

Social Media News Release

Chesapeake Bay's Underwater Grass Abundance Rises 24 Percent

Widgeongrass expands in mid-Bay, eelgrass sees modest recovery

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Annapolis, MD – Between 2012 and 2013, underwater grass abundance in the Chesapeake Bay increased 24 percent, reversing the downward trend of the last three years.

The Chesapeake Bay Program tracks underwater grass [abundance](#) as an indicator of Bay health. Annual acreage is estimated through aerial surveys flown from late spring to early fall. Abundance is mapped in four different salinity zones, each of which is home to an underwater grass community that responds differently to strong storms, drought and other adverse growing conditions. Until this year, grasses were mapped by geographic zone; reporting grass abundance by salinity zone makes it easier for scientists to connect changes in growing conditions with changes in grass communities.

Scientists attribute this year's boost in bay grass abundance to the rapid expansion of [widgeongrass](#) in the saltier waters of the mid-Bay, from the Pocomoke Sound to the Honga River south of Cambridge, Maryland. Scientists also observed an increase in the acreage of the Susquehanna Flats, and a modest recovery of [eelgrass](#) in shallow salty waters, where the hot summers of 2005 and 2010 led to dramatic diebacks. However, widgeongrass is a boom and bust species that comes and goes rapidly, and a lack of clear water remains a challenge for eelgrass growth in deeper waters.

Facts

Between 2012 and 2013, bay grass abundance in the Chesapeake Bay increased 24 percent from 48,195 acres to 59,927 acres. This marks a 32 percent achievement of the 185,000-acre goal. Over the long term (between 1984 and 2013), bay grass abundance has fluctuated between 38,958 acres (1984) and 89,659 acres (2002), averaging 65,468 acres.

Tracking Bay Grass Abundance by [Salinity Zone](#):

Between 1984 and 2013:

- Bay grass abundance in the Bay's fresh waters (the **Tidal Fresh Salinity Zone**) has ranged from 6,900 acres (1995) to 25,481 acres (2008), averaging 12,399 acres. Between 2012 and 2013, bay grass abundance in this zone increased 1,841 acres to 13,990 acres, achieving 68 percent of the zone goal.
- Bay grass abundance in the Bay's slightly salty waters (the **Oligohaline Salinity Zone**) has ranged from 653 acres (1984) to 13,918 acres (2005), averaging 6,680 acres. Between 2012 and 2013, bay grass abundance in this zone increased 78 acres to 5,590 acres, achieving 54 percent of the zone goal.
- Bay grass abundance in the Bay's moderately salty waters (the **Mesohaline Salinity Zone**) has ranged from 15,636 acres (1984) to 48,443 acres (2005), averaging 27,851 acres. Between 2012 and 2013, bay grass abundance in this zone increased 5,958 acres to 25,579 acres, achieving 21 percent of the zone goal.
- Bay grass abundance in the Bay's very salty waters (the **Polyhaline Salinity Zone**) has ranged from 9,959 acres (2006) to 24,015 acres (1993), averaging 17,887 acres. Between 2012 and 2013, bay grass abundance in this zone increased 3,859 acres to 14,768 acres, achieving 44 percent of the zone goal.

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Issues

Like grasses on land, [underwater grasses](#), also known as submerged aquatic vegetation or SAV, need sunlight to survive. When the waters of the Chesapeake Bay become clouded with algae blooms or suspended sediment, sunlight cannot reach the bottom habitat where grasses live. While healthy grass beds can trap and absorb some nutrient and sediment pollution—thus improving water clarity where they grow—too much pollution can cause grass beds to die off. Water temperatures, strong storms and drought can also affect the growth and survival of underwater plants. Chesapeake Bay Program partners are working to improve water clarity, protect existing grass beds and enhance bay grass-related education and outreach to restore underwater grasses in the watershed.

Importance

Underwater grass beds are critical to the Chesapeake Bay ecosystem. They offer food to small invertebrates and migratory waterfowl, and shelter young fish and blue crabs. Bay grasses also keep our waters clear and healthy by absorbing excess nutrients, trapping suspended sediment and slowing wave action and shoreline erosion.

Because bay grasses are sensitive to pollution but quick to respond to water quality improvements, their abundance is a good indicator of Bay health. To support the resurgence of underwater grass beds in the Bay, cities can upgrade their wastewater treatment plants with [pollution-reducing technologies](#), farmers can use [best management practices](#) to keep fertilizers in their fields, boaters can steer clear of bay grass beds that are growing in shallow waters and homeowners can use green roofs, rain barrels or rain gardens to slow nutrient- and sediment-laden stormwater runoff.

Quotes

"The mid-Bay has seen a big rise in widgeongrass. In fact, the expansion of this species in the saltier waters between the Honga River and Pocomoke Sound was one of the driving factors behind the rise in bay grass abundance. While widgeongrass is a boom and bust species, notorious for being incredibly abundant one year and entirely absent the next, its growth is nevertheless great to see."

--- Robert J. Orth, Professor of Marine Science and Coordinator of the Submerged Aquatic Vegetation Survey, Virginia Institute of Marine Science

"Since 1984, Chesapeake Bay Program partners have reported abundance of underwater grasses by geographic zone. These artificial boundaries worked for some time, but the switch to mapping grasses by salinity zones makes more ecological sense. Reworking our historic data was hard work, but doing so makes it easier to understand patterns in grass growth."

--- Lee Karrh, Program Chief, Living Resource Assessment at Maryland Department of Natural Resources and Chair, Chesapeake Bay Program's [Submerged Aquatic Vegetation Workgroup](#)

"This data is a reminder of just how resilient the Bay's underwater grasses can be. I am heartened by the news of increases in all of the salinity zones of the Bay, from Newport News to the Susquehanna Flats. Such visible signs of improvement in the ecosystem should encourage everyone's commitment to strong restoration efforts throughout the entire watershed."

--- Nick DiPasquale, Director, Chesapeake Bay Program

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Related News

- Blog post: [Chesapeake Bay's underwater grass abundance rises 24 percent in 2013](#)

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We Recommend:

- [Underwater Bay Grass Abundance \(Baywide\)](#)
- [Underwater Bay Grass Abundance in Four Salinity Zones](#)
- Data Visualization: [Chesapeake Bay Grasses](#)
- Learn the Issues: [Bay Grasses](#)
- [Submerged Aquatic Vegetation \(SAV\) in Chesapeake Bay and Delmarva Peninsula Coastal Bays](#) (Virginia Institute of Marine Science)

Videos:

- Bay 101: [Bay Grasses](#)
- [Chesapeake Unscripted: What is Submerged Aquatic Vegetation?](#)

Photos:

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- Related image tag: bay grasses