

Nicoletta DellaRatta
Shakira S. Rivera Arellano
Widener University Delaware Law School
April 14, 2026

This paper is for educational purposes only and is not intended as legal advice.

Comparative Analysis for Funding Opportunities for Non-Tidal Wetland Protection in the Chesapeake Bay Watershed

Since Sackett v. EPA, federal protections for non-tidal wetlands have been reduced nationwide. Given this decrease in protection, funding for wetland preservation is more critical than ever.

I. Background

The Chesapeake Bay Watershed encompasses portions of multiple states, including Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia, and the District of Columbia.¹ Wetlands in the Chesapeake Bay Watershed prevent flooding, trap polluted runoff before it enters bodies of water, and provide critical habitat for hundreds of plant and animal species.² Wetlands, however, face increasing threats from sea level rise, development, and invasive species.³ It is imperative that wetlands are protected and restored. These efforts, however, come at a cost, and securing adequate funding is often challenging.

Non-tidal wetlands make up 86% of wetlands in the Chesapeake Bay region.⁴ Non-tidal wetlands, sometimes referred to as palustrine wetlands, are inland freshwater areas, unaffected by ocean tides.⁵ Hardwood forests, wet meadows, inland bogs, and areas of lakes and ponds are some environments that constitute non-tidal wetlands.⁶ Previously, some non-tidal wetlands were protected under Section 404 of the Clean Water Act (CWA); however, the Supreme Court in *Sackett* interpreted the wetlands protected by the CWA to be limited to “wetlands with a continuous surface connection” to a body of water.⁷ In light of the narrowed definition, many non-tidal wetlands fall outside the scope of the CWA⁸, requiring states to assume primary

¹*The Watershed*, CHESAPEAKE BAY PROGRAM, <https://www.chesapeakebay.net/discover/watershed>.

² *Wetlands*, CHESAPEAKE BAY PROGRAM <https://www.chesapeakebay.net/issues/whats-at-risk/wetlands>.

³ *Id.*

⁴ *Id.*

⁵ *Nontidal Wetlands and Their Values*, MARYLAND DEPARTMENT OF THE ENVIRONMENT, <https://mde.maryland.gov/programs/water/WetlandsandWaterways/DocumentsandInformation/Documents/www.mde.state.md.us/assets/document/WetlandsWaterways/values.pdf>.

⁶ *Id.*

⁷ *Sackett v. EPA*, 598 U.S. 651, 662 (2023).

⁸ Carroll, R., *Comparative Analysis for a Non-Tidal Wetland Regulatory Program in Delaware*, WIDENER UNIVERSITY DELAWARE LAW SCHOOL, (2024), <https://delawarelaw.widener.edu/files/resources/ntw-comparative-analysis-final-draft-rc-copy.pdf>.

responsibility for their protection.⁹ It is estimated that approximately 84% of total wetland areas previously protected prior to *Sackett* are now left with no federal protection.¹⁰

The task of protecting non-tidal wetlands is often challenging for states, as it requires sufficient funding for both restoration and ongoing protection. Thus, it is important for states to understand the funding programs available for non-tidal wetland preservation. Examining programs from other states that demonstrate effective funding strategies is also critical. Federal and private funding options are available, but funding sources have different requirements and goals, and programs vary in how they support non-tidal wetland protection.

This memorandum provides a comparative analysis of how states in the Chesapeake Bay Area protect their tidal and non-tidal wetlands through incentive-based protection programs and the various funding sources for these programs.

II. Research Objectives and Methodology

This memorandum includes research on the wetland protection programs in the states of Virginia, Pennsylvania, Maryland, and Delaware, as well as the funding that supports them. The research was conducted by means of reviewing states' public websites, databases, and other informational and official portable document files accessible to the public. Information was also gathered from conversations with members of The Nature Conservancy based in Virginia, Maryland's Department of the Environment, Ducks Unlimited, and the Chesapeake Wildlife Heritage. The following topics were covered in each discussion:

- (1) Allocation of funds received from state and federal entities for the programs;
- (2) If there were any match or multiple bid requirements;
- (3) Whether funding was underutilized;
- (4) If funding covered full project cycles;
- (5) Applicant requirements to receive funding; and
- (6) Whether there were any restrictions imposed on selected recipients of the fund.

A. Virginia

Virginia's non-tidal wetland protection framework is extensive, with a wetland and stream replacement fund that provides a "no net loss" of wetland acreage, mitigation credit

⁹ Flaherty, M.T., *Comparative Analysis of Non-Tidal Wetland Compensatory Mitigation Programs for Delaware*, WIDENER UNIVERSITY DELAWARE LAW SCHOOL, (2025), <https://delawarelaw.widener.edu/files/resources/non-tidal-wetland-compensatory-mitigation-programs.pdf>.

¹⁰ *New Report Reveals Massive Loss of Wetland Protections After Supreme Court's Sackett Decision*, NDRC, <https://www.nrdc.org/press-releases/new-report-reveals-massive-loss-wetland-protections-after-supreme-courts-sackett#:~:text=Under%20the%20least%20restrictive%20interpretation,are%20left%20without%20federal%20safeguards.>

programs that focus on smaller and isolated wetland preservation initiatives, and, finally, federal grant contributions to state revolving funds. All of these programs are crucial to the wetland preservation and restoration efforts in the state of Virginia. They are programs that may be applicable to the Chesapeake Bay Watershed non-tidal wetlands.

1. The Wetland and Stream Replacement Fund (WSRF)

The Wetland and Stream Replacement Fund (“WSRF”) is a state program that operates as an In-Lieu Fee (“ILF”) program for compensatory mitigation.¹¹ The objectives for this program are 1) a “no net loss” of wetland area and stream, and wetland function in any Virginia Watershed; and 2) having the WSRF program be a high-quality compensatory mitigation for authorized activities in Virginia’s watershed.¹² This program, sponsored by the Virginia Department of Environmental Quality (“DEQ”) and the Virginia Wetland Restoration Fund (“Fund”) also commonly referred to by the “Trust Fund”, provides third party compensatory mitigation options for developers whose projects may have unavoidable impacts to aquatic resources within the Commonwealth of Virginia, the Chesapeake Bay and the Atlantic Ocean.¹³ For purposes of analyzing this fund, developers are referred to as “prospective purchasers” when they are in the initial process of purchasing mitigation credits, and “permittees” after they have been found eligible for mitigation credits.

The WSRF establishes mitigation credits through standard crediting ratios for creation, restoration, enhancement, and/or preservation of wetlands, streams, and associated adjacent buffers.¹⁴ As a public service to the Commonwealth, the WSRF is approved to sell mitigation credits that permittees may reserve for their active applications and permits, in the absence of other sources of third-party mitigation bank credits and other in-lieu fee credits.¹⁵

The resources of the WSRF consist of funds paid to the DEQ by permittees through credit sales.¹⁶ Costs of each credit are based on a the expected cost of the project, including but not limited to restoration, preservation or enhancement of aquatic resources in particular geographic areas; appropriate estimated expenses related to creation of the project; costs related

¹¹ *Wetland and Stream Replacement Fund*, VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, <https://www.deq.virginia.gov/business-construction/office-of-permitting-assistance/wetland-and-stream-replacement-fund>.

¹² *Program Instrument*, VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, Wetland and Stream Replacement Fund In-Lieu Fee Mitigation Program, <https://www.deq.virginia.gov/home/showpublisheddocument/33474/639071977732430000>.

¹³ *Public Notice Distribution List*, U.S. ARMY CORPS OF ENGINEERS – NORFOLK DISTRICT, <https://www.nao.usace.army.mil/Media/Public-Notices/Article/4227187/nao-2014-00851-wetland-and-stream-replacement-fund-in-lieu-fee-program-richmond/>.

¹⁴ *Wetland and Stream Replacement Fund*, VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, <https://www.deq.virginia.gov/business-construction/office-of-permitting-assistance/wetland-and-stream-replacement-fund>.

¹⁵ *Id.*

¹⁶ *Program Instrument*, VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, Wetland and Stream Replacement Fund In-Lieu Fee Mitigation Program, <https://www.deq.virginia.gov/home/showpublisheddocument/33474/639071977732430000>.

to operation and management; any financial assurances required to ensure successful completion of the site; and finally, contingencies to account for uncertainties re: construction and real estate expenses.¹⁷ DEQ will determine, and periodically reevaluate, the funding needed to effectively operate the WSRF.¹⁸ Prices will be listed by 8-digit hydrologic unit codes within each geographic service area, and will be reviewed and adjusted each year, as necessary.¹⁹

Figure 1 – Current Credit Price Schedule for the Chesapeake Bay Area

8-Digit HUC	Streams (Per Unit)	Non-Tidal Wetlands (Per Credit)
Chesapeake Bay and its Small Coastal Basins		
02080101, 02080102, 02080108, 02080110, 02080111	\$800	\$375,000

To be able to “fill the gap” between mitigation credits received and missing mitigation credits to fulfill a party’s needs, DEQ will make an eligibility determination when a prospective purchaser first submits a request to reserve or purchase Credits from WSRF for an aquatic impact.²⁰ To be eligible to purchase these mitigation credits, purchasers must demonstrate that their use of WSRF credits is for a permit, court order, enforcement action or any other government-approved reason for buying mitigation credits.²¹ Prospective purchasers must also show that no other credits are available from other mitigation banks or similar ILF programs in the area where the impact is proposed.²² In a situation where a different mitigation bank or other credits are available for purchase, and it partially covers the mitigation credit need, the prospective purchaser may be eligible to receive WSRF credits for the remaining, unmet needs for mitigation credits.²³

Working as a safety net for developers looking to reduce or offset unavoidable impacts to wetlands and streams, Virginia’s WSRF program has played an important role in resolving credit shortages, reducing costly delays that increase housing costs.²⁴ In supporting these economic developments, the WSRF has proven to be highly successful in protecting and preserving Virginia’s wetlands acreage because the funds collected from the mitigation credit sales are then

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Wetland and Stream Replacement Fund*, VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, <https://www.deq.virginia.gov/business-construction/office-of-permitting-assistance/wetland-and-stream-replacement-fund>.

²¹ *Id.*

²² *Id.*

²³ *Id.*

²⁴ *U.S. Army Corps of Engineers Accepting Industry Comment on Proposal to Address Mitigation Credit Shortages and Project Delays*, HOME BUILDERS ASSOCIATION OF VIRGINIA, <https://www.hbav.com/u-s-army-corps-of-engineers-accepting-industry-comment-on-proposal-to-address-mitigation-credit-shortages-and-project-delays/>.

used in wetland and stream restoration and preservation projects across the state.

2. Stream and Wetland Mitigation Program

The Stream and Wetland Mitigation Program (“SWMP”) in Virginia is very similar in format to the aforementioned WSRF program. SWMP is a wetland and stream mitigation in-lieu fee program, co-administered by The Nature Conservancy (“TNC”) and managed in partnership with the U.S. Army Corps of Engineers and the Virginia DEQ.²⁵ Launched in 1995 as the Virginia Aquatic Resource Trust Fund (“Fund”), operated by TNC, the program has protected and restored more than 20,000 acres - half of which is public land - and prevented tons of sediment from entering the Virginia waterways.²⁶

The key difference is that this program focuses on large-scale conservation of wetlands - primarily, non-tidal wetlands.²⁷ Instead of completing small, isolated efforts like the WSRF, the program combines funds from multiple sources to take on larger projects with better ecological outcomes, which often are eroding streams with little to no vegetation and drained/ditched leveled lands.²⁸ By focusing on areas that offer the most environmental benefit, the program helps restore and protect land and water where damage has occurred, in donated or affordably purchased land.²⁹ The sites are planned and constructed to create self-sustaining natural aquatic systems that achieve the intended level of aquatic ecosystem functionality with minimal human intervention, including long-term site management and maintenance.³⁰ This program has many projects such as: wetland restoration³¹, wetland enhancement³², and wetland preservation³³.

