Restoring Historic Wetlands in the Chesapeake Bay Region
Waterfowl Festival Conservation Partners Grant Proposal 2025

About Ducks Unlimited:

Ducks Unlimited (DU) was established in 1937 amid the Dust Bowl drought and the Great Depression. Founded by individuals who understood the value of wetland resources and bolstered by the passage of the first federal duck stamp in 1934, DU has become a leader for wetlands and waterfowl conservation. To date, we have conserved more than 19 million acres across the continent, focusing heavily on the priority landscapes for waterfowl populations, while conserving habitat in all 50 states, every Canadian province, and Mexico.

DU employs a three-pronged strategy to accomplish our mission and vision. This strategy includes on-the-ground restoration and protection of key wetland habitats backed up by extensive peer and in-house research. DU also engages in waterfowl-friendly public policy, such as responsible land and water use and policies that ensure perpetuation of waterfowl hunting guided by professional wildlife management principles.

Proposal Abstract:

Ducks Unlimited has a mission to protect, restore and manage wetlands and associated habitats for North America's waterfowl. The Chesapeake Bay region has a long history of waterfowl use, mainly noted for its historic wintering grounds used in large numbers by migratory waterfowl. DU ranks the Chesapeake Bay region as a priority two landscape, just below the priority one breeding grounds for these migratory waterfowl, as DU realizes the extreme importance of the wintering grounds in the full life cycle of waterfowl.

The Chesapeake Bay Program estimates a net loss of approximately 60,000 wetland acres from 1985 to 2020 in the watershed. Even more focused, down to the Eastern Shore of Maryland, where we see habitat loss at a high rate due to eroding shoreline, sea-level rise, invasive species, agriculture, and human development. Maryland could lose up to 90% of its coastal marshes by 2100 due to these factors. This makes it all the more important to do everything in our power to protect and restore waterfowl habitat in the region.

Through this proposal, and strategic partnerships to include the Maryland Department of Natural Resources (MD DNR) and the U.S. Fish and Wildlife Service (USFWS), DU looks to restore areas that were once historically wetlands back to their original state with management capabilities focused directly on waterfowl use and habitat. As the Waterfowl Festival looks to bring a conservation focus back to the forefront of the organization, playing a role in the proposed projects would ensure significant impact by restoring waterfowl habitat on publicly accessible lands in the immediate vicinity of the Festival's roots. Beyond wintering and migrating waterfowl, other wildlife benefit from these projects as well, contributing significantly to water quality in the Bay as outlined below. Furthermore, wetland restoration provides critical ecosystem services for people including community resilience and public recreation opportunities.

Project Selection:

When DU looks to put projects on the ground, there are many factors that play into our decision. DU looks to identify locations in agricultural fields that are only marginally suitable for agricultural production, largely due to the area's natural hydrology and historic wetland presence. These areas tend to be less productive for the farmers who are working the land as they typically stay too wet to grow crops.

This often aligns with what DU seeks in a project site. These areas are typically lower lying than the rest of the field and the surrounding landscape, making them ideal for capturing runoff from higher areas. Additionally, because they are at a lower elevation, they usually have the types of soils that are necessary for making a project viable. These soils are known as hydric soils and have heavier clay content. Hydric soils are indicative of areas that were once wetland before human influence altered the natural hydrology, ultimately draining them for agricultural purposes.

DU also takes a science-based approach when selecting project areas. The Black Duck Decision support tool is used to identify areas where the American Black Duck will stand to have the most benefit out of a project when wintering and breeding in the region. American Black Ducks are one of the few waterfowl species that breed in the Chesapeake Bay region and have been on a declining trend since the 1950s. The Chesapeake Bay Program's overarching goal is to be able to support 100,000 wintering American Black Ducks, and these proposed projects play a significant role in achieving this by providing food and habitat.

Moreover, these projects support the Atlantic Coast Joint Venture's Waterfowl Implementation Plan through the restoration of wetlands across the Atlantic Flyway. This is a regionalized version of the North American Waterfowl Management Plan that aims to restore habitat for breeding and migrating waterfowl across North America. These overarching documents are driving forces in DU's mission related to protecting and restoring waterfowl habitat throughout North America. With these documents in mind and taking a landscape-based approach to project selection, the proximity of these project locations to high waterfowl use areas is an important factor.

