



Delaware **Wild** Lands

NEWS | SPRING/SUMMER 2026

65
years
Delaware **Wild Lands**

dewildlands.org





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Cover Photo:
Barred Owl at the
Great Cypress Swamp

Can you believe Delaware Wild Lands is celebrating 65 years?

It began in 1961 with a small but determined group of people who believed Delaware's natural landscapes were worth protecting. From those grassroots efforts, Delaware Wild Lands (DWL) has grown into the state's oldest and largest land conservation organization.

In 1971, our founders stood alongside Governor Russell Peterson in support of the Delaware Coastal Zone Act, a landmark law that continues to protect Delaware's coastal landscapes from heavy industrial development.

From those early efforts to today, DWL has protected more than 32,000 acres of forests, marshes, estuaries, and swamplands. This work has never been defined by acres alone, but by people, relationships, trust, and shared commitment. We are grateful to every volunteer, donor, partner, and supporter who makes this work possible.

This year, we have focused on strengthening connections between people and the lands we protect through trails, education, and community programs, so these places are not only protected but also experienced and valued.

As you read this newsletter, I hope you reflect on how far this work has come. Beach-nesting birds return each year to Milford Neck, horseshoe crabs continue their shoreline rhythms, and baldcypress rise from the Great Cypress Swamp like living markers of time. Over the decades, DWL has restored wetlands, strengthened forests, planted hundreds of thousands of native trees, and supported the return of wildlife that was once nearly absent, including wild turkey. Today, a flock crossing an open field, waterfowl overhead, or a mink along a wetland edge is a quiet reminder that this work continues.

Like the baldcypress in our logo, it all begins small, a seed, a decision, a belief that care can grow into something lasting.

Thank you for being part of this story.

Marcia A. Fox

Marcia A. Fox, Executive Director

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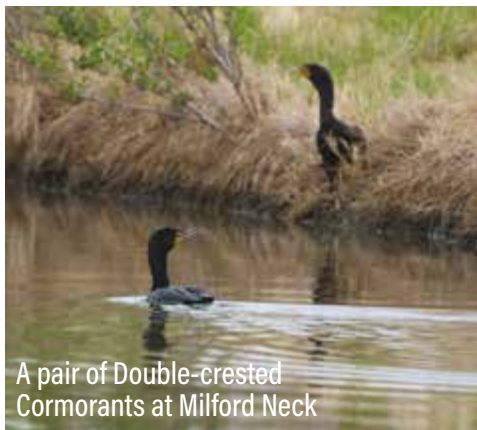
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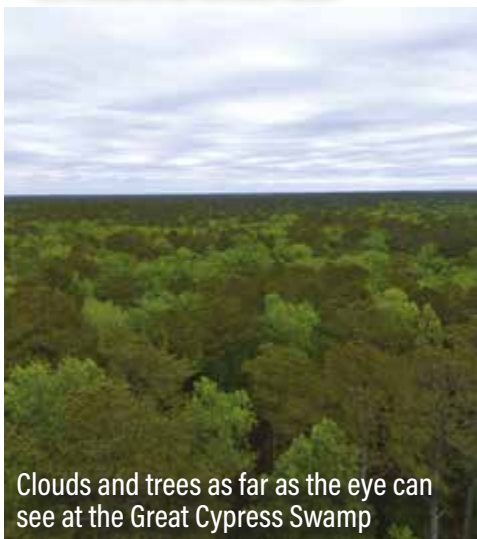


