



THE PATH FORWARD: INVESTING IN VIRGINIA'S LAND AND WATER

VIRGINIA*forever*'s Five-Year Plan, 2021-2025



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MISSION OF *VIRGINIAforever*

As a unique coalition of concerned businesses, environmental organizations and outdoor enthusiasts, *VIRGINIAforever* advocates for increased funding to restore and protect the lands and waterways of the Commonwealth.



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Landscape photography of Lake Moomaw was generously provided by Ben Greenberg.

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VIRGINIA*forever*

FIVE-YEAR FUNDING GOALS, 2021-2025

Land Conservation & Public Access

\$20 million per year for land conservation grant programs

\$70 million bond for conservation agency land acquisition

\$75 million per year for Land Preservation Tax Credits

\$115 million in bonds for public access projects

Total: \$660 million over five years

Water Quality

\$55 million per year for wastewater treatment plant upgrades

\$80 million per year for stormwater projects

\$100 million per year for Agricultural BMP cost share

Total: \$1.175 billion over five years

RECOGNIZING PROGRESS MADE AND UNDERSTANDING THE CHALLENGES AHEAD

In 2015, VIRGINIAforever unveiled its first comprehensive funding plan for investing in the Commonwealth's land and water. This plan provided specific recommendations for state-funded natural resources programs for years 2015-2019.

Over that period, the Virginia General Assembly made noteworthy advancements toward meeting these funding goals, recognizing the benefits of investing in Virginia's land and water have for our economy and for the quality of life of all Virginians. While the General Assembly's commitment is significant, much work lies ahead. In fact, funding levels ultimately fell short of our recommendations – **with water quality initiatives underfunded by \$285 million and land conservation initiatives underfunded by more than \$420 million.**

Much progress made, yet more progress needed.

Building on the successes of the last five years, VIRGINIAforever has developed a new Five-Year Funding Plan, which outlines the investments needed to accomplish the Commonwealth's land conservation and water quality improvement goals from 2021 through 2025.

The investments that Virginia has made in natural resources protection thus far have proven to deliver wide-reaching benefits.

A Clean Water Economy

The Chesapeake Bay has long been one of the Commonwealth's greatest natural and economic treasures. A 2014 economic study sponsored by the Chesapeake Bay Foundation concludes that if all the practices necessary to achieve Chesapeake Bay cleanup goals by 2025 were implemented, Virginia will reap an additional \$8.3 billion annually in economic value. The aesthetic benefits alone – which drive people to live, work and play in the region – would add an annual \$3.6 billion in economic value.

In 2017, Virginia's commercial seafood landings across all species were valued at \$183 million, with total oyster landings valued at \$34 million, according to the National Marine Fisheries Service. More specifically, the shellfish aquaculture market in 2017 had a farm gate value of over \$54 million, according to the Virginia Institute of Marine Science. This sector of Virginia's economy will only grow stronger as we further improve water quality.

Economic Benefits of Land Protection

Conservation of Virginia's natural and working lands also continues to play a strong role in the Commonwealth's economy. According to the Trust for Public Land, every one dollar invested in land conservation yields four dollars in return. Moreover, these efforts support the hundreds of thousands of jobs that make up land-based industries in Virginia.

The Weldon Cooper Center for Public Service found that in 2015, the forestry sector generated over \$21 billion in total industry output and was responsible for making up more than 107,000 jobs. The Center also found the agriculture sector had a total industry output of over \$69 billion and made up more than 334,000 jobs.

Virginia's rich landscape is also responsible for generating tourism and recreation revenue across every region. The Virginia Tourism Corporation found that in 2015, the Commonwealth generated approximately \$23 billion in travel expenditures from visitors. Fishing, boating, hiking and other forms of recreation are key drivers of this tourism.

The U.S. Fish and Wildlife Service found that Virginians spent over \$3 billion in 2016 fulfilling their outdoor hobbies and passions. Similarly, the Outdoor Industry Association found that outdoor recreation in Virginia supports 197,000 direct jobs and over \$1 billion in state and local tax revenue. Virginia's public lands are an essential component of delivering these economic benefits.

