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# HABITAT HOTLINE ATLANTIC

Atlantic States Marine Fisheries Commission

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## Save My Home!

### Making A Difference For Fish Habitat

#### INTRODUCTION

Healthy waterways and robust fish populations are vital to the well being of our society. They provide clean water and sustainable fisheries. They also are vital for less tangible reasons, as anyone who has fished wild waters or canoed a tranquil stream can attest. Unfortunately, in many waters around the country, fish and the habitats on which they depend are in decline. Although significant measures have been taken to protect and restore aquatic habitats, current efforts have not kept pace with impacts resulting from population growth and land-use changes. Additionally, given the diverse array of federal, state, tribal, local, and private jurisdictions, the need has never been greater for increased action and improved coordination of fisheries conservation measures across boundaries and jurisdictions.



Source: NOAA

#### THE NATIONAL FISH HABITAT ACTION PLAN

To address the need for improved coordination of fisheries conservation efforts throughout the nation, the Association of Fish and Wildlife Agencies and the Departments of the Interior and Commerce adopted the Na-

tional Fish Habitat Action Plan (NFHAP) in April 2006. The NFHAP is an action-oriented, science-based effort with a mission to protect, restore, and enhance the nation's fish and aquatic communities through partnerships that foster fish habitat conservation and improve the quality of life for Americans. The objectives of the national effort are to: (1) conduct a condition analysis of all fish habitats within the US by 2010, (2) identify priority fish habitats and establish fish habitat partner-

ships (FHPs) targeting these habitats by 2010, (3) establish 12 or more FHPs throughout the US by 2010, (4) prepare a "Status of Fish Habitats in the United States" report in 2010 and every five years thereafter, (5) protect all healthy and intact fish habitats by 2015, and (6) improve the condition of 90% of priority habitats and species targeted by FHPs by 2020.

#### FISH HABITAT PARTNERSHIPS

The National Fish Habitat Board has recognized that local or regional FHPs formed around important aquatic habitats, distinct geographic areas, keystone species, or system types will be the primary work units of the NFHAP. Five pilot FHPs currently exist, and their focus is primarily on protecting and restoring habitat for

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freshwater species. It has been acknowledged that the existing NFHAP lacks a partnership focused specifically on diadromous and estuarine-dependent fish and the coastal habitats on which they depend.

An FHP focused on reversing habitat degradation and persistent declines in Atlantic slope coastal drainage systems, which provide critical habitats for diadromous fish populations and estuarine-dependent fish species, will help fill that gap. These critical coastal habitats are under siege from anthropogenic impacts such as poor water quality, including eutrophication, low dissolved oxygen, sedimentation, and toxic contaminants; physical disturbances and barriers, including dredging, hardened shorelines, filling, dams, changes in sediment composition, and water diversions; climate change, including elevated water temperatures, sea level rise, and pH changes; and invasive species. What is needed is a plan to examine these problems holistically along the coast and implement local partnerships to restore these critical habitats.

## THE ATLANTIC COASTAL FISH HABITAT PARTNERSHIP

In May 2006, the Commission charged its Habitat Committee with developing a coastal FHP under the auspices of the NFHAP. The existing infrastructure and collaboration of the 15 Atlantic coastal states make the Commission an ideal candidate to catalyze such a partnership. Through the development of a draft Foundation Document, the Habitat Committee proposed that the partnership initially focus on diadromous and estuarine-dependent species, partly because the Commission is concurrently in the process of developing a source document on the habitats utilized by the different life history stages of Commission-managed diadromous fish species, which could serve as a resource for the development of a conservation strategy for the Atlantic Coastal Fish Habitat Partnership (ACFHP).

Last fall the Commission submitted letters to the National Fish Habitat Board indicating the Commission's interest

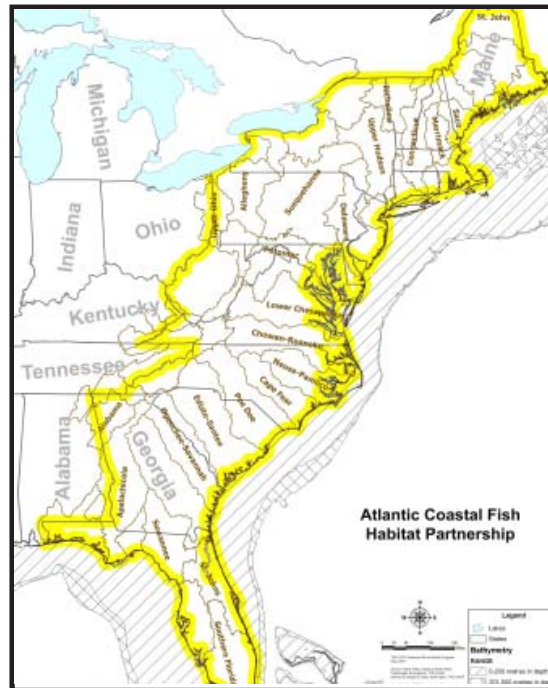
in the partnership process and outlining efforts to date. The ACFHP has since been recognized by the NFHAP Board as a "candidate partnership." In the spring of

