



Chesapeake Bay Program
A Watershed Partnership

Press Release

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Chesapeake Bay Underwater Grasses Undergo Significant Reduction in 2006

Large beds on the Susquehanna Flats remain dense despite baywide declines

ANNAPOLIS, Md. – In 2006, Chesapeake Bay underwater grasses, also known as submerged aquatic vegetation (SAV), experienced a 25 percent decrease baywide, dropping from 78,263 acres in 2005 to 59,090 acres, according to a study released today by the federal-state Chesapeake Bay Program. The 2006 acreage reduction marks the first setback for SAV after two consecutive years of moderate gains, while the total abundance of SAV ranked as the lowest since 1989.

Broken down into three zones, grasses in the upper Bay fell 20 percent to 15,510 acres. Middle Bay grasses fell 23 percent to 30,659 acres, while grasses in the lower Bay covered 12,922 acres, falling 33 percent.

Scientists are attributing 2006 SAV declines in the upper and middle Bay to both the very dry spring of 2006, which raised salinity levels in those areas, and to an abnormally large rain event in early June which “muddied” much of the upper and mid Bay for approximately one month. Higher salinities in many of the Bay’s upper reaches are believed to have caused increased stress and loss to SAV species acclimated to fresher water. The massive amount of sediment that followed the June rain event caused further stress on bay grasses and also probably contributed to additional acreage losses.

Exacerbating significant losses of SAV in the lower Bay was a large eelgrass dieback in late summer of 2005 due to record high temperatures. Many of the areas affected by the dieback in 2005 did not produce grass at all in 2006, while the remaining SAV beds were observed to be very thin.

“Of most concern is the continued dieback of eelgrass we are witnessing in the lower Bay since 1996,” stated Professor Robert Orth of the Virginia Institute of Marine Science. “The recorded losses are occurring in areas where water quality is very good – at the mouth of the York River and Poquoson Flats.”

SAV is critical to the Bay’s ecosystem because the grasses provide habitat for fish and shellfish, help reduce shoreline erosion, absorb excess nutrients and trap sediment. SAV once grew in abundance, covering an estimated 200,000 acres along the shallows and shorelines of the Chesapeake Bay. Because SAV requires that the water be clear enough for sunlight to reach its underwater leaves, and because water clarity is reduced by excess nitrogen, phosphorous, and sediment pollution from the land, the Chesapeake Bay Program looks at annual bay-wide SAV survey results as an indication of the Bay’s response to efforts to control pollution. Based on long-term trends, significant progress is still needed before the Bay is clean enough for SAV to recover to historic levels.

“The news however, is not all bad,” said Orth. “While underwater grass acreage in the upper Bay fell 20 percent to 15,510 acres, the large, dense SAV beds on the Susquehanna Flats area remained healthy and vibrant despite the deluge of sediment following the June rain event.”

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Increases in SAV in some lower Bay tributaries were also recorded. Widgeon grass spread throughout the lower Rappahannock River and hydrilla, an invasive species, continued to increase in the Mattaponi, Pamunkey, Chickahominy and upper James rivers. SAV beds remained very dense in the tidal freshwater areas of the Potomac from Broad Creek down to Aquia Creek while researchers on the St. Mary's River also witnessed healthy SAV populations.

"Some folks just want to know 'Are SAV numbers up? Are they down?'," said Mike Fritz, acting associate director for ecosystems at the Chesapeake Bay Program. "We have to avoid taking the simplistic approach to these numbers. The Chesapeake Bay is a large and extremely complex ecosystem, subject to different conditions in different regions. It's not unusual to see grasses decline in some areas of the Bay while they are on an upswing in other regions."

Bay scientists working to protect and increase the bay's underwater grasses say SAV losses in the lower Bay could be particularly problematic for blue crabs, because lower Bay SAV beds provide essential shelter for very young crabs where they can hide from predators and grow until they are large enough to migrate up the Bay and into the tributaries. "This additional habitat loss, among other factors, could contribute to the extended period of low blue crab abundance currently observed in the Bay," continued Fritz.

"While 2006 SAV numbers are disappointing, they are certainly not discouraging," said Mike Naylor of the Maryland Department of Natural Resources and chair of the Chesapeake Bay Program's Submerged Aquatic Vegetation Workgroup. "Thanks to the expansions in bay grass in the middle and upper Bay over the last decade, we are expecting a significant recovery in these areas in 2007."

The health and density of underwater bay grasses is just one indicator of the overall health of the Chesapeake Bay. The Chesapeake Bay Program's annual *Chesapeake Bay Health and Restoration Assessment*, which provides the most current scientific data and tracks restoration progress, is currently in production. The *2006 Chesapeake Bay Health and Restoration Assessment* will be made public on April 18, 2007.

The Chesapeake Bay watershed is home to more than 16 million people living in parts of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia. Since 1983, the Chesapeake Bay Program has coordinated the restoration of the Bay and its watershed.

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