



Chesapeake Bay Program
A Watershed Partnership

Press Release

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Chesapeake Bay Underwater Grasses Increase 10 Percent in 2007, But Remain Well Short of Restoration Goal

Largest gains seen in Susquehanna Flats, while grasses in lower Bay continue to recover from 2005 losses

Underwater bay grasses covered nearly 65,000 acres of the Chesapeake Bay and its tidal rivers in 2007, about 35 percent of the 185,000-acre baywide restoration goal, according to data from scientists with the Chesapeake Bay Program. Though a 10 percent increase from 59,000 acres in 2006, bay grasses have not yet recovered to the recent high of 90,000 acres in 2002.

Bay grasses -- also called submerged aquatic vegetation or SAV -- are critical to the Bay ecosystem because they provide habitat and nursery grounds for fish and blue crabs, trap sediments, absorb excess nutrients and reduce shoreline erosion. Bay grasses are also an excellent measure of the Bay's overall condition because they are not under harvest pressure and their health is closely linked to water quality.

"While we saw a slight increase in SAV baywide in 2007 -- due in part to increases in the very large and dense beds in the upper Bay and upper Potomac River -- overall there is concern about SAV in many areas because of declining water clarity," said Bob Orth, scientist with the Virginia Institute of Marine Science and leader of the SAV baywide annual survey.

In the upper Bay zone (from the Chesapeake Bay Bridge north), bay grasses covered about 19,000 acres, 80 percent of the 23,630-acre goal and an increase from about 15,500 acres in 2006. The massive grass bed on the Susquehanna Flats, which is now visible on satellite images, dominated this zone. Bay grasses in the Flats increased from 8,743 acres in 2006 to 11,726 acres in 2007, 97 percent of the restoration goal for that segment. However, much of the rest of the upper Bay zone had little grasses, particularly on the Eastern Shore from the Sassafras River to the Chester River.

In the middle Bay zone (from the Chesapeake Bay Bridge to the Potomac River), bay grass acreage decreased slightly to about 30,000 acres, 26 percent of the 115,229-acre restoration goal. Grass beds remained reasonably robust in the Severn, upper Patuxent and upper Potomac rivers. Bay grasses in the upper Potomac River increased from 4,234 acres in 2006 to 6,246 acres in 2007, exceeding Maryland and Virginia's restoration goals for that area. However, grasses in the lower central Bay in Virginia decreased from 2,017 acres in 2006 to 1,342 acres in 2007.

Unusually high salinities due to dry conditions during summer 2007 may have contributed to declines in the Chester and Magothy rivers and in Eastern Bay, where bay grass acreage fell from 565 acres in 2006 to 80 acres in 2007. Low river flows during drought conditions allow saltier waters to move up from the Atlantic, negatively impacting certain bay grass species that are adapted to growing in fresher waters.

In the lower Bay zone (from the Potomac River south), researchers mapped about 16,000 acres of grasses -- an increase from a record low of 13,000 acres in 2006 and 35 percent of the 46,030-acre restoration goal. Many beds dominated by eelgrass, which dramatically died back during the hot summer of 2005, showed some modest recovery in 2007. Grass beds in the eastern lower Bay, for example, increased from 3,740 acres in 2006 to 5,134 acres in 2007 -- still far short of the 15,107-acre goal for this segment.

"The overall picture for eelgrass -- one of the two dominant SAV species in the lower Bay zone -- remains bleak due to multiple stressors, including declining water clarity, warmer summertime temperatures and cownose rays," said Orth.

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Bay grasses continue to show a strong presence in many of the low-salinity and freshwater areas in the lower Bay zone, such as the Mattaponi, Pamunkey and Chickahominy rivers and creeks off the upper mainstem James River. These tributary segments are far enough from the Bay that the drought did not raise their salinity enough to cause diebacks of the low-salinity grass species that grow there.

“Over the past five to 10 years we have witnessed large increases of SAV in many of the freshwater tributaries and segments of the Bay,” said Lee Karrh, scientist with the Maryland Department of Natural Resources and chair of the Bay Program’s SAV Workgroup. “However, middle- and high-salinity areas, such as Eastern Bay and Tangier Sound, are well below their peaks.”

Because of their importance to the Bay ecosystem, in 2003 Bay Program partners committed to protect and restore 185,000 acres of bay grasses by 2010.

Annual bay grass acreage estimates are an indication of the Bay's response to pollution control efforts, such as implementation of agricultural best management practices (BMPs) and upgrades to wastewater treatment plants. Bay watershed residents can do their part to help bay grasses by reducing their use of lawn fertilizers, which contribute excess nutrients to local waterways and the Bay, and participating with their local tributary teams or watershed organizations.

Bay managers are supplementing pollution reduction efforts with experimental bay grass plantings where predicted improvements in water quality would support bay grasses where none currently exist. These newly planted grasses act as seed sources which, in turn, produce more grass beds as water quality improves.

Bay grasses acreage is estimated through an aerial survey, which is flown from late spring to early fall. For additional information about the aerial survey and survey results, go to www.vims.edu/bio/sav/.

The Chesapeake Bay Program is a unique regional partnership that has coordinated the restoration of the Chesapeake Bay and its watershed since 1983. Bay Program partners include the states of Delaware, Maryland, New York, Pennsylvania, Virginia and West Virginia; the District of Columbia; the Chesapeake Bay Commission, a tri-state legislative body; the U.S. Environmental Protection Agency, representing the federal government; and participating citizen advisory groups.

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