The Virginia Department of Conservation and Recreation (DCR) reports that Virginia's state parks and natural areas support 10 million annual visits, generating a \$267 million positive economic impact, and supporting over 3,800 jobs. Improving access to generate even more tourism must be a core focus moving forward.

Public Opinion Matters

Not only are there indisputable economic reasons to invest in Virginia's land and water, but also public opinion research shows that an overwhelming number of Virginians support these initiatives. A 2017 Wason Center for Public Policy survey showed that the health of the Chesapeake Bay was very important to 75 percent of Virginia voters and 80 percent of voters said local rivers, streams, and lakes are important. More broadly, 70 percent of voters in Virginia said that outdoor recreation is important. Nearly 70 percent of voters said Virginia should increase the amount it spends on environmental priorities.

VIRGINIAforever – which is composed of a diverse group of businesses, environmental organizations and outdoor enthusiasts – respectfully urges state elected leaders to use the following funding recommendations as a roadmap to fully take our investments in the Commonwealth's land and water to the next level. Doing so will compound the economic successes we continue to witness and will give every Virginian, no matter where they live, the opportunity to enjoy our great natural assets.

LAND CONSERVATION AND PUBLIC ACCESS IN THE COMMONWEALTH

Public Demand for Land Programs

Virginia has strong policies and programs in place to preserve our open spaces, farmlands and forests. The Land Preservation Tax Credit (LPTC), the Virginia Land Conservation Foundation (VLCF) and other grant programs have been critical to the Commonwealth's land conservation achievements. Since VLCF's founding, the program has protected 152,838 acres with additional acreage protected with funds transferred to the Virginia Outdoors Foundation (VOF). VLCF has received a total of 337 applications requesting more than \$122 million – more than two times the available amount. Legislation in 2013 (HB 1398) established a policy that VLCF should receive \$16 million per year, plus \$2 million per year being allocated to battlefields and farmland preservation programs. Since 2000, the LPTC has been responsible for helping preserve 872,951 acres. The current annual cap of \$75 million for the LPTC program was established in 2015. As both of these programs effectively drive land conservation in the Commonwealth, the Governor and General Assembly must maintain these two programs as top priorities.

VIRGINIAforever calls for the Commonwealth to maintain level funding of the LPTC at \$75 million per year and annually appropriate \$20 million for the VLCF, battlefields and farmland preservation as prescribed in HB 1398 (2013).

Setting Goals, Measuring Results

VIRGINIAforever recommends that policymakers consider establishing meaningful and measurable goals for land conservation. One approach could be to define an overall amount of land to be protected, such as 30 percent of the Commonwealth (which is less than 17 percent protected today). Once that target is reached, consideration can be given to resetting the goal based on population growth, land-based industry needs and wildlife habitat needs, as well as other relevant factors. With state agencies now using ConserveVirginia to identify the highest value lands, policymakers can be assured that state dollars are being spent only on the most important priorities, in accordance with a statewide strategy.

The timeframe for a land conservation goal should be established in a way that allows for annual benchmarking. In the absence of an annual acreage target, VIRGINIAforever's recommendation is based on our assessment of what is needed and achievable. If the grant programs are fully funded and the LPTC cap remains the same, Virginia would be able to protect about 65,000 acres a year. There also are needs and opportunities to acquire inholdings and lands that are adjacent to existing public lands.

Therefore, **VIRGINIAforever recommends funding that would conserve 80,000 acres per year for the next five years. In order to meet this goal, Virginia would need not only consistent funding for grant programs and the LPTC, but also the issuance of bonds in the amount of \$70 million.**

A \$70 million land acquisition bond would allow DCR to secure 4,500 acres across 15 state parks and 7,200 acres across 15 natural area preserves, consistent with documented management needs and capital outlay plans. Some of the funding could also be available to the Department of Forestry (DOF) and Department of Game and Inland Fisheries (DGIF) for their highest priority land acquisition needs.