Out and About

on DWL's properties



A pair of Double-crested
Cormorants at Milford Neck



Clouds and trees as far as the eye can
see at the Great Cypress Swamp



Common Yellowthroat at Milford Neck



Glossy Ibis at Milford Neck



Great Blue Heron at Milford Neck



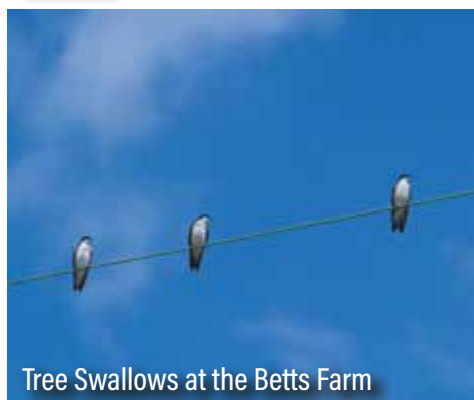
Willet on the Bayshore at Milford Neck



Mallards



Muskrat



Tree Swallows at the Betts Farm



Ruddy Turnstones on the
Bayshore at Milford Neck



Osprey at Milford Neck



By the Numbers



12,719

trees planted on DWL properties so far in 2026



8

snapping turtles laying eggs at DWL's Main Office

185

wood duck nest boxes cleaned and prepped for use



9

types of wild game served at DWL's Wild Game Dinner



1

blonde mallard harvested in Taylors Bridge (a rare mutation producing unique plumage)

3

3 varieties of DWL wine crafted by Harvest Ridge Winery



70

bird species recorded during the Christmas bird count



2,878

community members reached at DWL outreach events in 2025



2,000

square-foot meeting space added to DWL's Main Office





Native Animal Species Profile

American Mink (*Mustela vison*)

By Hannah Small

Guest Quote: Joseph Kessler, DNREC DFW Furbearer Biologist

Was that a... Mink?

If you've ever cruised down State Route 9 along Delaware's bayshore, you've likely seen a few furry animals scurry across the road. Most often it is a red fox, raccoon, opossum, or maybe even a muskrat. However, have you ever seen a furry critter and thought, "Was that a mink?" If so, you could be right! The American mink (*Mustela vison*) is a native furbearer species in Delaware, and it is typically very elusive, though it can sometimes be spotted crossing the road in areas with abundant wetlands, such as marshes, rivers, creeks, and ponds.

Minks are members of the mustelid family (Mustelidae) and closely resemble other animals, including weasels, otters, martens, fishers, and ferrets. They have long, supple bodies, short legs, and a furry tail, and are typically dark chocolate, brown, or black. American minks are found throughout much of North America, and they typically breed in late February or March. The female raises up to eight kits in a den, which is typically an abandoned muskrat den, a beaver lodge, or holes and hollow logs along the shores, where there is cover and plenty of food. Their diet varies and can consist of muskrat, fish, frogs, rabbits, birds, snakes, and insects.



An American mink in the grass. Photo Credit: USFWS



A mink captured on a trail camera behind DWL's main office.

According to DNREC Furbearer Biologist Joseph Kessler, "our understanding of mink occupancy in Delaware comes from a combination of our own research, trapper harvest data, citizen science, and incidental data collected from partners such as DWL". Joe adds, "Most tidal trappers in New Castle and Kent Counties report an increase in mink population in recent years, and harvest numbers remain somewhat consistent despite a decline in total active trappers. Field surveys in this area suggest a similar trend. Likewise, many sites in the Piedmont have mink in respectable numbers. While the success of our mink population is great news, Delaware is full of suitable habitat where we have not seen any sign of mink, at least not in recent years. For example, eastern Sussex County has habitat similar to that of our two northern counties. Further inland, the Nanticoke Watershed offers prime habitat as well. With all of this to offer, it is surprising that we have had only one mink harvest reported in Sussex County over the past ten years. With all of that said, if you are lucky enough to spot a mink anywhere in Delaware, I would love to hear about it!"

Due to their shy, avoidant nature, mink are rarely seen. However, throughout DWL's Taylors Bridge complex in southern New Castle County, we often see them traveling from marsh to marsh, and we even catch them on our trail cameras. In the summer, we have seen them bounding through fields near Blackbird Creek, and in the winter, we have seen them dash across the ice behind our main office along the Appoquinimink River.

So be sure to keep your eye out, because it just might be a mink you see!



Long-term Planning in Milford Neck

Ensuring a Resilient and Thriving Future

By Hannah Small



A bird's-eye view of the Milford Neck Preserve, consisting of sandy coastlines, tidal salt marsh, and coastal forests.

This year, DWL received a National Fish and Wildlife Foundation grant to develop a Master Management Plan for our 3,500-acre Milford Neck Preserve (MNP) over the next three years.