The funding for this program is paid directly to TNC through credit sales, and therefore, it can be difficult to forecast available funding in a given year.³⁴ TNC holds the mitigation payments in an interest-generating account, and these payments are then used by TNC to complete the required stream/wetland mitigation.³⁵ Similar to WSRF, this program is available

²⁵ *What is the SWMP*, THE NATURE CONSERVANCY, Virginia Stream and Wetland Mitigation Program, https://www.nature.org/content/dam/tnc/nature/en/documents/2/5/25_SWMP_One_Pager.pdf (last updated July 2025).

²⁶ *Stream and Wetland Mitigation Program*, THE NATURE CONSERVANCY, Stories in Virginia, <https://www.nature.org/en-us/about-us/where-we-work/united-states/virginia/stories-in-virginia/virginia-aquatic-resources-trust-fund/>.

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Virginia Aquatic Resource Trust Fund (VARTF)*, THE NATURE CONSERVANCY, Amendment and Restated Program, https://www.nature.org/content/dam/tnc/nature/en/documents/VARTF_Program-Instrument_2019.pdf (last updated 2019).

³¹ “Restoration” includes grading, ditch plugging or filling, drain tile removal, tree planting.

³² “Enhancement” includes hydrologic improvements, tree planting, invasive species control.

³³ “Preservation” includes land acquisition and protection.

³⁴ Johnson, Karen. “Stream and Wetlands Mitigation Program Funding” Shakira S. Rivera Arellano, Feb. 20, 2026. Email Interview.

³⁵ *Purchasing and Approval of Mitigation Credits*, THE NATURE CONSERVANCY, <https://www.nature.org/en-us/about-us/where-we-work/united-states/virginia/stories-in-virginia/vartf-purchasing-mitigation-credits/>.

only to applicants who could not secure mitigation credits through other mitigation banks or programs.³⁶ Funding covers the entirety of the project cycle - from acquisition through design construction, planting, and covers at least 10 years' worth of monitoring and maintenance.³⁷ The SWMP can fund all aspects of stream and wetland restoration on public or private land including purchasing land or conservation easements, as well as the design and implementation of projects.³⁸ The funds cannot be used interchangeably, as they are tracked and limited to specific areas of impact. For example, payments made for stream restoration are tracked separately from funds for tidal and non-tidal wetlands - which are also tracked separately. This means that funds that come in for tidal wetlands are to be used for tidal wetlands, not streams or non-tidal wetlands.³⁹ Funding by this program is used primarily for non-tidal wetland projects, because there are significantly more impacts to non-tidal wetlands in VA.⁴⁰

Figure 2 - Stream and Mitigation System



There are two types of available credits for purchase by permittees, Advance Credits and Release Credits.⁴¹ Released Credits are those credits available and released for mitigation projects already in the ground.⁴² Advance credits are in-lieu-fee credits sold in advance of mitigation sites generating released credits.

³⁶ Johnson, Karen. "Stream and Wetlands Mitigation Program Funding" Shakira S. Rivera Arellano, Feb. 20, 2026. Email Interview.

³⁷ *Id.*

³⁸ *Stream and Wetland Mitigation Program*, THE NATURE CONSERVANCY, Stories in Virginia, <https://www.nature.org/en-us/about-us/where-we-work/united-states/virginia/stories-in-virginia/virginia-aquatic-resources-trust-fund/>.

³⁹ Johnson, Karen. "Stream and Wetlands Mitigation Program Funding" Shakira S. Rivera Arellano, Feb. 20, 2026. Email Interview.

⁴⁰ *Id.*

⁴¹ *Purchasing and Approval of Mitigation Credits*, THE NATURE CONSERVANCY, <https://www.nature.org/en-us/about-us/where-we-work/united-states/virginia/stories-in-virginia/vartf-purchasing-mitigation-credits/>.

⁴² *Id.*

Figure 3 – Pricing for Advanced Credits for the Fiscal Year 2025

VARTF Mitigation Prices for Advanced Credits			
BASIN & HUC	Per Credit	Per Credit	Per Unit (CR)
	NT Wetland	Tidal Wetland	Stream
CHESAPEAKE BAY			
HUC 02080101, 02080102, 02080108, 02080110, 02080111	125,000.00	1,500,000.00	400.00

These Advanced Credits are limited in numbers. Shown below is the table for the amount of credits available for the Chesapeake Bay Basin.

Figure 4 – Table for the Stream and Wetland Mitigation Advanced Credits

River Basin	Advanced Credits (Non-tidal Wetlands)	Advance Credits (Streams)	Advance Credits (Tidal Wetlands)
Atlantic Ocean Basin	10	5,000	2
Big Sandy River Basin	0	0	0
Chesapeake Bay Basin	20	5,000	5

TNC assumes responsibility for a permittee's required compensatory mitigation up to the number of credits sold to offset the impacts associated with a given permit once the permittee has 1) secured the appropriate number and resource type of credits from TNC, and 2) the Interagency Review Team (“IRT”) has received documentation that confirms that TNC has accepted legal responsibility for providing the required compensatory mitigation for a given permit.⁴³ Development of new projects is a lengthy process and is largely based on the ability to find suitable new projects and develop them through this proposal process.⁴⁴

The SWMP program has been a successful conservation initiative for over 30 years, strengthening climate resilience in Virginia’s watersheds, and providing a third-party mitigation option for permit applicants. Although Virginia’s SWMP program is state-specific to Virginia, the program has been known to extend to adjacent states and work across state lines in shared areas – like the Chesapeake Bay Basin. To date, the SWMP program has restored 800 acres of

⁴³ *Virginia Aquatic Resource Trust Fund (VARTF)*, THE NATURE CONSERVANCY, Amendment and Restated Program, https://www.nature.org/content/dam/tnc/nature/en/documents/VARTF_Program-Instrument_2019.pdf (last updated 2019).

⁴⁴ Johnson, Karen. “Stream and Wetlands Mitigation Program Funding” Shakira S. Rivera Arellano, Feb. 20, 2026. Email Interview.

non-tidal wetlands, and has preserved over 4,700 acres of non-tidal wetlands.⁴⁵

3. Wetland Program Development Grants + Five Star Program

The Wetland Program Development Grants (“WPDG”) are funded by the Environmental Protection Agency (“EPA”). These grants assist state, tribal, local government agencies, and intertribal/interstate entities in building programs to protect, manage, and restore wetlands.⁴⁶ The primary financial support for these grants comes from the EPA.⁴⁷ These grants cannot be used for implementation activities (i.e. ongoing, routine activities), WPDGs are meant to develop the capacity of tribal governments, state, territorial, and local government agencies to increase the quantity and quality of wetlands.⁴⁸

The grants are extremely competitive, and projects can last between two 2 to 4 years.⁴⁹ Opportunities are available both at the National and the Regional level through published Requests for Applications (“RFAs”).⁵⁰ WPDGs provide eligible applicants an opportunity to create projects that promote research and proactive work in water pollution prevention, reduction, and elimination.⁵¹

To be eligible, the proposal needs to demonstrate a linkage with the Core Elements Framework (i.e. monitoring and assessment; voluntary restoration and protection; regulatory approaches including Clean Water Act 401 certifications; and wetland-specific water quality standards) and must use one or more of the “Core Elements” to achieve the project goals.⁵² Each of these four Core Elements is composed of several “broad” actions that if collectively carried out would complete that core element.⁵³ The RFA website provides the most up-to-date requirements, such as the need to link a proposal to climate change or information on the Justice 40 Initiative.⁵⁴ The applicants are required to have a detailed budget with estimated funding amounts for each project task.⁵⁵ Due to their highly competitive nature, these requirements, such

⁴⁵ *Stream and Wetland Mitigation Program*, THE NATURE CONSERVANCY, Stories in Virginia, <https://www.nature.org/en-us/about-us/where-we-work/united-states/virginia/stories-in-virginia/virginia-aquatic-resources-trust-fund/>.

⁴⁶ *Wetland Program Funding*, NATIONAL ASSOCIATION OF WETLAND MANAGERS, <https://nawm.org/wetland-programs/tribal-wetland-programs/wetland-program-funding.html?highlight=WyJmdW5kaW5nIl0=>.

⁴⁷ *Id.*

⁴⁸ *A Fact Sheet for Tribal Wetland Programs*, NATIONAL ASSOCIATION OF WETLAND MANAGERS, Wetland Program Development Grants, https://nawm.org/pdf/lib/tribal_wp/wetland_program_development_grants_fact_sheet.pdf.

⁴⁹ *Wetland Program Funding*, NATIONAL ASSOCIATION OF WETLAND MANAGERS, <https://nawm.org/wetland-programs/tribal-wetland-programs/wetland-program-funding.html?highlight=WyJmdW5kaW5nIl0=>.

⁵⁰ *Overview and Tricks and Tips*, THE NATURE CONSERVANCY, Wetland Program Development Grants, https://nawm.org/pdf/lib/tribal_wp/wetland_program_development_grants_overview_and_tricks_and_tips.pdf.

⁵¹ *Id.*

⁵² *Overview and Tricks and Tips*, THE NATURE CONSERVANCY, Wetland Program Development Grants, https://nawm.org/pdf/lib/tribal_wp/wetland_program_development_grants_overview_and_tricks_and_tips.pdf.

⁵³ *Id.*

⁵⁴ *Wetland Program Development Grants and EPA Wetlands Grant Coordinators*, THE ENVIRONMENTAL PROTECTION AGENCY, <https://www.epa.gov/wetlands/wetland-program-development-grants-and-epa-wetlands-grant-coordinators>.

⁵⁵ *Id.*

as page limit, criteria requested, and the ability to follow directions are crucial factors that prospective applicants take into consideration before submitting their proposal. Finally, individual WPDGs require a cost share, or matching funds, of 25% of the total project cost.⁵⁶ A cost share is the portion of a project's total cost that must be contributed by the applicant in addition to the federal funding provided by the EPA to ensure compliance and that the applicant has a financial stake in the success, or lack thereof, of the wetland program.⁵⁷ Essentially, the EPA can provide 75% of the total project costs for WPDGs.

One example of a successful program that is financially backed by the WPDGs is The Five Star Program and Urban Waters Restoration Grant Program (“The Five Star Program”). This Program awards grants of \$10,000 to \$40,000 to schools, organizations, corporations, landowners, and local governments to provide environmental education and training through projects that restore wetlands and streams throughout the United States.⁵⁸ Since its initiation, The Five Star Program has provided more than \$33 million in challenge grants to support over 1,150 projects throughout the United States - of which have amounted to \$101 million in matching funds.⁵⁹ One of the 2024 recipients for a grant from The Five Star Program was Virginia Wesleyan University for “Urban Greening and Habitat Restoration to Address Extreme Heat and Stormwater Runoff.”

Although highly sought after, both in Virginia and on the national level, these WPDGs are extremely useful sources of funding that are key to vital restoration and environmental projects. Funding from the EPA has been drastically reduced by the current administration, with President Trump canceling a \$20 million EPA grant dedicated to climate adaptation and flood resilience in 2025 alone.⁶⁰ Most recently, April 6, 2026, Trump's 10% deduction in non-defense spending, including a cut of over \$1 billion from EPA categorical grants⁶¹ – affecting this program immensely.⁶²

4. Virginia Conservation Reserve Enhancement

The Conservation Reserve Enhancement (“CREP”) is one of Virginia's most active water

⁵⁶ *A Fact Sheet for Tribal Wetland Programs*, NATIONAL ASSOCIATION OF WETLAND MANAGERS, Wetland Program Development Grants, https://nawm.org/pdf/lib/tribal_wp/wetland_program_development_grants_fact_sheet.pdf.

⁵⁷ *Id.*

⁵⁸ *Five Star Wetland and Urban Waters Restoration Grants*, THE ENVIRONMENTAL PROTECTION AGENCY, <https://www.epa.gov/wetlands/five-star-wetland-and-urban-waters-restoration-grants>.

⁵⁹ *Id.*

⁶⁰ *Trump Administration Cancels \$20M EPA Grant for Hampton's Historic Aberdeen Gardens*, WETLANDS WATCH, <https://www.wetlandswatch.org/directors-blog/trump-administration-cancels-20m-epa-grant-for-hamptons-historic-aberdeen-gardens>.

