



FORWARD TOGETHER

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Forward Together: A Culture-Nature Journey Towards More Effective Conservation in a Changing World

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The Presidio

San Francisco, California

This symposium was convened to share insights on how understanding culture-nature interlinkages on many landscapes and waterscapes can shape more effective and sustainable conservation.

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Forward Together: A Culture-Nature Journey Towards More Effective Conservation in a Changing World
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The Chesapeake: Where Culture and Nature are Never Separate

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Abstract

This paper explores the long-standing integration of culture and nature in the Chesapeake Bay watershed, how it has stimulated conservation over time, and the evolution of a landscape-scale partnership focused on conserving multifaceted values. The Chesapeake Conservation Partnership is a coalition of diverse organizations and agencies engaged in land conservation and related fields. Partners seek to extend the conservation of large landscapes throughout the region to benefit economic sustainability, scenic and cultural heritage, working lands, important wildlife habitat, water quality and supply, public health and recreation, and overall quality of life. The Partnership's approach, goals, initiatives for growing conservation, and examples of progress are described, including development of a *Chesapeake Conservation Atlas* to inform and guide collaboration and priority work.

Keywords

landscape, Chesapeake, conservation, watershed, partnership

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The Chesapeake: Where Culture and Nature are Never Separate

The Chesapeake and Conservation

The connection between nature and culture in the Chesapeake Bay watershed was impressed on one of us two decades ago when newly arriving here to create a program for interpreting the Chesapeake story. Jonathan Doherty visited various stakeholders and asked: “what’s more important -- the cultural story or the natural story?” He was routinely met with looks implying he was obviously not from around here. Most people simply couldn’t fathom a distinction between the two. That’s how intertwined this socio-ecosystem is.



Figure 1. Tangier Island, Virginia in Chesapeake Bay. *Courtesy of the Chesapeake Bay Program.*

Chesapeake Bay is the largest estuary in North America. The bay watershed encompasses 64,000 square miles in six states and the District of Columbia. It is home to 18 million people, the nation's capital, the major port cities of Norfolk and Baltimore, and:

- 57 units of the National Park System
- All or part of 7 National Heritage Areas and 25 state heritage areas
- 2 National Scenic Trails and 5 National Historic Trails
- 248 National Historic Landmarks and over 3,600 National Register of Historic Places listings
- 17 National Wildlife Refuges
- 2 National Forests
- Over 4 million acres of state owned parks, forests and wildlife management areas
- Over 1.7 million acres of privately owned farm, forest and historic lands protected through conservation easements
- Over 1200 public access sites along the bay and its rivers

Clearly, there is a lot of culture and nature in these parts. And people recognize it.

How could one not? The Chesapeake's most iconic "natural" resources are likely the Atlantic Blue Crab and the Eastern Oyster. Similarly, the most revered "cultural" heritage of the bay rests in the Chesapeake watermen and women who have made their living crabbing, oystering, and fishing here.²

² See William Warner's Pulitzer Prize winning *Beautiful Swimmers: Watermen, Crabs and the Chesapeake Bay* (Atlantic Monthly Press and Little, Brown Books, 1976) and James Michener's *Chesapeake* (Random House, 1978).



Figure 2. Hand-tonging for oysters in Chesapeake Bay. *Courtesy of the Chesapeake Bay Program.*

Blended from time immemorial in the Chesapeake, nature and culture have inspired and driven conservation since the mid-nineteenth century. The birth of the historic preservation movement in America is attributed to the preservation of George Washington's Mount Vernon in 1858, along the Potomac River, a Chesapeake tributary. A century later in 1961, a national park was created solely to protect the view from Mount Vernon across the river. In between these dates, states, the federal government and non-governmental organizations acted to protect battlefields, presidents' homes and birthplaces, vast once-forested landscapes denuded by nineteenth century timber harvests, migratory bird habitat, and sites for outdoor recreation.

In the half century since the 1960s our recognition of the complexities of culture, nature, and conservation has skyrocketed. Ground-breaking commissions, studies, and local demands drove innovative policies and initiatives in the Chesapeake region: whole new funding programs for protecting land, like Maryland's [Program Open Space](#), Virginia's [Land Preservation Tax Credits](#),

and Pennsylvania's [farmland preservation program](#); the development of state heritage areas; the growth of regional land trusts; and establishment of the Chesapeake Bay Program in 1983.

