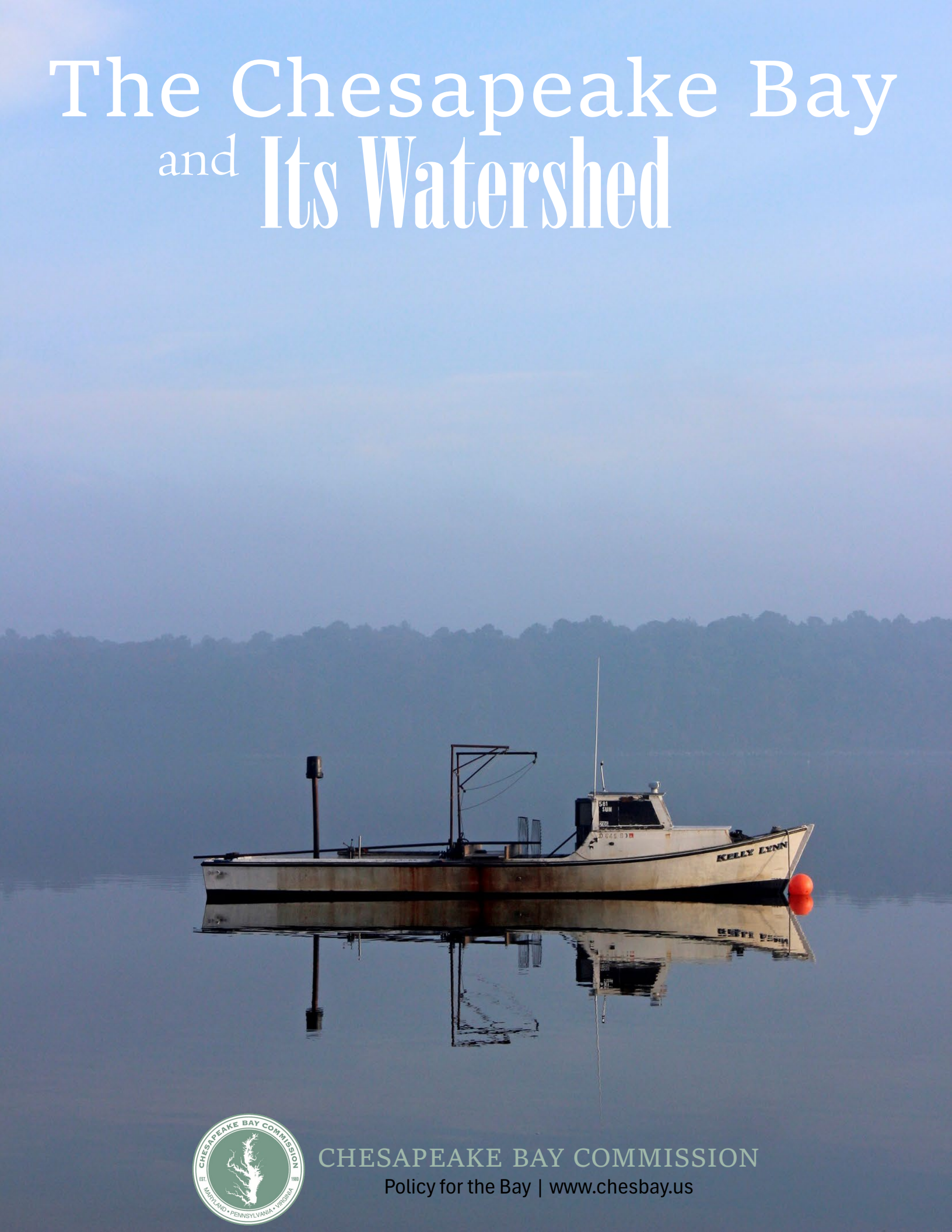
The Chesapeake Bay and Its Watershed



CHESAPEAKE BAY COMMISSION

Policy for the Bay | www.chesbay.us

Why Restore the Chesapeake Bay?