Public access is also a key component of project selection. All three proposed projects will occur on state or federally owned lands. This plays an important role in allowing the residents of Maryland access to the projects, which are a result of the dollars they raised through outdoor recreation participation. These projects allow for increased use of these public areas and create new recreational activities for the public whether this be through new waterfowl hunting opportunities, enhanced experiences for wildlife viewers (i.e. birders and photographers), healthy fisheries for the area's anglers, or simply adding a variety of different habitats for outdoors men and women to enjoy.

Projects taking place on public lands, such as Browns Branch Wildlife Management Area (WMA), which is situated in a major flyway, also present opportunities for future work. A phase two at Brown's Branch WMA is already in the planning stages, allowing the impacts of these wetland restorations to be greater, adding to the complex of wetlands and associated waterfowl habitat in the immediate vicinity. Similarly, the project at LeCompte WMA is located in the Nanticoke watershed, which historically supports over 30% of the wintering waterfowl population on the shore within its 725,000-acre watershed. LeCompte WMA boasts several wetland complexes within its boundary, as well as other historic public waterfowl wintering areas just adjacent, including Blackwater National Wildlife Refuge (NWR), regularly known to hold hundreds of thousands of wintering waterfowl.

Projects occurring on public lands such as these also play a large role in future support of organizations such as DU and the Waterfowl Festival, as residents can directly see the project's impact on the public land system in the state of Maryland. These sites also serve as environmental education resources, encouraging those who are new to sporting traditions to discover the experiences available in the outdoors via public lands. These public sites are often used for youth educational trips centered on experiencing nature and learning about the native wildlife in their region. Furthermore, many DU projects become designated as youth and veteran hunting areas, allowing the hunting community to engage those who may be young or first-time hunters.

DU also uses an online system called Field Docs to run selected wetland systems through algorithms that produce estimated water quality benefits related to each individual project. Wetlands act as the kidneys of nature and reduce non-point source pollution, contributing to the Total Maximum Daily Load (TMDL) of

the Chesapeake Bay watershed. TMDL's are a calculation that determines the maximum amount of specific pollutants that can be released into a water body to help meet water quality standards. Increasing the number of wetlands in the landscape directly addresses the water quality issues currently faced in the Chesapeake Bay. Wetlands take in run off from a larger area and filter pollutants out as they settle to the bottom of the wetland before the water ends up downstream, ultimately entering the Chesapeake Bay.

Construction and Management:

Construction of proposed wetlands includes removing material from the pool areas through shallow excavation and using this material to create berms surrounding the pool area to back up water. One important note here is that the topsoil that contains the best growing soil and the native seed bank is stockpiled on the side and respread over the floor of the pool areas to allow for the moist soil vegetation to grow in the right conditions. A water control structure will be installed, which is set into the berm, and can be opened and closed with boards to manage the level of water being held back in these systems.

The construction of these wetlands is specifically designed to be managed as a natural system would function in order to create ideal waterfowl habitat. By adding a water control structure to the wetland, the land managers can follow the natural cycle of wetlands to promote moist soil vegetation growth favored by migrating waterfowl. This cycle includes dewatering in the spring to allow this vegetation to grow and bringing water back on in the fall as waterfowl start to migrate south. Leaving water on past the end of hunting seasons into the spring is ideal, as this not only resets the seed bank for the following growing season but also allows waterfowl to use these systems on their northern migration. While much of the vegetation has been consumed up to this point, protein-rich invertebrates increase production in the spring. Waterfowl increase their protein intake as they migrate north to prepare for egg production, molting, and higher energy use during breeding months.

This cycle of dewatering in the spring and putting water back on in the fall, leaving the areas flooded through the winter, is repeated on an annual basis. Sometimes, a disturbance event is needed every few years to reset the native vegetation growth, which could include burning, discing, and leaving the area flooded or dry for an extended period of time outside of the normal cycle. With the proper management of water levels and disturbance events, invasive vegetation can be controlled, and native moist soil plants can thrive. Additionally, returning wetlands to the area and enabling management capabilities will offer a flood mitigation benefit to local communities. Healthy wetlands are sponges on the landscape, absorbing water during excess rainfall and extreme weather events.