⁶¹ “Categorical grant” is a type of federal grant awarded by the EPA for a specific purpose or program area.

⁶² *Trump's FY27 Budget Slashes Climate and Disaster Funding, Shifting Costs to Cities and States*, SMART CITIES DIVE, <https://www.smartcitiesdive.com/news/trump-fy27-budget-slashes-climate-disaster-funding-costs-to-cities/816696/>.

quality partnership efforts.⁶³ CREP is an enhancement to the federal Conservation Reserve Program, established in 1985, and has since enrolled more than 36 million acres nationwide.⁶⁴ The Virginia sector of CREP uses three methods to improve Virginia’s water quality and wildlife habitat. They are 1) offering financial incentives, and 2) cost-share and rental payments to farmers who voluntarily restore riparian forest buffers, grass and shrub buffers, and wetlands using CREP-approved best management practices.⁶⁵ Although the goal is general water quality improvement and wildlife habitat protection, CREP focuses on the installation of riparian buffers to reduce nutrient and sediment pollution in the waters of the commonwealth.⁶⁶

This program provides a 50% reimbursement through the Farm Service Agency of a participant’s eligible expenses for implementing best management practices (i.e. fencing or alternative watering systems).⁶⁷ The state cost-share payments are administered through local SWCD offices.⁶⁸ The state provides an additional 35% of the restored buffer or wetland of conservation practice costs deemed eligible by the local Farm Service office - equaling a total of 85% cost-share of eligible costs, not including separate federal bonus payments and a 25% state income tax credit for out-of-pocket expenses. In funding the restoration of wetlands, forested riparian buffers up to 300 feet wide and cropland buffers up to 100 feet wide have been set up in appropriate locations.⁶⁹ The benefit of funding this is that a 100-foot-wide strip of forest and grass reduces sediment by 97%, nitrogen by 80%, and phosphorus by 77%.⁷⁰

The application process is fairly simple, if the Farm Service Agency determines that the land is eligible, the Natural Resources Conservation Service (“NRCS”) conservationist and local soil and water conservation district (“SWCD”) staff will visit the site to determine and design the conservation practice.⁷¹ After measuring the CREP acreage, the 10–15-year contract is signed, the landowner finishes installing the best management practices, and submits bills for cost-share to the Farm Service Agency.⁷² The Farm Service Agency conducts spot checks throughout the life of the contract to ensure productivity and functionality of the project.

The Chesapeake Bay drainage basin has had major reductions in chemical loads - improving Virginia’s overall water quality standards by incentivizing farmers to restore wetlands by having them install riparian buffers. This program has had a success in Virginia’s farming districts, providing the landowners with stable rental income, erosion and flood control, lower

⁶³ *Conservation Reserve Enhancement Program(CREP)*, VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION, <https://www.dcr.virginia.gov/soil-and-water/crep>.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.*

disease rates for livestock because of the wetland restoration efforts by the farmers.

5. State Revolving Funds & Water Infrastructure Finance and Innovation Act

The WIFIA program was established in 2014, under the Water Infrastructure Finance and Innovation Act, and it functions as an EPA-operated bank that provides supplemental, flexible, low-cost credit assistance to public and private borrowers for all types of wastewater, drinking water, and stormwater projects.⁷³ These terms are long-term, and the WIFIA program offers repayment deferral periods after project completion.⁷⁴ To request financing, prospective borrowers will submit a letter of interest demonstrating their project’s eligibility, creditworthiness, engineering feasibility, and alignment with the WIFIA criteria.⁷⁵ To be eligible for the WIFIA loan, the project’s eligible costs must be reasonably anticipated to be at least \$20 million.⁷⁶ From there, selected projects will be invited to apply to the EPA.⁷⁷ When funding the maximum allowable percentage of a project’s cost with the WIFIA program (typically around 49%), using a below-market interest rate SRF assistance agreement to finance the remaining costs can lead to substantial savings compared to financing with municipal bonds.⁷⁸

There are two types of State Revolving Funds, the Clean Water SRF (“CWSRF”) or the Drinking Water SRF (“DWSRF”). Both types of SRFs provide financing for projects that improve water quality and provide protection for public health. Both programs provide additional subsidy (e.g. grants and principal forgiveness) to borrowers who qualify for disadvantaged assistance by meeting state criteria. CWSRFs and DWSRFs combine federal capitalization grants and state funds to provide below market interest rate loans for eligible projects.⁷⁹ The states contribute an additional 20% to match the federal grants.⁸⁰ As the low-interest loans are repaid, those funds are then available to be used again for new projects, thus “revolving.”⁸¹ Although very similar, the CWSRF and the DWSRF operate separately within the states where they operate. There are currently 51 DWSRF programs nationwide, as well as 51

⁷³ *About the WIFIA Program*, THE ENVIRONMENTAL PROTECTION AGENCY, Water Infrastructure Finance and Innovation Act, <https://www.epa.gov/wifia/about-wifia-program>.

⁷⁴ *Using WIFIA and SRF Programs to Finance Water Infrastructure Projects*, THE ENVIRONMENTAL PROTECTION AGENCY, <https://www.epa.gov/system/files/documents/2024-09/wifia-and-srf-programs-finance-water-infrastructure.pdf> (last updated 2024).

⁷⁵ *WIFIA Handbook*, THE ENVIRONMENTAL PROTECTION AGENCY, <https://www.epa.gov/system/files/documents/2023-09/WIFIA-Program-Handbook.pdf>

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ *Using WIFIA and SRF Programs to Finance Water Infrastructure Projects*, THE ENVIRONMENTAL PROTECTION AGENCY, <https://www.epa.gov/system/files/documents/2024-09/wifia-and-srf-programs-finance-water-infrastructure.pdf> (last updated 2024).

⁷⁹ *Resource Guide for Wetland Applicants*, THE ENVIRONMENTAL PROTECTION AGENCY, <https://www.epa.gov/system/files/documents/2025-01/srf-wetlands-resource-guide.pdf>

⁸⁰ *About the Clean Water State Revolving Fund (CWSRF)*, THE ENVIRONMENTAL PROTECTION AGENCY, <https://www.epa.gov/cwsrf/about-clean-water-state-revolving-fund-cwsrf#works>.

⁸¹ *Resource Guide for Wetland Applicants*, THE ENVIRONMENTAL PROTECTION AGENCY, <https://www.epa.gov/system/files/documents/2025-01/srf-wetlands-resource-guide.pdf>

CWSRF programs.⁸²

The CWSRF was created by the 1987 amendments to the Clean Water Act as a financial assistance program for a wide range of infrastructure projects, under 33 U.S. Code §1383.⁸³ States are responsible for operating their CWSRF programs.⁸⁴ Wetland protection and conservation can be eligible through the nonpoint source pollution projects or the National Estuary Program projects - pursuant to CWSRF regulations.⁸⁵ In Virginia, the CWSRF has provided financial assistance, amounting to over \$4 billion since 1987.⁸⁶ The DEQ administers the program and receives annual federal funding through the EPA to support the fund.⁸⁷ This program provides loans, refinancing, purchasing or guaranteeing local debt and purchasing bond insurance.⁸⁸ Additionally, loan terms may be up to 30 years, and there is no minimum or maximum project size - typical range is from \$50,000 to \$25 million. In recent years, more states have begun to use the full scope of eligibility to manage nonpoint source pollution and implement a wider range of water quality projects.⁸⁹ Nonpoint source pollution from rainwater or snowmelt can be drastically reduced through wetland vegetation by slowing runoff from the surrounding landscape.⁹⁰ Additionally, nonprofit community groups are part of the eligible groups that may receive funding for their water quality projects.

⁸² *About the Clean Water State Revolving Fund (CWSRF)*, THE ENVIRONMENTAL PROTECTION AGENCY, <https://www.epa.gov/cwsrf/about-clean-water-state-revolving-fund-cwsrf#works>.

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Clean Water Revolving Loan Fund*, VIRGINIA RESOURCES AUTHORITY, <https://www.virginiaresources.gov/program/clean-water-revolving-loan-fund/>.

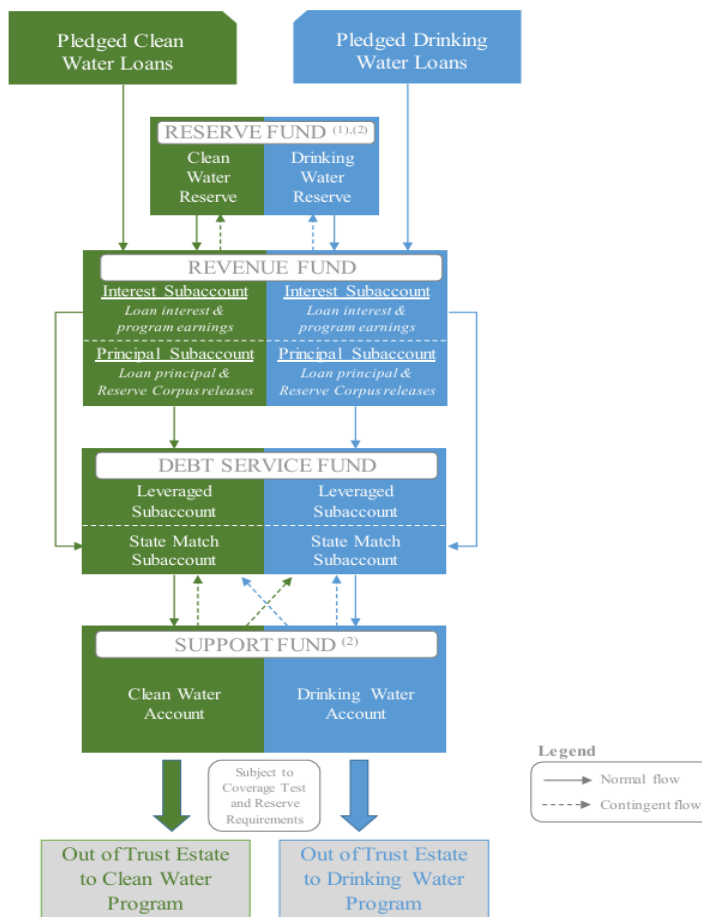
⁸⁷ *Id.*

⁸⁸ *About the Clean Water State Revolving Fund (CWSRF)*, THE ENVIRONMENTAL PROTECTION AGENCY, <https://www.epa.gov/cwsrf/about-clean-water-state-revolving-fund-cwsrf#works>.

⁸⁹ *Resource Guide for Wetland Applicants*, THE ENVIRONMENTAL PROTECTION AGENCY, <https://www.epa.gov/system/files/documents/2025-01/srf-wetlands-resource-guide.pdf>.

⁹⁰ *Id.*

Figure 5 – VRA SRF Program Summary: Flow of Funds



Under the DWSRF, states may take up to approximately 31% of their capitalization grant for set-asides.⁹¹ These set-aside funds from the DWSRF capitalization grants complement states' ability to provide financial assistance to publicly owned and privately owned community water systems, as well as nonprofit non-community water systems, for drinking infrastructure projects, such as wetland restoration, that improve the water quality of a source water stream.⁹² Repayments of DWSRF loans begin up to 18 months after project completion, with loan terms up to 30 years, and even 40 years for disadvantaged communities.⁹³ Additionally, interest accrued only on the portion of the loan drawn.⁹⁴ Eligibility requirements for DWSRFs are strict; only the following types of public water systems are eligible: 1) existing private/publicly owned water systems; and 2) new community water systems that represent cost-effective solutions to

⁹¹ *Id.*

⁹² *Protecting Source Water with the Drinking Water State Revolving Fund Set-Asides*, THE ENVIRONMENTAL PROTECTION AGENCY, https://www.epa.gov/sites/default/files/2019-10/documents/protecting_source_water_with_the_dwsrf_-_final.pdf.