- Ranked among the largest estuaries in the world, the Chesapeake Bay covers 4,480 square miles and includes 18 trillion gallons of water bounded by 14,415 miles of shoreline, more than the US west coast.
- Its shallow waters deliver sunlight to underwater grasses, which in turn provide food and refuge to both migratory and nonmigratory species. The inflow of fresh water from major tributaries and salt water from ocean currents allows for multiple salinity levels throughout the Bay, supporting a diverse array of plants and wildlife.
- More than 64,000 square miles of land drains into the Chesapeake Bay, comprising its watershed that is home to over 18.5 million people and 3,600 species of plants and animals.
- The Chesapeake Bay and its watershed support industries critical to our local, regional, and national well-being, from fisheries, shipping, farms, and working forests to outdoor recreation and national defense.
- Many of the features that make the Chesapeake Bay so culturally significant, ecologically important, and economically productive are also reasons a collaborative effort is needed for its protection and restoration.
- The health of the Bay's waters and living resources is greatly impacted by the activities that take place throughout the watershed, which in turn affect the people and communities that depend on and enjoy these resources.



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General Facts about the Chesapeake Bay

- The Chesapeake Bay was formed about 10,000 years ago when glaciers melted and flooded the Susquehanna River valley, including an impact crater 53 miles in diameter at the mouth of the Bay from a meteor strike 35 million years ago.
- The Chesapeake's name, "Great Shellfish Bay," and the names of many of its tributaries, continue to reflect the indigenous communities who have inhabited this region for thousands of years.



- The Chesapeake Bay is the nation's largest estuary, a unique environment where freshwater draining from land meets and mixes with saltwater from the Atlantic Ocean. It is among the largest estuaries in the world.
- At 200 miles long, the Bay stretches from Havre de Grace, Maryland, to Virginia Beach, Virginia. The mouth of the Potomac River contains the widest section of the Bay measuring 35 miles across.
- Despite its large size, the Bay is surprisingly shallow with an average depth of around 21 feet (including tidal tributaries). A six-foot-tall person could stand in more than 700,000 acres of the Bay without getting their head wet.
- The Bay's water volume consists of half freshwater draining from the 64,000-square-mile watershed and half saltwater from the Atlantic Ocean.

General Facts about the Chesapeake Bay

(continued)

- Spanning roughly 524 miles from Cooperstown, New York to Norfolk, Virginia, the Chesapeake Bay Watershed includes portions of six states and the District of Columbia. The states included in the watershed are Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia.
- Approximately 92% of the land in Maryland, 57% of the land in Virginia, and 50% of the land in Pennsylvania drains to the Chesapeake Bay.
- Pennsylvania is the largest landholder in the watershed, making up 37% of the total Chesapeake Bay drainage basin (14.4 million acres). Virginia is next at 35% or 13.4 million acres, while Maryland is third with 15% or 5.7 million acres. Collectively, these three states make up 87% of the watershed and account for around 90% of the pollutant load.
- The Bay watershed encompasses nearly 1,800 local governments including towns, cities, counties, and townships. Approximately 1,000 of them are in Pennsylvania alone.
- More than 18.5 million people call the Chesapeake Bay watershed home, 10 million of whom reside along or near the Bay. Each year about 150,000 people relocate to the Bay watershed.
- With a land-to-water ratio of 14:1, the highest in the world for a coastal water body, our actions on land have a significant impact on the Bay's health.
- The Atlantic coastal plain, the Piedmont plateau, and the Appalachian province are the three distinct geologic regions that make up the Chesapeake Bay Watershed.