The MNP is home to at least 14 threatened or endangered species, including the federally threatened red knot (*Calidris canutus*). The site provides vital resting and foraging habitat for shorebirds, marsh birds, and waterfowl migrating along the North Atlantic Flyway. The Plan will serve as a tool for DWL to design land management activities and to identify, select, and implement future restoration projects for this critical coastal habitat.

To date, data collection is well underway. This past winter and early spring, engineers and surveyors began collecting high-quality, high-density LiDAR mapping, digital elevation models, and ortho imagery of the MNP to inform modeling, restoration planning, and infrastructure assessments. Next, they will install a series of temporary wells and tide gauges to investigate the hydrology (the distribution and movement of water across the landscape), identify areas prone to flooding, erosion, or inefficiencies, and support scenario testing for proposed restoration opportunities.

The first round of botanical surveys has already been completed. DWL's long-term partner, Wild Earth Allies, is assisting with a preserve-wide botanical inventory to identify habitat types and any rare or threatened species, which will inform future land management decisions. These surveys will be conducted throughout the year for multiple years to capture as many species as possible growing under various conditions. Some highlights from the first spring survey include the southern twayblade (*Neottia bifolia*) orchid, the Southern Adder's-tongue (*Ophioglossum pycnostichum*) fern, and beach plum (*Prunus maritima*). The inventory will also provide a snapshot of the landscape for future reference, as many of these coastal habitats naturally transform and retreat inland and will be impacted by sea-level rise and saltwater intrusion, which will drastically alter the floral community. To learn more about our long-term partnership with Wild Earth Allies, check out the "Working Together" article on page 12.



Southern Adder's-tongue (*Ophioglossum pycnostichum*) recently documented in DWL's Milford Neck Preserve during a spring botanical survey. Photo Credit: Steven Brewer, WEA



Steven Brewer, botanist with Wild Earth Allies, scanning the tree canopy at DWL's Milford Neck Preserve.

The MNP Master Management Plan will serve as a comprehensive, science-based roadmap for the long-term stewardship of one of Delaware's most ecologically significant and climate-sensitive coastal landscapes. The Plan will focus on DWL's landholdings in the Milford Neck area, but the results will benefit the greater community, including nearby protected lands managed by The Nature Conservancy and the State of Delaware, as well as the many residents who call Delaware home. This effort will help ensure the MNP and surrounding lands will remain resilient and thriving into the future for generations to come.

The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Government or the National Fish and Wildlife Foundation and its funding sources. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Government, or the National Fish and Wildlife Foundation or its funding sources.

Join the Movement

Protect the Land. Leave a Legacy.

Your monthly gift to DWL helps preserve the places we love — protecting critical habitats, open spaces, and natural landscapes for generations to come.

LIMITED-TIME OFFER

The **first 30 donors** to sign up for a monthly recurring gift will receive a **DWL Stainless Steel Tumbler**.

Our thanks to you for investing in the land.

Make Your Gift Today!



Every dollar raised goes directly toward cultivating, managing, acquiring, and stewarding the lands that define our state.



Visit dewildlands.org or scan the QR Code



On Nature's Time: The Long Life of a Baldcypress Tree

By Andrew Martin

It has long been said that you don't plant a tree to enjoy its shade, and this philosophy is near and dear to us at Delaware Wild Lands. As humans, it's easy to get lost in the hustle and bustle of daily life, including work, chores, and family responsibilities. It's easy to fall into the habit of living day to day, week to week, and to lose sight of the fact that, in the grand scheme of things, our time here is short. Other living things experience life on a much longer time scale, facing different challenges over the years.

The baldcypress tree was an object of fascination for DWL's late founder, Ted Harvey, and it's easy to understand why. Baldcypress is ancient, even in evolutionary terms, dating back more than 65 million years to the Late Cretaceous period, when it existed in a world dominated by dinosaurs such as Tyrannosaurus rex and triceratops. A seeming contradiction, the baldcypress is a conifer whose needles turn rust-brown and drop every autumn. A long-lived tree with gnarled knees and deep buttresses at the base of its trunk, it evokes old Southern swamps and ecosystems that predate humans. In Delaware, baldcypress is at the northernmost limit of its range on the East Coast, making locations like the Great Cypress Swamp and Trussum Pond feel almost out of place in Delaware's landscape today. Perhaps this is why the tree was chosen as Delaware Wild Lands' symbol 65 years ago.