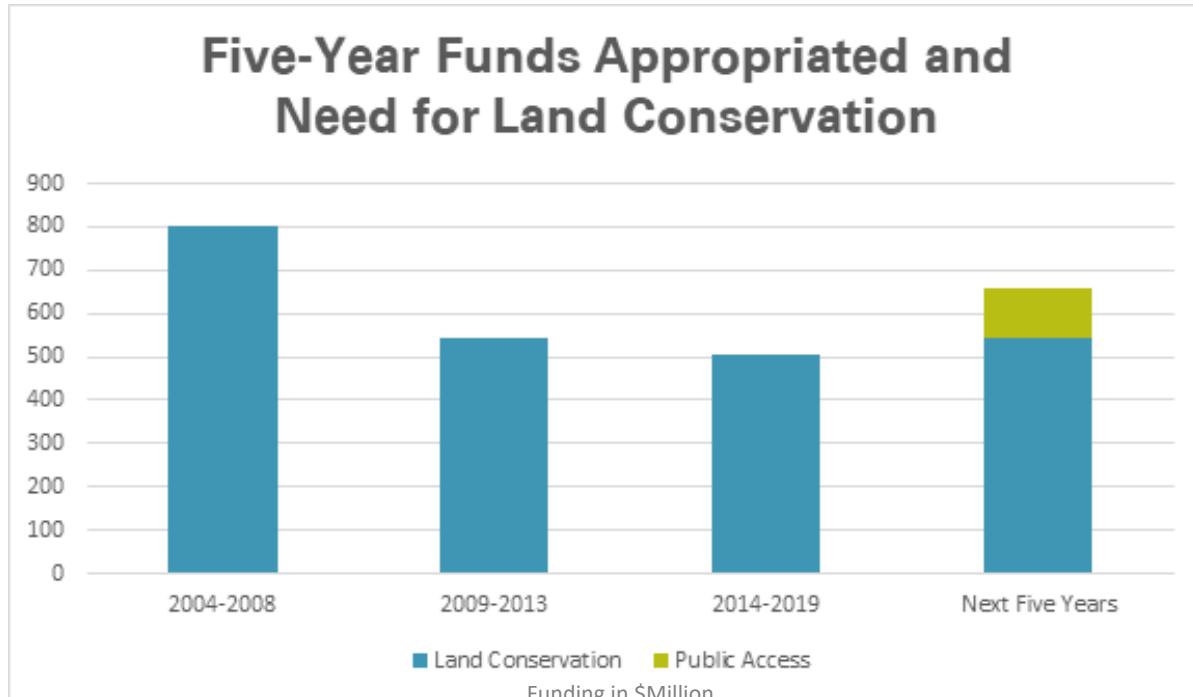
Public Access Infrastructure

Public lands can only be enjoyed by citizens and visitors if they contain basic infrastructure such as roads, parking, trails and facilities for disabled access. Virginia has eight land banked parks in need of such infrastructure: Clinch River, Mayo River, Middle Peninsula, Natural Bridge, Seven Bends, Sweet Run, Widewater and Machicomoco. These parks need things like bathrooms, campgrounds, boat launches, picnic areas, cabins, fishing piers, and outdoor educational facilities. Funds are also needed for water access points throughout the Commonwealth for fishermen, paddlers and boaters. These access points are provided both by DCR and DGIF. In addition, there are five state-wide trails in the Virginia Outdoors Plan (James River Heritage Trail, Potomac Heritage National Scenic Trail, East Coast Greenway, Beaches to Bluegrass Trail and Great Eastern Trail). Bond funding could facilitate the development of these trails to meet broader access needs across Virginia. **VIRGINIAforever recommends that over the next five years \$115 million in bonds be authorized to provide public access infrastructure in state parks and natural areas as well as for water access points and statewide trails.**

Reforestation of Timberlands Program

Virginia's private forest lands provide a host of ecosystem services. The Reforestation of Timberlands program assists landowners in the reforestation of their lands after timber harvest. Funding for this program comes from a self-tax paid by the forest products industry, which is supposed to be matched dollar for dollar by the General Fund. While this program is currently fully funded, some past budgets have not funded the match at 100 percent. **VIRGINIAforever recommends fully funding this program on an ongoing basis.**