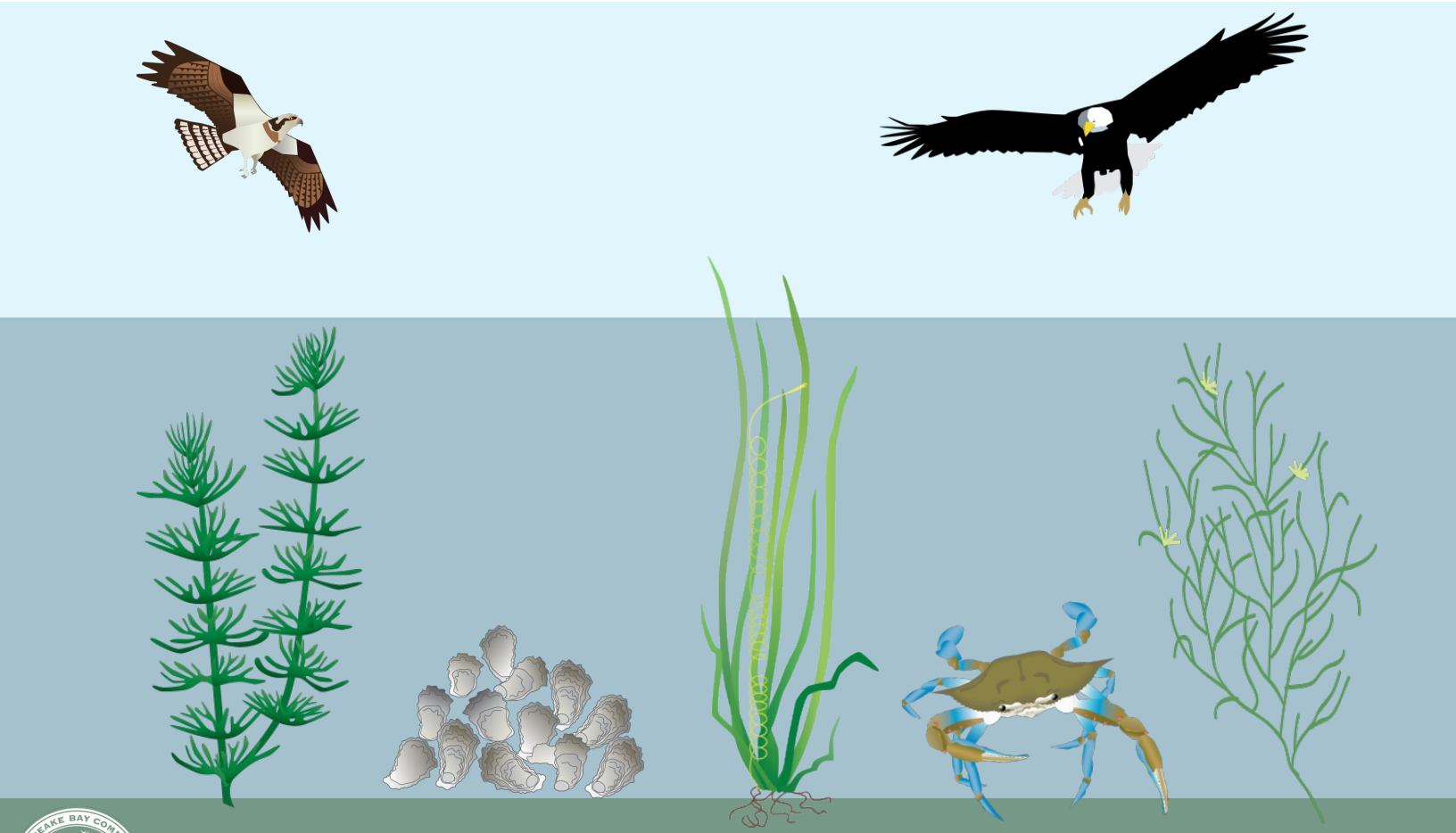
Rivers and Streams

- The Chesapeake Bay watershed includes an extensive network of 150 major rivers and streams plus more than 100,000 smaller tributaries with nearly 350,000 miles of channels overall (Source: Chesapeake Conservancy). Pennsylvania has the highest stream density in the nation.
- Major rivers emptying into the Bay include the James, York, Rappahannock, Potomac, Patuxent, Patapsco, and Susquehanna from the west and the Pocomoke, Wicomico, Nanticoke, Choptank, and Chester from the east.
- Together, the Susquehanna, Potomac, and James Rivers supply more than 80% of the Bay's freshwater supply. The Susquehanna alone accounts for 50%.



Wildlife and Vegetation

- More than 3,600 species of plants and animals are found throughout the Chesapeake Bay. The Bay's habitat supports 173 species of shellfish and 348 species of finfish along with more than 2,700 species of plants and over 16 species of underwater grasses. Every winter, the Chesapeake Bay provides refuge for nearly 1 million waterfowl, attracting approximately one-third of the Atlantic Coast's migratory population. Additionally, 87 species of waterbirds are supported by the Bay over the winter.
- Blue crabs are the most valuable fishery in the Chesapeake Bay. They mate from spring to fall, before mature female crabs migrate to the mouth of the Bay to spawn. Blue crab eggs hatch into larvae in the higher salinity coastal and ocean waters, before eventually returning to the Bay's grass beds and brackish waters as young crabs.
- For centuries, the eastern oyster has been an iconic Bay species, contributing to its history, culture, and economy. European settlers remarked upon oyster reefs so tall they posed navigational hazards. At its peak, the Bay produced 20 million bushels of oysters during the 1884-1885 harvest season. Adult oysters are filter feeders and can filter up to 50 gallons of water a day.