For three decades, the [Chesapeake Bay Program](#)—a state-federal partnership—has worked on challenges affecting the bay. Authorized under the Clean Water Act and largely financed through the U.S. Environmental Protection Agency, the program has a strong water quality emphasis to reduce nutrient and sediment pollution. Yet, by 2000, the program adopted a “[Chesapeake 2000](#)” agreement with ten year goals for a wide range of values, including land protection.

As the following decade neared its end, a combination of factors caused concern. Pollution loads, while reduced, were not on a good enough trajectory. The Bay Program began moving toward a more regulatory approach for restoring water quality, squeezing conservationists working outside the water quality realm to the edges. The Great Recession significantly impacted state budgets. “Bay fatigue” became a worry. A pathway to a new Chesapeake agreement was unclear.

Then, something new occurred. In 2009, the President of the United States signed [Executive Order 13502](#) “Chesapeake Bay Protection and Restoration.” The order set deadlines and assigned various federal agencies to develop reports on aspects of conservation and an overall strategy for moving forward. The National Park Service, directed to address land conservation and public access, convened a group of over fifty partners to help craft goals and recommendations. The makeup of the group—experts in historic preservation, natural resources, outdoor recreation and more—led to a goal embracing multiple values:

Conserve landscapes treasured by citizens to maintain water quality and habitat; sustain working forests, farms and maritime communities; and conserve lands of cultural, indigenous and community value. Expand public access to the Bay and its tributaries through existing and new local, state and federal parks, refuges, reserves, trails and partner sites.³

³ Federal Leadership Committee for the Chesapeake Bay, 2010. *Strategy for Protecting and Restoring the Chesapeake Bay Watershed*. See: <http://federalleadership.chesapeakebay.net/file.axd?file=2010%2f5%2fChesapeake+EO+Strategy%20.pdf>.

But, the group of organizations was not satisfied with words. They saw value in crossing boundaries—of jurisdictions, levels of government, and disciplines—to meet, collaborate and advance the work. While Chesapeake agencies and organizations were used to this approach in the water quality arena, this extensive collaboration broke new ground for those working together for land conservation in the region.

Over the next four years the initial group evolved into an increasingly organized broad coalition—now called the [Chesapeake Conservation Partnership](#)—with annual meetings, a steering committee, work groups and staff. The mission: “Foster collaborative action to conserve culturally and ecologically important landscapes to benefit people, economies, and nature throughout the sixstate watershed.”

The Partnership worked with the Bay Program to embed land conservation and public access as major goals when a new [Chesapeake Bay Watershed Agreement](#) was negotiated and signed in 2014 by governors of the six states, the District of Columbia, Chesapeake Bay Commission and U.S. Environmental Protection Agency. In addition to adopting narrative goals framed four years earlier, the new agreement set ambitious outcomes to achieve by 2025, among them:

- Protect an additional two million acres of lands throughout the watershed—currently identified as high-conservation priorities at the federal, state or local level—including 225,000 acres of wetlands and 695,000 acres of forestland of highest value for maintaining water quality.
- Add 300 new public access sites to the Chesapeake Bay watershed, with a strong emphasis on providing opportunities for boating, swimming and fishing, where feasible.

These commitments further solidified the regional importance of landscape-scale conservation and the Chesapeake Conservation Partnership’s role in convening efforts to get there, alongside, but slightly outside, the water quality focused Chesapeake Bay Program.

Values, Goals and Moving Forward

Protecting two million acres in a fifteen year period is ambitious and it leaves many questions to answer: What does landscape-scale conservation look like in a 64,000 square mile watershed? What does it aspire to achieve over an even longer term? What values do we seek to conserve? What are the priorities? How do those values look reflected in maps and statistics? What is the best way to communicate the values? And what will it take, over how long, to achieve the aspirations? These are the challenges the Partnership has worked to address since 2014, all while member organizations continue the day to day work of protecting individual properties.

What are the values?

In preparation for an annual meeting, the Partnership began formulating a set of inclusive long-term landscape conservation goals encompassing shared values in the watershed. These were to reflect certain principles:

- Pooling our priorities gives greater influence
- Everyone's land conservation goals and priorities are important
- The Partnership's landscape conservation goals must be inclusive of all partners' goals
- Dividing the pie of funding is not our interest. Making the pie bigger is.