Partnership Opportunity:

Ducks Unlimited respectfully requests the support of the Waterfowl Festival for timely and critical conservation efforts spanning the Eastern Shore of Maryland. Specifically, we are seeking a $70,000 grant to advance wetland restoration projects planned at Browns Branch Wildlife Management Area, Lecompte Wildlife Management Area, and Blackwater National Wildlife Refuge. Your partnership will add high-quality waterfowl habitat to the landscape in an area important to both of our organizations. Below is a description of each project your investment will make possible. DU anticipates the delivery of all three projects by June 30, 2026.

[Browns Branch WMA] DU is partnering with MD DNR to restore 16.2 acres of agricultural fields back to the historic shallow water emergent wetlands they once were. This is occurring on a property MD DNR has recently acquired, now formally known as Browns Branch WMA, located at the intersection of Route 301 and Sudlersville Road. This WMA was acquired in 2019 by the state, consisting of 1,172 total acres, of which 682 acres are currently in agriculture.

The property's natural hydrology has been highly altered through ditching and the installation of drain tile to allow for the current agricultural practices. MD DNR has already started work on the property by removing some of the existing drain tile in the hope of restoring some of the natural hydrology that once existed on the landscape. Even with the past installation of ditches and drain tiles, the areas we are focused on stay excessively wet, making these areas less than ideal for agriculture. MD DNR has partnered with DU to create some shallow water pool areas in hydric soil areas (indicative of the area once being a wetland) through low berm construction, shallow excavation, and water control structure installation for water management capabilities. The planned system is designed to catch the runoff from the field creating a variety of shallow pool areas and sheet flow wetlands with existing ditching being taken advantage of for overflow and dewatering to follow a natural wetland cycle.

While benefiting waterfowl, shorebirds, and other wildlife, this project also removes suspended solids, nitrogen, and phosphorus from the Chesapeake Bay watershed, improving the water quality of rivers downstream, starting with water in Browns Branch, and ultimately ending up in the Bay. This specific wetland has been run through online calculations in Field Docs to show an estimated reduction of 826 lbs. of Nitrogen, 21 lbs. of Phosphorus, and 38,873 lbs. of suspended solids from the Chesapeake Bay watershed on an annual basis. A portion of this grant award ($20,000) will be used to supplement the project cost and serve as a required non-government match still needed to unlock secured public funding from National Fish and Wildlife Foundation (NFWF).

[**LeCompte WMA]** Ducks Unlimited is partnering with MD DNR to restore 16.6 acres of land that is currently in agricultural production to a large managed wetland cell designed specifically for shallow water emergent vegetation, benefiting waterfowl and other wildlife. This project is occurring at LeCompte WMA, located south of Vienna, Maryland, on Steele Neck Road just west of the Nanticoke River. LeCompte WMA is a part of Maryland's long, rich history of public land, comprised of 485 total acres. Notably, the WMA's history includes being chosen for the first release site of trapped turkeys from the western shore and being designated as a refuge site for the Delmarva Fox Squirrel, which was listed as an endangered species in 1967.

Adding to the diversity of wildlife relying on this WMA are the various waterfowl using the area. Waterfowl habitat will be greatly improved through this project. Through shallow excavation and the building of gradual berms, this restored wetland cell is being designed to catch rainwater and groundwater to function as a natural wetland. Native varieties of vegetation will be provided with optimal conditions through water level management, allowing them to thrive and create prime waterfowl habitat during the critical periods of winter and spring migration. This system will have water level management capabilities through a water control structure installed in the berm to allow for draining of the wetland for vegetation growth in the spring and summer.

While this project is specifically focused on waterfowl habitat, other species will also benefit from this wetland system. Our work will also reduce inputs of nitrogen, phosphorus, and suspended solids from the Nanticoke watershed, ultimately improving water quality in the Chesapeake Bay for wildlife and people. The project at LeCompte WMA has been run through Field Docs to show an estimated reduction of 1,114 lbs. of Nitrogen, 47 lbs. of Phosphorus, and 59,715 lbs. of suspended solids from the Chesapeake Bay watershed on an annual basis. DU would be grateful to have the support of the Waterfowl Festival to assist in advancing this project. A portion of this grant award ($20,000) will be used for the remaining phases of project delivery and will also help fulfill the non-government commitment required to unlock funds previously awarded to this project by NFWF.