Wildlife and Vegetation

(continued)

- Forest and trees provide essential water quality benefits by filtering and protecting the drinking water of 75% of watershed residents. Additionally, they can capture more than 85% of biologically available nitrogen in the air that might otherwise be deposited to our lands and waterways via rainfall. Mature trees with deep roots can stabilize banks and reduce erosion by holding soil in place. And the shade provided by trees can keep streams cooler for sensitive species like brook trout and communities more comfortable in the summer heat.
- Spanning roughly 284,000 acres, the Bay's tidal wetlands serve as essential habitat for fish, birds, crabs, and countless other wildlife species. They also act like sponges, protecting nearby communities and habitats by absorbing stormwater and reducing the impacts of storm surge.
- Freshwater plants, estuarine plants, redhead grass, and marine species all make up some of the 26 different species of submerged aquatic vegetation (SAV) in the Chesapeake Bay. Underwater grass beds provide food, oxygen, and habitat for iconic Bay species like the blue crab, while filtering water and preventing shoreline erosion.



The Chesapeake Bay Economy

- Each year, the Chesapeake Bay produces roughly 500 million pounds of seafood. The *2023 Fisheries Economics of the U.S. Report* by the U.S. National Oceanic and Atmospheric Administration (NOAA) indicates that the commercial seafood industry in Maryland and Virginia contributed $7.6 billion in sales, almost $1.8 billion in income, and over 43,000 jobs to local economies. The recreational fishing industry in Maryland and Virginia contributed $731 million in sales, almost $248 million in income, and over 4,710 jobs to local economies.
- Baltimore and Hampton roads, both located on the Chesapeake Bay, are two of the nation's five major North Atlantic ports. According to an economic analysis commissioned by the Maryland Port Administration, in 2023 the port of Baltimore generated $5.3 billion in salaries, $3.9 billion in business revenues, $647 million in state and local taxes, and 44,143 jobs.
- According to economic analysis commissioned by the Virginia Port Authority, in FY22 the port of Virginia generated $41.4 billion in salaries, $124.1 billion in output sales, $5.8 billion in state and local taxes, and 565,000 jobs.





The Chesapeake Bay Economy

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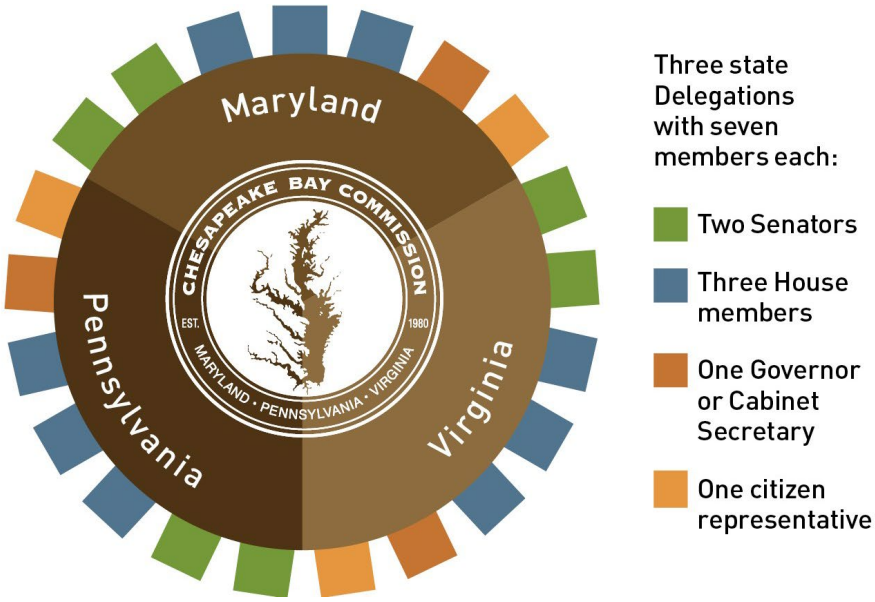
- In 2025, 38,600 farms across Virginia produced a net farm income of $1.5 billion in 2025. In Maryland, 12,600 farms produced a net farm income of $1.0 billion. And in Pennsylvania, a total of 48,400 farms produced a net farm income of $3.4 billion.
- The 2023 economic contribution of U.S. forestry in Virginia was 34,295 jobs, $2.27 billion in labor income, and $3.96 billion in gross domestic product (GDP). In Maryland, the contribution was 7,729 jobs, $490 million in labor income, and $826 million in GDP. And in Pennsylvania, the contribution was 63,000 jobs, $4.91 billion in labor income, and $8.71 billion in GDP.
- According to the Department of Defense (DoD) Chesapeake Bay Program, the DoD manages 68 major military installations and 400,000 acres of land within the Chesapeake Bay watershed, making it the largest federal manager of developed land. In FY 2024, Virginia, Maryland and Pennsylvania were in the top 6 states for defense spending with $76.2 billion, $29.7 billion, and $24.3 billion respectively.
- The Bay's outdoor economy also generates significant spending – with wildlife watchers alone spending $483 million, $958 million, and $1.2 billion in Maryland, Virginia, and Pennsylvania, respectively, according to the 2011 *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*.