⁹³ *Id.*

⁹⁴ *Drinking Water State Revolving Fund*, THE ENVIRONMENTAL PROTECTION AGENCY, <https://www.virginiaresources.gov/program/drinking-water-revolving-loan-fund/>.

existing public health problems with serious risks.¹⁸⁷ The only caveat of using a DWSRF for wetlands is that only drinking water-related wetland benefits are factored into state decisions to fund these projects; other wetland benefits, including habitat creation, may be co-benefits but are not considered in these funding decisions. In Virginia, the DWSRF has invested over \$600 million in drinking water projects throughout the Commonwealth.¹⁸⁸ The Virginia Department of Health administers the Virginia section of the DWSRF, and, similar to the CWSRF, receives annual funding through the EPA.¹⁸⁹ As the money is paid back into the state's revolving fund, the state makes new loans to other recipients for high-priority, water quality activities.

By using both the WIFIA program and the SRFs, a project with a 20-year SRF loan and a 35-year WIFIA loan could make the interest-only repayments on the WIFIA loan until year 21, after the SRF has been fully repaid, making the combined use of these programs very desirable. Both the State Revolving Funds ("SRF") and the Water Infrastructure Finance and Innovation Act ("WIFIA") provide financing solutions to help communities address their water infrastructure needs.¹⁹⁰ If communities use these EPA-funded programs together to co-finance their projects, they may be eligible for a 100% financial backing.¹⁹¹ The WIFIA program offers borrowers unlimited funding that can be sculpted and backloaded alongside other sources of debt.¹⁹² Additionally, states can allocate federal or non-federal SRF funds to each project.¹⁹³ SRFs, generally, have been great financial programs that have been very successful in wetland protection in Virginia, as well as states discussed below.

6. Conclusion

The Virginia programs provide different avenues for wetland protection depending on the type of work to be conducted. For example, developers have the option, through the Wetland and Stream Replacement Fund, to restore wetlands that may be affected by their development activities. Similarly, the Wetland Program Development Grants and State Revolving Funds are funding options for those seeking to undertake large-scale projects to improve water quality in the state.

In sum, Virginia has one of the most comprehensive wetland range of options in the Bay

¹⁸⁷ *Protecting Source Water with the Drinking Water State Revolving Fund Set-Asides*, THE ENVIRONMENTAL PROTECTION AGENCY, https://www.epa.gov/sites/default/files/2019-10/documents/protecting_source_water_with_the_dwsrf_-_final.pdf.

¹⁸⁸ *Drinking Water State Revolving Fund*, THE ENVIRONMENTAL PROTECTION AGENCY, <https://www.virginiaresources.gov/program/drinking-water-revolving-loan-fund/>.

¹⁸⁹ *Id.*

¹⁹⁰ *Using WIFIA and SRF Programs to Finance Water Infrastructure Projects*, THE ENVIRONMENTAL PROTECTION AGENCY, <https://www.epa.gov/system/files/documents/2024-09/wifia-and-srf-programs-finance-water-infrastructure.pdf> (last updated 2024).

¹⁹¹ *Id.*

¹⁹² *Id.*

¹⁹³ *Id.*

Watershed. This state offers many options for a wide range of wetland restoration projects.

B. Pennsylvania

Pennsylvania's approach to non-tidal wetland protection is multifaceted. It includes the Pennsylvania Wetland Replacement Project, which provides a structured in-lieu fee program for addressing smaller-scale impacts to wetlands; the Pennsylvania Wetland Habitat Initiative, which utilizes federal funding to support large-scale habitat restoration; and State Revolving Funds, which support water quality and infrastructure projects. Together, these varied programs contribute to wetland protection and restoration across the Commonwealth.

1. Pennsylvania Wetland Replacement Project

The Pennsylvania Department of Environmental Protection ("PADEP") cooperates with the National Fish and Wildlife Foundation ("NFWF") in administering a fund called the Pennsylvania Wetland Replacement Project ("PWRP").¹⁹⁴ NFWF is a congressionally created nonprofit which manages the fund and administers the money for conservation purposes consistent with its mission of supporting fish, wildlife, and plant resource conservation. When established in 1996, PWRP required that wetlands degraded as a result of federal and state permitting actions be replaced elsewhere when on-site mitigation is not feasible.¹⁹⁵ This fund operates as an in-lieu fee program in Pennsylvania. However, the PWRP¹⁹⁶ does not comply with the federal 2008 Mitigation Rule.¹⁹⁷

PWRP is designed to reduce administrative and financial burdens associated with small wetland replacement areas, which are often difficult to fund.¹⁹⁸ Small wetlands or restorations frequently face challenges in obtaining the resources needed for both wetland construction and long-term management.¹⁹⁹

PWRP requires on-site replacement when feasible, and participation in the fund is generally limited to impacts of up to 0.50 acre, with limited exceptions determined by Regional Office staff.²⁰⁰ Applicants seeking Water Obstruction and Encroachment Permits under Chapter

¹⁹⁴ 26 Pa. B. 534.

¹⁹⁵ *Id.*

¹⁹⁶ *SPN-1328 Pennsylvania Wetland Replacement Program PWRP*, US ARMY CORPS OF ENGINEERS, <https://www.nab.usace.army.mil/Missions/Regulatory/Public-Notices/Public-Notice-View/Article/492668/spn13-28-pennsylvania-wetland-replacement-program-pwrp/>.

¹⁹⁷ The *2008 Mitigation Rule* is a federal regulation that establishes performance standards and criteria for compensatory mitigation, mitigation banks, and in-lieu fee programs. See https://www.epa.gov/sites/default/files/2015-07/documents/general_requirements.pdf.

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

²⁰⁰ *Id.*

105, who meet all other permitting requirements but cannot provide on-site wetland replacement, may fulfill this obligation by contributing to the fund.²⁰¹

Figure 6 - For Impacts Exceeding 0.05 Acre, The Following Fee Schedule Applies:

Acreage of wetland impacted	Amount paid into Fund (\$)
0.051-0.10	500
0.11- 0.20	1,000
0.21- 0.30	2,500
0.31- 0.40	5,000
0.41- 0.50	7,500

By establishing tiered contributions to the fund based on the acreage of impact, the program promotes proportionality. The fund supports wetland, riparian corridor, and aquatic system restoration projects.²⁰² Although this is not a wetland-specific funding resource, wetlands are one of the main areas that could qualify for this program. PADEP oversees fund distribution and maintains records of funded projects and acreage replaced, and the program applies to all actions reviewed under Chapter 105.²⁰³

2. Pennsylvania Wetland Habitat Initiative

The Pennsylvania Wetland Habitat Initiative (“PWHI”) is a \$6 million partnership between the Pennsylvania Game Commission and Ducks Unlimited to improve 1,600 acres of wetland habitat on state game lands.²⁰⁴ This program began in 2023, and aimed to use the next

²⁰¹ *Id.*

²⁰² *Id.*

²⁰³ *Id.*

²⁰⁴ *Pennsylvania Receives 6 Million for Public Land Habitat Restoration*, DUCKS UNLIMITED <https://www.ducks.org/conservation/conservation-projects/pennsylvania-receives-6-million-for-public-land-habitat-restoration>.

three years to replace water control structures and levees at sites across 31 counties in all six of the Game Commission's regions in Pennsylvania.²⁰⁵

PWHI uses funding from the U.S. Fish and Wildlife Service and the Pittman-Robertson Act.²⁰⁶ The Pittman-Robertson Act is administered by the U.S. Fish and Wildlife Service within the Department of the Interior, and it provides federal funding to support state wildlife management and conservation programs.²⁰⁷

To qualify for Pittman-Robertson funding, states must have laws directing all hunting license fees exclusively to the administration of their state wildlife agencies.²⁰⁸ This ensures that state-collected revenues are reinvested directly into wildlife management and conservation, maintaining accountability and aligning state programs with the federal funding priorities established under the Act.

The Act obtains funding from taxes on firearms and ammunition related to hunting through programs, such as the Wildlife Restoration Program.²⁰⁹ Under the Wildlife Restoration Program, states receive up to 75% federal funding to restore and manage habitats.²¹⁰ These funds are used by states to acquire land, conduct research, and provide public access for hunting and wildlife recreation.²¹¹

The apportionment structure of the Pittman-Robertson Act is also very unique. The money collected by taxes goes into a special federal fund.²¹² The following year, that money become available to be used without Congressional approval.²¹³ Before, the money was distributed to states, some is taken out and distributed to specific programs.

²⁰⁵ *Id.*

²⁰⁶ *The Pittman-Robertson Wildlife Restoration Act*, CONGRESS, <https://www.congress.gov/crs-product/IF12229>.

²⁰⁷ *The Pittman-Robertson Wildlife Restoration Act*, CONGRESS, <https://www.congress.gov/crs-product/IF12229>.

²⁰⁸ 16 U.S.C. §669.

²⁰⁹ *Id.*

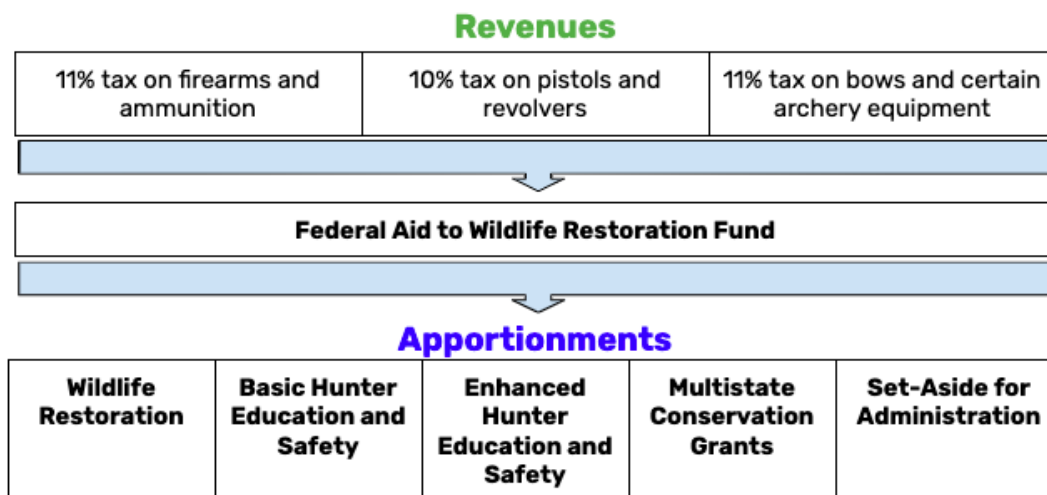
²¹⁰ *Id.*

²¹¹ *Id.*

²¹² *Id.*

²¹³ *Id.*

Figure 7 - Pittman-Robertson Wildlife Restoration Act Apportionment Structure ^[OBJ]



The apportionment of funds for specific programs are described in this figure.

The federal government uses factors such as the size of the state, the amount of hunting licenses sold in the state, and the state’s population to determine how much money each state receives.²¹⁴ However, there is a federal limitation to this act because tribes and certain territories, such as the District of Columbia, do not receive funding through these programs.²¹⁵

PWHI is not necessarily a non-tidal wetland funding program. However, it utilizes an interesting approach for obtaining funding for non-tidal wetlands, as it essentially uses tax revenue from hunting to restore habitats critical to numerous bird species. Pennsylvania implements this strategy through the PWHI. Given that non-tidal wetlands serve as essential habitat for many species, the program represents an innovative method of obtaining financial resources towards non-tidal wetland conservation.