It Starts with a Seed...







It's late October or November, and a baldcypress cone, about an inch in diameter and one of thousands on its tree, is shaken by a stiff breeze and **SPLASH, it lands in the water below.**

The cone, once green, is now brown, with visible fissures between some of its 15-30 geometric pods. It floats for two weeks while the acidic waters of the swamp soften it until the tiny round seeds inside are exposed. Here, the baldcypress faces its first challenge: the seed must reach a substrate like sphagnum moss or mucky soil to germinate, then grow fast enough to keep its new green needles above the water, or else the tree will drown. Water levels draw down over the spring and summer while the tree grows up, down, and outward. Upward, the stem may grow to nearly 30" in height in its first growing season. Downward, a taproot begins to grow deep into the soil to anchor the growing tree and help it survive future droughts. Laterally, the roots begin to spread outward in a network that can eventually reach 50' or more from the trunk. While baldcypress are generally unpalatable to deer, they often sustain some deer browse on their tender new foliage in the first couple of years of life, and some trees will succumb to this damage.

Over the next five to seven years, the baldcypress reaches ten feet tall and begins to shed some of its lower branches as it continues to grow upward. Now it faces a new challenge from deer: rubs. White-tailed bucks rub their antlers on the tree, scraping away some of its bark while they spread their scent and remove the velvet from their antlers. Some baldcypress trees will be damaged in this process, weakening their trunks and causing them to die. Our tree persists. At around 10-15 years, the tree will reach 20-30' in height. It begins to produce its own cones, as many as thousands a year, and something interesting is happening below. Lateral roots begin to produce knees, vertical protuberances that push up through the muck

and sphagnum moss below and eventually extend above the surface of the water. These knees do not grow into new trunks as many people assume, but rather culminate in gnarled, knobby lumps of wood. Knees are believed to help stabilize the growing tree in wet conditions, making it less susceptible to tipping or blowing over in high winds, but that isn't all they do. Knees also provide vital shaded habitat for invertebrates, amphibians, and fish, giving them a place to hide from predators and thermoregulate.

As the years pass, the tree grows taller and wider, and its knees grow larger and more numerous. Birds nest in its branches, treefrogs call from its canopy and hide under loose patches of gray bark. Mosses and lichens grow on the furrowed bark of its trunk and knees. It becomes fully integrated into the surrounding ecosystem. Eventually, after more than 100 years, the tree will reach its maximum diameter and height, as tall as 100-125'. The tallest living baldcypress tree is nearly 150' tall, and the widest is more than 17' in diameter. The oldest known living baldcypress tree is on the Black River in North Carolina and is more than 2,600 years old. When the first European settlers arrived in America, it was already more than 2,000 years old. In a life that long, a tree will survive countless floods, droughts, storms, fires, and more, all the while providing habitat for other plants and animals and spreading seed for generations of new trees.

Delaware Wild Lands has been around for 65 years, and in all that time, we haven't forgotten that the trees we plant and the habitats we restore aren't simply there for us to enjoy. Baldcypress forests existed before humans took their first upright steps, and if we've done our job, the trees we plant in the Swamp will be here long after we are gone.





Restoration

Staying True to our Roots:

Delaware Wild Lands Plants Over 12,000 trees this Spring!

By Andrew Martin



Since the earliest days of the American conservation movement, one action has always held both practical and symbolic significance: The planting of a tree. Planting a tree isn't just an act of restoration, which can increase biodiversity and improve habitat; it's also a symbol of what conservation means to people. It's an opportunity to get your hands dirty and leave a mark on the planet that will outlast you.