2007, the Commission's Habitat Program conducted five informational discussion sessions along the Atlantic coast to gather potential ACFHP partners, and disseminate information on NFHAP and ACFHP activities. The informational sessions, held in Florida, South Carolina, Virginia, New Jersey, and New Hampshire, were relatively well attended and received.

On May 16 & 17, 2007, a coastwide ACFHP Workshop was held in Baltimore, MD; approximately 80 partners and stakeholders attended the workshop. The objectives of the workshop were to: (1) engage partners in developing and implementing an ACFHP, (2) establish the focus (species, habitat, and regional components) of the ACFHP; (3)

establish the ACFHP's administrative structure; and (4) discuss strategies for addressing the next steps for ACFHP.

Preliminary target species and habitats for the ACFHP were determined to be: diadromous fish, estuarine-dependent fish, macrocrustaceans, tidal river systems, non-tidal river systems, marshes, nearshore coastal habitats, structurally complex habitats, and water quantity and quality issues. Additionally, participants





partnership members. The ACFHP will then use these tools to protect, restore, and enhance fish habitat along the Atlantic coast.

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agreed to create one overarching coastwide partnership that would ultimately regroup into regional sub-partnerships (the decision was made to delay the delineation of boundaries for regional components until partnership structure is more defined). Breakout sessions to determine next steps were held for Steering Committee, Science, Communications, and Joint Southeast Working Groups.

On August 14, the ACFHP Interim Steering Committee conducted its first meeting in Alexandria, VA. The group discussed a plan of action for getting the partnership up and running, including development of structural documentation, funding, and working group meetings. At their next meeting in October 2007, the group hopes to review and approve a Charter, Bylaws, and a Memorandum of Understanding. The partnership plans to have the first meeting of the Science and Data Working Group on October 17 as well. That group will begin planning the coastwide habitat assessment.

#### THE PLAN

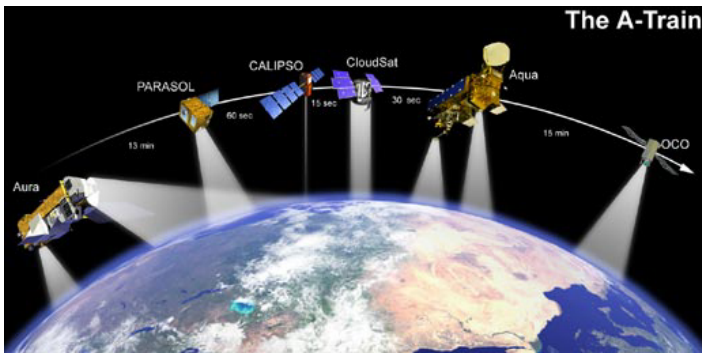
Through the ACFHP, an unprecedented effort will be made to collect the hundreds of existing conservation plans and datasets in the Atlantic region and synthesize them into one comprehensive assessment of important focus areas for habitat protection and restoration. This assessment will be imperative to the development of a conservation strategy for the Atlantic coast. Also key to the success of the ACFHP will be the development of a suite of communications tools, including accessible publications and web-based tools for information dissemination. Development of these tools will culminate with the publication of a coastwide conservation strategic plan and website which will serve as a portal for information, learning, and coordination amongst the public and



## **ENERGY UPDATE**

### ***ASMFC DEVELOPS OUTLINE FOR ALTERNATIVE ENERGY SOURCE DOCUMENT***

In October 2006, the ASMFC Habitat Committee and Management and Science Committee conducted a workshop to determine the most effective role for the Commission to assist the states in protecting fishery resources and fish habitat throughout the energy policy, development, permitting, and/or monitoring process in state coastal waters. One of the resulting recommendations was to develop a source document to serve as a tool to help the states when commenting on a proposed energy project in their area. According to the outline, the document will present general information on types of alternative energy projects, the general permitting process, potential impacts (i.e., ecological, social, and economic, minimum monitoring requirements, and methods for evaluating and mitigating cumulative impacts), and recommendations and research needs for alternative energy development. Wind and hydrokinetic energy will be discussed, in addition to LNG. The outline for this document will be reviewed by the Habitat and Management and Science Committees in October. This document will commence development in 2008.



