





### LETTER FROM THE EXECUTIVE DIRECTOR



### The mission of The Nature Conservancy is to conserve the lands and waters on which all life depends.

ON THE COVER A resident of Tylerton, located on Smith Island, Maryland walks down a flooded street during an exceptionally high tide that was caused by a nor'easter that buffeted the Chesapeake Bay. The flooded structure in the background had been decaying for years due to neglect, not specifically because of the storm in the photo. © Dave Harp; THIS PAGE Tim Purinton © TNC; Great Falls Park in autumn © Kent Mason; OPPOSITE PAGE Steve Hills Courtesy of Steve Hills

### Climate change isn't a distant threat—it's happening now. In the United States and all around the world we are seeing

**the impacts:** the accelerated melting of our polar ice caps, deadly heat waves, catastrophic droughts and wildfires, and more frequent and intense storms hitting our coasts—just to name a few symptoms. The good news is that nature can help. To match the urgency of this crisis, The Nature Conservancy—including the Maryland/DC chapter—has prioritized innovative solutions that maximize nature's ability to fight climate change while bolstering resilience for our most precious ecosystems and vulnerable communities.

In 2018, the Maryland/DC chapter launched an ambitious, five-year capital campaign to finance a science-based strategic plan to tackle climate change and protect clean water for the Chesapeake Bay—two conservation priorities where we know our local actions will have the greatest regional and global impacts. The "Change is Here" five-year, \$70-million capital campaign is now more than halfway complete, and—thanks to the generous support of some of our most committed donors—I'm thrilled to announce that we have reached nearly 70 percent of our goal.

This impact report highlights some of the chapter's greatest accomplishments from the past year—accomplishments that were achieved through the focus and energy generated by the Change is Here campaign. As we look ahead at the work we have left to accomplish over the next two years, it's critical that we reach our private fundraising goal so that we can continue to use those gifts to leverage public dollars and impact investments. It's the combination of these funding sources that allows us to have the outsized impact for which The Nature Conservancy is known. Together with supporters like you, we will work with global colleagues to ensure that our legacy is one of action. Join us to be a part of the greatest success story in the history of the planet.

Tim Purinton

Tim Purinton, Executive Director of the Maryland/DC chapter





### LETTER FROM THE BOARD CHAIR



### For much of its history, The Nature Conservancy's mission has been to protect some of the world's most wild and beautiful places.

I started supporting TNC decades ago because I loved the innovative ways in which TNC was working toward that mission at a scale that mattered. Today, however, the planet faces unprecedented challenges. We are at a pivotal time in human history. Our technological advancements over the past hundred years have been

extraordinary, but now we must apply that same ingenuity and resourcefulness to solving the problems that our human advancement has placed on our home—planet Earth. The Nature Conservancy, with our decades of global conservation success, is taking bolder action than ever before to address the dual crises of climate change and the rapid loss of biodiversity.

As the chair of the Maryland/DC chapter board of trustees, I think of that evergreen adage when I reflect on my board service: "Think global. Act local." When you support your local chapter of TNC, you truly are making a global impact since the whole organization is aligned to tackle climate change and protect the planet's most important lands and waters. I'm a proud supporter of the Maryland/DC chapter's "Change is Here" campaign because it compels us to think big, to innovate, and to build policy, partnerships and outreach into our local work so that we are having an outsized impact. Please join me and the rest of the board of trustees in supporting the Change is Here campaign and be a force for nature.

Steve Hills

Steve Hills, Chairman of the Board of Trustees



The Nature Conservancy in Maryland and D.C.

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#### 2021 AT A GLANCE



TNC and the American Forest Foundation have partnered to create The Family Forest Carbon Program (FFCP), an initiative that is a win-win for landowners, the environment and wildlife. In 2020, the FFCP expanded

to Maryland where landowners who own between 30 and 2,400 forested acres in Garrett, Allegany, Washington, Frederick or Carroll counties are now eligible to participate. Read more on page 8. © American Forest Foundation



In the spring of 2021, a new project touched down in Western Maryland, where TNC staff, partners and contractors planted more than 10,000 genetically diverse red spruce seedlings on TNC's Finzel Swamp and

Cranesville Swamp preserves. These sites are now part of a larger initiative in the Central Appalachians and will be continually monitored and studied in order to inform future red spruce restoration. Read more on page 9. © Matt Kane/TNC

As the world's leading conservation science organization, it is critical that TNC scientists and conservation practitioners disseminate important findings and research to the broader scientific community. In 2021,