Land Conservation and Public Access Funding Recommendations



Program	Recommended 5-Year Investment
Land Conservation Grant Programs	\$100,000,000
Land Preservation Tax Credit	\$375,000,000
Bonds for Land Acquisition (Parks & Natural Areas)	\$70,000,000
Bonds for Public Access Projects	\$115,000,000
Total Funding Over 5 Years	\$660,000,000

WATER QUALITY IN THE COMMONWEALTH

State Water Commitments

Virginia has been working to restore its waterways, especially the Chesapeake Bay and tributaries, for decades. The most comprehensive effort was initiated in 2010, when Virginia, together with the other Bay states and the federal government, developed the Chesapeake Bay Total Maximum Daily Load (Bay TMDL), which set updated pollution limits for the Bay and its tributaries. Consistent with the TMDL, Virginia developed its multi-phased Watershed Implementation Plan (WIP), laying out the specific steps the Commonwealth committed to take to reduce the pollution entering Bay waterways from each major sector – wastewater, agriculture, urban areas and septic – by 2025. Together, the TMDL and state WIPs act as a blueprint for restoring the Chesapeake Bay.

Virginia's achievements in implementing this blueprint to reduce the nitrogen and phosphorus that pollute Bay waters have been substantial, especially in the wastewater and agriculture sectors. These efforts are showing results: underwater grasses are increasing to levels not seen in our lifetimes, the Bay's annual dead zone – where little can grow due to oxygen deprivation caused by pollution – is getting smaller, and blue crab populations are rebounding.

As we get closer to full Bay restoration, however, accelerated efforts are needed to reach the goal in sectors presenting complex issues and to address new challenges – such as the impacts of climate change. Resources must be available to meet those challenges in all sources: agriculture, stormwater, wastewater and septic. To meet these challenges, Virginia is currently updating its plan under the blueprint in the next phase of the WIP.

Wastewater Treatment Improvements

The updated WIP calls for continuing to upgrade wastewater treatment facilities to attain nutrient reductions at comparably high levels (overall estimated reductions are in the range of 2.5-3.7 million pounds of nitrogen). From 2005 to 2016, Virginia's wastewater treatment facilities reduced nitrogen at an average estimated cost in state dollars of \$73.60 per pound. To meet the reductions outlined in the updated WIP using the historic cost per pound, **VIRGINIAforever recommends the General Assembly appropriate \$55 million each year over the next five years to meet the identified needs.**

Stormwater Management Improvements

Virginia has made progress in reducing pollution from stormwater pursuant to the Phase I WIP program, which required comparatively small reductions at the outset of a 15-year program and much more substantial reductions in the last half. The updated Phase III WIP recognizes that much work in this sector remains to be accomplished by 2025. From 2014 to 2019, Virginia reduced phosphorus from this

sector at an average cost of \$5,000 per pound in state dollars. To meet the goals under the updated WIP using the historic cost per pound, **VIRGINIAforever recommends the General Assembly appropriate \$80 million per year to the Stormwater Local Assistance Fund (SLAF) over the next five years.**

