

trogen, phosphorus and sediment pollution flowing to the Chesapeake Bay in hopes of restoring water quality and the Chesapeake Bay ecosystem. With pollution causing everything from oxygen-starved dead zones to economic hardship in industries dependent upon clean water, it is clear that the current effort has fallen well short of the goal of a restored Chesapeake Bay by 2010. Accordingly, EPA will soon implement a court-ordered, watershed-wide "pollution budget," or Total Maximum Daily Load (TMDL) for nitrogen, phosphorus and sediment pollution. The watershed states will have to abide by this new TMDL to reduce nutrient pollution to the Bay and its rivers and streams.

The **Chesapeake Bay Clean Water and Ecosystem Restoration Act** works in conjunction with the TMDL process to improve water quality throughout the watershed—a huge benefit to Pennsylvania, where much of the watershed lies with the Susquehanna River and its tributaries—while providing necessary technical and financial assistance, and autonomy for state and local governments to decide how to best reduce pollution. You can take action to support this legislation by visiting the “Take Action” page at www.pachurchesadvocacy.org. Download postcards for your congregation on the “Environment” page (under “Issues”). Send them to the address below for delivery to legislators.

Endnotes:

¹www.chesapeakebay.net; “About the Bay”

²www.srbc.net; “Public Information,” then “River Basin Fact Sheets,” then “Susquehanna River Basin Facts”

³www.epa.gov/nep/kids/about/what.htm

⁴Learn more about streams and rivers at www.chesapeakebay.net; “About the Bay,” then “Habitats,” then “Streams and Rivers”

⁵www.chesapeakebay.net; “About the Bay,” then “The Bay Watershed”

More Information and Resources:

Visit www.pachurchesadvocacy.org; “Issues,” then “Environment”

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Respecting Creation: The Religious Community and the Chesapeake Bay



Why Should We Care About the Chesapeake Bay?

The Chesapeake Bay—the largest estuary in the United States—is an incredibly complex ecosystem that includes important habitats and food webs. The Bay and its rivers, wetlands and forests provide homes, food and protection for diverse groups of animals and plants. Fish of all types and sizes either live in the Bay and its tributaries year-round or visit its waters as they migrate along the East Coast.¹

In short—the Bay is a marvelous testimony to a creation that is wonderfully complex, interdependent, and beautiful. As persons of faith, we are called as stewards of the gifts of creation so that present and future generations may live on it and enjoy all of its fruits.

About the Chesapeake Bay Watershed

At 4,480 square miles, the Chesapeake Bay is the largest **estuary** in the U.S. and supports the livelihoods of thousands in the maritime industry from fishermen and packing house employees to recreational enthusiasts. For generations, the people living in the six state region have come to depend on the Bay and its riches to provide them economic opportunities, such as the commercial fishing of seafood.



The Susquehanna River **watershed** is the largest tributary of the Chesapeake Bay, providing 50 percent of its fresh water flows. It drains 27,510 square miles, covering half the land area of Pennsylvania and portions of New York and Maryland, and comprises 43 percent of the Chesapeake Bay's drainage area. There are more than 49,000 miles of waterways – rivers, streams, creeks, brooks, runs, etc.—that make up the Susquehanna River watershed.²

The U.S. Environmental Protection Agency defines an **estuary** as “a body of water formed where freshwater from rivers and streams flows into the ocean, mixing with the seawater. Estuaries and the lands surrounding



Blue Heron

them are places of transition from land to sea, and from freshwater to saltwater. Although influenced by the tides, estuaries are protected from the full force of ocean waves, winds, and storms by the reefs, barrier islands, or fingers of land, mud, or sand that surround them.”³

A **watershed** is an area of land that drains to a particular river, lake, bay or other body of water. We all live in a watershed: some are large (like the Chesapeake), while others are small (like your local stream or creek). Watersheds are sometimes called "basins" or "drainage basins." The Chesapeake Bay watershed stretches across more than 64,000 square miles, encompassing parts of six states—Delaware, Maryland, New York, Pennsylvania, Virginia and West Virginia—and the entire District of Columbia. Threading through the Chesapeake watershed are more than 100,000 streams and rivers called tributaries⁴—that eventually flow into the Bay. Everyone in the Chesapeake Bay watershed lives within a few minutes of one of these streams and rivers, which are like pipelines from our communities to the Bay. Each of these tributaries has its own watershed, which are sometimes referred to as "sub-watersheds" or "small watersheds" within the larger Chesapeake watershed.

The Chesapeake watershed's land-to-water ratio (14:1) is the largest of any coastal water body in the world. This is why our actions on the land have such a significant influence on the health of the Bay.⁵

We All Live Downstream

For many of us, the image of water pollution is wastewater treatment plants and industrial sites spewing pollutants into our waterways, but technology and regulations that limit dangerous discharges have made them less of a problem than all the other activities we undertake in our daily lives.

Imagine that you are a raindrop. As you fall to the earth, you carry tiny, airborne pollutants, byproducts from automobiles and industry. You might percolate into the soil on your way to the groundwater below. More likely you'll be part of the runoff—the water that runs over the surface, heading downhill.



In a typical suburban neighborhood, you would run across lawns where you would pick up fertilizers and pesticides, down streets where you would pick up leaked oil, detergents from washed cars, and sediments, and then you would probably tumble into a storm

sewer to a drainage pipe where you would spill unfiltered into a local stream. In farm country, you would pick up pesticides, herbicides, and fertilizers, and while the path isn't quite as direct, you would probably still end up in a local stream.

Raindrops carry the products of our human activities, thus affecting not only the quality of our local streams, but every other body of water that is downstream from that activity. Just a few pollutants picked up here or there might not matter, but when many sources contribute and come together, the pollution levels grow and become too much to handle, as they have in the Chesapeake Bay.



Chesapeake Bay watershed

Water in the Chesapeake comes from over 40 rivers in six states, carrying the toxic pollutants, excessive nutrients, and sediments generated in each of these watersheds. The nutrients are a problem in the water because they feed algae blooms that block sunlight to underwater grasses and use up oxygen needed by fish. Sediments cloud the water, and limit underwater growth by settling on the bottom. It ruins habitat for shellfish like oysters, crabs and clams, which in turn affects the jobs of those who harvest them.

In order to change this, we must: (1) give prayerful thought to how we live on a personal level; and (2) actively support government policies and legislation aimed at protecting our water. To learn more about what you can do personally, visit the environment page (under “Issues”) at www.pachurchesadvocacy.org.

We Are Called to Support Clean Water and the Chesapeake Bay

For 25 years, the federal government, the Chesapeake Bay watershed states and the District of Columbia have worked in concert to reduce ni-