Source: NASA

## SPOTLIGHT ON TRACKING COASTAL WATER QUALITY

Researchers armed with data from two NASA satellites have invented a way to map the changes in coastal water quality from space. The task long had evaded researchers and coastal managers relying only on ground-based data. Using data from instruments aboard NASA satellites, researchers found that they can monitor water quality almost daily, rather than monthly. Such information has direct application for resource managers devising restoration plans for coastal water ecosystems and federal and state regulators in charge of defining water quality standards.

The team's findings, published July 30 in two papers in *Remote Sensing of Environment*, will help tease out factors that drive changes in coastal water quality. For example, sediments entering the water as a result of coastal development or pollution can cause changes in water turbidity – a measure of the amount of particles suspended in the water. Sediments suspended from the bottom by strong winds or tides may also cause such changes. Knowing where the sediments come from is critical because turbidity cuts off light to the bottom, thwarting the natural growth of plants.

Satellites previously have observed turbidity in the open ocean by monitoring how much light is reflected and absorbed by the water. The technique has not had much success in observing turbidity along the coast, however. That's because shallow coastal waters and Earth's atmosphere serve up complicated optical properties that make it difficult for researchers to determine which colors in a satellite image are related

to turbidity, which to shallow bottom waters, and which to the atmosphere. Now with advances in satellite sensors combined with developments in how the data are analyzed, researchers show it is possible to monitor turbidity of coastal waters via satellite.

The traditional methods of monitoring coastal water quality require scientists to use boats to gather water samples, typically on a monthly basis because of the high costs of these surveys. The method is sufficient to capture episodic events affecting water quality, such as seasonal freshwater runoff. However, researchers suspected that the monthly measurements were not capturing fast changes in factors that affect water quality, such as winds, tides, and human influences, including pollution and runoff.

Satellites, with their wide coverage and multiple passes per week, provided a solution to frequent looks and measuring an entire estuary within seconds. When compared with results from independent field measurements, collected with the help from the U.S. Geological Survey, the researchers found that the satellites offered an accurate measure of water quality in Tampa Bay, FL.

Frequent measurements from space could resolve questions about the specific timing and nature of events that led to decreases in water quality. Seasonal freshwater discharge from nearby rivers and runoff into the bay can carry nutrients. If these nutrients are not controlled, they can give rise to large and harmful phytoplankton blooms, which can kill sea grass. Wind conditions, however, are the driving force for a decline in water quality in the dry season between October and June, when bottom sediments are disturbed.

“It's important to look at baseline conditions and see how they change with the seasons and over the years, and whether that change is due to development, coastal erosion, the extraction and dumping of sediments, or digging a channel,” says Frank Muller-Karger, study co-author, University of Florida.

SOURCE: NASA ([www.nasa.gov](http://www.nasa.gov))

# AROUND THE COAST: EELGRASS RESTORATION

## Maryland

Since 2004, the Maryland Department of Natural Resources (MD DNR) has been developing and applying large-scale bay grass restoration techniques at its Piney Point Aquaculture Center on the Potomac River. Bay grasses once grew in abundance in the shallows of the Chesapeake Bay and its tributaries. The underwater grasses are vital to a healthy bay ecosystem because they provide protection and nursery habitat for fish and blue crabs, filter and oxygenate the water, and help reduce shoreline erosion. Currently, there are about 32,000 acres of bay grasses in the Maryland portion of the Chesapeake - approximately 30% of the state's 114,000-acre restoration goal. Progress toward the bay-wide goal of 185,000 acres of grasses is similar, at about 32%.

While the best way to restore bay grass populations is through water quality improvements, bay grass

restoration activities also play an important role. For the past three years, MD DNR has seeded nearly 70 acres of suitable, unvegetated habitat to help jumpstart natural, established bay grass beds.



Source: Chesapeake Bay Program

MD DNR staff is currently working to restore bay grasses—specifically eelgrass, a particularly beneficial species—by collecting seeds from healthy eelgrass beds in the spring and distributing them in promising areas of the lower Potomac River.