TNC's Maryland/DC chapter science team published five peer-reviewed studies on topics ranging from fire ecology to soundscape monitoring to decision science. Our conservation and policy work continues to be guided by science. © Gabriel Cahalan/TNC



Through District Stormwater LLC, TNC and the Knollwood Life Plan Community have collaborated on a new green infrastructure project. The new rain garden will collect stormwater runoff from the facility's parking lots—an estimated 3 million gallons annually—to help

slow and clean the runoff before it flows into Rock Creek and ultimately into the Potomac River and Chesapeake Bay. Read more on page 10. © Matt Kane/TNC



S In 2020, TNC expanded our Build Green Cities program to Baltimore. This fall, we were excited to announce that Isaac Hametz was hired as the Baltimore Program Director. In this role, Isaac will provide strategic leadership in directing our conservation portfolio

in Baltimore and managing the new Baltimore Community Project Manager staff member. Read more on page 11. Courtesy of Isaac Hametz



(in the 2021 legislative session, TNC played a critical role in the passage of the Property Assessed Clean Energy Residential (PACE-R) legislation, which expands on the existing PACE program by allowing residential

property owners to finance or refinance projects that remediate environmental issues, improve their properties' resiliency, increase water efficiency, enhance electric grid resiliency, and/or improve energy efficiency. © Flickr Creative Commons



state. The oysters purchased from more than 20 Maryland oyster farmers were planted on three sanctuary reefs in the Chesapeake Bay, helping those reefs grow to meet restoration goals. © Jay Fleming

✓ Last year, TNC worked with private donors and other partners to purchase more than 5 million surplus farmed oysters from growers in Maine, New Hampshire, Massachusetts, New York, New Jersey, Maryland and Washington



3 Matthew Houser, Ph.D., was hired as the UMD/TNC Regenerative Agriculture Fellow. His role is a new partnership between TNC and the University of Maryland Center for Environmental Science to build and

execute collaborative projects that will advance our collective goals in regenerative agriculture in the Chesapeake Bay watershed. Courtesy of Matt Houser

## **WE TRANSFORM**



**Program Goal:** To support an agricultural economy where farms provide healthy food, clean water and resiliency to climate change, and support a healthy Chesapeake Bay where people and nature thrive.

### FARMER SURVEYS AND WORKSHOPS

Many farmers don't own the land they work, but instead rent from landowners who do not actively farm—also known as non-operating landowners (NOLs). In Maryland, roughly 64% of all farmland is



Maryland farmer Trey Hill (left) shares a laugh with non-operating landowner Joe Hickman (right), one of 60 landowners from whom Hill rents. © Katie Schuler

leased. NOLs and their relationships with the farmers to whom they rent land are vital to achieving wide-scale adoption of soil health and nutrient management practices across U.S. croplands and here in the Free State.

In early 2021, The Nature Conservancy and American Farmland Trust (AFT), hosted a workshop presenting findings from two separate surveys of NOLs and farmers that lease land in Pennsylvania and Maryland. The objectives of the workshop were to discuss opportunities in the areas of policy, outreach, education, and incentives for strengthening leasing relationships of NOLs and leasing farmers and for supporting the implementation of conservation practices. They also identified actionable next steps and partners that are interested in collaborating on future efforts. Recommendations from the workshop focused on additional needs for education and outreach resources, outreach strategies, and policy and program opportunities.

### WETLAND RESTORATION IN THE POCOMOKE RIVER HEADWATERS

Building on the recent successes of downstream floodplain restoration on the Pocomoke River, TNC recently led an 80-acre freshwater wetland restoration at a property owned by Delaware Wild Lands in the Great Cypress Swamp. This property, located at the headwaters of the Pocomoke River in southern Delaware and once a low-yield agricultural field, now consists of seven interconnected wetlands that create a dynamic natural habitat. Several partners contributed their expertise, funding, oversight and design skills to make this project a great success, including Delaware Wild Lands, TNC, Ducks Unlimited and the U.S. Fish & Wildlife Service. This 80-acre restoration in the Great Cypress Swamp is now part of 3,000 restored acres of Pocomoke River floodplains and headwaters, which improves the health of the Chesapeake Bay.