3. State Revolving Funds

As mentioned, SRFs have sectors in each state, for both Drinking Water and Clean Water programs. SRFs in the state of Pennsylvania work in conjunction with the Pennsylvania Infrastructure Investment Authority (“PENNVEST”) - an independent investment authority that provides low-cost financial assistance to address issues related to water, wastewater, stormwater, and nonpoint source pollution.²¹⁶ PENNVEST has two goals for the betterment of the Commonwealth [of Pennsylvania]: 1) ensuring all Pennsylvanians have access to clean water,

²¹⁴ *Id.*

²¹⁵ *Id.*

²¹⁶ *Pennsylvania Infrastructure Investment Authority – PENNVEST*, COMMONWEALTH OF PENNSYLVANIA, <https://www.pa.gov/agencies/pennvest> <https://www.pa.gov/agencies/pennvest>.

and 2) supporting the Commonwealth's economic development.²¹⁷

The program's framework is identical to that of the program in Virginia, with a few administrative differences. For example, in Pennsylvania, PENNVEST administers the DWSRF and the CWSRF programs. Additionally, PENNVEST has incorporated the following elements into the DWSRF program for the benefit of Pennsylvanian residents:

- A. *Economy of Sale* → economizing the funds and the amount of projects to fund at a time
- B. *Fix-It-First Approach* → replacing, augmenting, and/or repairing existing infrastructure v. creating/building new infrastructure
- C. *Cluster Systems* → to address localized individual home drinking water needs in specific areas

The SRF programs in Pennsylvania have been referred to as “the lifeblood of [PA’s] capital improvement program.”²¹⁸ In 2022, the EPA was awarded \$240 million by the Bipartisan Infrastructure Law, providing \$50 million of that toward the water infrastructure mission the SRFs have, supplementing the SRFs' \$67 million in funds that were already circulating.²¹⁹ In more rural areas, SRFs support and enable these communities to plan and implement water-quality projects that benefit wetland protection and restoration.

The SRFs funds in Pennsylvania are not directly funding the projects, a contrast from the SRFs in Virginia. In Pennsylvania, the funds function as a financial backing for more direct-to-target programs. For instance, the CWSRF awards funding through the Performance and Innovation in the SRF Creating Environmental Success (“PISCES”) Program, a compensatory mitigation initiative for the restoration and enhancement of aquatic resources. The DWSRF awards funding through the AQUARIUS Program, which highlights projects constructing and rehabilitating critical drinking infrastructure. These projects often include stormwater water projects that have a positive effect on wetlands in the areas.

4. Conclusion

In sum, Pennsylvania has a multifaceted approach to funding wetland restoration, with each program addressing different aspects of non-tidal wetland protection. Pennsylvania's SRFs provide broad financial support for water infrastructure which indirectly benefits non-tidal wetlands, although they do not specifically target wetland restoration. The PWRP offers a more direct mechanism by addressing smaller-scale impacts through a structured fee system, despite

²¹⁷ *Id.*

²¹⁸ *Keep Funds Flowing: Pittsburgh Infrastructure Project Underscores Importance of SRFs*, AMERICAN WATER WORKS ASSOCIATION, <https://www.awwa.org/AWWA-Articles/keep-funds-flowing-pittsburgh-infrastructure-project-underscores-importance-of-srfs/>.

²¹⁹ *EPA Awards \$240 Million for PA SRFs*, SMART WATER MAGAZINE, <https://smartwatermagazine.com/news/us-epa/epa-awards-240-million-pennsylvania-srfs>.

its limitation to state permitting and smaller impacts. In contrast, the PWHI represents the most robust program because it leverages funding through the Pittman-Robertson Act to fund larger-scale habitat restoration projects.

Together, these programs in Pennsylvania operate at different scales and stages. SRFs support infrastructure and planning; PWRP addresses permit impacts of wetlands; and PWHI allows for large-scale restoration. These programs together work as a complimentary framework. However, since SRFs provide indirect benefits for wetland restoration, PWRP has a limited scope, and PWHI does not exclusively focus on protecting non-tidal wetlands; some gaps remain. It would be beneficial for Pennsylvania to develop additional programs, specifically targeting non-tidal wetlands.

C. Maryland

Maryland's approach to non-tidal wetland protection is driven by nonprofit-led restoration efforts, agricultural programs such as the Conservation Reserve Enhancement Program ("CREP"), and state-administered funding mechanisms, including in-lieu fee programs and State revolving loan funds. Nonprofit organizations play a direct role in designing and implementing projects, while programs like CREP provide financial incentives for landowners to restore environmentally sensitive lands, such as wetlands. Together, these funding sources form a comprehensive system for supporting wetland restoration and preservation.

1. Non-Profit Organizations in Maryland

In Maryland, groups such as The Nature Conservancy, Ducks Unlimited, and the Chesapeake Wildlife Heritage play a significant role in advancing wetland restoration efforts using a variety of funding sources. Although these organizations do not typically provide substantial funding of their own, they remain essential to the restoration of non-tidal wetlands by designing, implementing, and managing projects.²²⁰

Chesapeake Wildlife Heritage relies on programs such as the Conservation Reserve Program and Conservation Reserve Enhancement Program to secure construction funding, while also obtaining support for personnel, including designers, construction supervisors, and managers, from private foundations.²²¹ Ducks Unlimited in Maryland typically relies on Farm Bill programs and traditional wetland restoration programs to fund its wetlands projects.²²²

Project eligibility criteria further shape the work of these organizations. Chesapeake Wildlife Heritage prioritizes restoring wetlands in areas that were previously cropped and contain hydric soils.²²³ The organization is currently planning multiple projects while also

²²⁰ Gerber, Ned. "Wetland Funding Research" Nicoletta DellaRatta, Feb. 16, 2026. Email Interview.

²²¹ *Id.*

²²² Reinhart, Scott. "Wetland Funding Research" Nicoletta DellaRatta, Feb. 13, 2026. Email Interview.

²²³ Gerber, Ned. "Wetland Funding Research" Nicoletta DellaRatta, Feb. 16, 2026. Email Interview.

maintaining hundreds of acres of previously established wetlands.²²⁴ Similarly, Ducks Unlimited, applies specific criteria when selecting project sites. According to Scott Reinhart, a Regional Biologist for Ducks Unlimited, suitable locations must have favorable soils that allow surface water to be retained for extended periods, a condition the organization refers to as ponding.²²⁵ Additionally, project sites are typically required to be in active agricultural rotation or to have recently retired from row-crop production, allowing Ducks Unlimited to focus on reducing agricultural runoff and nonpoint-source pollution.²²⁶ The organization also prioritizes designated focus areas that provide critical habitat for waterfowl species such as the American Black Duck. At present, Ducks Unlimited has approximately 25 to 35 projects in various stages of planning, surveying, design, and permitting across Maryland.²²⁷

Funding structures and collaboration practices further influence how wetland restoration projects are carried out. Denise Clearwater of Maryland's Department of the Environment notes that organizations often partner to meet matching requirements.²²⁸ However, Chesapeake Wildlife Heritage typically operates independently due to tight funding constraints.²²⁹ Nonetheless, the organization supports projects from initial design and construction through long-term maintenance, often securing funding for the full project lifecycle through agricultural programs such as Maryland's Conservation Reserve Enhancement Program, which is discussed in more depth below.²³⁰

Overall, many grants for wetland restoration require a one-to-one matching component, while others incentivize matching but do not require it.²³¹ Although most grants are intended to support the full project cycle, they frequently cover only a portion of personnel costs, necessitating supplemental funding from private foundations or grassroots efforts.²³² Funding opportunities also include certain limitations based on the priorities of the funding agency or partnership, which is another drawback.²³³ Despite occasional funding gaps, the overall structure encourages collaboration among conservation organizations, enabling them to play an important role in wetland restoration in Maryland.

However, smaller organizations, such as the Chesapeake Wildlife Heritage, often face challenges in accessing state and federal funding.²³⁴ The structure of these funding systems tends

²²⁴ *Id.*

²²⁵ *Id.*

²²⁶ *Id.*

²²⁷ *Id.*

²²⁸ Clearwater, Denise. "Maryland Department of the Environment" Nicoletta DellaRatta, Feb. 12, 2026. Zoom Interview.

²²⁹ Gerber, Ned. "Wetland Funding Research" Nicoletta DellaRatta, Feb. 16, 2026. Email Interview.

²³⁰ *Id.*

²³¹ *Id.*

²³² *Id.*

²³³ *Id.*

²³⁴ Gerber, Ned. "Wetland Funding Research" Nicoletta DellaRatta, Feb. 16, 2026. Email Interview.

to favor larger, more established organizations, making it more difficult for smaller groups to secure resources for wetland restoration projects.

2. Maryland's Conservation Reserve Enhancement Program

Maryland's Conservation Reserve Enhancement Program ("CREP") is a federal-state partnership administered through the US Department of Agriculture.²³⁵ Maryland's CREP program is funded by both the United States Department of Agriculture ("USDA") Farm Service Agency and the Maryland Department of Agriculture ("MDA"). CREP is a voluntary, nature-based agricultural program that aims to enroll up to 100,000 acres of agricultural land in the state.²³⁶ The USDA provides annual rental payments, cost-share assistance, and incentives, while MDA contributes additional financial incentives and covers up to 100% of eligible costs for certain best management practices.²³⁷ The Farm Service Agency requires CREP partners, such as Maryland, to match approximately 30 percent of the USDA's total project contributions through cash or in-kind support, such as technical assistance or monitoring.²³⁸ Another federal requirement is that the Maryland Department of the Environment ("MDE") and the Department of Natural Resources must provide an annual performance report detailing accomplishments and specific project goals.²³⁹

Under CREP, the government pays farmers and landowners to stop farming environmentally sensitive areas of their land, such as wetlands, for 10 to 15 years.²⁴⁰ In exchange, the land is maintained as protected areas that provide environmental benefits rather than being used for crop production.²⁴¹

CREP provides several incentives for landowners, including a one-time signing bonus, annual rental payments, and full cost-share coverage for wetland restoration in the state.²⁴² Additionally, landowners are eligible for a 40% Practice Incentive Payment specifically for wetlands.²⁴³ There is also a permanent easement option available. At the end of a CREP contract,

²³⁵ *Conservation Has Its Rewards... CREP*, MARYLAND,

https://mda.maryland.gov/resource_conservation/pages/crep.aspx.

²³⁶ *Conservation Reserve Enhancement Program (CREP) – Maryland Chesapeake Bay*, U.S. DEPARTMENT OF AGRICULTURE, <https://www.fsa.usda.gov/tools/informational/fact-sheets/conservation-reserve-enhancement-program-crep-maryland-chesapeake>.

²³⁷ *Conservation Grants Program*, MARYLAND DEPARTMENT OF AGRICULTURE,

https://mda.maryland.gov/resource_conservation/counties/MDA_ConsGrants2024_web.pdf.

²³⁸ *Partner*, U.S. DEPARTMENT OF AGRICULTURE, https://www.fsa.usda.gov/programs-and-services/conservation-programs/conservation-reserve-enhancement/crep_for_partners#:~:text=The%20achievement%20of%20multiple%20natural,progress%20in%20meeting%20program%20goals.

²³⁹ *Id.*

²⁴⁰ *Conservation Has Its Rewards... CREP*, MARYLAND,

https://mda.maryland.gov/resource_conservation/counties/MDA_CREP_Brochure_2023%20%28sc%29%20accessible%20%281%29.pdf.

²⁴¹ *Id.*

²⁴² *Id.*

²⁴³ *Id.*

landowners may sell a permanent easement on their land to the state of Maryland. The land is then protected by the State, rather than the landowner.²⁴⁴ The price of the easement is based on the fair market value of the foregone development.²⁴⁵ The permanent easement option is administered by Maryland's Department of Natural Resources, meaning the State is the founder of the easements.

Although this program is not specific to wetlands, many nonprofits rely on CREP as a key source of funding of wetland restoration projects. For smaller organizations, such as the Chesapeake Wildlife Heritage, CREP and other agriculture programs are among the most effective ways to secure funding in Maryland.²⁴⁶ Ned Gerber from the Chesapeake Wildlife Heritage emphasized the efficiency of CREP, explaining that the organization could submit a design for a landowner, receive approval within 30 days, and proceed with construction shortly after.²⁴⁷ Through this process, Chesapeake Wildlife Heritage has constructed many acres of wetlands and are able to maintain them, even after three years.²⁴⁸

CREP is a specialized version of the federal Conservation Reserve Program (“CRP”) that is more targeted toward environmentally sensitive lands, including wetlands. CREP follows the same regulations as CRP. As a result, participants must meet several eligibility requirements. First, the land must have been farmed regularly, meaning it was used for crops in at least four of the previous six years. Additionally, landowners must have an annual income lower than \$900,000 in average to be eligible.²⁴⁹ Federal regulations also limit participants to receiving no more than \$50,000 per year from the program. In addition, generally, no more than 25 percent of a county’s total cropland can be enrolled in CRP-related programs at once. However, this limit can be waived by the USDA, if the county agrees.²⁵⁰

From 1995 to 2024, CRP and Maryland CREP have invested over \$557,971, specifically in Wetlands Restoration Payments.²⁵¹

²⁴⁴ *Conservation Reserve Enhancement Permanent Easement Program (CREP)*, MARYLAND DEPARTMENT OF NATURAL RESOURCES, <https://dnr.maryland.gov/land/pages/crep.aspx>.