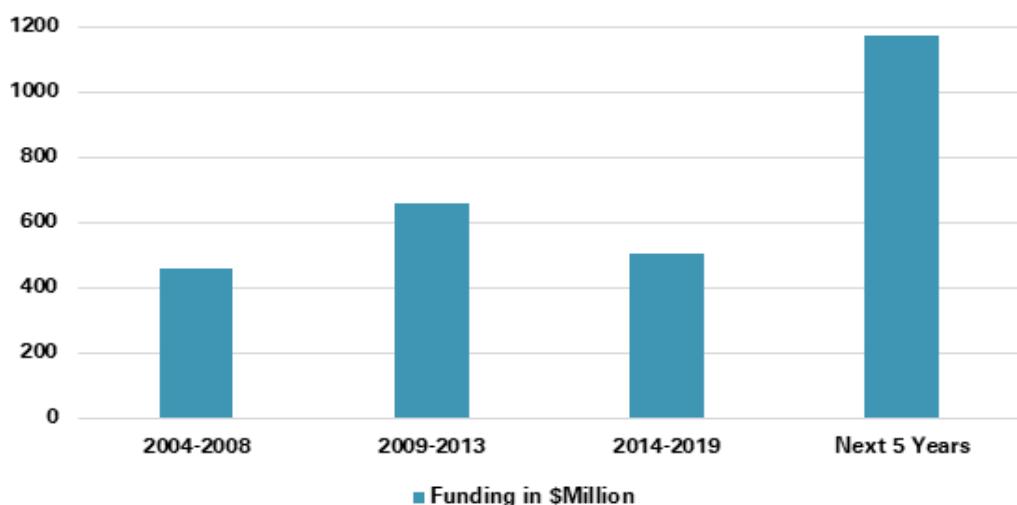
Agricultural Best Management Practices

Virginia farmers and the agricultural sector have played a key role in our ability to reach the reductions we have over the last ten years. Virginia's Agricultural Cost-Share (VACS) program, which funds best management practices and technical assistance, has yielded significant pollution reductions; continual, robust funding for this program will be essential to meet Virginia's 2025 goals. **VIRGINIAforever recommends the General Assembly appropriate funding at the full needs assessment level: \$100 million per year.**

Farmers are Key to Continued Success

Water Quality Funding Recommendations

Five-Year Funds Appropriated and Need for Water Quality



Sector	Recommended 5-Year Investment
Wastewater Treatment	\$275,000,000
Stormwater Management	\$400,000,000
Agricultural BMPs	\$500,000,000
TOTAL	\$1,175,000,000

A RESILIENT COMMONWEALTH

VIRGINIAforever is committed to ensuring that Virginia has adequate funding to not only sustain existing programs that protect our land and water resources, but to also appropriately meet new and emerging challenges to those resources. As the impacts of extreme weather events and sea level rise continue to escalate, Virginia has an opportunity and obligation to ensure our resilience to these threats. Resiliency efforts should include both coastal and inland strategies, focusing especially on pollution runoff reduction and shoreline erosion. We must also maximize our funding efforts for natural carbon sequestration – such as adopting policies that encourage forest health and growth, including improving forest buffers on agricultural lands and tree canopies in urban areas.

While Virginia has been fortunate in recent years to not receive the full impact of any major hurricanes, we must take seriously the threat that future storms pose for the Commonwealth. The Federal Emergency Management Agency has identified risks to vulnerable coastal areas like Virginia's Tidewater region which include sea level rise, shoreline erosion, coastal flooding and salt water intrusion effects on drinking water. In total these risks place this region as the second most vulnerable population center behind Miami for climate risk.

As Virginia's coastal region continues to be a major asset to our economy, resiliency efforts must be taken seriously. In the cities of Chesapeake and Virginia Beach alone, population estimates suggest that nearly 1 million people could reside in these two localities. Further, as this region is home to more than 15 military installations, Virginia must show its due diligence in ensuring long-term funding strategies are in place to mitigate climate impacts.

In 2016, the General Assembly established a Shoreline Resiliency Fund to improve floodplain management and mitigation efforts for future flood damage. ***This program and other resilience programs that benefit land and water need adequate funding to address these significant threats.***