### **PARTNERING TO HELP FARMERS**

The Nature Conservancy and its partners recently wrapped up a 2017 National Fish and Wildlife Foundation-funded project that was designed to accelerate the implementation of improved fertilizer application practices that improve water quality in the Chesapeake Bay region. This work included outreach, education and training that led to the engagement of 1,477 farmers and over 1,300 agribusiness and public sector partners with total potential exposure to over 49,000 farmers, conservation and agribusiness professionals. The project directly resulted in the reduction of an estimated 913,000 lbs of nitrogen and 23,000 lbs of phosphorus per year of implementation on 46,000 acres in the Chesapeake Bay region from the adoption of improved fertilizer application practices.



Heavy equipment is used to reshape an old farm field in the Pocomoke River headwaters to a landscape that more closely resembles a natural wetland. © Matt Kane/TNC; INSET Waterfowl, like wood ducks, are already benefiting from the restored habitat. © Deb Felmey



### Susan and Larry Taylor

"We have been enthusiasts of the natural world most of our lives. enjoying the seasons along the waterways of eastern North Carolina, the shores of the Chesapeake Bay and exploring other diverse landscapes across the globe. Our support for The Nature Conservancy is driven by our desire to be part of an organization that is grounded in science and seeks to find solutions and test ideas that explore humans' beneficial role in nature. We are particularly interested in the Conservancy's work with the agriculture industry and farming communities where we balance producing food, being good stewards of our lands and sustainability. The Conservancy genuinely works with all stakeholders to find ways to achieve these goals across the Bay watershed and in other regions around the world."



**Program Goal:** To conserve and strengthen our piece of the Appalachians—critical migratory corridor for mammals, birds and amphibians.

### FAMILY FOREST CARBON PROGRAM EXPANSION

Last year, The Nature Conservancy partnered with the American Forest Foundation to create the Family Forest Carbon Program (FFCP), an



TNC Conservation Forester Kevin Yoder meets with a private landowner in Pennsylvania to create a management plan that will enable the landowner to participate in the Family Forest Carbon Program. After a successful, year-long pilot phase in Pennsylvania, this program has now expanded to Maryland and West Virginia. © The American Forest Foundation initiative that started in Pennsylvania and has recently expanded to Maryland and West Virginia. The FFCP provides incentive payments to landowners who implement sustainable forest management practices that sequester additional carbon on their properties. This revenue helps landowners with the upkeep and long-term management of their land, which in turn means a healthier and more robust landscape for wildlife habitat and biodiversity. In Western Maryland, TNC's Family Forest Outreach Specialist is connecting with landowners—in places where our science has identified the maximum co-benefits of carbon sequestration and habitat conservation for biodiversity—to educate and enroll interested landowners in the program.

### **OLD-GROWTH FOREST MANAGEMENT PROJECT**

"Old growth" was once the predominant natural forest condition across the Eastern United States before European colonization on the continent. However, around the turn of the 20th century, the vast majority of forests in the Appalachians were clear-cut, resulting in forests in which most of the trees are now the same age and lacking characteristics that most people have come to know as "old growth." To accelerate old-growth characteristics, we are utilizing innovative silvicultural techniques at two demonstration sites in Western Maryland where public and private landowners and land managers can come learn how to accelerate old-growth conditions that will improve forest resilience and wildlife habitat.



An Eastern Hemlock old-growth forest is protected at Cathedral State Park in Aurora, WV—just over 30 miles from TNC's old-growth management project at Savage River State Forest, where land managers can visit our demonstration site to learn how to accelerate old-growth conditions. © Severn Smith/TNC

### IMPROVING GENETIC DIVERSITY IN RED SPRUCE RESTORATION

For the past four years, a team led by the University of Vermont has studied how to improve the genetic diversity of Appalachian red spruce forests, which will make these unique and important forests more resilient to climate change. Partners in the project include The Nature Conservancy, the University of Maryland Center for Environmental Science, and the U.S. Forest Service. In the spring of 2021, this project touched down in Western Maryland, where TNC staff, partners and contractors planted more than 10,000 genetically diverse red spruce seedlings on TNC's Finzel Swamp and Cranesville Swamp Preserves. These sites are now part of a larger initiative and will be regularly monitored and studied in order to inform future red spruce restoration.



TNC ecologist Deborah Landau, TNC Restoration and Public Lands Manager Katy Barlow, and Allegany County forester Adam Miller monitor red spruce restoration efforts at the Finzel Swamp Preserve. © Matt Kane/TNC



### Josie Gabel

"I have precious childhood memories of exploring the Fontainebleau forest in France, where I grew up. It was there that I formed a lifelong love for trees and the desire to protect them. Now that I have children of my own, I have a deep appreciation for the need to protect these cherished forests for the next generation and for the health of our planet. By visiting the Conservancy's preserves in Western Maryland and talking with their conservation teams. I have learned how vital it is to apply scientific expertise and management practices to preserve forests and protect trees for the long term. My focused support for the Conservancy, both locally and internationally, gives me a way to keep that lifelong promise of doing everything I can to help protect forests so that my kids and all those who follow can also know their magic."