Delaware Wild Lands is no stranger to planting trees. We've put hundreds of thousands of trees in the ground over the last 65 years, and we're not slowing down. This April, DWL planted 12,719 trees across 11 sites in New Castle and Sussex County! When selecting planting sites, we consider several factors:



soil types and conditions, hydrology, land uses, landscape-scale connectivity, and more! Our planting sites in New Castle County were chosen for their outsized importance to our broader restoration plans. These sites created habitat and wildlife corridors between existing forested land and improved buffering between agricultural fields and sensitive wetlands and waterways. Native tree species were chosen for their ability to thrive in the specific site conditions and for their wildlife benefits. Mast-producing trees (trees that produce fruits, acorns, and other nuts) were favored for their benefit for a whole host of wildlife species that eat their fruits and nuts. In Sussex County, several sites were selected to enhance biodiversity by adding more mast-producing species, including numerous oak species and persimmons, to benefit wildlife. Plantings were also built on and enhanced some of our past restoration efforts. Nearly 6,500 trees were planted adjacent to our Hickman Farm restoration site, which has already been planted with a mix of wildlife-beneficial hardwoods, short-leaf and long-leaf pines, and early successional habitat. Additionally, 2,000 baldcypress trees were planted in wooded wetlands restored through our hydrologic restoration efforts in 2013.

Many of the trees planted on our Taylors Bridge and Augustine Creek properties were planted by volunteers, as well as the baldcypress trees in the Great Cypress Swamp on April 24th and 25th this year. DWL can't do what we do without the generosity of our supporters, and we are very thankful to everyone who donated their time to our restoration efforts. These plantings were also made possible by the Tree for Every Delawarean Initiative (TEDI), a program started by DNREC and the Delaware Forest Service in 2020. Since its inception, nearly half a million trees have been planted under TEDI, and the program is nearly halfway to its goal of 1 million trees by 2030. A huge thank you goes to all our supporters and volunteers, and to the State of Delaware. The best restorations are built on partnerships, and we've got some great partners here in Delaware.

To learn more about TEDI and view an interactive map, please visit <https://dnrec.delaware.gov/tedi/>





Partnerships

Working Together

for Wildlife and Wild Places

For 65 years, Delaware Wild Lands has been an independent voice for land conservation in Delaware, but we've never gone it alone.

By Andrew Martin



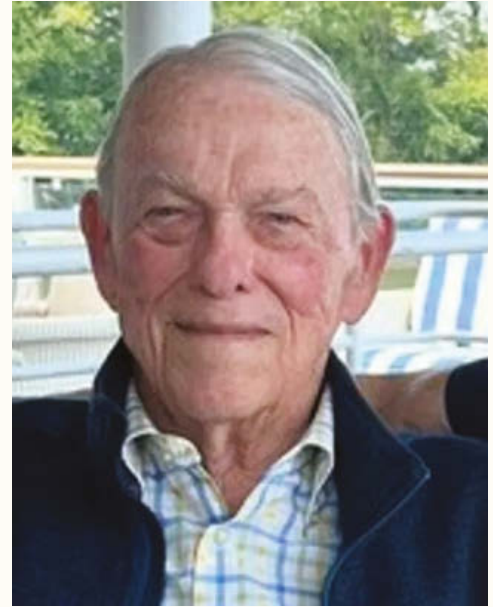
From grant applications to restoration planning to sharing the workload on large projects, partnerships with other organizations, both governmental and nonprofit, have helped us build successful projects and acquire new lands to protect. For the last five years, one of our most valuable partners has been **Wild Earth Allies**