²⁴⁵ *Conservation Has Its Rewards... CREP*, MARYLAND, https://mda.maryland.gov/resource_conservation/counties/MDA_CREP_Brochure_2023%20%28sc%29%20accessible%20%281%29.pdf.

²⁴⁶ Gerber, Ned. “Wetland Funding Research” Nicoletta DellaRatta, Feb. 16, 2026. Email Interview.

²⁴⁷ *Id.*

²⁴⁸ *Id.*

²⁴⁹ *Adjusted Gross Income*, U.S. DEPARTMENT OF AGRICULTURE, <https://www.fsa.usda.gov/tools/informational/payment-eligibility/adjusted-gross-income#:~:text=The%202018%20Farm%20Bill%20requires,to%20Disclosure%20of%20Tax%20Information.>

²⁵⁰ *Conservation Reserve Program*, NATIONAL SUSTAINABLE AGRICULTURE COALITION, <https://sustainableagriculture.net/publications/grassrootsguide/conservation-environment/conservation-reserve-program/>.

²⁵¹ *Conservation Reserve Program payments in Maryland totaled \$290 million from 1995-2024*, https://farm.ewg.org/progdetail.php?fips=24000&progcode=total_cr.

3. The Maryland Department of the Environment’s In-Lieu Fee Program

The MDE has successfully managed an in-lieu fee wetland mitigation program using two separate funds. The Non-tidal Wetlands Compensation Fund has been in place since 1991, and the Tidal Wetlands Compensation Fund has operated since 1996.²⁵²

This program functions as a compensatory mitigation option. When a developer builds on property that contains wetlands, mitigation is required to address the environmental impact. If mitigation cannot be completed on site, the developer may instead pay a fee based on the extent of environmental loss.²⁵³ This is an impactful mitigation program on a small scale that helps preserve wetlands from the negative effects of development, which often can be devastating.

²⁵⁴is not consistent with the 2008 Mitigation Rule. Changes are proposed to ensure the program is consistent with the 2008 Mitigation Rule.²⁵⁵

4. The Chesapeake Bay Trust

The Chesapeake Bay Trust (“CBT”) is a non-profit organization created by Maryland’s General Assembly that funds environmental activities and awards grants, including those supporting non-tidal wetland projects.²⁵⁶ CBT provides grants to smaller wetland initiatives, and its average project approval rate is approximately 33 percent.²⁵⁷ The organization also engages in monitoring and developing proposals for wetland projects. While conducting a Zoom interview with Denise Clearwater, MDE, she also explained that MDE is currently under contract with CBT to manage and solicit bids for potential compensatory mitigation projects.²⁵⁸ CBT receives funding from federal agencies, as well as from state and local governments, non-governmental organizations, and private entities.²⁵⁹

5. The National Fish and Wildlife Foundation

The National Fish and Wildlife Foundation (“NFWF”) is another independent nonprofit organization. NFWF administers and distributes federal funds through grant programs.²⁶⁰

²⁵² *MDE’s In-Lieu Fee Program*, MARYLAND DEPARTMENT OF THE ENVIRONMENT

<https://mde.maryland.gov/programs/water/wetlandsandwaterways/aboutwetlands/pages/inlieu.aspx>.

²⁵³ Clearwater, Denise. “Maryland Department of the Environment” Nicoletta DellaRatta, Feb. 12, 2026. Zoom Interview.

²⁵⁴ *Id.*

²⁵⁵ *Id.*

²⁵⁶ Clearwater, Denise. “Maryland Department of the Environment” Nicoletta DellaRatta, Feb. 12, 2026. Zoom Interview.

²⁵⁷ *Grants & Opportunities*, CHESAPEAKE BAY TRUST, <https://cbtrust.org/grants/>.

²⁵⁸ Clearwater, Denise. “Maryland Department of the Environment” Nicoletta DellaRatta, Feb. 12, 2026. Zoom Interview.

²⁵⁹ *Grants & Opportunities*, CHESAPEAKE BAY TRUST, <https://cbtrust.org/grants/>.

²⁶⁰ *National Fish and Wildlife Foundation (NFWF): History, Function, and Funding*, CONGRESS <https://www.congress.gov/crs-product/R44740>.

However, the NFWF must match federal funds with non-federal private funds when awarding general grants.

NFWF provides substantial grant funding to state governments and private landowners. Maryland will receive more than \$16.7 million in federal conservation grants for projects, including wetland conservation.²⁶¹ These federal grants are expected to generate \$10.5+ million in matching contributions.²⁶²

NFWF has also partnered with the U.S. Environmental Protection Agency and the federal-state Chesapeake Bay Program, soliciting proposals through the Chesapeake Bay Stewardship Fund for the Chesapeake Bay Small Watershed Grants program.²⁶³ NFWF accepted Requests for Proposals from organizations or individuals until April 2, 2026. The program supports small-scale projects aimed at protecting or improving watersheds in the Chesapeake Bay region.²⁶⁴

The NFWF's ability to award grants depends on the availability of funds from federal agencies and other contributing partners. Final decisions regarding which projects receive funding are determined by the project applications submitted and the amount and timing of funds NFWF receives.²⁶⁵

The Chesapeake Bay Small Watershed Grants program ("SWG") offers two types of funding. The first is SWG Implementation grants which range from \$150,000 to \$750,000 for projects that take direct action to restore water quality, species, and habitats in the Chesapeake Bay Watershed region.²⁶⁶ The second grant is SWG Planning and Technical Assistance grants ("SWG-PTA"), which are smaller grants for under \$150,000. This grant can include planning, assessments, designing projects, or providing other technical support for future restoration projects.²⁶⁷ Match requirements of these grants are not required, but they are encouraged.²⁶⁸

These grants have the potential of supporting non-tidal wetlands, as their protection falls within one of the program's priorities. Priority 4 focuses on restoring degraded tidal and non-tidal wetlands, as they are important habitats of the American Black Duck.²⁶⁹

²⁶¹ Mackesey, Ryan, *Maryland to receive over \$16.9M in Chesapeake Bay Conservation Grants, including in Eastern Shore Projects*, WBOC, (Feb. 11, 2026), https://www.wbo.com/news/maryland-to-receive-over-16-7m-in-chesapeake-bay-conservation-grants-including-eastern-shore-projects/article_9348bcf5-2e92-4b07-a749-df8d3b9c35df.html.

²⁶² *Id.*

²⁶³ *Chesapeake Bay Small Watershed Grants 2026 Request for Proposals*, NFWF, <https://www.nfwf.org/programs/chesapeake-bay-stewardship-fund/chesapeake-bay-small-watershed-grants-2026-request#:~:text=NFWF%20will%20award%20grants%20through,within%2018%20months%20of%20award.>

²⁶⁴ *Id.*

²⁶⁵ *Id.*

²⁶⁶ *Id.*

²⁶⁷ *Id.*

²⁶⁸ *Id.*

²⁶⁹ *Id.*

The following table, provided on the NFWF website, shows organization types which may be eligible for certain funding.²⁷⁰

Figure 9 – Organizations Which May Be Eligible for NFWF Funding

Organization Type	Funding Opportunity	
	SWG Implementation	SWG-PTA
501(C) Non-Profit Organizations	✓	✓
Community Based Organizations	✓	✓
Local Governments	✓	✓
Municipal Governments	✓	✓
Tribal Governments and Organizations	✓	✓
K-12 Educational Institutions	✓	✓
U.S. Federal Government Agencies	✗	✗
State Government Agencies	✗	✓
Institutions of Higher Education	✗	✓
Businesses	✗	✗
Unincorporated Individuals	✗	✗
International Organizations	✗	✗

However, Chesapeake Wildlife Heritage has had a difficult time in receiving funds for non-tidal wetland projects from NFWF due to the small size of their organization.²⁷¹

6. The Conowingo Watershed Implementation Plan

The Conowingo Watershed Implementation Plan (“CWIP”) addresses pollution flowing into the Chesapeake Bay because the Conowingo Dam can no longer hold back as much sediment and nutrients as it previously did.²⁷² The goal of this plan is to reduce the nitrogen entering waterways.²⁷³ The plan aims to approve the most cost-effective projects.

²⁷⁰ *Id.*

²⁷¹ Gerber, Ned. “Wetland Funding Research” Nicoletta DellaRatta, Feb. 16, 2026. Email Interview.

²⁷² *Conowingo Watershed Implementation Plan*, SUSQUEHANNA RIVER BASIN COMMISSION, <https://www.srbc.gov/our-work/what-we-do/conowingo-watershed-implementation-plan.html>.

²⁷³ *Id.*

The funding for CWIP is provided by the pay-for-success program in Maryland.²⁷⁴ Under the pay-for-success program, depending on the project type, the first round of funding pays for projects that reduce nitrogen pollution at different costs, ranging from \$6 per pound of nitrogen reduced to \$150 per pound reduced.²⁷⁵

MDE is in an agreement with the Susquehanna River Basin Commission (“SRBC”) to assist in the review of applications and serve as the financing authority.²⁷⁶ MDE has set aside \$25 million for the Pay for Success Program to achieve the goals in the CWIP.²⁷⁷

Although this program does not specifically target wetlands, it nonetheless has indirect benefits for wetlands by reducing nutrient pollution and improving overall water quality.

7. Maryland State Revolving Funds

Maryland’s Water Quality Revolving Loan Fund (“MWIFA”) is extremely similar to Virginia’s SRFs, as it is administered through the EPA, and has all the same requirements and processes of applications for the funds. The mission of MWIFA is to provide state and federal financial assistance in the form of low-interest rate loans, loan forgiveness, and grant funding for eligible water quality, drinking waters, and stormwater management capital projects.²⁷⁸ This program administers a Maryland mirror version of the DWSRF discussed previously - this time named Drinking Water Revolving Loan Program (“DWRLF”).²⁷⁹ In effect, they function the same with long loan terms, and below market interest rate loans. The MWIFA program in Maryland focuses on improving the quality of Maryland’s rivers, streams, lakes, the Chesapeake Bay, and other water resources.²⁸⁰ MWIFA is authorized to issue revenue bonds subject to approval of the State Board of Public Works and Secretary of MDE.²⁸¹ The bonds are paid solely from MWIFA revenues as pledged under bond indenture for each of the above Funds.²⁸² Eligible types of projects, that wetland regulation and preservation may fit under, are Drinking Water Infrastructure and Source Water Pollution, Nonpoint Source Pollution and Watershed Restoration, and Stormwater Management and Flood Mitigation²⁸³

²⁷⁴ *Maryland Invests in Upstream and Out-of-State Nutrient Reductions via ‘Pay for Success’ Model*, ECOS <https://www.ecos.org/news-and-updates/maryland-invests-in-upstream-and-out-of-state-nutrient-reductions-via-pay-for-success-model/>.

²⁷⁵ *Id.*

²⁷⁶ *Conowingo Watershed Implementation Plan*, MARYLAND DEPARTMENT OF THE ENVIRONMENT, https://mde.maryland.gov/programs/water/TMDL/TMDLImplementation/Pages/Conowingo_WIP.aspx.

²⁷⁷ *Id.*

²⁷⁸ *Maryland Water Infrastructure Financing Administration*, MARYLAND DEPARTMENT OF THE ENVIRONMENT, <https://mde.maryland.gov/programs/water/WQFA/Pages/index.aspx>.

