

SPANNING MORE THAN 700 MILES from its headwaters in Cooperstown, New York, its journey through the mountains along the West Branch, and its entry to the Chesapeake Bay in Havre de Grace, Maryland, the mighty Susquehanna River has been the lifeblood of this fertile region for centuries. To travel its length is to take a colorful journey through endless forests, wilderness areas, and rolling farms; past flocks of migrating waterfowl and historic towns; and along unique geologic features like water gaps through the Appalachian Mountains. The river continues to be an important place for commerce, recreation, and wildlife; however, it faces an uncertain future riddled with challenges. The Susquehanna drains more than 27,500 square miles, picking up pollutants and sediments from an area roughly the size of West Virginia and Delaware combined.

ISLANDS IN THE BÚSZÁRVÍZ, SOUTH OF THE CONVENTION DAM
DURING THE SPRING FLOODS

cities, including Harrisburg, the capital of Pennsylvania. Almost 25 percent of the watershed remains in agricultural use and over 60 percent of the watershed is forested. Although many of these tracts are incorporated into state forest reserves, much remains in private ownership. Only 27 percent, or 2.9 million acres, of the forests in the watershed are protected, making conservation an immediate priority.

trade, exchanging beaver pelts and deer skins with the Europeans and various American Indian tribes at the confluence of the river's North and West Branches. In the 21st century, Haudenosaunee culture remains vibrant. The Haudenosaunee Environmental Task Force is working hard to bring attention to the many environmental issues that affect native communities and is guided by their environmental philosophy "to harvest only what you can eat or use, consider the Seven Unborn Generations, and give thanks."

More than 100 state forest areas and state and local parks offer opportunities for hiking, biking, photography, and wildlife watching. Look for bald eagles at Susquehanna State Park, cross-country ski at Arnold Lake State Forest, and hike the Appalachian National Scenic Trail at Michaux State Forest. There is even a driving tour—the Susquehanna River Birding and Wildlife Trail—linking the region's top birding spots through

After traveling the length of the Chesapeake Bay in search of the Northwest Passage, Captain John Smith and his crew found themselves on the Susquehanna River in August 1608. There, they met and traded with the Susquehannocks, who have been immortalized on Smith's famous map. Unfortunately, Smith met an unlikely foe on the Susquehanna—a fall line that produced impassable rapids. Smith's Falls, as they are still known today, was the farthest north Smith traveled during his voyages in the Chesapeake. In 2012, the Captain John Smith Chesapeake National Historic Trail was extended the length of the Susquehanna River to commemorate Smith's exploration and the rich American Indian history in the region.

maps, brochures, and signposts. The river itself offers opportunities for kayaking, canoeing, and rafting on one of its many water trails, such as the Captain John Smith Chesapeake National Historic Trail and the Susquehanna River Water Trail-West Branch. Unfortunately, public access areas along the Susquehanna are limited and sorely needed throughout the river corridor to reconnect the region's communities with this amazing resource.

Not even mountains can contain the mighty Susquehanna. Over millions of years, the river has cut through five ridges of the Appalachian Mountains north of Harrisburg, forming what are now known as the "five gaps." While the exact process of their formation is unknown, they are a unique and beautiful geological feature and have been designated a "National Natural Landmark" by the National Park Service.

Where the Susquehanna meets the Chesapeake is a large, shallow area of underwater grasses known as the Susquehanna flats. The 20th century saw devastating declines in grasses and dependent waterfowl species due to pollution and severe weather; however, through natural and restoration processes, native grasses are recolonizing the flats.

abundant wildlife populations, diverse fisheries, and waterfowl migration corridors draw people to the Susquehanna River each year. According to a 2005 U.S. Fish & Wildlife Service survey, more than 4.5 million people engage in wildlife-associated recreation (fishing, hunting, and/or wildlife watching). In Pennsylvania alone, this led to \$2.7 billion in expenditures.

Connection to the Bay

While the Susquehanna River and the Chesapeake Bay do not share a name, they share an ancient past. The bay is actually an extension of the lower Susquehanna; a valley that has been gradually flooded by the Atlantic Ocean over the last 15,000 years. The Susquehanna remains the lifeblood of the Chesapeake, pouring about 20 billion gallons of freshwater into the bay each day. This makes up about half of all the freshwater entering the bay. It provides crucial habitat for countless species of iconic bay wildlife, and carries sediments and nutrients from as far north as New York State to the shores of Virginia. The fate of the bay rests heavily on the fate of the Susquehanna.

The mighty Susquehanna begins at Otsego Lake, a beautiful nine-mile-long lake named "Glimmerglass" by the novelist of the *Leatherstocking Tales*, James Fenimore Cooper. Lying at the south end of the source waters, the village of Cooperstown, N.Y., named after Cooper's father, was also home to James's daughter, Susan Fenimore Cooper, the true nature writer in the family. An amateur naturalist, Susan found inspiration in the headwaters and wrote *Rural Hours*, a collection of nature essays that has come to be recognized as one of the classics in that genre. Her work encouraged Henry David Thoreau in his writing of *Walden* or *Life in the Woods*, giving rise to generations of nature enthusiasts and conservationists throughout the landscape.

Large forested tracts, miles of riparian landscape, and aquatic habitats support a rich diversity of life throughout the Susquehanna watershed. Reptiles and amphibians like the map turtle and the elusive spotted salamander inhabit the many tributaries; smallmouth bass swim the river, while the brook trout grace the cold water streams; and the eastern coyote and reintroduced allamoonie roam the forests. Waterfowl, raptors, and songbirds also abound as the Atlantic Flyway traverses the river corridor bringing tens of thousands of tundra swans and snow geese, bald eagles and red-tailed hawks, and warblers, orioles, and tanagers to the area.

Through hydroelectric facilities, the waters of the Susquehanna provide power for millions of people. According to the Susquehanna River Basin Commission, the 14 dams along the river and its tributaries can generate enough electricity to power two million homes. Each of the dams receives a 30- to 50-year license for operating, and several are currently up for renewal. Although necessary for our energy needs, these facilities present an impediment to wildlife, recreation, and the nutrients and sediments

carried by the Susquehanna. Dams make it difficult for fish species to reach their spawning grounds and for boaters to traverse large portions of the river. These structures also retain sediment and nutrients, but have recently reached their carrying capacity. During acute storm events, large amounts of sediment and nutrients are released into the river, causing widespread environmental damage to the Chesapeake, as its natural resources are unable to absorb this sudden influx of sediment and nutrients.

The map illustrates the Chesapeake Bay Watershed, a large area of land where precipitation flows into the Chesapeake Bay. The watershed is shown in green, with the Susquehanna River and its tributaries (Potomac, Rappahannock, James, York, and Pamunkey) flowing into the bay. The bay itself is shown in blue, and the Atlantic Ocean is at the bottom right. The map includes state boundaries for Canada, United States, New York, Pennsylvania, Maryland, West Virginia, and Virginia. Major cities like Washington, D.C. are marked. A scale bar at the bottom right indicates distances in miles (0, 25, 50) and kilometers (0, 40, 80).