The goal framework developed around *farms, forests, habitat, heritage and human health*. Note the centrality of both nature and culture:

- *Farms*: Protect the Chesapeake watershed's productive farms and prime farmland from conversion and secure space for urban farming to ensure permanent, sustainable 'close to home' sources of food for the region's population and to support the economic and cultural value of our working farms and farmers.
- *Forests*: Protect the Chesapeake watershed's most ecologically and economically valuable forest land from conversion--headwater and riparian forests, large forest blocks,

woodlots providing multiple values, and forests conducive to sustainable timber harvests.

- *Habitat*: Protect a network of large natural areas and corridors sufficient to allow nature to respond to a changing climate and land development and to support thriving populations of native wildlife, migratory birds, fish and plants and sustain at-risk species.
- *Heritage*: Protect the treasured landscapes of our collective heritage from development that would alter the scenery and character that conveys their importance -- along our designated trails and scenic rivers and byways, at our parks, and throughout our state and national heritage areas, valued cultural landscapes and historic sites and districts.
- *Health*: Provide people access to parks and trail networks within walking and biking distance of their homes and communities. Provide sufficient opportunities along waterways to ensure nearly all residents are within 30 minutes of reaching a public access site at water's edge.⁴



Figure 3. The Susquehanna River landscape in Pennsylvania, flowing towards the Chesapeake. *Photograph courtesy of Nicholas Tonelli.*

⁴ The Partnership is now expanding this goal to encompass other aspects such as protecting public drinking water.

These sectors combine as an interconnected socio-ecosystem for “a vibrant economy, strong communities, healthy people, working farms and forests, vital habitat for native wildlife, clean water, our shared heritage, recreation and quality of life.”⁵ In many—if not most—places on the land, cultural and natural values fully overlap. This is a benefit, often bringing those with diverse interests together to work toward their conservation.

How do these values look reflected in maps and statistics?

An advantage of 21st century conservation, especially in the Chesapeake watershed, is the availability of geo-spatial data. The Partnership began assembling existing data in 2012 using bi-weekly conference calls among partner organizations to coordinate work. This resulted in launching [LandScope Chesapeake](#), an on-line, publicly accessible map viewer.

By 2016, the “mapping team” turned to documenting the Partnership’s long-term conservation goals. The team took an iterative approach, using the best available data to produce reliable, useful first-generation maps. This approach--and the bi-weekly calls--produced draft maps of each conservation goal in months, not years, in time for review at the 2016 annual meeting.

⁵ See: <https://www.chesapeakeconservation.org/index.php/our-work/chesapeake-conservation-atlas-2/>.