²⁷⁹ *Id.*

²⁸⁰ *Water Quality Revolving Loan Fund*, MARYLAND DEPARTMENT OF THE ENVIRONMENT, https://mde.maryland.gov/programs/water/wqfa/pages/water_quality_fund.aspx.

²⁸¹ *Maryland Water Infrastructure Financing Administration*, MARYLAND DEPARTMENT OF THE ENVIRONMENT, <https://mde.maryland.gov/programs/water/WQFA/Pages/index.aspx>.

²⁸² *Id.*

²⁸³ *Id.*

A major difference between the main CWSRFs & DWSRFs and the DWLRF is that Maryland is more proactive and creative with the use of these SRFs.²⁸⁴ SRFs are a very popular method of financial assistance for Maryland, which have a total of over 7 different grants and revolving loans that are financially supported by the MWIFA.²⁸⁵ These programs are in accordance with the EPA's regulation of SRFs, as the EPA even encourages the creative use of SRFs by states.²⁸⁶

Due to their creative nature and the success of these loans in Maryland, the Maryland legislature began to look at more uses for these loans beyond the traditional projects. In 2021, Maryland passed The Maryland Comprehensive Conservation Finance Act to: 1) including more projects in the eligibility requirements; 2) expand the types of borrowers that can receive SRF assistance; 3) allow sponsorships; and 4) set up a potential revenue source for repaying the SRF loans by defining environmental outcomes as a commodity.²⁸⁷ In expanding who can receive funding, Maryland may be able to fund wetland protection and conservation programs to improve water quality in the Chesapeake Bay Area in other states so long as Chesapeake Bay Program Partnership approves of the organization looking for the sponsorship.²⁸⁸

8. Conclusion

Maryland's non-tidal wetland protection relies on a combination of restoration efforts from nonprofit organizations, federal-state agricultural programs such as CREP, in-lieu fee mitigation programs, and revolving loan funds. Together, these programs provide multiple options for wetland restoration, from direct financial incentives for landowners to grant support for project design, construction, and long-term maintenance. While this framework allows for diverse and innovative approaches, it favors larger, more established organizations over smaller nonprofits, which can face challenges obtaining funding. Despite these limitations, the programs collectively play an important role in preserving and restoring non-tidal wetlands in Maryland. Expanding funding opportunities or creating additional programs specifically targeted to non-tidal wetlands could further strengthen Maryland's wetland conservation efforts.

D. Delaware

Delaware's non-tidal wetland conservation is supported by a mix of state cost-share programs, federal partnerships, and landowner incentives. Programs like the Phragmites Cost-Share Program and the Delaware Community Conservation Assistance Program provide funding

²⁸⁴ *Water Quality Revolving Loan Fund*, MARYLAND DEPARTMENT OF THE ENVIRONMENT, https://mde.maryland.gov/programs/water/wqfa/pages/water_quality_fund.aspx.

²⁸⁵ *Maryland Water Infrastructure Financing Administration*, MARYLAND DEPARTMENT OF THE ENVIRONMENT, https://mde.maryland.gov/programs/water/wqfa/pages/water_quality_fund.aspx.

²⁸⁶ *Innovative Use of SRFs Encouraged in New Maryland Legislation*, POLICY INNOVATION, <https://www.policyinnovation.org/insights/innovative-use-of-srfs-encouraged-in-new-maryland-legislation>.

²⁸⁷ *Id.*

²⁸⁸ Legislation, Bill SB0737, <https://mgaleg.maryland.gov/mgawebsite/Legislation/Details/sb0737?ys=2021RS>.

and guidance for managing invasive species and creating new wetlands. Federal programs such as the Natural Resources Conservation Service (“NRCS”) offer easements and restoration support. In combination, these programs help landowners and conservation groups to protect, restore, and enhance wetlands across the state.

1. Phragmites Control Cost-Share Program

Invasive species, including many plants, pose a great risk to wetlands. Often, these plants overgrow and replace native wetland plants, eliminating vital food sources and shelter for native wildlife.²⁸⁹

The DNREC Division of Fish and Wildlife helps private landowners improve and protect their land including non-tidal wetlands, through programs such as the Phragmites Cost-Share Program.²⁹⁰ This program is intended to aid property owners with undeveloped wetlands which are being taken over by phragmites.²⁹¹ Non-native hybrids of phragmites, a plant found in marshes and wetlands, are an invasive species that have had many negative effects on wetlands in Delaware and other states.²⁹² This program aids property owners by providing technical and financial assistance to Delaware landowners with undeveloped wetlands, such as tidal or non-tidal freshwater or brackish marshes that are being taken over by phragmites.²⁹³

The U.S. Department of Agriculture’s Natural Resources Conservation Service and The DNREC Division of Fish and Wildlife have partnered to create the Environmental Quality Incentives Program (EQIP).²⁹⁴ EQIP aims to provide technical and financial assistance to farmers, owners of non-industrial private land, and tribes.²⁹⁵ Through EQIP, state and federal funds combined cover 87.5 percent of the cost of a project, and the landowner would only need to contribute the remaining 12.5 percent of the cost.²⁹⁶ This means the landowner would be paying only about \$10 per acre treated.²⁹⁷

²⁸⁹ *Invasive Species*, CHESAPEAKE BAY PROGRAM, <https://www.chesapeakebay.net/issues/threats-to-the-bay/invasivespecies#:~:text=These%20large%2C%20semi%2Daquatic%20rodents%20can%20cause%20destruction.can%20remove%20a%20lot%20of%20plankton%20fr>.

²⁹⁰ *Private Land Assistance*, DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, <https://dnrec.delaware.gov/fish-wildlife/conservation/private-lands/>.

²⁹¹ *Id.*

²⁹² *Facts About Phragmites*, DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, <https://dnrec.delaware.gov/fish-wildlife/conservation/phragmites-facts/>.

²⁹³ *Private Land Assistance*, DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, <https://dnrec.delaware.gov/fish-wildlife/conservation/private-lands/>.

²⁹⁴ *Id.*

²⁹⁵ *Environmental Quality Incentives Program 2026*, NATURAL RESOURCES CONSERVATION SERVICE, <https://www.nrcs.usda.gov/programs-initiatives/environmental-quality-incentives-program/delaware/environmental-quality#:~:text=EQIP%20helps%20farmers%2C%20ranchers%2C%20and%20forest%20landowners,lands.%20EQIP%20offers%20financial%20and%20technical%20assistance>.

²⁹⁶ *Private Land Assistance*, DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, <https://dnrec.delaware.gov/fish-wildlife/conservation/private-lands/>.

²⁹⁷ *Id.*

To obtain assistance, landowners are able to apply to the Phragmites Cost-Share Program, with assistance on a first-come, first-served basis, benefiting those who apply early.²⁹⁸ There are qualifications in order for landowners to be approved for the Phragmites Cost-Share Program. The applicant must have a range of 5-200 acres of phragmites to be spray-treated with herbicide.²⁹⁹ The landowner also must agree to have their phragmites treated for three years.³⁰⁰

Although this cost-share program does not directly target non-tidal wetlands, they are very likely to be targeted as a result of the phragmites control.

However, there are several valid concerns with this cost-share program, as herbicides are applied to phragmites via helicopter.³⁰¹ A broad-spectrum herbicide is used, which may also eliminate native plants that the herbicide comes into contact with.³⁰² The DNREC Division of Fish and Wildlife attempts, to the best of its ability, to spray only phragmites with precision.³⁰³ Landowners can also establish no-spray buffer zones around sensitive areas, allowing them to play a direct role in herbicide treatment.³⁰⁴

Another potential drawback of this program is that the DNREC Division of Fish and Wildlife does not offer assistance for phragmites that cannot be treated by helicopter.³⁰⁵ However, the Division does provide guidance on how landowners can address the issue themselves.³⁰⁶ Overall, this program offers individualized support to landowners, even if they may not qualify for direct treatment assistance.

2. The Delaware Community Conservation Assistance Program

The Delaware Community Conservation Assistance Program (“DeCAP”) is another cost-share program that helps support the existence of non-tidal wetland areas in Delaware. It provides financial incentives, along with technical and educational assistance, to property owners for the use of Best Management Practices (“BMPs”) in Delaware’s Chesapeake Bay Watershed.³⁰⁷ There are eight BMPs approved for DeCAP, one of which is constructed wetlands.³⁰⁸

²⁹⁸ *Id.*

²⁹⁹ *Id.*

³⁰⁰ *Id.*

³⁰¹ *Cost Share Questions and Answers*, DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, <https://dnrec.delaware.gov/fish-wildlife/conservation/private-lands/cost-share-questions/>.

³⁰² *Id.*

³⁰³ *Id.*

³⁰⁴ *Id.*

³⁰⁵ *Id.*

³⁰⁶ *Id.*

³⁰⁷ *Community Conservation Assistance Program*, DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL, <https://dnrec.delaware.gov/watershed-stewardship/chesapeake/decap/>.

³⁰⁸ *Id.*

The BMPs must be maintained for 5 years to receive funding.³⁰⁹ The cost-share percentage depends on the specific program. DNREC has an infographic of the costs of constructed wetlands compared to other BMPs.³¹⁰

Although this program does not protect existing non-tidal wetlands, it still supports wetland ecological functions by incentivizing the creation of new wetlands in areas where they previously did not exist.

3. Nature Resources Conservation Service Programs

The NRCS is a federal agency of the U.S. Department of Agriculture that works with farmers, ranchers, landowners, and other private land managers to improve, protect, and conserve natural resources. NRCS's primary focus is agricultural lands, but it also contributes to broader environmental goals such as water quality and soil health.³¹¹ The NRCS has multiple programs that provide funding for these types of projects. The program discussed below may be applicable to Delaware's wetlands and non-tidal wetlands.

For funding, applicants may go through the NRCS's Wetland Reserve Enhancement Partnership ("WREP"), which is a part of the agency's Agricultural Conservation Easement Program ("ACEP").³¹² This is different from most CREP programs, as this program is wetland-specific. ACEP has two components: 1) agricultural land easements, which help protect croplands and grasslands on working farms, and 2) wetland reserve easements, which help protect wetlands affected and degraded due to agricultural reasons.³¹³ The WREP is a voluntary program through which NRCS enters into agreements with eligible partners to leverage resources to carry out high priority wetland protection, restoration, and enhancement to improve wildlife habitat.³¹⁴ Eligible lands, which include farmed or converted wetland habitat that can be successfully and cost-effectively restored, may be enrolled under permanent easements, up to 30 years, or 30-year contracts.³¹⁵ Eligible landowners include owners of privately held land, including land that is held by American Indian tribes, and all landowners who meet the adjusted gross income limitations.³¹⁶ Partner contributions must equal at least 10% of the total estimated

³⁰⁹ *Protecting Local Waterways Starts At Home – and These Programs Are Here to Help*, Chesapeake Bay Program, <https://www.chesapeakebay.net/news/blog/protecting-local-waterways-starts-at-home-and-these-programs-are-here-to-help>.

³¹⁰ *Community Conservation Assistance Program*, DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL, <https://dnrec.delaware.gov/watershed-stewardship/chesapeake/decap/>.

³¹¹ Official Website, NATURAL RESOURCES CONSERVATION SERVICE, <https://www.nrcs.usda.gov/>.

³¹² *Weekly Crop Update*, University of Delaware, <https://sites.udel.edu/weeklycropupdate/?p=15959>.

³¹³ *Agricultural Conservation Easement Program*, NATURAL RESOURCES CONSERVATION SERVICE, <https://www.nrcs.usda.gov/programs-initiatives/agricultural-conservation-easement-program>.

³¹⁴ *Wetland Reserve Enhancement Partnership*, NATURAL RESOURCES CONSERVATION SERVICE, <https://www.nrcs.usda.gov/programs-initiatives/wetland-reserve-enhancement-partnership>.

