



What's new with . . .

LIVING RESOURCES

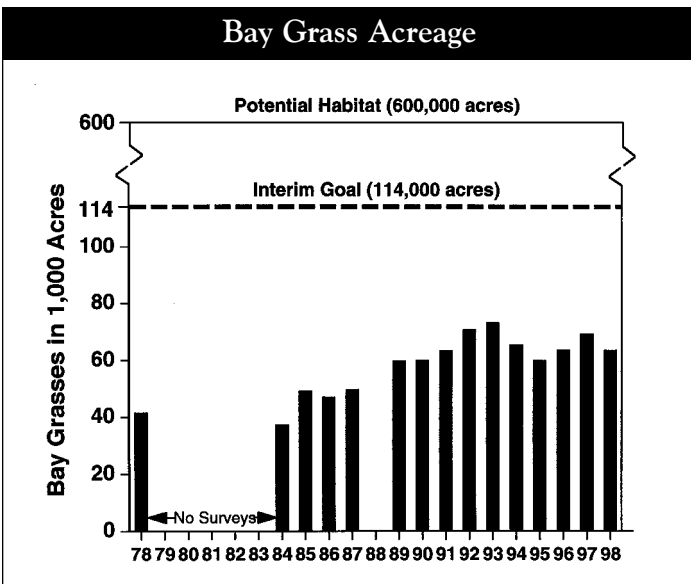
IN THE CHESAPEAKE BAY REGION IN 1999

Since its inception in 1983, the Chesapeake Bay Program's highest priority has been the restoration of the Bay's living resources—its finfish, shellfish, Bay grasses and other aquatic life and wildlife. More than 3,000 species of plants and animals inhabit the Chesapeake ecosystem. Many are doing well or are recovering, while others require more attention and targeted restoration efforts.

Annual Grass Survey Shows Decline

Underwater Bay grasses, also called submerged aquatic vegetation or SAV, are ecologically vital to the Bay's other living resources. Bay grasses provide food and habitat for waterfowl and many forms of aquatic life, including fish, crabs and invertebrates. They also reduce erosion and wave action, absorb nutrient pollution and trap sediments. Bay grasses respond to water quality improvements that result from reduced sediment and nutrient pollution. Because they are not harvested like many of the Bay's other living resources, they are excellent indicators of the Bay's overall health and water quality.

Bay grass survey results indicate that total acreage decreased 8% in 1998, following two consecutive years of increases. The total 1998 acreage represents 56% of the Bay Program's interim restoration goal of 114,000 acres in 2005. The latest survey also showed that, for the sixth straight year, grasses declined in Tangier Sound—one of the most productive areas for crabs in the Bay. Scientists are looking at a variety of causes for the decline, including increased suspended sediment, decreased water clarity and excessive nutrients—all of which contribute to conditions that block the light grasses need in order to grow.



Wetlands Goal Endorsed

In 1999, the Bay Program developed a wetlands restoration and protection goal for endorsement by the Chesapeake Executive Council and inclusion in the proposed *Chesapeake 2000* agreement. The goal recommits the Bay Program jurisdictions of Maryland, Virginia, Pennsylvania and the District of Columbia to achieving “no net loss” of wetlands. The goal also commits the Bay Program to restore wetlands in the region and to support local efforts to protect existing wetlands.

Key Fish Passage Projects Completed

In 1993, the Executive Council established a five-year goal to reopen 731 miles and a ten-year goal to reopen 1,357 miles of blocked Bay tributary waters to migratory fish, including American and hickory shad, blueback herring, alewives and eels. To date, almost 90 projects have been completed, including the construction of 35 fish ladders and lifts, 45 dam removals and breaches, and reconstructed culverts and dam notches. To date, more than 1,100 miles of Bay tributary waters have been reopened to migratory fish.

In 1999, the Bay Program completed two of its most impressive fish passage projects: one at Boshers' Dam in Virginia and the other at the York Haven Dam in Pennsylvania. The new fishway at Boshers' Dam opened 137 miles of the James River from Richmond to Lynchburg, in addition to more than 200 miles of tributaries. The new fish ladder at York Haven Dam was completed in late 1999 and will be operational by the spring run in 2000. York Haven was the final mainstem blockage to migratory fish on the Susquehanna, the Bay's largest river.

Upcoming high-priority projects include a fishway at the Abutment Dam in Petersburg, Virginia, which will open 121 miles of the Appomattox River, and the removal of the Embrey Dam on the Rappahannock River in Fredericksburg, Virginia, which will open 71 additional miles. This puts the Bay Program on track to exceed the 2003 goal.