(WEA). WEA is focused on its mission to protect vital areas of our natural world for the benefit of wildlife, habitats, and people by inspiring collaborative action. From habitat restoration and research on Asian elephants to ape conservation in Central Africa to documenting and cataloging the more than 1,300 tree species of Belize, WEA's international work is as inspiring as it is important to global conservation. When the two organizations were first introduced five years ago, it immediately became clear that we were a "natural" fit as partners in conservation. In those five years, WEA has helped DWL plant more than 51,000 native trees in the Great Cypress Swamp, plan large-scale restoration projects, and conduct experimental design and data analysis to inform future Atlantic white-cedar and baldcypress restoration efforts. Their staff has joined ours in the field for data collection, and their expert botanist, Steven Brewer, undertook a botanical inventory in the Great Cypress Swamp, documenting a phenomenal 124% increase in plant diversity since the last survey more than 20 years ago. DWL has always been a lean organization with a small staff, and access to WEA's expertise and assistance has allowed us to accomplish far more than we would have otherwise. Moving forward, we are proud not only to continue our work with WEA in the Great Cypress Swamp but also to expand it to our Milford Neck Preserve. WEA will soon start the first-ever botanical inventory of the 3,500-acre MNP, an effort that will contribute to a new comprehensive management plan for the property. Their knowledge and partnership are a reminder that local conservation, even in a state as small as Delaware, is connected to conservation efforts around the world. Birds that migrate from WEA study sites in South America pass through Delaware during their annual migrations. Lessons learned protecting and studying horseshoe crab populations in the Delaware Bay will have implications for horseshoe crab conservation in Cambodia.

Partnerships drive conservation efforts in Delaware and around the globe, and we couldn't think of a better partnership than the one between Wild Earth Allies and Delaware Wild Lands.



In Memory of Blaine T. Phillips



Blaine Townsend Phillips, Sr.

May 3, 1930 - December 3, 2025

DWL Board Member 1989-2021

Delaware Wild Lands mourns the loss of Blaine Phillips, whose wisdom, leadership, and dedication helped shape our organization from its earliest days. As a young attorney in 1961, Blaine drafted Delaware Wild Lands' original certificate of incorporation and bylaws, and later served on our Board of Directors from 1989 to 2021. Raised in lower Sussex County, he developed a lifelong appreciation for Delaware's natural landscapes and became one of the state's most respected conservation advocates and philanthropists. Through his service to Delaware Wild Lands, Mt. Cuba Center, the Fair Play Foundation, Wild Earth Allies and numerous other organizations, Blaine played a pivotal role in protecting natural resources throughout Delaware and beyond.

His legacy lives on in the lands he helped protect, the organizations he strengthened, and the many people fortunate enough to learn from him.

SAVOR the Wild



Delaware Wild Lands Wild Game Dinner

Thank you to our sponsors!



Partnerships

NEW
CASTLE
COUNTY

New Staff Highlight

Delaware Wild Lands Welcomes Tom Hairgrove, New Castle County Conservation Technician

A native Delawarean and lifelong resident of southern New Castle County, Tom is excited to join DWL and help protect the area he calls home. Growing up, Tom was always involved in sports and outdoor recreation, which fostered a passion for the outdoors and a respect for our open spaces. With several years of experience in the military, prescribed and wildland fire, and tree and plant healthcare, Tom brings a unique perspective and leadership to the DWL Team. Tom is ready to get to work, strengthening our commitment to our mission of land protection and lending a hand to our stewardship and conservation efforts. In his free time, Tom enjoys tending to his chickens and gardening.





65 Years of Conservation in Action!

By Brigham Whitman and Kim Staska

In 1961, a group of outdoor enthusiasts came together to oppose land development in Delaware and protect wild areas before they were lost forever. That group called themselves Delaware Wild Lands. Today, we continue the work that they started to protect the environment, create wildlife habitat, and preserve the state's natural heritage for future generations.

Sixty-five years of land protection is no small feat and calls for celebration!

Countless supporters, volunteers, partners, friends, staff, and Board members have built Delaware Wild Lands into the institution that it is today, and we give thanks for their tireless dedication to the organization. We've hosted a number of events already this year, and we are looking forward to more. If you haven't joined us at any of these celebrations, we hope to see you at the next one!

Keep an eye on DWL social media for more events throughout the summer and fall.