**D.C. Program Goal:** A robust Washington, D.C., stormwater retention credit (SRC) market is catalyzed by construction of green infrastructure projects and sale of stormwater credits.



### NEW STORMWATER PROJECT COMPLETED IN D.C.

A new green stormwater infrastructure project at the Knollwood Life Plan Community in Washington, D.C., will capture an estimated 3 million gallons of runoff each year, improving the health of nearby Rock Creek, which drains to the Potomac River—and ultimately—the Chesapeake Bay. The project will also generate SRCs to be sold on D.C.'s Stormwater Retention Credit market to real-estate developers who are unable to meet their own stormwater retention requirements on-site.

The new rain garden at Knollwood Life Plan Community captures runoff from 1.6 acres of impervious surfaces. The native plants used in the project will provide food for birds and pollinators. © Matt Kane/TNC

### D.C.'s Stormwater Credit-Trading Market Continues to Grow

TNC—through a wholly owned subsidiary called District Stormwater—is currently the largest voluntary supplier of Stormwater Retention Credits (SRCs) in the District's stormwater credit-trading market. Note: One SRC = one gallon of stormwater stored per average rain event.

### Mount Olivet Cemetery

Total SRCs generated: 160,717

Total annual gallons of retention: **5.3 million** 



#### Knollwood Life Plan Community

Total SRCs generated: **91,054** Total annual gallons

of retention: **3 million** 

### District Stormwater Credit/Sale Summary Total credits certified: 1,025,523 Total credits sold: 490,166 Total credits currently available: 535,357 Total credits coming online in 2022: 324,693 Average price per sale: \$2.02

"As a non-profit life plan community, we are excited to be collaborating with District Stormwater, a subsidiary of The Nature Conservancy, and continue our commitment to preserve the environment," said COL Paul Bricker, Knollwood COO. "This partnership continues to allow nature to thrive at Knollwood."

**Baltimore Program Goal:** City-wide investments in infrastructure improvements prioritize nature-based solutions to reduce stormwater runoff impacts on water quality and local flooding and improve coastal climate resilience.

### BALTIMORE PROGRAM MANAGER BEGINS NEW ROLE

In 2020, TNC expanded our Build Green Cities program to Baltimore. This fall, we were excited to announce that Isaac Hametz was hired as the Baltimore Program Director. In this role, Isaac will provide strategic leadership by directing our conservation portfolio in Baltimore and managing the new Baltimore Community Project Manager staff member.

Isaac has deep ties to Baltimore, coming from a landscape architecture, urban design, and planning firm based in the city where he built the firm's design research and coastal resiliency portfolios emphasizing ecological integrity, economic uplift, and community identity.



Isaac Hametz was recently hired as TNC's Baltimore Program Director. Courtesy of Isaac Hametz

Working together with partners, the program aims to design and deliver nature-based solutions that protect natural resources and enhance quality of life in Baltimore neighborhoods. The new Baltimore program staff will facilitate on-theground community-driven conservation projects with a focus on stormwater retention and coastal resilience, strategic tree canopy expansion, and environmental justice initiatives emphasizing youth engagement.



### Tom DeKornfeld and Nina Fisher

Thomas DeKornfeld and Nina Fisher were inspired to donate to the Maryland/DC chapter's developing Baltimore program after hearing about the program's goals to implement nature-based solutions and advance climate-smart policies and programs for a more resilient Baltimore. They particularly appreciate that the project prioritizes the intentional reintegration of nature back into the city in the places where it can best tackle both environmental and social challenges.

"As long-time Maryland residents, we are acutely aware of the effects of climate change on the Chesapeake Bay, particularly urban flooding. We look forward to seeing how this project develops and informs future work throughout the Bay."

# WE STRENGTHEN COASTS



**Program Goal:** To ensure that Maryland's coastal habitats and communities are resilient in the face of sea-level rise.

