Rising Tides: Innovative Climate Strategies In The Chesapeake Bay

At Blackwater National Wildlife Refuge on Maryland’s Eastern Shore, rising sea levels are swallowing acres of critical marshland. Black holes of brackish water now dot the more than 28,000 acres of sanctuary land. To prevent these marshes from completely disappearing, the U.S. Fish and Wildlife Service has joined forces with Audubon Maryland-DC and The Conservation Fund to implement an innovative climate resiliency project.

In a first for the Chesapeake watershed, we raised the surface of a key 40-acre marsh site by dredging 26,000 cubic yards of sediment from Blackwater River and layering it across the marsh. This thin-layer technique adds height to the marsh in the local Chesapeake tidal range and will stimulate more native plant growth. The added root mass of these marsh grasses will continue to lift the marsh surface in the future despite rising tides. To date, this is the largest wetland restoration project attempted at Blackwater. Strategic replanting in the marsh will take place this spring.

Coupled with other initiatives—such as protecting land in key future marsh migration areas—targeted thin-layer elevation is vital to the future of the refuge’s wetlands. In fact, scientists predict that without such action to adapt to rising sea levels, virtually all of today’s tidal wetlands in this part of the Chesapeake Bay will become open water by the end of the 21st century. If we lose Blackwater’s marshes, we lose critical habitat for migratory birds, waterfowl and fish, as well as natural protection for nearby communities from storm surges. This ambitious project will help Blackwater’s treasured wetlands persist for future generations—even in the face of climate-driven sea level rise.
The Upper Neuse River basin in North Carolina’s Research Triangle serves more than half a million people and includes nine drinking water reservoirs. Since this part of the country is experiencing rapid growth and the population is expected to grow significantly over the next few decades, the need to protect these precious water resources and the lands that surround them are more important than ever.

The Conservation Fund is a member of the Upper Neuse Clean Water Initiative, a coalition of eight conservation groups which aims to protect priority lands near this vital river basin. The Initiative’s efforts involve strategic planning, land acquisition, landowner outreach, monitoring and stewardship. Our Strategic Conservation Planning team helped design and develop a strategic plan and provided guidance on the design of a GIS-based Watershed Protection Model to identify critical properties that provide water quality enhancement, and our Conservation Acquisitions team is working to protect some of these properties in perpetuity. This Model is an update to the original 2006 plan, which has already served as a guide for the Initiative partners on great conservation successes: 90 properties, 84 miles of stream banks and 7,698 acres protected across the basin. We also brought together stakeholders and provided technical support for how the models were designed and run.

By protecting forests, wetlands and open fields near drinking water sources, water quality is enhanced and the surrounding forests and wetlands absorb rain and runoff before it enters the streams and lakes. Land conservation is a critical component to water quality. In addition to these water benefits, land protection in this region also creates added community benefits, such as new greenways and parks, natural flood protection and cleaner air.

Here at the Fund, we know strong partnerships are essential for success. With this model in place, and our Conservation Acquisitions team on the ground, we hope to help the Upper Neuse Clean Water Initiative reach its goal of protecting 30,000 acres over the next 30 years in this region.

### Ensuring A Clean Water Future For North Carolina

#### Alabama

In spring 1961, groups of civil rights activists known as Freedom Riders began organizing integrated bus rides to the South. When a bus of Freedom Riders pulled into Anniston it was met by a mob that attacked the bus, forced the group out of town, and then set the bus on fire. In January 2017, President Obama officially designated the Freedom Riders National Monument. The Conservation Fund worked with the National Park Service, the city of Anniston, Calhoun County and other partners to protect the site of the bus burning and the location that once housed the Greyhound station to help establish the new national monument.

#### California

On April 1, a historic and sustainably sourced replica of a 19th-century tall ship set sail in San Francisco Bay. Its mission is to provide unique educational experiences for more than 10,000 youths each year. Through our North Coast Forest Conservation Initiative, we donated 73 Douglas fir logs—more than half a mile of lumber harvested from our sustainably sourced forest. In collaboration with Native American tribes and landowners, The Conservation Fund purchased the 264-acre historic site for the National Park Service with funding from the federal Land and Water Conservation Fund. This is the first land acquisition for the Captain John Smith Chesapeake National Historic Trail—securing the undeveloped landscape for future research and interpretation.

#### Virginia

The location of Werowocomoco—the seat of power for Chief Powhatan and the storied place where English explorer Captain John Smith met Powhatan—has been debated for centuries. Over the past decade, archaeologists made significant findings that confirm the lost Native American village was once situated along the north shore of the York River in Gloucester County, Virginia. In collaboration with native tribes and landowners, The Conservation Fund purchased the 264-acre historic site for the National Park Service with funding from the federal Land and Water Conservation Fund. This is the first land acquisition for the Captain John Smith Chesapeake National Historic Trail—securing the undeveloped landscape for future research and interpretation.

#### Wyoming

The Fremont Lake bottleneck in Wyoming was once the most threatened portion along the internationally significant Red Desert-to-Hoback migration route that mule deer travel twice a year. When the 364-acre property near Pinedale was listed for sale in 2016, we moved quickly to purchase and protect the property from subdivision and development. With lead funding from the Knobloch Family Foundation and contributions from other state and private sources, we acquired and donated the property to the Wyoming Department of Game and Fish Commission. This critical area is now designated as the Luke Lynch Wildlife Habitat Management Area to honor the legacy of the Fund’s late Wyoming State Director. Lynch provided the vision and leadership to conserve this portion of the migration corridor, as well as many other vitally important properties across the state.
Your Gift To Nature Makes A Big Impact

Climate change is a serious problem. Its impacts are being felt worldwide and in our own communities. With environmental challenges as vast as these, it is hard to feel that the actions of one person or one family can make a difference. But even small acts can have lasting results.

Over the past three decades, we’ve seen the success of building partnerships to achieve big accomplishments. Our entrepreneurial staff have worked to find innovative conservation solutions that directly address the growing impacts of our changing world.

Projects like the Blackwater Climate Adaptation Plan extend far beyond one refuge. Blackwater National Wildlife Refuge sits within the Chesapeake Bay watershed; more than 18 million people in six states live within the watershed.

Your support of smart conservation of these lands across the country, and restoration of lands that already have been affected by climate change is making a real difference. You can contribute to The Conservation Fund in several ways that make an impact—a gift of general support enables us to continue working with our partners to meet the unique challenges communities across the country are facing, a gift to an ongoing project in your region can address your specific concerns about climate impacts locally, or you can visit our online Carbon Calculator (gozero.conservationfund.org/calc/household) to estimate the annual carbon footprint produced by your family's energy use and make a donation that will plant trees of equal value.

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