1



2



3



4



5



6



7



8

1. Friends and supporters joined the Harvest Ridge Winery, Delaware Ornithological Society, and DWL to watch birds and sample wine during the Afternoon Escape at DWL's Main Office.
2. Hunt clubs from DWL properties were invited to attend a Deer Hunting Seminar to discuss deer populations, management, and hunting practices. Speakers from the Delaware Department of Natural Resources and Environmental Control, the University of Pennsylvania, and the National Deer Association came to present on various topics for the hunters, pictured here at Thousand Acre Farm in New Castle County.
3. DWL hosted a Wild Game Dinner in March. Much of the featured game was harvested on DWL properties and included venison, waterfowl, turkey, muskrat, snapping turtle, and more.
4. A new restoration site featuring forest and meadow habitat has been dedicated to former DWL Executive Director Kate Hackett in honor of her dedication to the organization. The site will forever be called The Hack.
5. DWL has begun a flourishing partnership with Harvest Ridge Winery where both organizations can share their passions for healthy ecosystems, community, and charity. Here, DWL hosts a table at the Hero Hunts Outdoorsman Expo.
6. The Sip & Savor fundraiser treated supporters to fine wines paired with delicious snacks at the Harvest Ridge Winery.
7. Proceeds from Trivia Night in March, held at the Harvest Ridge Winery, went to support DWL. The crowd learned about DWL, enjoyed fun trivia, and sampled wine throughout the evening.
8. DWL friends and supporters gathered this spring to dedicate the new terrace at the office in memory of past Board Member Charles "Charlie" F. Gummey. Charlie lived life to the fullest, and we honor him with this meeting space overlooking the wetlands and waterfowl he loved so dearly.



Protecting, Restoring, and Monitoring Delaware's Most Valuable Wetlands

By Hannah Small

In the winter of 2022, DWL embarked on a journey to restore nearly four acres of coastal plain ponds, also known as Delmarva bays, in southern New Castle County.



A bird's eye view of the restored coastal plain ponds, or Delmarva bays, at DWL's Taylors Bridge complex in southern New Castle County.

These small, isolated freshwater wetlands are unique, biodiverse, and among Delaware's most valuable natural resources. Since project completion in winter 2024, DWL staff have been monitoring the restored wetlands to assess function, quality, and wildlife use, and the results have not disappointed!

The restoration project included eight individual ponds, all of which have maintained hydrology throughout each year since excavation. This has allowed a range of species to use them at various life stages. Some highlights have been waterfowl, pond turtles, a diverse mix of freshwater invertebrates, and the Atlantic coast leopard frog, a **Tier 1** species of highest conservation concern in Delaware. We expect the wildlife species using these ponds to change over time, as the hydrology changes and the surrounding upland landscape transitions into mature forests.

Delmarva bays are unique because they are isolated and ephemeral, meaning they do not connect to other water bodies and do not hold water permanently. These characteristics are very important because they prevent wildlife such as predatory

fish from surviving in them, thereby allowing species like pond-breeding amphibians to thrive. However, during routine monitoring, DWL documented fish in a couple of the restored ponds, which raises concerns and questions. DWL is actively managing the invaded ponds to remove the fish so target species such as spotted salamanders, a **Tier 2** species of moderate conservation concern in Delaware, can successfully use them. The question remains how the fish were able to colonize the ponds, because how they end up in isolated wetlands is still a mystery to science!

Despite a majority of Delaware's landscapes consisting of non-tidal freshwater wetlands, such as Delmarva bays, we are the only state in the region without state-level protections for these valuable habitats. Historically, the state has relied on the federal Clean Water Act of 1972 to protect them. However, about 75,000 acres of non-tidal wetlands in Delaware have been left unprotected following the U.S. Supreme Court's recent decision in *Sackett v. Environmental Protection Agency*.

To safeguard non-tidal wetlands in Delaware, Senator Stephanie Hansen recently proposed The Wetlands Stewardship Act (Senate Bill 9). The bill would establish a state permitting framework to regulate non-tidal wetlands, including Delmarva bays. The permitting would help prevent the destruction or pollution of valuable wetlands, preserving their biodiversity and invaluable ecosystem services. Though many non-tidal wetlands may appear to be just a wet spot in the woods, they are critical to supporting many endangered plant and animal species, reducing flood risk, and enhancing the quality of our groundwater!



Recently emerged dragonfly larva in one of the restored Delmarva bays.



Restoration

NEW
CASTLE
COUNTY

From Soil to Sanctuary:

Creating Wetland Habitat in Taylors Bridge

By Brigham Whitman



The Roberts Farm hosts several healthy wetlands with native vegetation that draws wildlife including muskrats, snapping turtles, green-winged teal, and sandhill cranes.