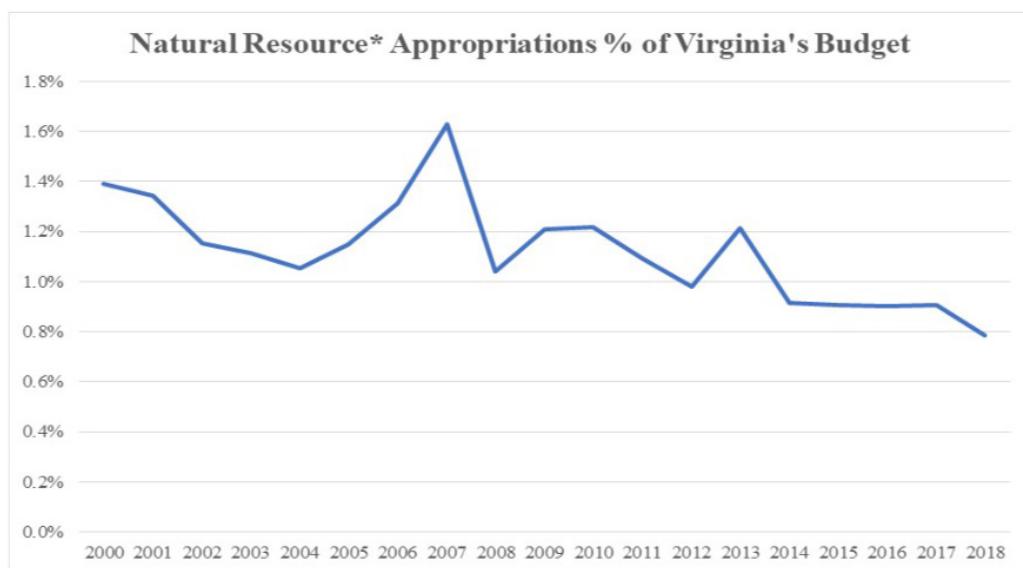
NATURAL RESOURCES AGENCY OPERATIONS

VIRGINIAforever members recognize that agencies can only implement the programs that are highlighted in this plan if they have sufficient staff and adequate tools such as IT and communications technology. But as was revealed in the report "Virginia Natural Resources Funding and How it Compares to Other States," which VIRGINIAforever commissioned in 2018, natural resources was the only part of the budget that declined from 2001 to 2018. Furthermore, natural resources also declined as a percent of Virginia's budget. Businesses and conservation organizations alike are concerned about these reductions, which can impact the effectiveness and efficiency of program administration.

General Fund Operating Appropriation Growth (\$ Mil.)

	2001	2018	Growth	Annualized Growth
Medicaid	\$1,384.2	\$4,605.7	232.7%	7.3%
GF Debt Service	\$243.1	\$763.7	214.2%	7.0%
Behavioral Health	\$430.2	\$772.6	79.6%	3.5%
Other H&HS	\$648.9	\$1,059.0	63.2%	2.9%
K-12 Public Education	\$3,942.4	\$6,030.0	53.0%	2.5%
Public Safety/Comp Board	\$1,949.1	\$2,588.3	32.8%	1.7%
Higher Education	\$1,634.2	\$2,014.5	23.3%	1.2%
All Other	\$1,634.2	\$2,392.3	25.9%	1.4%
Natural Resources*	\$152.1	\$128.5	-15.5%	-1.0%
Total GF Operating	\$12,283.6	\$20,354.6	65.7%	3.0%

* Includes NR Secretariat, Forest Management and VDACS Farmland Preservation



Land Conservation Program Operations

The agencies that own public land need adequate staff to operate and maintain public access facilities and make sure that the natural treasures at these sites are properly cared for. Yet staffing for these functions has not kept pace with a growing workload.

As the Natural Area Preserve System has grown from 34 preserves in 2002 to 63 today, staffing for these areas at DCR's Division of Natural Heritage has decreased by five individuals. Current and future generations care deeply about these special places and expect the Commonwealth to be a good steward. The 2017 Virginia Outdoors Survey found that access to these protected natural areas is the number one outdoor recreation activity desired by Virginians.

Every year, Virginia's state park system continues to see increases in visitors and reservations of facilities, but the parks are challenged to keep up with this demand. For example, in 2018, some swimming beaches were closed because of a lack of lifeguards. As well, state parks have deferred maintenance needs, and many vehicles and equipment are in need of replacement.

When Virginia lands are placed under open space easement, the state becomes responsible for stewarding that easement in perpetuity. This requires maintaining a strong partnership with the landowner and, at minimum, conducting annual monitoring visits. The Virginia Outdoors Foundation (VOF) holds nearly 4,300 open space easements across the Commonwealth, and in doing so is responsible for stewarding more than 840,000 acres of land. VOF has significant need for staff, technology and legal counsel to conduct this work. Similarly, the Department of Forestry is in need of additional land conservation staff to manage its growing easement program.