Each May, scientists and volunteers collect seed-bearing shoots from eelgrass growing in Tangier Sound, near Crisfield on Maryland's Lower Eastern Shore. The seed material is then transported by boat across the Bay to the Piney Point Aquaculture Center to be processed, stored and distributed. MD DNR staff is currently evaluating two eelgrass seed dispersal methods to determine the most cost-effective way to re-establish eelgrass beds. MD DNR scientists monitor the seeding sites throughout the eelgrass growing season to determine the effectiveness of both distribution techniques. In addition, nearby water quality monitoring information is also collected to help explain changes in the overall health of eelgrass beds.

Scientists at VIMS are conducting similar restoration efforts in Virginia waters.

SOURCE: CHESAPEAKE BAY PROGRAM ([www.cbf.org](http://www.cbf.org))

## Massachusetts

The city of Gloucester's wastewater improvement project involved the dredging of approximately a half acre of eelgrass habitat in Gloucester Harbor to locate a viable combined sewer outflow (CSO) through Pavilion Beach. While the CSO construction will improve water quality in Gloucester Harbor, the intentional removal of eelgrass habitat was a concern. Eelgrass habitat supports an abundant diversity of marine life, stabilizes seafloor sediments and adjacent shorelines, helps maintain water quality, and is a critical component of the marine food web. However, the population of eelgrass is severely diminished from historic levels, and continues to steadily decline throughout its range along the Atlantic coast, including Massachusetts waters.



Source: NOAA

The Massachusetts Office of Coastal Zone Management, in coordination with other partners, developed a creative response to the planned impacts to the eelgrass bed. The goal of this initiative was to save eelgrass in the project area and raise awareness of eelgrass habitat. Partners combined their resources and expertise to: (1) facilitate ongoing eelgrass restoration in Boston Harbor; (2) study and develop methodology to store eelgrass for future restoration; (3) support local research and education programs; and (4) develop interpretative information on eelgrass habitat and the CSO project.

Two community events were organized to harvest plants in the area that was to be impacted by the CSO project, both of which required substantial coordination between project partners and volunteers.

Scientists from collaborating agencies are monitoring survival and growth of eelgrass. Eelgrass that survives the winter in experimental systems will be transplanted back to the impacted area at Pavilion Beach and to other potential restoration sites. This study will help to determine the feasibility of creating an eelgrass bank. Maintaining the eelgrass bank offers the opportunity to restore eelgrass habitat at Pavilion Beach with eelgrass harvested before the CSO dredging, ultimately saving this valuable resource that otherwise would be removed from Gloucester Harbor.

SOURCE: COASTLINES (An annual publication of the Massachusetts Office of Coastal Zone Management)

# IN THE NEWS

## New Handbook Explains the Law and Science of Clean Water Act Coverage

Last year's Supreme Court ruling in *Rapanos v. United States* left regulators, activists, and landowners nationwide scrambling to understand the scope of Clean Water Act (CWA) jurisdiction over wetlands and streams. Unless and until Congress amends the law to clarify its intended coverage of the "waters of the United States," we are left to sort out the present law. There is now a comprehensive resource designed to shed light on the topic, *The Clean Water Act Jurisdictional Handbook*, just released by the Environmental Law Institute (ELI). The ELI Handbook lays out the various tests for CWA coverage under current law. Additionally, the Handbook brings science to bear on the question of determining CWA coverage for certain categories of wetlands and streams, in a way that no other publication to date has attempted. ELI has analyzed the key case law, compiled the relevant scientific studies and literature, and provided a set of jurisdictional "checklists" to assist the legal layperson in determining whether a particular wetland or stream is covered. For a free download of the Handbook, visit [www.eli.org](http://www.eli.org).

## 2008 National Wetlands Awards Program Nominations

Nomination forms for the 2008 National Wetlands Awards Program are now available. The National Wetlands Awards Program honors individuals who have demonstrated extraordinary commitment to the conservation and restoration of our nation's wetlands. The deadline for submitting nominations for the 2008 Awards program is January 15, 2008. The 2008 National Wetlands Awards Program will honor individual achievement in six categories: Education and Outreach, Science Research, Conservation and Restoration, Landowner Stewardship, State, Tribal and Local Program Development, and Wetland Community Leader. Organizations and federal employees are not eligible. Awardees will be recognized at a Capitol Hill ceremony in May 2008. The Environmental Law Institute has presented the National Wetlands Awards since 1989. The Awards program recognizes individuals who have demonstrated exceptional effort, innovation, and excellence in wetlands conservation at the regional, state, or local level. To learn about previous Award winners, or for a nomination form, please visit [www.nationalwetlandsawards.org](http://www.nationalwetlandsawards.org).

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