The Origin of the Chesapeake Bay Commission

- In the late 1970s, U.S. Senator Charles "Mac" Mathias (R-Md.) sponsored a congressionally funded $27 million, five-year study to analyze the Bay's rapid loss of wildlife and aquatic life. The study, which was published in the early 1980s, identified excess nutrient pollution as the main source of the Bay's degradation.
- The impending results of the study prompted the creation of a joint Maryland-Virginia Chesapeake Bay Legislative Advisory Commission to evaluate existing and proposed structures for strengthening interstate ties and better coordinating the management of the Chesapeake Bay. The Advisory Commission recommended the establishment of a bi-state Commission to reinforce state responsibility for the Bay clean-up and meet the need for timely, science-based policy advice for the state legislatures.
- In 1980, legislatures of Maryland and Virginia created the Chesapeake Bay Commission. Pennsylvania's legislature joined in 1985.
- Once formed, one of the Commission's earliest actions was to serve as the lead sponsor of a conference to receive the results of the EPA Chesapeake Bay study. That conference resulted in the signing of the first Chesapeake Bay Agreement and the creation of the federal-state partnership known as the "Chesapeake Bay Program," paving the way for all agreements and directives to follow.



The History of the Chesapeake Bay Watershed Restoration



Photo courtesy of the Chesapeake Bay Commission

- The Chesapeake Bay was the first estuary in the nation targeted by Congress for restoration and protection.
- The EPA Chesapeake Bay study conducted in the 1970s and 80s triggered the largest, most coordinated clean-up effort in the nation, one that would ultimately bring the six watershed states, the District of Columbia, the Chesapeake Bay Commission, and nine federal agencies together.
- The original Chesapeake Bay Agreement was a simple, one-page pledge signed by the Chair of the Chesapeake Bay Commission, the Governors of Pennsylvania, Maryland, and Virginia, the Mayor of Washington, D.C., and the Administrator of the EPA in 1983. The agreement recognized that a cooperative approach was necessary to address the Bay's pollution problems.
- The 1987 Chesapeake Bay Agreement sets the first numeric goals to reduce pollution and restore the Bay ecosystem. Among other goals, the agreement aimed to reduce nitrogen and phosphorus entering the Bay by 40% by 2000.
- In 2000, Bay Program partners signed *Chesapeake 2000*, a comprehensive agreement that set 102 specific commitments to restore the watershed by 2010. The partners committed to reducing nutrients and sediments sufficiently to remove the Bay and its tidal tributaries from the list of impaired waters under the Clean Water Act.