Water Quality Program Operations

Virginia agencies tasked with achieving water quality improvements and protecting our vast water resources have a strong record of success, especially in the context of dramatic budget reductions over the last 15+ years. Over the next five years, the Commonwealth should recognize the full needs of our agencies to ensure continue making historic progress on the health of our rivers, streams and the Chesapeake Bay.

Virginia's Soil and Water Conservation Districts need sufficient and reliable funding to implement the Virginia Agriculture Cost-share Program, a vital program to assist farmers with on-the-ground efforts to mitigate pollution related to agricultural practices. Conservation Districts also provide other essential services, such as environmental education, outreach and assistance with the federal Conservation Reserve Enhancement Program and the Virginia Conservation Assistance Program that assists property owners in onsite stormwater management. In addition, DCR requires staff to complete the required best management practice verification inspections; to provide programmatic support to the Resource Management Plan and nutrient management plan programs; and to deliver increased data development support to the Department's Conservation Suite Applications and Districts.

The Department of Environmental Quality also has substantial and growing needs as it continues its essential work in overseeing restoration of the Chesapeake Bay and protecting water resources across the Commonwealth. Efforts described under the updated Phase III WIP and water quality programs affecting rivers, streams and groundwater will require additional staff and other resources both to assist industry in permit approval and compliance assistance, and to ensure needed assistance and oversight in the implementation of key programs like the Chesapeake Bay Preservation Act, stormwater management, erosion and sediment control, water quality monitoring and other programs.

Other needs for DEQ include analytical costs and upgrading its communications and IT capabilities, which are critical for the agency to operate in the most timely and efficient manner and to assist in ensuring public transparency, a growing area of concern for many Virginians. Lastly, enhanced funding will enable DEQ to promote needed environmental equity initiatives.

VIRGINIA*forever recommends that general fund appropriations for natural resource agencies be increased to ensure the efficient execution of all critical functions.*

CONCLUSION

VIRGINIAforever takes seriously its mission to identify the most critical needs for funding to restore and protect the lands and waterways of the Commonwealth, a constitutional obligation under Article XI, Section 1 of the *Constitution of Virginia*. We are grateful for the extent to which the General Assembly has recognized our efforts over the years with certain increases in funding; however, underfunding of natural resource protections continues after many years.

Over the last five years, funding for land and water programs made up only 0.6 percent of the overall budget. While these programs have clearly demonstrated a return on their investment, minimal investment has constrained the full potential of maximum return. The robust goals and funding recommendations laid out in this plan make clear the investments necessary to achieve maximum and accountable results.

We recognize that governors and legislators face many competing needs, and that the funding levels we are recommending are significant. That is why we believe it will be critical for policymakers to open a dialogue focused on new dedicated revenue sources in order to meet VIRGINIAforever's goals for land conservation and water quality. As outlined in the report "Virginia Natural Resources Funding and How It Compares to Other States," which VIRGINIAforever commissioned in 2018, many states – including our sister Chesapeake Bay states of Maryland and Pennsylvania – have adopted dedicated revenues to fund their natural resource protection goals. Until dedicated revenues are identified and enacted, it is absolutely critical that natural resources receive a larger proportion of general fund revenues to achieve the specific funding levels outlined in this plan.

This plan has recommended funding for various land and water initiatives that, if funded, could have significant outcomes for Virginians. Named #1 on CNBC's 2019 America's Top States for Business, Virginia is well positioned to make larger investments to protect our natural resources. Doing so will further promote the tourism and outdoor recreation that helps drive the economy, in addition to giving every Virginian the essential access to clean water and open space.

These recommendations are more than dollar figures. If funded, these appropriations will have real, tangible results. Better trail access in state parks. Parking improvements at natural areas. Assisting farmers with costs of stream buffers. Larger oyster landings. More hunters and anglers visiting the Commonwealth. A restored Bay that teems with wildlife and supports working watermen. Farmlands passed on to the next generation. The list goes on.

VIRGINIAforever urges leaders in the General Assembly to give these recommendations their full attention. The economic benefits of investing in Virginia's land and water are far too great to go unrealized. Simply put, meeting these goals will improve the quality of life for Virginians and continue to bolster our economic success.