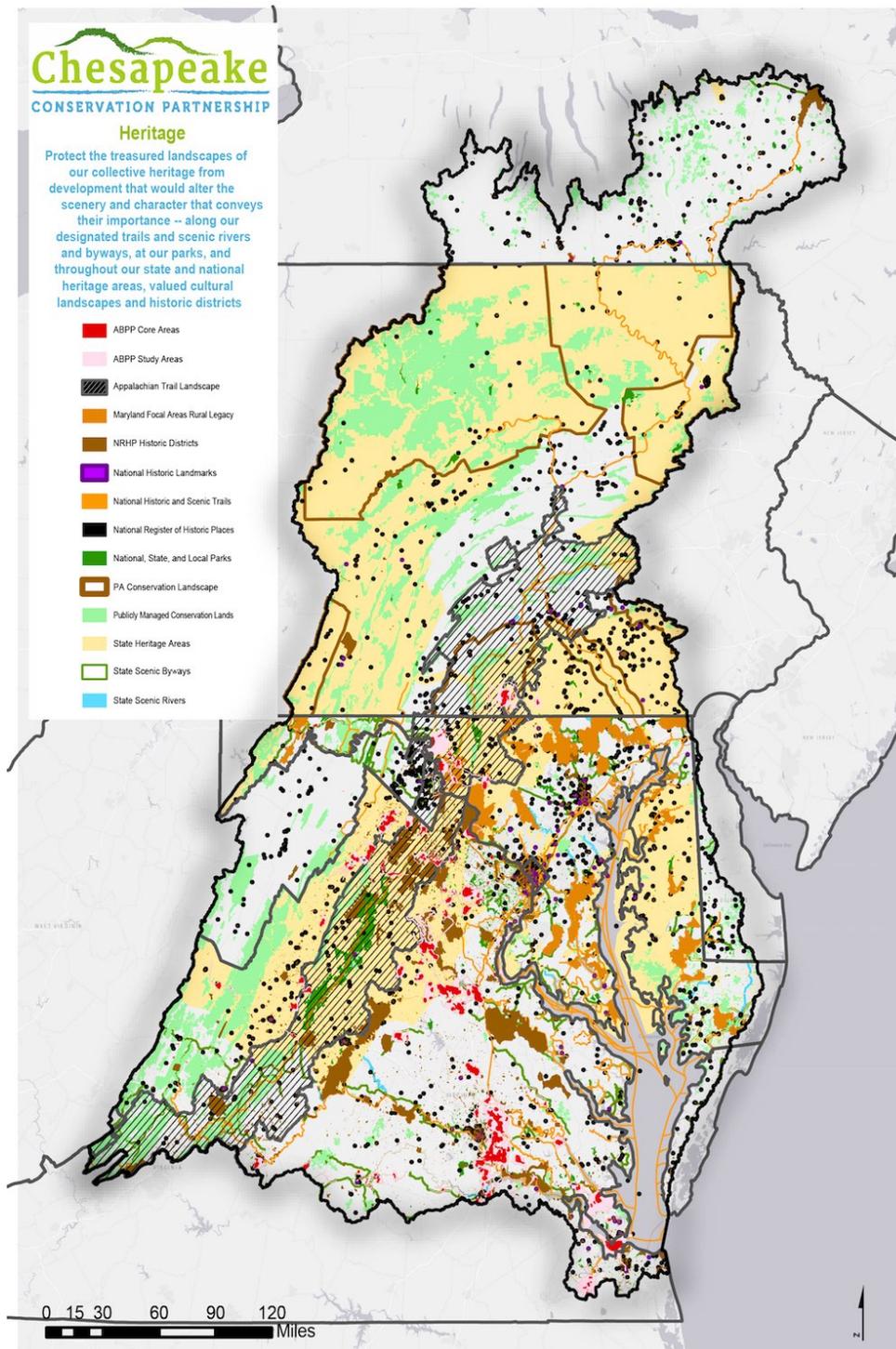


Figure 4. Map of Important Heritage Resources corresponding to Heritage goal.
Courtesy of the Chesapeake Conservation Partnership.

A next wave of analysis focused on two questions: (1) how do all these values intersect and what is a composite set of our most valued lands? and (2) what factors might influence the ability to achieve long-term conservation goals? Again, the team assembled data and analyses, including first-ever watershed-wide maps of energy infrastructure, land trust capacity and more.

By the 2017 annual meeting, the Partnership's mapping work was packaged as the [Chesapeake Conservation Atlas](#), setting out the status of protected lands, conservation goals, influences and the composite: "Our Valued Lands."

What does this composite of valued lands suggest? There are 41 million acres of land in the Chesapeake watershed. Eleven percent of that area is developed in cities, towns, homes, roads, and industry. But we also rely on large portions of the remaining 89 percent to support our lives:

- That is where we find 22 million acres of important forests that protect our water supplies and climate and help control flooding.
- It is where we find 19 million acres of important wildlife habitat.
- It includes 20 million acres of land that can support farming, including 7 million acres now being farmed. We rely on those working farms for food and supporting the economy -- orchards, vineyards, crop and vegetable fields, dairies and more, plus the businesses they support.
- It is also where we find 24 million acres of history, farms, forests, and habitat that represent our cultural and natural heritage -- the places important to who we are as a people; that provide us with recreation, hunting, fishing, tourism and other economic sectors.

Interestingly, each of these core values equates to approximately half the watershed, though there is substantial overlap.

The [valued lands map](#) represents a composite of values from the [Farms](#), [Forests](#), [Habitat](#) and [Heritage](#) goals.⁶ It depicts the full range of places we collectively value. A portion of these lands—8.8 million acres or 22 percent of the Chesapeake watershed—are permanently conserved. But another 11.5 million acres (or 28% of the watershed) represent our most valued lands—places with the highest amount of overlapping farm, forest, habitat and/or heritage values which are *currently unprotected*. Achieving the 2025 land protection goal will only reduce that amount of unprotected high value land to 26 percent -- not enough to conserve the full half of the watershed people rely on and value most highly.

What will it take, over how long, to achieve these aspirations?

One member of the Chesapeake Conservation Partnership’s steering committee described the greatest value of the goal setting and mapping as “giving us a common language” -- something essential for collaboration on big goals. The Partnership is now focused on what it will take to achieve those goals, building on the original philosophy of “growing the pie, not dividing it up.”