The History of the Chesapeake Bay Watershed Restoration

(continued)

- Following a lawsuit and settlement with the Chesapeake Bay Foundation, in 2010 the EPA established the landmark Chesapeake Bay Total Maximum Daily Load (TMDL). The Chesapeake Bay TMDL is a federal "pollution diet" that sets limits on the amount of nutrients and sediment that can enter the Bay and its tidal rivers to meet water quality goals.
- By the start of 2011, each of the seven Bay jurisdictions had created their first Watershed Implementation Plan (WIP) that spelled out specific steps the jurisdiction would take to meet the pollution reductions required by the TMDL by 2025. Jurisdictions updated their initial plans in 2012, issuing Phase II WIPs. The Bay jurisdictions also incorporated two-year milestones to track and assess progress toward completing the restoration actions in their WIPs.
- With a new Chesapeake Bay Watershed Agreement signed in 2014, the Bay partners, including the headwater states West Virginia, Delaware, and New York, reaffirmed their recognition of the role and necessity of the Chesapeake Bay TMDL in driving pollution reductions.
- The Midpoint Assessment, meant to evaluate progress towards meeting 60% of pollution reductions by 2017, was finalized in 2018. It found that collectively the jurisdictions exceeded the 60% goals for reducing phosphorus and sediment, but they did not achieve their 2017 goal for reducing nitrogen.
- In 2019, each jurisdiction created a Phase III WIP. The Phase III WIPs were drafted to guide local and state Bay restoration efforts through 2025 to put practices in place necessary to achieve water quality standards. Clean water is defined as meeting standards for dissolved oxygen (DO), water clarity/submerged aquatic vegetation (SAV), and chlorophyll *a* (a measure of algae that indicates nutrient pollution).
- In May 2020, the Chesapeake Bay Foundation and its partners filed a Notice of Intent (NOI) to sue the EPA for violating the Clean Water Act. The Attorneys General of Virginia, Maryland, and the District of Columbia filed similar notices. They argued that the Phase III WIPs of Pennsylvania and New York failed to fully account for 100% of the practices necessary to achieve nutrient reductions by 2025. The CBF et al. notice claimed that by not imposing any consequences on NY and PA, EPA acted in an "arbitrary and capricious" manner in violation of both the Clean Water Act and the Administrative Procedure Act.

The History of the Chesapeake Bay Watershed Restoration

(continued)

- A settlement was reached in April 2023 wherein EPA agreed to increase compliance oversight and enforcement efforts, particularly for agricultural and stormwater runoff sources of excess nitrogen and phosphorus.
- In 2025, the Chesapeake Bay Program revised and updated the Chesapeake Bay Watershed Agreement to guide the next 15 years of partnership to conserve and restore the Bay and its watershed. The revised Agreement reorganized around 4 core, comprehensive goals for the watershed: clean water; healthy landscapes; thriving habitats, fisheries, and wildlife; and engaged communities. Twenty-one associated outcomes, with specific and measurable targets, further identify how the Program will assess progress in meeting these goals.
- With respect to the TMDL, the Bay jurisdictions and EPA committed to accelerating completion of all interim water quality planning targets by implementing current WIPs through 2030; revising the planning targets using the latest modeling and science by the end of 2030; and developing new or amended WIPs to meet the updated targets by 2040. These new or amended WIPs should begin in 2031.
- To ensure the partnership is on track and undergoing adaptive management, the Chesapeake Bay Program will re-evaluate and update its strategies in 2033, the halfway point of the Agreement's 2040 horizon.



Photo courtesy of Joe Andrucyk

Challenges and Progress in Chesapeake Bay Restoration

Water Quality

Challenge **-** The EPA Chesapeake Bay Program study conducted in the 1970s and 80s identified concerning water quality trends: increasing levels of nutrients contributing to degrading water quality; larger areas of the mainstem of the Bay with low to no dissolved oxygen, devoid of aquatic life; and high concentrations of toxic organic compounds and metals in sediments.

Nitrogen and phosphorus are essential nutrients for plant growth. High levels of these nutrients can stimulate large algal blooms, in a process known as eutrophication. The algal growth blocks sunlight from penetrating to underwater grasses. When the algae die and decay, oxygen is consumed, leading to dead zones, or areas in the Bay with low to no dissolved oxygen for shellfish and finfish.

Progress – As part of the Accountability Framework agreed to by Chesapeake Executive Council, every Bay jurisdiction, including the federal government, has adopted watershed implementation plans (WIPs) documenting the programs and practices they will use to prevent excess nitrogen, phosphorus, and sediment from reaching the Chesapeake Bay and meet their pollution reduction targets under the Chesapeake Bay Total Maximum Daily Load (TMDL).