[Blackwater NWR, Fields #9 and #14 Wetland Restoration] Blackwater National Wildlife Refuge, located just outside of Cambridge, Maryland, is recognized as a vital resting and feeding area for migratory and wintering waterfowl. It serves as one of the primary wintering grounds for Canada geese along the Atlantic Flyway. A key feature of the approximately 28,000-acre Refuge is a 250-acre area of managed wetlands, adjacent to a popular Wildlife Drive and the Refuge Visitor Center. Notably, over 70% of the waterfowl that utilize the Refuge each year can be found within this 250-acre managed wetland complex, which is the focus of our project.

This wetland complex is important not only for wildlife, but also for people, as more than 180,000 annual visitors to the Refuge enjoy wildlife observation at this site. The U.S. Fish and Wildlife Service (USFWS) relies on wetland infrastructure (water control structures, pumps, and dikes) to manage these wetlands to provide optimal habitat conditions. The USFWS, with the help of DU, desires to restore fields #9 and #14 (see attached map). DU has secured $158,000 of NFWF grant funds for this project. However, DU must invest an additional $30,000 in non-government funding to move forward with this effort. DU will provide survey and design, project bidding and contracting, and construction management services. A portion of the grant from the Waterfowl Festival ($30,000) will be used to leverage secured public funding and complete this project. Together, we will restore approximately ~23 acres of shallow emergent freshwater wetlands and enable estimated reductions of nitrogen runoff by 1,800 lbs. and 161.34 tons of sediment annually. These restoration projects provide essential, high-quality food sources and enhance water quality for waterfowl in the long term.

List of Attachments:

- Project Budgets
- Project Site Maps

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Project Budgets:

CATEGORY	Browns Branch WMA	LeCompte WMA	Blackwater NWR
Personnel*	$ 38,231	$ 35,625	$ 52,730
Equipment	$ -	$ -	$ -
Travel	$ 2,010	$ 2,010	$ 1,340
Construction Materials & Contracts**	$ 129,156	$ 77,300	$ 158,100
Indirects^	$ 12,957	$ 12,140	$ 13,449
Subtotal	$ 182,354	$ 127,075	$ 225,619
TOTAL	**$ 535,048**		

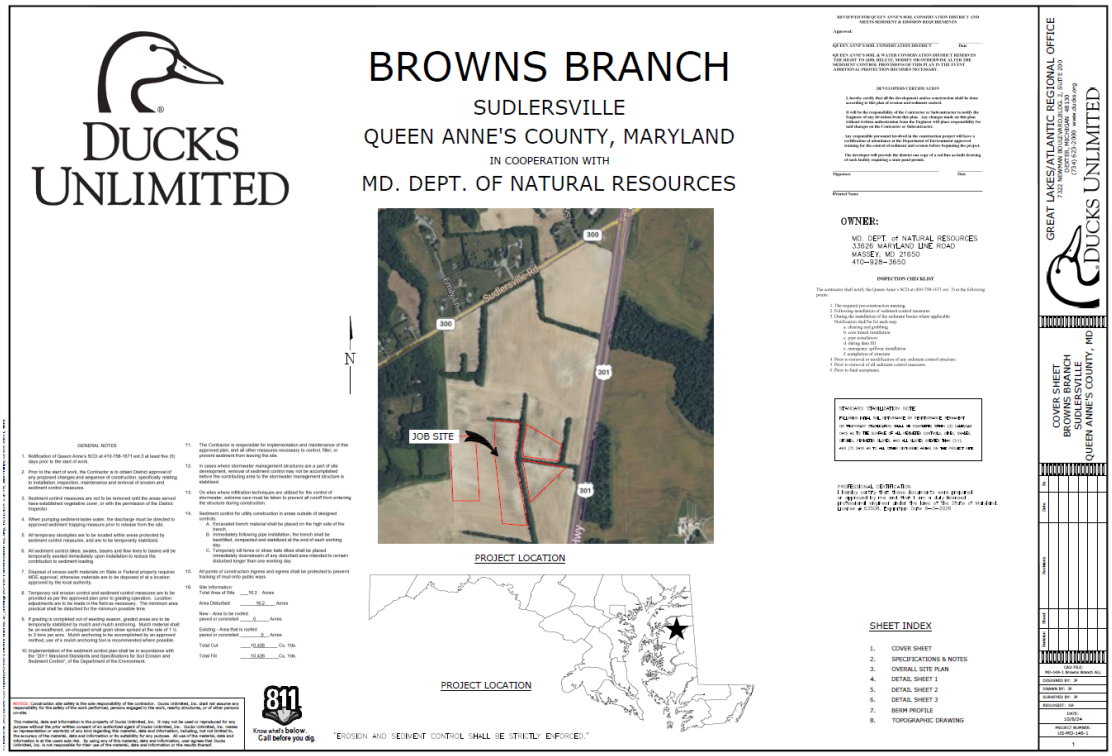
CATEGORY	Waterfowl Festival Grant Allocation	Leveraged Public Funds (NFWF)
Personnel*	$38,326	$88,260
Equipment	$0	$0
Travel	$0	$5,360
Construction Materials & Contracts**	$0	$364,556
Indirects^	$31,674	$6,872
Subtotal	$70,000	$465,048
TOTAL	**$535,048**	