Framing: Global biodiversity declines have fueled conversation on the need to protect half the planet to ensure sustainability. Most notable is the call from famed scientist Edward O. Wilson in [Half Earth](#). Regional efforts within the watershed have been exploring similar scale goals, including in the Piedmont and the Eastern Shore, though not solely for biodiversity aims. The Partnership’s “valued lands” mapping suggests the same need to conserve half the watershed; partners are working on how to best frame this goal and achieve it over time.

Communicating: Meeting conservation goals requires sustained support for public land conservation programs, private sector investment and capacity, and other new sources of conservation financing. All these depend on a supportive public, interested landowners, dedicated conservationists, and committed public officials. To sustain engagement and commitment of many organizations, the Partnership is developing a communications and

⁶ The current [Health goal map](#) represents a different type of data and is not included. As additional health values are added this will likely change.

messaging framework. This will assist all partners in building support for land conservation and its financing at multiple scales.

Sustaining Existing Financing: The Chesapeake region is fortunate to have significant state land conservation programs. That is not to say these programs are always safe from efforts to divert or reduce funding levels. Partnership members actively work with governors and legislators to sustain and grow conservation programs. As one example, in Maryland, the Governor and General Assembly committed to fully fund [Program Open Space](#) at \$183 million in fiscal year 2019.

Developing New Protections and Financing: Existing public financing programs and protections are insufficient for achieving long-term goals. New mechanisms and sources are needed. The Partnership is currently working on two:

- [Crediting Land Conservation](#): In 2010, the Chesapeake Bay TMDL (Total Maximum Daily Load) became the primary driver for reducing nutrient and sediment pollution. It requires that states implement Best Management Practices (BMPs) and account for potential growth in pollution. Conservationists were concerned the TMDL did not “credit” land protection as a means of preventing future pollution loads. The Partnership is working with the Chesapeake Bay Program to incorporate permanent land protection as BMPs in state Watershed Implementation Plans. Over time, this could provide a significant incentive for allocating resources to land protection to prevent future pollutant load growth.
- [State Mitigation Policy](#): Numerous applications for large scale energy projects are affecting Chesapeake lands and waters. There is a need to enhance state-level policies for landscape-scale mitigation to address these projects. A 2018 report prepared by the Environmental Law Institute for the Partnership assesses state policies in Maryland, Pennsylvania, and Virginia, and recommends options to make mitigation protocols more accountable and provide more consistent landscape-level benefits.

Filling Conservation Atlas Gaps: Despite the scope of the [Chesapeake Conservation Atlas](#) there are gaps and new opportunities for analysis more fully develop the landscape conservation agenda. Here are four works in progress:

- *Crowd-sourcing Important Scenic Landscapes:* Conserving scenic landscapes resonates with the public. National park visitor surveys indicate 90% of visitors consider “scenic views extremely or very important to protect.”⁷ Yet, documentation of scenic landscapes lags far behind that for many ecological resources, in part because it has traditionally been labor intensive. The Partnership is experimenting with a new approach: using millions of data points from geo-tagged photos shared through web platforms. The massive amount of data appears to allow mapping of hotspots of valued places, views and landscapes.
- *Leveraging the Enthusiasm for Birding:* Migratory birds are among the most visible, appreciated species of wildlife, and public interest in birding is growing. The [eBird](#) platform has allowed birders to share detailed data on their observations creating an enormous database of 30 million birding checklists and a half billion species observations. The Partnership is leveraging this information to illustrate the high interest in birding and how protected lands contribute to sustainable bird populations. Both can help build support for conservation.
- *Analyzing Gaps in Access to Parks:* The Partnership aspires for people to have access to parks and trail networks within walking and biking distance of their homes and communities. This is particularly relevant in densely developed areas and neighborhoods with historic inequities in access to recreation. The Trust for Public Lands’ [ParkServe](#) analyzes access to parks for communities nationwide. The Partnership is using data from ParkServe and other datasets to inform future collaboration on how to expand access in underserved areas.

⁷ See https://www.nature.nps.gov/air/pubs/pdf/NPS-VisitorValueOf-CleanAir-ScenicViews-DarkSkies_2013_web.pdf.

- *Documenting the Lands that Provide Drinking Water*: Perhaps no value is more important than an adequate supply of clean drinking water. The Partnership is assembling existing data on lands that sustain drinking water supplies, including aquifer recharge zones and watersheds supporting public drinking water intakes. The resulting analyses will contribute new factors in the Partnership’s human health goal and “valued lands” analyses.