Overall sediment entering the Bay declined 6.8% from 18.8 billion pounds in 2009 to 17.6 billion pounds in 2025, achieving 100% of the sediment goal of 18.6 billion pounds. Phosphorus entering the Bay declined 21.4% from 16.8 million pounds in 2009 to 13.2 million pounds in 2025, achieving an estimated 90% of the phosphorus goal of 12.8 million pounds. And nitrogen entering the Bay declined 15% from 297.1 million pounds in 2009 to 252.7 million pounds in 2025, achieving an estimated 57% of the nitrogen goal of 219.5 million pounds.

Challenges and Progress in Chesapeake Bay Restoration

Water Quality

Progress (continued) – Upgrades and operational efficiencies at wastewater treatment plants throughout the Chesapeake Bay watershed have resulted in steep reductions in nitrogen and phosphorus pollution and put the wastewater sector at the forefront of Bay restoration efforts. According to the Chesapeake Bay Program's modeling tools, wastewater treatment plants accounted for about 11% of the nitrogen loads and 15% of the phosphorus loads that entered the Chesapeake Bay in 2025, down from 28% and 44% in 1985. Phosphorus detergent bans passed by Virginia, Maryland, Pennsylvania, and Washington, D.C. resulted in a 30% reduction of phosphorus influent to wastewater treatment plants.

To encourage the voluntary adoption of conservation practices on agricultural land, Maryland, Virginia, and Pennsylvania have dedicated state resources for cost-sharing programs, supplementing federal Farm Bill conservation programs. And stormwater pollution reduction measures have been incorporated into the municipal separate storm sewer system permits regulating developed areas.



Challenges and Progress in Chesapeake Bay Restoration

Protected and Forested Lands

Challenge **–** Human population in the Chesapeake Bay watershed has more than doubled since the 1950s to nearly 19 million people. This population growth comes with increased demand for land use change from natural, forested lands to developed areas with impervious surfaces.

Trees are essential to clean water, cool streams, and resilient communities. However, between 1990 and 2005, the watershed lost an estimated 100 acres of forest land each day. Between 2013-2022, approximately 176,845 forested acres were lost to development in the Chesapeake Bay watershed.

Progress **–** Between 2014 and 2024, Bay Program partners planted approximately 17,082 acres of trees in communities throughout the watershed. However, canopy loss continues to outpace new plantings, resulting in a net loss of more than 28,000 acres of tree canopy in urban and community areas between 2013-2014 and 2021-2022.

According to the Chesapeake Bay Program's 2021-2022 High Resolution Land Use/Land Cover Data, 69.96% of riparian areas have forest buffer coverage, just shy of the Program's 70% target for 2025.

As of 2024, approximately 9.28 million acres of land have been permanently protected by Chesapeake Bay Program partners. This is an increase of approximately 1.8 million acres since 2010 and accounts for 23% of the total land in the region.

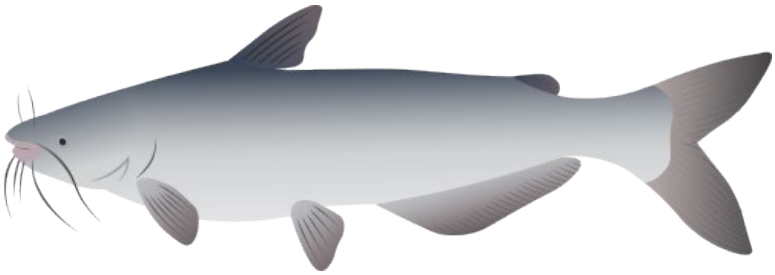
Challenges and Progress in Chesapeake Bay Restoration

Habitats, Wildlife, and Fisheries

Challenge **-** The EPA Chesapeake Bay Program study also identified major changes in living resources: an increasing number of algal blooms; a decline in submerged aquatic vegetation abundance and diversity; a decrease in landings of freshwater-spawning fish such as shad; and a decline in oyster harvests.

More than 1.6 billion pounds of blue crabs have been harvested from the Bay by commercial waterman since 1990. However, yearly harvest data shows a steady decline. 2014 was the worst blue crab harvest with commercial watermen only harvesting 35 million pounds, the smallest harvest in 25 years.