DWL's Roberts Farm has long been a haven for waterfowl. Located within DWL's 5,200-acre Taylors Bridge complex, the property features brackish and freshwater wetlands, as well as several wetland impoundments. Originally designed as waterfowl refugia, these impoundments have evolved into critical habitat for a diversity of bird species and other aquatic and terrestrial wildlife. One impoundment, however, was not effectively holding water. Given the regional decline of freshwater wetlands, restoring this site to establish a resilient, functioning wetland was critical.

To enlist the expertise needed to restore a wetland like this, DWL turned to its longtime partner Ducks Unlimited (DU). DU Farm Bill Biologist Chase Colmorgen became involved in this project to improve the site for waterfowl. To start, he notes, "The goal of this project was to increase the water-holding capabilities and extend the time at which it holds water. Additionally, since this will complement surrounding wetland cells, this project would be



Before this project, the impoundment was not functioning properly nor offering any sort of meaningful wildlife habitat.



As the pool area is excavated, the clay-rich soil is used to reinforce the sides of the impoundment. After the excavation is finished, the topsoil is spread over the ground to replace the organic material needed for plant growth.

a great opportunity to increase wetland plant diversity through moist soil management." This is the process by which water levels are manipulated throughout the year, often by a water control structure, to mimic the water movement of natural wetlands. This management style "often encourages the growth of early-emergent, annual plants, which are high seed producers and provide beneficial food availability to wintering waterfowl."

The first step of the project is to assess the soil. "Soils will dictate the type of wetland restoration" that is possible, Colmorgen says. A key objective is identifying soils with sufficient clay content to allow water to pool and create the conditions necessary for wetland habitat. "Our approach for construction is to strip topsoil from a site, move and stockpile it, cut out subsoil to our desired elevation in the pool area, and utilize this material to build a low berm, and then replace the topsoil over the berm and pool area to allow plant growth to occur." Combined with native seedings to increase plant diversity and management efforts to suppress invasive species, this approach lays the groundwork for a healthy, resilient, and functioning wetland ecosystem.

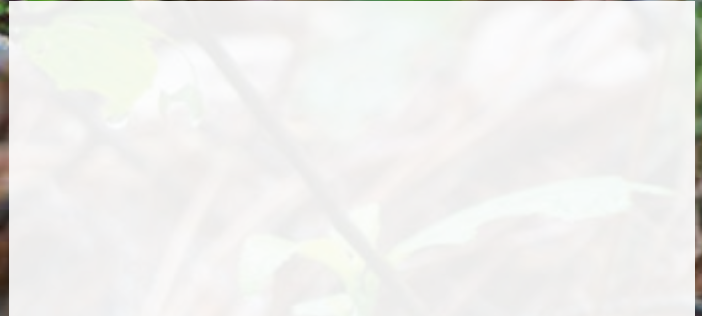
To address the failing impoundment, the team aimed "to excavate the proposed pool area deeper into the clay liner material and line the inside of the existing berm with suitable material to ensure the area was completely sealed." Widening the berms has the added benefit of deterring muskrats, which prefer burrowing in steeper-sided embankments. Importantly, the design also called for installing a new water control structure. "Since this area will be actively moist-soil managed, we wanted to make sure we were able to manipulate the pool area completely" Colmorgen explained.

The new wetland will resemble the previous impoundment, but the pool will be deeper and able to hold water throughout the winter and spring. The surrounding habitat is important, too, as Colmorgen notes, "The upland component is beneficial to waterfowl and other species that might use the area as escape cover from predators and to create a contiguous travel corridor to surrounding habitat." In the end, "the completed project will offer more sustained habitat for waterfowl and wading birds, as well as a food source for migrating waterfowl." Holistic management will convert this site into a year-round sanctuary not only for waterfowl but also for all manner of bird life, mammals, amphibians, and invertebrates. Like a shimmering diamond in the marsh, the new impoundment will support the Taylors Bridge ecosystem for years to come.



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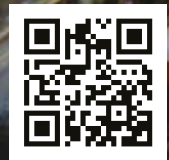
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