# Health and Restoration in Virginia

More than 21,000 square miles of Virginia sit within the Chesapeake Bay watershed, and five of the Commonwealth's major rivers—including the Appomattox, James, Potomac, Rappahannock and Roanoke—flow into the Chesapeake Bay. Virginia has committed to achieving 28 of the outcomes in the *Chesapeake Bay Watershed Agreement*. Its progress toward nine of these outcomes is highlighted below.

## Oysters

**Outcome:** Increase finfish and shellfish habitat and the water quality benefits of restored oyster populations. Restore native oyster habitat and populations in 10 tributaries by 2025 and ensure their protection.

**Progress in Virginia:** Ten Chesapeake Bay tributaries have been selected for large-scale oyster restoration: Harris Creek, Little Choptank River, Manokin River, Tred Avon River and upper St. Mary's River in Maryland, and the Greater Wicomico, Lafayette, Lower York, Lynnhaven and Piankatank rivers in Virginia. Each tributary is at a different level of progress that involves developing a tributary restoration plan, constructing and seeding reefs, and monitoring and evaluating restored reefs. In Virginia, 539 acres of oyster reef are considered complete. Initial restoration is now finished in the Lafayette River. Forty-seven acres of reefs remain to be restored in the Lynnhaven River, 165 acres remain to be restored in the Lower York River and 121 acres of reefs remain in the Piankatank River. A draft restoration plan for the Greater Wicomico River was completed in 2020.

## 2025 Watershed Implementation Plans

**Outcome:** By 2025, have all practices and controls in place to achieve applicable water quality (i.e., dissolved oxygen, water clarity/submerged aquatic vegetation and chlorophyll a) standards as articulated in the Chesapeake Bay Total Maximum Daily Load.

**Progress in Virginia:** According to the Chesapeake Bay Program's Watershed Model, pollution controls put into place across the Chesapeake Bay watershed between 2009 and 2019 have lowered nitrogen loads 11%, phosphorus loads 10% and sediment loads 4%. In Virginia, pollution controls have lowered nitrogen loads 14%, phosphorus loads 10% and sediment loads 2%.

## Submerged Aquatic Vegetation

**Outcome:** Sustain and increase the habitat benefits of submerged aquatic vegetation (SAV) in the Chesapeake Bay. Achieve and sustain the ultimate outcome of 185,000 acres of SAV Bay-wide necessary for a restored Bay. Progress toward this ultimate outcome will be measured against a target of 90,000 acres by 2017 and 130,000 acres by 2025.

**Progress in Virginia:** According to data from the Virginia Institute of Marine Science, 66,387 acres of underwater grasses were mapped in the Chesapeake Bay in 2019. This is 51% of the Chesapeake Bay Program's 2025 restoration target of 130,000 acres and 36% of the partnership's 185,000-acre goal. About 27,371 acres of underwater grasses were observed in Virginia's tidal waters, and 13 segments within the state—including the Chickahominy, Lower and Upper Pamunkey, Middle and Upper Rappahannock, Potomac, Upper Mattaponi and Upper James rivers and Hog Island Bay—surpassed their previous acreage.

### Virginia's Progress Towards Meeting its 2025 Targets

**14%** Nitrogen    **10%** Phosphorus    **2%** Sediment

# Forest Buffers

**Outcome:** Increase the capacity of forest buffers to provide water quality and habitat benefits throughout the Chesapeake Bay watershed. Restore 900 miles of riparian forest buffers per year and conserve existing buffers until at least 70 percent of the watershed's riparian areas are forested.

**Progress in Virginia:** Between 2010 and 2019, 240 miles of forest buffers were planted along rivers and streams in Virginia: during this time a total of 9,190 miles of forest buffers were planted across all watershed jurisdictions.

# Protected Lands

**Outcome:** By 2025, protect an additional two million acres of lands throughout the watershed—currently identified as high-conservation priorities at the federal, state or local level—including 225,000 acres of wetlands and 695,000 acres of forestland of highest value for maintaining water quality.

**Progress in Virginia:** According to data collected from 2011—2018, almost 1.4 million acres of land in the Chesapeake Bay watershed have been permanently protected from development. This brings the total amount of protected land in the watershed portion of Virginia to 2,987,078 acres, 22% of Virginia land in the watershed.

# Public Access

**Outcome:** By 2025, add 300 new public access sites to the Chesapeake Bay watershed, with a strong emphasis on providing opportunities for boating, swimming and fishing, where feasible.

**Progress in Virginia:** Between 2010 and 2019, 194 boat ramps, fishing piers and other public access sites were opened on and around the Chesapeake Bay. The Commonwealth of Virginia is home to 374 public access sites in all.

# Environmental Literacy Planning

**Outcome:** Each participating Chesapeake Bay jurisdiction should develop a comprehensive and systemic approach to environmental literacy for all students in the region that includes policies, practices and voluntary metrics that support the environmental literacy goals and outcomes of the Watershed Agreement.

**Progress in Virginia:** In 2019, the Chesapeake Bay Program issued its third survey to measure environmental literacy preparedness in public schools. Of the 290 responding school districts, 58 identified as well-prepared and 155 identified as somewhat prepared to deliver high-quality environmental literacy programming to their students. Eighteen percent of the 137 public school districts in Virginia's portion of the watershed identified as well prepared, 49% identified as somewhat prepared and 15% identified as not prepared to put environmental literacy programs in place.

# Student

**Outcome:** Increase students' age-appropriate understanding of the watershed through participation in teacher-supported Meaningful Watershed Educational Experiences (MWEEs) and rigorous, inquiry-based instruction, with a target of at least one MWEE in elementary, middle and high school depending on available resources.

**Progress in Virginia:** In 2019, the Chesapeake Bay Program issued its third survey to measure the extent of Meaningful Watershed Educational Experiences (MWEEs) in public schools. Of the school districts that responded to this survey, 35% reported providing system-wide MWEEs to their elementary school students, 39% reported providing system-wide MWEEs to their middle school students and 35% reported providing system-wide MWEEs to their high school students. The 94 public school districts in Virginia's portion of the watershed reported providing system-wide MWEEs to 27% of its elementary school students, 34% of its middle school students and 26% of its high school students.

# Diversity

**Outcome:** Identify stakeholder groups not currently represented in the leadership, decision-making or implementation of current conservation and restoration activities and create meaningful opportunities and programs to recruit and engage these groups in the partnership's efforts.

**Progress in Virginia:** In 2019, the Chesapeake Bay Program's diversity survey indicated a slight increase in the number of respondents that self-identified as people of color from 13.7% in 2016 to 14.6% in 2019. Virginia noted an increase of 0.4% of respondents who self-identified as being a person of color.