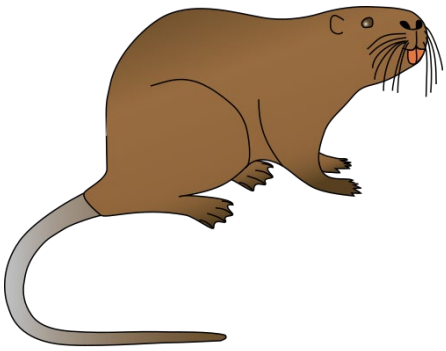
There are as many as 200 invasive species present in the Chesapeake Bay watershed that are causing some serious issues in an already-stressed ecosystem. Some examples include blue and flathead catfish, snakehead, zebra mussel, purple loosestrife, and nutria.



Blue catfish



Purple loosestrife



Nutria



Zebra mussel

Challenges and Progress in Chesapeake Bay Restoration

Habitats, Wildlife, and Fisheries

Progress **–** The Chesapeake Bay Program partnership met its 2025 oyster restoration goals by completing large scale oyster reef restoration in 10 tributaries throughout the Chesapeake Bay. Altogether, partners added an additional 1,900 acres in healthy reef to 500 existing acres, achieving the world's largest oyster reef restoration effort. In Harris Creek, Maryland alone, restored oyster reefs remove nitrogen equivalent to roughly 20,000 bags of garden fertilizer according to NOAA.

In 1989, the Chesapeake Bay Program developed the first Chesapeake Bay Blue Crab Fishery Management Plan to support collaboration among fishery managers at Maryland's Department of Natural Resources, Virginia's Marine Resources Commission, and the Potomac River Fisheries Commission. Today, the Chesapeake Bay Stock Assessment Committee continues to provide scientific advice to fisheries managers to inform harvest controls.

In 2025, there was an estimated 89,385 acres of underwater grasses across the Chesapeake Bay and its tidal tributaries, just 615 acres short of the Chesapeake Bay Program's 2030 interim target of 90,000 acres. Estimates suggest that in 1984, the Bay supported less than 40,000 acres of underwater grasses

In the 1970's, there were as few as 60 breeding pairs of bald eagles in the entire Bay region. Today, as many as 3,000 breeding pairs of bald eagles can be found. Between 2022-2023, 303 miles of stream were opened for migratory fish passage by Chesapeake Bay Program partners.

The Chesapeake Bay Program exceeded its 2025 goal of adding 300 new water access sites for the public. Since 2014, partners opened 312 additional sites, bringing the total to 1,451 throughout the watershed, including 652 in Maryland, 414 in Virginia, and 230 in Pennsylvania.

In addition to those cited above, these sources were used in combination to create this document:

Arkansas Center for Forest Business 2023 U.S. Forestry Economic Contribution by State (https://www.uamont.edu/academics/CFANR/forestbusiness/USForestryEconomicContributionbyState20230109.pdf)

Chesapeake Assessment and Scenario Tool (CAST) (https://cast.chesapeakebay.net/)

The Chesapeake Bay Program (https://www.chesapeakebay.net/)

Chesapeake Bay Explorer's Guide by Dr. David Malmquist, 2021

Chesapeake Bay Program: Findings and Recommendations by the United States Environmental Protection Agency, September 1983

Chesapeake Conservancy (https://annualreports.chesapeakeconservancy.org/highlights/partner-to-release-the-most-detailed-inventory-of-the-chesapeake-bay-watersheds-stream-and-ditch-network-to-date)

Pennsylvania Department of Environmental Protection (https://files.dep.state.pa.us/water/chesapeakebayoffice/wipiii/storymap/healthywatersmunicipalhandout.pdf)

Pennsylvania Department of Environmental Protection (https://storymaps.arcgis.com/stories/7af67824d6924b88b544dbad302ebc4f)

U.S. Department of Agriculture Economic Research Service (https://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics/charts-and-maps-about-your-state)

U.S. Department of Defense (https://oldcc.gov/sites/default/files/2025-11/oldcc_dsbs_fy2024_abridged_nov25.pdf)

United States Census Bureau Data Maryland (https://data.census.gov/profile/Maryland?g=040XX00US24)

United States Census Bureau Data Pennsylvania (https://data.census.gov/profile/Pennsylvania?g=040XX00US42)

United States Census Bureau Data Virginia (https://data.census.gov/profile/Virginia?g=040XX00US51)

U.S. National Oceanic and Atmospheric Administration (https://www.fisheries.noaa.gov/species/blue-crab)

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