

2024–2025

# Bay Barometer

Health and Restoration in  
**PENNSYLVANIA**



***Bay Barometer*** shares the most up-to-date information and data about our progress toward the goals and outcomes in the 2014 ***Chesapeake Bay Watershed Agreement***.

In Pennsylvania, the Chesapeake watershed spans more than 14.4 million acres, touches 43 counties and is home to one of the Bay's largest tributaries—the Susquehanna River. Below is a snapshot of progress in Pennsylvania's portion of the Chesapeake Bay watershed.

## Abundant Life

### Brook Trout

Between 2016 and 2024, Pennsylvania saw a net increase of 35 square miles of habitat occupied by naturally reproducing brook trout, contributing to the 12,823 square miles of occupied brook trout habitat across the watershed.

### Fish Passage

Between 2022 and 2023, 303 stream miles across the watershed were reopened to fish passage. Pennsylvania removed nine dams in 2023, including the Oakland Dam, which alone opened more than 200 stream miles.

### Wetlands

Since 2014, Pennsylvania has enhanced 178 acres of wetlands, contributing to the watershed-wide total of 61,163 acres, which marks a 40.77% achievement of the 150,000-acre goal.

Additionally, Pennsylvania has created or restored 528 acres of wetlands, contributing to the watershed-wide total of 4,862 acres, which marks a 5.72% achievement of the 85,000-acre goal.

## Clean Water

### 2025 Watershed Implementation Plans (WIPs)

As of 2024, Pennsylvania has achieved 22%, 50% and 57% of its 2025 reduction goals for nitrogen, phosphorus and sediment, respectively. Since 2019, the Commonwealth has lowered the amount of nitrogen reaching the Bay by 7.23 million pounds, the amount of phosphorus by 160,000 pounds and the amount of sediment by 202.6 million pounds.

### Water Quality Standards Attainment

During the 2021–2023 assessment period, 29.4% of the Chesapeake Bay's tidal waters attained water quality standards. Short-term monitoring trends (2014–2023) show that nitrogen, phosphorus and sediment trends in the Susquehanna River are improving.



Read the **2024–2025 Bay Barometer** at  
[Chesapeakebay.net/what/publications](https://Chesapeakebay.net/what/publications)

# Conserved Lands

## Forest Buffers

Pennsylvania contributed 111 of the 227 miles of riparian forest buffers planted across the watershed in 2024, helping to achieve 25.2% of the watershed-wide goal to plant 900 miles per year.

## Land Use Methods and Metrics

The Chesapeake Bay Program's 2021-22 [High-Resolution Land Use/Cover and Change Data](#) show that 2,066,925 acres, or approximately 4.7% of the watershed, is covered by impervious surfaces. In Pennsylvania's portion of the watershed, impervious surfaces cover 559,942 acres, or approximately 3.9% of the land.

## Protected Lands

As of 2024, 3,688,818 acres of protected lands can be found across Pennsylvania, an increase of 1.2% from 2022. Over 1.8 million acres of lands have been protected across the watershed since 2010, achieving 90% of the goal to protect an additional two million acres by 2025.

## Tree Canopy

Pennsylvania planted 3,842 acres of trees in 2024, bringing the total amount of trees planted across the Commonwealth since 2014 to 5,041 acres. Overall, 5,743 acres of trees were planted across the watershed in 2024, continually increasing tree canopy.

Despite these gains, the Chesapeake Bay Program's High-Resolution Land Use/Cover and Change Data show that from 2013/14-2021/22, an estimated 3,709 acres of tree canopy was lost across Pennsylvania's portion of the watershed.

# Engaged Communities

## Environmental Literacy

In 2024, 144 local education agencies in Pennsylvania voluntarily reported their preparedness for environmental education, with 99 indicating they were well or somewhat prepared by having a comprehensive, system-wide approach in place.

Additionally, 135 local education agencies reported that 16% of elementary schools have a system-wide [Meaningful Watershed Educational Experience \(MWEE\)](#) in place; 134 local education agencies reported that 16% of middle schools have a system-wide MWEE in place; and 131 local education agencies reported that 19% of high schools have a system-wide MWEE in place.

Pennsylvania adopted new academic standards for Science, Technology & Engineering, Environmental Literacy & Sustainability (PA STEELS) in June 2025, which will incorporate environmental literacy and sustainability principles across all grade levels.

## Public Access

In 2024, Pennsylvania opened nine new sites to connect the public with the water, bringing the total number of public access sites opened in the Commonwealth since 2011 to 230. Overall, 1,451 new public access sites were opened across the watershed during this timeframe, completing the Public Access Outcome.



Read the revised *Chesapeake Bay Watershed Agreement* at [Chesapeakebay.net/watershed-agreement](https://Chesapeakebay.net/watershed-agreement)