### STUDYING THE ECOLOGICAL EFFECTS OF SEA-LEVEL RISE

Thanks to the NOAA Effects of Sea Level Rise Program, we are working alongside George Mason University (GMU) and the Maryland Department of Natural Resources to better understand how marshes can mitigate flooding in coastal communities. This new study expands on our preliminary research at Deal Island, which indicated that marshes can reduce wave energy by up to 90 percent. Results from this new phase of coastal research will help direct protection, restoration and management of the Chesapeake Bay region's coastal habitats to enhance community resilience. The team of TNC and GMU researchers spent several days in the water last summer collecting data from our three study sites.

TNC Coastal Scientist Jackie Specht records data during a monitoring visit to Franklin Point State Park. © Jay Fleming

### ROBINSON NECK COMMUNITY SCIENCE PROJECT

The ecologically diverse marshes, waters and pine forests found at Frank M. Ewing/ Robinson Neck Preserve are home to otters, waterfowl, spawning fish and deer. Sea-level rise is unfortunately degrading this beautiful landscape, but you can help us track these changes. By encouraging visitors to take photos at the preserve and sharing them to Picture Post, community scientists—like you—are helping us document the long-term changes of this region, which will better inform our management efforts.

### NEW GRANT WILL IMPROVE COASTAL WETLAND MANAGE-MENT AND RESTORATION

Coastal habitat restoration has traditionally addressed single sources of degradation, such as sea-level rise, erosion, invasive species, etc. However, sites are usually impacted by a myriad of human-caused stressors. To better Coastal Scientist Jackie Specht installs a Picture Post at TNC's Robinson Neck Preserve to encourage preserve visitors to participate in a sea-level rise monitoring project. © Michael Roswell

catalogue all potential sources of marsh degradation, TNC is partnering with experts to develop an innovative marsh management decision framework model, thanks to a one-year grant from the National Fish and Wildlife Foundation. With current and projected rates of habitat loss, the Chesapeake Bay can no longer afford to continue business as usual. TNC and our partners will create an innovative decision framework that will help inform holistic tidal marsh management and restoration.





Phragmites is a non-native, invasive perennial plant that grows in wetlands and along roadsides and shorelines, transforming native marsh habitats throughout the Chesapeake Bay watershed. © Jay Fleming



# Courtesy of Kirsten Quigl

### Kirsten Quigley

"Having an opportunity to give back to a world which has given so much to me and my family is what drives me both at home and in my business. My parents showed us a love for nature, with sunsets on the Chesapeake Bay and listening to migrating birds in the trees of the C&O Canal. My husband and I continue that tradition of sharing the beautiful landscape we call home with our children. I now act and give to make sure that my grandchildren and their children also have the opportunity to fish from a clean stream, hike in a healthy forest, or marvel at the quiet solitude of nature."



Maryland/DC Nature Conservancy Preserves

Juvenile newt © Matt Kane/TNC



Wild turkey nestlings © Chase McLean/TNC

Yellow-bellied sapsucker © Matt Kane/TNC







Northern green frog © Chase McLean/TNC



Maryland Stewardship Field Assistant Chase McLean launches an ignition drone during a controlled burn at the Nassawango Creek Preserve. Ignition drones are a new technology in the world of fire restoration that allow burn teams to burn more acres more safely. Interesting tidbit: the payload of ping-pong ball-sized ignition spheres that the drone drops to start fires in the interior of the burn unit are called "dragon eggs." © Gabriel Cahalan/TNC



Natasha Whetzel, conservation practitioner based out of The Nature Conservancy in Delaware and Pennsylvania, talks to a national CBS News crew at the Sideling Hill Creek Preserve in Western Maryland for a story about the role that controlled burns will play in establishing more climateresilient Appalachian forests. Burn crews often work across state lines to support neighboring chapters so that we can burn at a larger scale. The internal TNC mantra that best explains this type of cross-chapter collaboration is referred to as "One Conservancy." © Matt Kane/TNC



TNC and National Aquarium staff team up to monitor the success of an Atlantic white cedar restoration project at TNC's Nassawango Creek Preserve—a partnership more than 10 years in the making. © Deborah Landau/TNC



A pink lady-slipper orchid in full bloom at the Nassawango Creek Preserve. © Chase McLean/TNC



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LEFT TO RIGHT  $\ensuremath{\mathbb{C}}$  Matt Kane/TNC;  $\ensuremath{\mathbb{C}}$  Gabe Cahalan/TNC;  $\ensuremath{\mathbb{C}}$  Jay Fleming









THANKS TO OUR STAFF AND PARTNERS FOR WORKING THROUGH ANOTHER DIFFICULT YEAR. TOGETHER, WE ACHIEVED GREAT THINGS