³¹⁵ *Id.*

³¹⁶ *Wetland Reserve Easements (WRE)*, NATURAL RESOURCES CONSERVATION SERVICE, <https://www.nrcs.usda.gov/programs-initiatives/wetland-reserve-easements>.

costs for easement acquisition-related costs and restoration implementation costs.³¹⁷ Proposals that make greater contributions will receive greater consideration in the selection process.³¹⁸ Additionally, the NRCS will prioritize applications based on the easement's potential to protect and enhance habitat for migratory birds and other wildlife.³¹⁹

As of October 7, 2020, the NRCS provided up to \$30 million in technical and financial assistance to help eligible conservation partners voluntarily protect, restore and enhance critical wetlands on agricultural lands.³²⁰ If an organization can fulfill these requirements, this program can be a great funding opportunity for Delaware's wetlands.

4. Conclusion

Delaware's wetland programs provide useful support for non-tidal wetlands, but many are only indirectly related. Programs like the Phragmites Cost-Share Program and DeCAP primarily focus on invasive species control or creating new wetlands, while the NRCS Wetland Reserve Enhancement Partnership targets agricultural lands more broadly. These programs face limitations, including herbicide impacts on native plants, restrictions on land that may be eligible, and challenges for smaller landowners or areas that cannot be treated easily. While they offer valuable tools, Delaware's non-tidal wetlands could benefit from more programs specifically designed to protect and restore existing habitats.

III. Comparative Non-Tidal Wetland Funding Programs from Other States

As explained in more detail below, several states outside the Chesapeake Bay Area offer effective funding models that may serve as useful examples for developing similar programs in the Chesapeake Bay Watershed.

A. Ohio

Ohio's wetland restoration project, H2Ohio, is administered collaboratively by the Ohio Department of Agriculture, Ohio Department of Natural Resources, Ohio EPA, and the Ohio Lake Erie Commission.³²¹ H2Ohio has generated approximately \$297- \$308 million from more than 180 wetland restoration projects that spans over 11,000 acres of land.³²² Ohio residents saw an \$8 return in economic benefits for every dollar invested in H2Ohio's wetland restoration

³¹⁷ *Wetland Reserve Enhancement Partnership*, NATURAL RESOURCES CONSERVATION SERVICE, <https://www.nrcs.usda.gov/programs-initiatives/wetland-reserve-enhancement-partnership>.

³¹⁸ *Id.*

³¹⁹ *Wetland Reserve Easements (WRE)*, NATURAL RESOURCES CONSERVATION SERVICE, <https://www.nrcs.usda.gov/programs-initiatives/wetland-reserve-easements>.

³²⁰ *Weekly Crop Update*, University of Delaware, <https://sites.udel.edu/weeklycropupdate/?p=15959>.

³²¹ *About H2Ohio*, H2OHIO OFFICIAL WEBSITE, <https://h2.ohio.gov/about-h2ohio/>.

³²² *H2Ohio and the Value of Restoring Watersheds*, THE NATURE CONSERVANCY, https://www.nature.org/content/dam/tnc/nature/en/photos/oh-clean-water-page/H2Ohio_and_the_Value_of_Restoring_Watersheds_2026.pdf.

project.³²³ Additionally, H2Ohio has created hundreds of jobs.³²⁴ Thus, Ohio’s wetland restoration program not only receives adequate funding, but also provides significant economic and social benefits to many residents across the state.

One of the main priorities of H2Ohio is to ensure excess nutrients, such as phosphorus, do not enter waterways.³²⁵ Through Agricultural Best Management Practices, H2Ohio prevented 420,000 pounds of phosphorus from entering waterways in 2024.³²⁶ Although this program incentivizes Agricultural Best Management Practices, it also includes the reduction of road salt runoff, litter cleanup, dam removal, land conservation, and revitalization of water infrastructure.³²⁷

H2Ohio is funded through the Ohio General Assembly’s biennial budget.³²⁸ Ohio’s program serves as a strong model for other states because it demonstrates how legislative investments can produce economic returns from investing into environmental restoration projects.

The Water Resource Restoration Sponsor Program (WRRSP) further illustrates a model approach to water quality improvement by providing funding for projects that specifically target high-quality streams and wetlands.³²⁹ WRRS is established by Ohio’s Environmental Protection Agency and is incorporated into the Water Pollution Control Loan Fund (“WPCLF”).³³⁰ In 2026, the Ohio EPA has allocated \$24.6 million to WRRSP for funding of wetland and restoration projects.³³¹ The Ohio EPA primarily receives funding from federal capitalization grants, including those provided through Ohio’s Clean Water State Revolving Loan Fund and annual federal SRF.³³² These federal grants require a minimum state match of 20 percent.³³³ To meet these matching requirements for the upcoming year, Ohio plans to use match bonds.³³⁴ This approach is different from the Chesapeake Bay Watershed state’s programs discussed above, as those states often rely on funding from agricultural programs that do not specifically target

³²³ *The Value of H2Ohio*, OHIO ENVIRONMENTAL COUNCIL, <https://theoec.org/news-and-information/the-value-of-h2ohio/>.

³²⁴ *Id.*

³²⁵ *H2Ohio and the Value of Restoring Watersheds*, THE NATURE CONSERVANCY, https://www.nature.org/content/dam/tnc/nature/en/photos/oh-clean-water-page/H2Ohio_and_the_Value_of_Restoring_Watersheds_2026.pdf.

³²⁶ *Id.*

³²⁷ *About H2Ohio*, H2OHIO OFFICIAL WEBSITE, <https://h2.ohio.gov/about-h2ohio/>.

³²⁸ *Id.*

³²⁹ *Water Resource Restoration Program*, OHIO ENVIRONMENTAL PROTECTION AGENCY, <https://epa.ohio.gov/divisions-and-offices/environmental-financial-assistance/financial-assistance/water-resource-restoration-sponsor-program>.

³³⁰ *Water Pollution Control Loan Fund*, OHIO ENVIRONMENTAL PROTECTION AGENCY, <https://dam.assets.ohio.gov/image/upload/epa.ohio.gov/Portals/29/documents/ofa/2026-WPCLF-PMP-FINAL-combined.pdf>.

³³¹ *Id.*

³³² *Id.*

³³³ *Id.*

³³⁴ *Id.*

wetlands. As a result, obtaining funding through those programs may be more difficult and may have more guardrails for wetland projects.

Together, H2Ohio and WRRSP provides major funding for many wetland restoration projects throughout the state. The approach to invest into on-the-ground projects has paid off to maximize both environmental and economic outcomes.

B. Massachusetts

The Division of Ecological Restoration (“DER”) plays a crucial role in restoring and protecting rivers, wetlands, and watersheds in Massachusetts.³³⁵ DER initiates projects and partners with nonprofits, towns, individuals, and groups to implement projects.³³⁶ These projects improve habitat for wildlife and provide many benefits to communities such as reduced flooding and improved water quality.³³⁷ In fact, as of 2019, DER awarded \$1.6 million in state and federal grant funds for Ecological Restoration Priority Projects that support river and wetland habitats and climate adaptation.³³⁸ DER selects projects based on considerations of the project’s cost, size, practicality, feasibility, available DER resources, and partner support.³³⁹ Applicants can be accepted on DER’s website.

Massachusetts is a model state, not only for its extensive legal protection of wetlands through their Wetlands Protection Act (“WPA”), but also for the many grant and loan programs available to developers and citizens alike. Through the combined effort of both the Act and the DER, Massachusetts has protected about 230,000 acres of wetlands.³⁴⁰

C. Minnesota

Minnesota runs a Clean Water Fund, that voters approved via a Clean Water, Land and Legacy Amendment to the state constitution in 2008.³⁴¹ Beginning in 2009 and continuing through 2034, the Amendment increases the sales and use tax rate by three-eighths of 1%.³⁴² These payments are dedicated to four separate funds, one being the Clean Water Fund.³⁴³ In the fiscal year 2020-21, the Minnesota Department of Agriculture (“MDA”) received \$21.7 million from the Clean Water Fund, and the legislature appropriated \$20.24 million of Clean Water

³³⁵ *Division of Ecological Restoration*, MASSACHUSETTS, <https://www.mass.gov/orgs/division-of-ecological-restoration>.

³³⁶ *Id.*

³³⁷ *Id.*

³³⁸ *DER Awards Grants to Five River and Wetland Restoration Priority Projects*, MASSACHUSETTS, <https://www.mass.gov/news/der-awards-grants-to-five-river-and-wetland-restoration-priority-projects>.

³³⁹ *Become a DER Priority Project*, MASSACHUSETTS, <https://www.mass.gov/how-to/become-a-der-priority-project>.

³⁴⁰ *Massachusetts State Wetland Program Summary*, NAWM, https://www.nawm.org/pdf_lib/state_summaries/massachusetts_state_wetland_program_summary_083115.pdf.

³⁴¹ *Clean Water Fund*, MINNESOTA DEPARTMENT OF AGRICULTURE, <https://www.mda.state.mn.us/environment-sustainability/clean-water-fund>.

³⁴² *Id.*

³⁴³ *Id.*

Funds for the MDA in 2022-23.³⁴⁴

The MDA is 1 of 7 state agencies to receive Clean Water Fund dollars to protect, enhance, and restore Minnesota’s lakes, rivers, streams and groundwater.³⁴⁵

Figure 10 – Table of Clean Water Funds Allocated to the MDA Since 2010

Clean Water Fund Biennium	Approximate Funds Allocated to the MDA
2010-2011	\$ 8.9 million
2012-2013	\$15.4 million
2014-2015	\$14.8 million
2016-2017	\$13.7 million
2018-2019	\$17.6 million
2020-2021	\$21.7 million
2022-2023	\$20.24 million
2024-2025	\$41.678 million
2026-2027	\$33.55 million

The Clean Water Fund of Minnesota is currently funding 10 separate projects that range from \$100,000 to \$5 million in costs per project. The Pesticide Monitoring and Assessment project has utilized the funds to monitor the state’s groundwater and surface water resources for agricultural chemicals for more than 30 years.³⁴⁶ The funds go to the MDA laboratory and have resulted in an increase of detectable pesticides in the water - a number that was once only 44 pesticides in 2009 and which are now more than 180 different identifiable pesticides.³⁴⁷ The Increased laboratory capacity has allowed the MDA to provide cooperative pesticide monitoring and assessment with other state agencies on wetlands and other public water supply systems.³⁴⁸

With 5,000+ projects funded through this program and over \$ 1,978 million in Clean Water Legacy appropriations since its enactment, the Clean Water Fund in Minnesota serves as an example of a thriving legislative initiative that protects wetlands.

IV. Conclusion

The programs analyzed above demonstrate the various methods by which non-tidal wetlands are protected and restored. The programs in Virginia use the SRFs and EPA grants

³⁴⁴ *Id.*

³⁴⁵ *Clean Water Funds Allocated to the MDA*, MINNESOTA DEPARTMENT OF AGRICULTURE, <https://www.mda.state.mn.us/protecting/cleanwaterfund/landlegacy/cwfmndause>.

³⁴⁶ *Clean Water Fund*, MARYLAND DEPARTMENT OF AGRICULTURE, https://www.mda.state.mn.us/sites/default/files/docs/2025-10/cwfbrochurefy26_27.pdf.

³⁴⁷ *Id.*

³⁴⁸ *Id.*

differently than other states, using the funds from the SRFs to fund the projects themselves, whereas other states use the SRFs and EPA grants as financial backing for their own state-run programs, such as the PICSES Program in Pennsylvania. Virginia uses SRFs and EPA grants, along with mitigation credit sales, to incentivize wetland protection. Maryland's programs are similar, but they place greater emphasis on the planning and implementation of projects, ensuring completion and long-term management. Pennsylvania is a great example of using non-wetland specific programs to indirectly benefit wetland protections, including the Ducks Unlimited and the Pennsylvania Game Commission partnership to support state wildlife management and broader conservation efforts. Delaware's current programs include effective cost-share initiatives that provide financial incentives to property owners to use BMPs in affected areas, particularly within the Chesapeake Bay Watershed.

In conclusion, this comparative analysis highlights key funding sources and program options available to states within the Chesapeake Bay Watershed region for the protection and restoration of non-tidal wetlands. These states can draw on model programs to develop a comprehensive network of funding options.