Aquatic Reef Restoration & Construction Continue

The massive oyster reefs that used to filter the Bay's water and that once covered the bottom of the Bay so densely that they posed navigational hazards are gone. Many of the three-dimensional reefs that provided habitat for oysters and other aquatic species have been reduced to flat surfaces. Since 1993, however, the Bay Program has focused on creating and restoring aquatic reefs throughout the Bay. These efforts appear to be



paying off. During the 1998–99 season, oyster harvests throughout the Bay improved: Virginia harvested 50,000 bushels—an increase over last year’s harvest—and Maryland harvested 300,000 bushels.

- In 1999, Maryland completed two reef projects, both in the Severn River, which is known for long-term oyster survival. One project restored the ten-acre habitat of an existing natural reef, and the other created 13 small shell piles over a half-acre and flat shell planting over five acres.

- In 1999, Virginia built five reefs: two in Mobjack Bay, one in the York River and two in the Lafayette River. The Virginia reefs contained more groups of newly attached, juvenile oysters (called spat sets) than those on the adjacent flat bottom. In the Piankatank River in Virginia, breeding oysters, or broodstock, that watermen had harvested were relocated, resulting in an improved spat set over approximately 5,000 acres and yielding 50,000 to 100,000 seed oysters. Recent ecological studies indicate that crabs, finfish and clams also are benefitting from the three-dimensional reef habitat.

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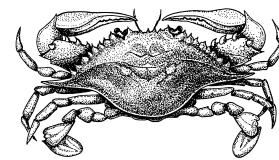
► **More Shad:** In an ongoing effort to rebuild populations of American shad in the rivers of the Bay region, Maryland, Virginia, Pennsylvania, the U.S. Fish and Wildlife Service and two tribal governments (the Mattaponi and Pamunkey) are involved in hatchery and restocking efforts. In 1998 and 1999, more than 65 million American shad were released in Virginia, Maryland and Pennsylvania rivers. Maryland also cultured and stocked more than 30 million hickory shad larvae in several tributaries.

► **New Grasses Report:** *The Submerged Aquatic Vegetation Habitat Requirements and Restoration Targets: A Second Technical Synthesis* is available for viewing and downloading from the Bay Program website at www.chesapeakebay.net/temporary/savts2/. This document contains the latest research on Bay grasses and includes a comprehensive list of the species of Bay grasses in the Chesapeake and supporting scientific literature.

However, even with the good news of higher spat sets, the drought of 1999 took its toll on the oyster, producing high salinities in Maryland and Virginia waters that increased oyster mortality from MSX and Dermo.

Investment in Habitat Restoration Pays Off

Since 1993, the Bay Program has funded important habitat restoration projects that have resulted in a total of 278 acres of wetland creation and restoration, and approximately 11 miles of stream and riparian forest buffer restoration. In 1998 and 1999, the Bay Program funded proposals that are expected to result in an additional 549 acres of wetland restoration, 18 miles of stream restoration and more than 20 miles of riparian forest buffers. Many of these projects were targeted to specific geographic areas to achieve maximum results for living resources.



h o t t o p i c s

► **Tulloch Ditching Leads to Massive Wetlands Loss:** In 1993, the practice of draining wetlands by digging ditches and carefully removing the excavated material came under the scope of the Army Corps of Engineers wetlands regulations, under what is now known as the *Tulloch Rule*. A federal court overturned the rule, so the practice is again unregulated. Among the Bay Program jurisdictions, Virginia is most vulnerable to losing wetlands to Tulloch ditching, since it does not have a nontidal wetlands regulatory program. As of October 1999, almost 2,500 acres of Virginia wetlands had been drained by Tulloch ditching and 6,500 more acres were at risk.

► **Bay’s Blue Crabs Fully Exploited:** The Chesapeake Bay Stock Assessment Committee adopted the *1999 Chesapeake Bay Blue Crab Advisory Report*, which concluded that the Baywide stock of blue crabs is fully exploited and that the spawning stock biomass is below the long-term average (1968–1998). According to the report, an increasingly large portion of the spawning stock has been harvested in recent years (1993–1998), and there has been no evident trend in recruitment during this same period. For a copy of the report go to www.noaa.chesapeakebay.net or call 1-800-YOUR Bay (ext. 676).

For more information on living resources, go to
www.chesapeakebay.net/baybio.htm
on the Bay Program website.