Progress

Despite all the mapping and all the analysis, landscape conservation gets done on the ground, and in good policy. Measuring that progress, both in examples and metrics, is essential. Here is a small sampling of recent results showing incremental progress in conserving intersecting cultural and natural values, piece by piece:

- *Werowocomoco*: In 2016, the National Park Service acquired the 264 acre Werowocomoco site on the York River in Virginia, an indigenous cultural landscape, spiritual center and prominent seat of leadership for Tidewater area Algonquians since at least the 1200s. By 1607, when European colonists arrived, Werowocomoco was the center of a multi-tiered chiefdom under Powhatan influencing dozens of communities in the Tidewater area. The Partnership was instrumental in gaining Land & Water Conservation Fund dollars to support the acquisition.
- *Harriet Tubman*: In August 2018, the Maryland Department of Natural Resources created a new 28,300-acre Harriet Tubman Rural Legacy Area in Dorchester County and allocated an initial two million dollars in grants to support conservation of the landscape associated with Tubman's life and legacy, which is affiliated with Blackwater National Wildlife Refuge. This builds on the Harriet Tubman Underground Railroad National Historical Park in Maryland established in 2014.
- *Michaux State Forest*: In June 2018, Strawberry Hill Nature Preserve, an environmental education center in Adams County Pennsylvania, donated and sold 560 acres that are now part of Michaux State Forest. The addition enhances the forest’s contiguous wildlife

corridor of nearly 86,000 acres in south-central Pennsylvania, and protects the headwaters of a designated Exceptional Value stream, Swamp Creek. Proceeds from the sale will enhance educational programming at the Preserve's main campus.

- *The Piedmont*: In 2017, private landowners in Fauquier County, located west of Washington DC in the Virginia Piedmont, placed 2,541 acres under permanent conservation easements. Over 104,000 acres in Fauquier — a quarter of the county — are now protected through easements. Fauquier is also within the Journey Through Hallowed Ground National Heritage Area.
- *The Eastern Shore*: In 2018, the Maryland Department of Natural Resources is ready to acquire a new 1,172 acre wildlife management area in Queen Anne's County on the upper Eastern Shore. The property will protect ecologically-sensitive habitat and provide for outdoor recreation, especially hunting or trapping.

These examples are indicative of Chesapeake conservationists' focus on culture and nature, across the watershed and on specific properties. Conservation actions add up. Tracking of watershed-wide land protection shows over one million acres have been conserved toward the 2025 goal of two million. One million down, one million to go.

The Chesapeake and its many sub-regions--Tidewater, Eastern Shore, Piedmont, Shenandoah Valley, Pennsylvania Wilds, Amish Country and more--continue to stir people's hearts. Whether we are American Indians, progeny of colonists, people descended from slavery, or more recent immigrants to the watershed now acculturated to this place, the lands we live in continue to shape our individual and common cultures. Our values, tied to the land and water around us, create our way of looking at nature/culture. Those values guide our desires and goals for the future of this place and drive the many individual and partnership actions necessary for long-term conservation.



Figure 5. Rapidan River headwaters, Madison County Virginia.
Courtesy of the Chesapeake Bay Program.

Biographical Notes

Jonathan Doherty has worked in landscape scale conservation efforts for three decades, conducting planning for national heritage areas, managing the Columbia River Gorge National Scenic Area, and coordinating many National Park Service contributions to conserving the Chesapeake Bay watershed. He helped facilitate development of the Chesapeake Conservation Partnership.

John Griffin is Program Manager for the Chesapeake Conservation Partnership. He is the former Secretary of Maryland Department of Natural Resources under two Governors, the Deputy Secretary of the department, the General Manager of the Washington Suburban Sanitary Commission, and served as Chief of Staff for Governor Martin O'Malley. He has decades of

experience with resource conservation and environmental protection as well as relationships across the Chesapeake watershed.

John Reynolds is a member of the Chesapeake Conservation Partnership Steering Committee. He had a 36 year career with the National Park Service, including serving as Deputy Director and as a Regional Director in both the Pacific West and Mid-Atlantic Regions. John is widely known for his forward thinking approach to conservation and parks. As a result he has served on multiple boards and commissions including the Fort Monroe Authority, Presidio Trust, Chesapeake Bay Commission, Flight 93 Advisory Commission, Shenandoah National Park Trust and more.