



BAY BAROMETER



Health and Restoration in Virginia (2017-2018)

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 Bay. Virginia has committed to achieving 28 of the outcomes in the *Chesapeake Bay Watershed Agreement*. Its progress toward 12 of these outcomes is highlighted here.

Estimated Nitrogen, Phosphorus and Sediment Pollution Reduced

The Chesapeake Bay Program uses its Watershed Model to estimate reductions in nitrogen, phosphorus and sediment pollution that is flowing into the Bay. By the end of 2017, Virginia had achieved 79 percent of its 2025 target for nitrogen, 99 percent for phosphorus and 54 percent for sediment. Collectively, Bay Program partners have achieved 36 percent of their nitrogen target, 87 percent of their phosphorus target and 67 percent of their sediment target.



Forest Buffers

Between 2010 and 2017, 227 miles of forest buffers were planted along rivers and streams in Virginia: during this time more than 2,050 miles of forest buffers were planted across all watershed jurisdictions.

Oysters

In Virginia, 480 acres of oyster reefs are considered complete. Five acres of oyster reefs remain to be restored in the Lafayette River and 61 acres remain to be restored in the Lynnhaven. Restoration targets for the Great Wicomico, Lower York and Piankatank are under development.

| Oyster Reef Restoration Progress Dashboard (2017) | | | | |
|---|----------------------------|-----------------------------|-------------------------|--------------------------|
| Tributary | Tributary Restoration Plan | Reef Construction & Seeding | Monitoring & Evaluation | Completed/Target Acreage |
| Piankatank (Va.) | In Progress | In Progress | | 253/TBD |
| Lynnhaven (Va.) | In Progress | In Progress | | 91/152 |
| Lafayette (Va.) | Complete | In Progress | | 75/80 |
| Great Wicomico (Va.) | In Progress | In Progress | | 61/TBD |
| Lower York (Va.) | In Progress | In Progress | | TBD |

Underwater Grasses

According to preliminary data from the Virginia Institute of Marine Science, an estimated 104,843 acres of underwater grasses were observed in the Chesapeake Bay in 2017: 14,843 acres greater than the Chesapeake Bay Program's 2017 restoration target and 57 percent of the partnership's 185,000-acre goal. About 41,480 acres of underwater grasses were observed in Virginia's tidal waters, and eight regions within the Commonwealth—including the Chickahominy and Rappahannock rivers and portions of the James, Mattaponi, Pamunkey and Potomac—surpassed their restoration goals.

Wetlands

Between 2010 and 2017, 1,086 acres of wetlands were restored on agricultural lands in Virginia: a total of 9,103 acres of wetlands were restored on agricultural lands across all watershed jurisdictions.

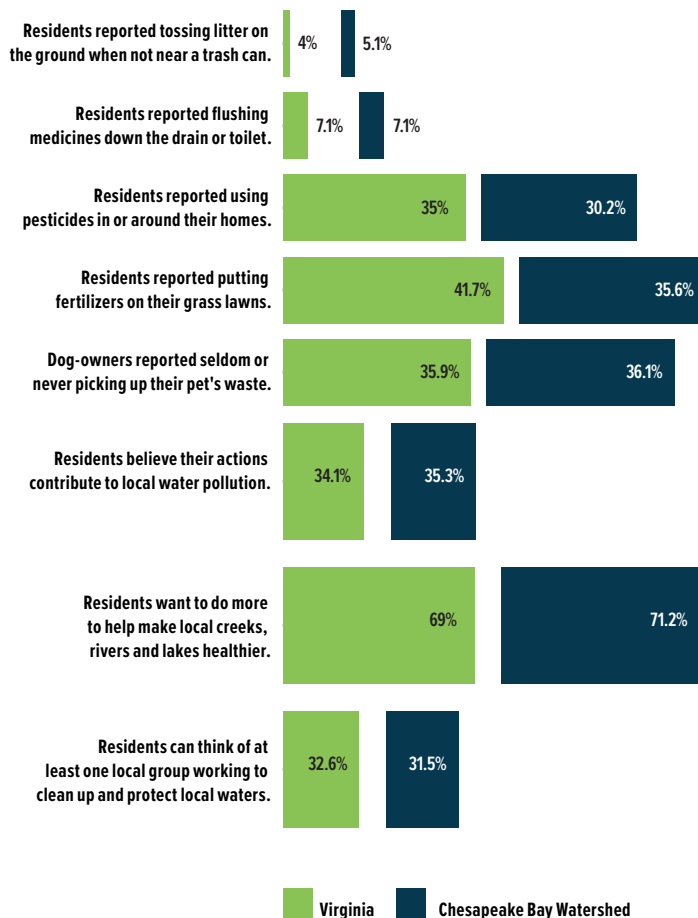
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Citizen Stewardship Outcome

In 2017, residents of the Chesapeake Bay region scored a 24 out of 100 on the Citizen Stewardship Index: the first comprehensive survey of stewardship actions and attitudes in the watershed. Residents of Virginia also scored a 24. To score a 100 on the Citizen Stewardship Index, everyone in the region would need to do everything they could in their daily lives to improve water quality and environmental health.

Virginia's Stewardship Compared to the Watershed



Fish Passage

Progress toward this outcome is measured against a 2011 baseline of 2,510 stream miles open to the migration of fish. Between 2012 and 2017, 1,236 additional miles were opened across the watershed, marking a 124 percent achievement of our 1,000-mile goal. Of this total, 46 percent (or 565 miles) are located in Virginia.

Protected Lands

According to preliminary data collected in 2018, more than 1.3 million acres of land in the Chesapeake Bay watershed have been permanently protected from development since 2010. Of this total, more than 215,000 acres are in Virginia. This brings the total amount of protected land in the watershed portion of the Commonwealth to 3 million acres: 33 percent of all the protected land in the watershed.

Environmental Literacy Planning

In 2017, the Chesapeake Bay Program issued its second survey to measure environmental literacy preparedness in public schools. Of the 132 responding school districts, 29 identified as well-prepared and 76 identified as somewhat prepared to deliver high-quality environmental literacy programming to their students. Fifteen "well-prepared" and 45 "somewhat prepared" school districts are located in Virginia.

71

Number of new places to boat, fish or enjoy the water in Virginia since 2010