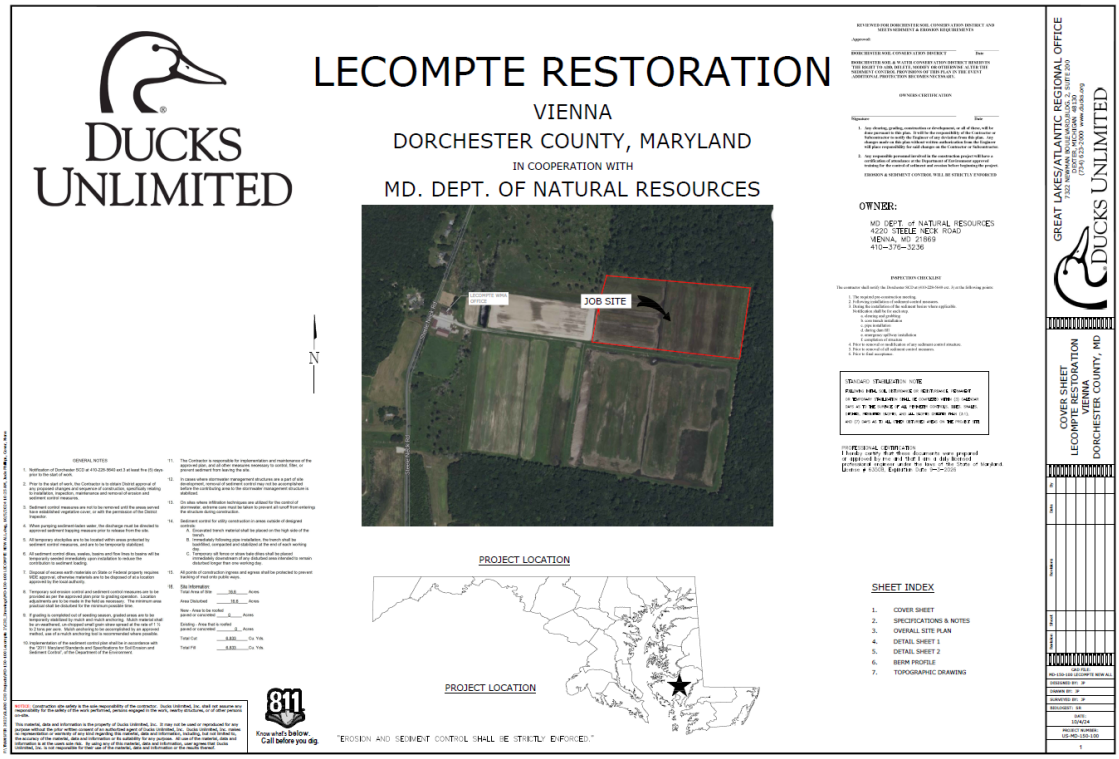
** Ducks Unlimited rolls all expenses that directly support our conservation projects into an Hourly Rate Charge (HRC) that is individualized by region. The HRC includes salaries and benefits, insurance and office space, office supplies and postage, and vehicles and office equipment.*

