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A Message From The Chesapeake Bay Director

Not long before COVID-19 closed our offices, I was fortunate to watch the sunrise over the Chesapeake Bay from an airplane. As I looked down, I saw the tributary where we worked with partners to create the world's largest oyster restoration.

The Bay's size and complexity compels us to take a collaborative conservation approach across six states, and with a legion of partners. TNC is helping to lead the way in showing how nature-based solutions—in our cities, in our farm fields, along our rivers, and in the Bay itself—can achieve clean water that benefits nature and people.

I hope you enjoy the following stories about TNC projects that are helping restore the Bay.

Mark Bryer

Chesapeake Bay Program Director

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Acid from bald cypress trees growing along the Pocomoke river's banks contributes to the dark water color. © Matt Kane/TNC

Freeing a Trapped River

The biggest restoration in Maryland just got bigger

In 2017, The Nature Conservancy (TNC) and key partners representing state and federal government agencies, NGOs, and private foundations formed a partnership to restore the Pocomoke River. The shared goal of the partnership: restore degraded floodplains along 14 miles of the river to improve water quality and habitat. In late 2018, as a nine-mile stretch of the river restoration neared completion, the first phase of the project became the largest of its kind in Maryland's history. A new grant received by TNC will make this huge success even bigger. This summer, the second phase of construction to restore an additional five miles of river will begin, thanks to support from the Maryland Department of Natural Resources. We are now using the Pocomoke project as a model for other restorations across the Chesapeake Bay watershed.

The success of the first phase of Pocomoke River floodplain restoration project helped lead to a new grant—nearly \$1 million from the National Fish and Wildlife Foundation which will be used to accelerate wetland restoration across the Chesapeake Bay watershed. The grant is designed to build on what worked in the Pocomoke, namely, developing partnerships with key agencies and individuals, investing in capacity for outreach, and providing flexibility to landowners with funding options to restore their land. The grant will enable TNC to coordinate with partners and landowners to design new, large-scale wetland restoration projects in Virginia's Rappahannock watershed, in Pennsylvania's Susquehanna River watershed, and in Delaware's Great Cypress Swamp at the headwaters of the Pocomoke River.



TNC Chesapeake Bay Program Director Mark Bryer (second from the left) is joined by representatives from technology firm Opti, Walmart, EPA, and officials from the state of Maryland to celebrate a smart pond installation in Fruitland, MD. © Matt Kane/TNC

Smart Ponds A new solution to an old problem

Stormwater runoff is the fastest growing source of pollution to the Chesapeake Bay. Stormwater pollution is caused when rainwater falls on impervious surfaces including sidewalks, parking lots and roads—where it mixes with oil, sediment, trash and other pollutants. It then flows into our sewers, streams, rivers and ultimately the Chesapeake Bay, where it accounts for 16 percent of the nitrogen, 18 percent of the phosphorus and 24 percent of the sediment polluting the Bay, according to the Chesapeake Bay program.

One of the oldest and most common ways to capture polluted runoff is the stormwater retention pond. In these engineered basins that are especially ubiquitous in suburban areas, pollutants and sediment in runoff can settle to the bottom before making their way downstream. But these ponds release water as soon as water levels reach an exit pipe, often shortchanging opportunities for longer storage and cleaner water.

Enter the "smart pond." Smart ponds use adaptive, cloud-based technologies to anticipate precipitation and control water levels to maximize pollution removal and floodwater storage. And they do so at a fraction of the cost of other stormwater solutions. The Nature Conservancy recently formed a partnership with technology firm Opti to accelerate smart pond conversions across the Bay watershed, beginning this year with three Walmart stormwater ponds in the state of Maryland. With more than 60,000 stormwater ponds in the six-state Chesapeake Bay watershed, the impact of all of them working more efficiently could be transformative.

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Freeing a Trapped River, Continued



An aerial view of the Pocomoke River floodplain restoration project © Severn Smith/TNC

Wetlands play a critical role in Chesapeake Bay water quality by slowing freshwater before it enters the Bay, which creates a natural filter for nutrients and sediment. Wetlands also provide habitat to a range of important species, including black ducks, many migratory birds, and fish. The Chesapeake Bay Partnership has pledged to restore 85,000 acres across the bay watershed by 2025, but only 11% of that goal has been reached since the agreement was last signed in 2014.

"The success we've seen with the restoration of the Pocomoke floodplains has taught us a lot of lessons that will help us expand this type of work to other areas in the watershed," said Amy Jacobs, acting conservation director for TNC in Maryland and D.C. "We need to aim for ambitious public-private coalitions, engage more private landowners and use the best available science to tell us where restoration will provide the greatest benefits."

As a science-based organization, TNC is also focused on continued monitoring of the Pocomoke project. Over the past five months we have been working with partners to build a more robust monitoring program around the Pocomoke restoration, which will make this successful model even more useful as we launch new projects in Virginia, Pennsylvania and Delaware.



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