INTRODUCTION
Virginia lies between the two largest estuaries in the United States: the Chesapeake Bay to the north and the Albemarle and Pamlico Sounds to the south. We have an obligation to protect and restore both of these estuaries. With 25% of Virginia’s land area located within the Albemarle-Pamlico watershed and the increasing challenges to the health of this system, there is a critical need for baseline data which would ground effective planning in the Albemarle-Pamlico Watershed. Additionally, more data would allow for communication among the cities and counties in Virginia that make up this watershed as well as provide a mechanism for communication and planning with our partners in North Carolina.

BACKGROUND
The Virginia portion of the Albemarle-Pamlico watershed is made up of three river basins and three coastal systems: the Roanoke, Chowan, and Pasquotank; and, Black Bay, North Landing and Northwest Rivers, which form Currituck-Sound. This watershed includes thirty-eight Virginia counties and cities and roughly 25% of the state’s land (10,500 square miles). The waters in this watershed affect Virginians in many more ways than they likely realize. The area is rich in farmland and recreational opportunities as well as being the source of drinking water for approximately 2 million Virginians.

The Albemarle-Pamlico watershed contains many different ecosystems and their diverse and unique sets of flora and fauna. The watershed spans from the Atlantic Ocean well into the mountains, with habitats ranging from open estuary and coastal marsh to densely forested upland in the Piedmont. Some of these plant and animal species are not found anywhere else in Virginia and several are classified as threatened or species of concern.

Increasingly, the health of this watershed and the rivers and estuaries that it supports is being threatened. The Albemarle-Pamlico faces challenges from climate change and sea level rise; increased precipitation and larger and longer lasting storms; toxins and bio-waste stored in flood plains; potential uranium mining; larger and longer lasting storms; toxins and bio-waste stored in flood plains; potential uranium mining; increasing demands for ground water from a shrinking aquifer; and, the need for improved farming practices.

Sea level rise and flooding alone are a major source of concern for many residents in the eastern parts of this watershed. The northernmost opening in the Albemarle-Pamlico estuary to the Atlantic Ocean is Oregon Inlet, with only three miles wide. This fact alone creates a very different hydrological system than the Chesapeake Bay with an eighteen-mile wide opening to the Atlantic Ocean. Water is wind-driven rather than lunar tide driven and flood waters can take many days or even weeks to recede. This combined with increased precipitation and bigger storms have both environmental and economic implications for this area of the watershed.

The western region of the watershed, made up of the Roanoke River Basin, echoes the concerns of the eastern part in regards to adaptation and climate change. Abundant clean water is a vital resource for this region providing safe drinking water and a key piece of the successful agricultural economy. In addition, the area’s rivers and rural character provide an opportunity to develop another piece of the regional economy centered on outdoor recreation and tourism. Moving forward, balancing the use of the region’s land and water resources with the need to protect its clean water, open spaces, and natural habitat will be vital to future economic success and improved quality of life in the region. This will require further investments from the Commonwealth of funding, time, and expertise to expand agriculture best management practices, provide local government assistance, and promote land conservation.

BALANCING THE USE OF THE REGION’S LAND AND WATER RESOURCES WITH THE NEED TO PROTECT THE CLEAN WATER, OPEN SPACES, AND NATURAL HABITAT WILL BE VITAL TO FUTURE ECONOMIC SUCCESS AND IMPROVED QUALITY OF LIFE IN THE REGION.

Currently, there is a dearth of baseline data on the Albemarle-Pamlico Watershed areas of Virginia. We need better and more complete information in order to plan effectively for the future. Among other data, we need:

- Information on previous major storms including the paths they followed and impact on affected communities;
- Groundwater supply, quality and sustainability;
- Distribution and population data on key species of both flora and fauna, including endangered, threatened, and species of concern;
- Scientifically-grounded data on the role that conserved forests are playing in water management;
- Threats to drinking water supplies;
- Baseline data on stormwater and wastewater issues and treatment in rural areas and access to state programs designed to assist with stormwater and wastewater retrofits;
- Map/data of completed agriculture BMP projects;
- Map/data of conserved lands and existing riparian buffers vs. needs.

This information will become the basis for a much-needed strategic plan for Virginia’s Albemarle-Pamlico watershed.

CONCLUSION
A significant part of Virginia lies in the Albemarle-Pamlico watershed and we have a responsibility to restore and protect the natural resources as well as the quality of life of the residents in this watershed. We also have an obligation to work together with our partners in North Carolina to plan effectively for the future of this beautiful and bountiful estuary.

POLICY RECOMMENDATIONS

Fund a study of the Albemarle-Pamlico Watershed. The study needs to be comprehensive and include at a minimum the items in the list above. This will form the basis for good planning to protect the citizens and the natural resources on which we depend in the Albemarle-Pamlico watershed of Virginia.

Initiate a roundtable planning process for the Albemarle-Pamlico Watershed in Virginia.

- Land-use and demographic data;
- Toxic and bio-waste storage information;
- Rainfall data and future projections;
- Information on previous major storms including the paths they followed and impact on affected communities;
- Groundwater supply, quality and sustainability;
- Distribution and population data on key species of both flora and fauna, including endangered, threatened, and species of concern;
- Scientifically-grounded data on the role that conserved forests are playing in water management;
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