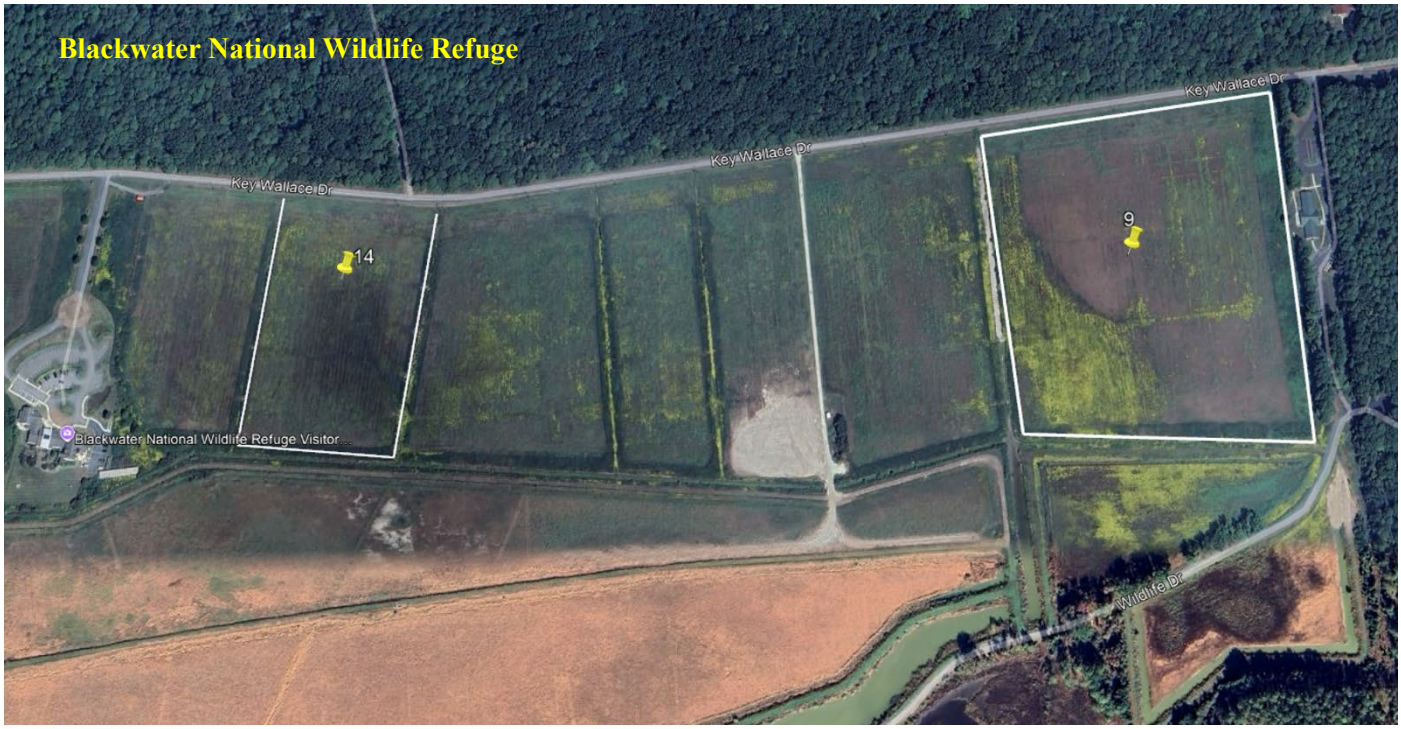
***Construction materials and contracts include activities such as mobilization, site prep, embankment, purchase and installation of water control infrastructure, seeding, and erosion control.*

^The US Department of Interior, our federal cognizant agency, calculates and approves this rate to recoup costs indirectly related to the project, such as administration, accounting, human resources, legal, and information services.

Project Site Maps:







Thank you for your thoughtful consideration of this grant request. Ducks Unlimited is proud of our longstanding and productive partnership with the Waterfowl Festival! We would be grateful to once again work together to put waterfowl habitat on the landscape in the Chesapeake Bay region.