Working towards healthy, thriving habitats of sufficient quality to support all life stages of Atlantic coastal, estuarine-dependent, and diadromous fishes.

Who We Are

A coast-wide partnership of fish habitat resource managers, scientists, and communications professionals from 30 different state, federal, tribal, and non-governmental entities.

What We Do

Develop goals, objectives, action strategies and priorities to guide conservation efforts directed towards fish habitat conservation on the Atlantic coast.

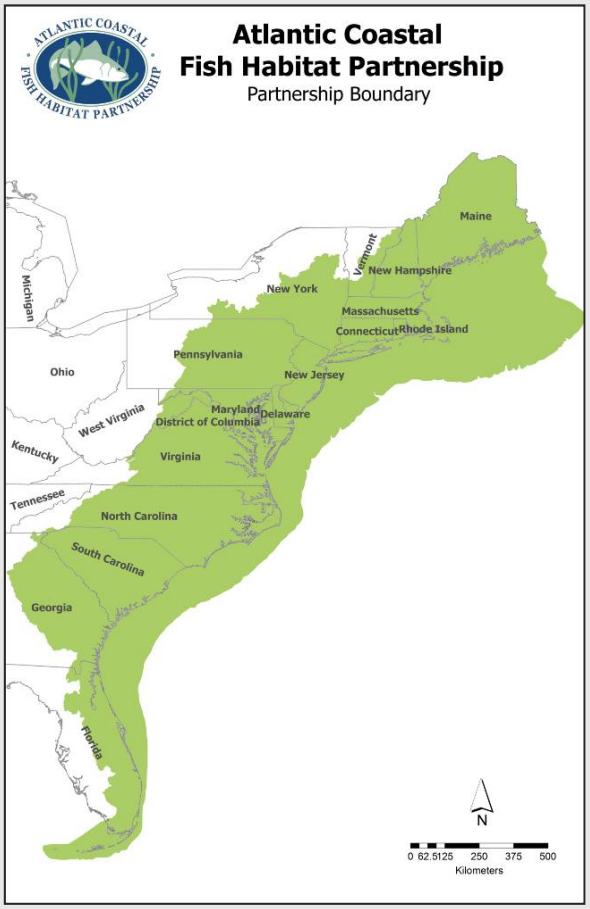
Secure, leverage, and distribute resources for on-the-ground fish habitat conservation projects.

Coordinate the implementation of fish habitat conservation projects on a coast-wide, regional, and local scale.

Develop coast-wide scientific projects whose outcomes serve as decision support tools for our partners and other entities working to conserve aquatic habitat.

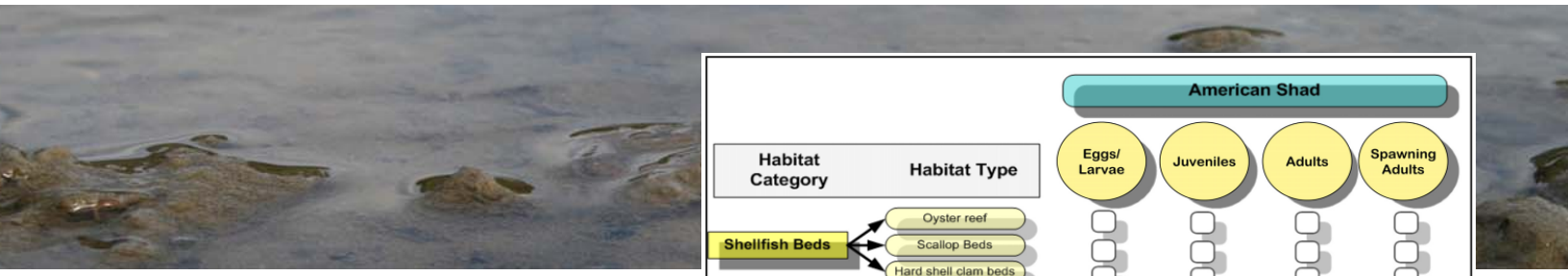
Our Goals

Support projects that protect and maintain healthy aquatic systems, prevent further degradation, or restore degraded aquatic habitats.



Where We Work

From the headwaters of coastally draining rivers to the edge of the continental shelf, from Maine to the Florida Keys, with a focus in estuarine environments.



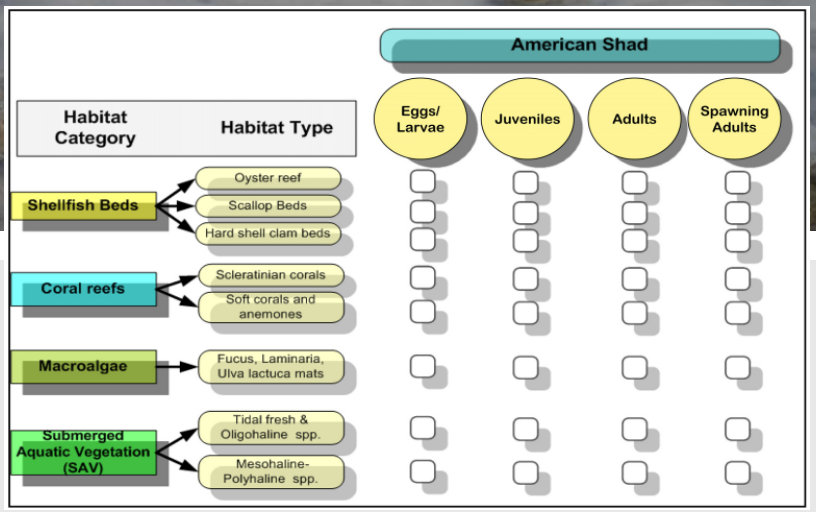
Science Projects

Our **Species-Habitat Matrix** and **Assessment of Existing Habitat Information** projects were completed to inform or verify the development of conservation objectives and priorities.

The **Species-Habitat Matrix** evaluates the relative importance of coastal, estuarine, and freshwater habitat types in terms of their value to the major life stages of over 100 fish species.

The development, review, and analysis of the Species-Habitat Matrix represents a truly coast-wide cooperative effort to which scientists from state, federal, NGO, and academic entities contributed.

The **Assessment of Existing Habitat Information** was conducted through a contract with the NOAA National Ocean Service. It is a database of documents, datasets, and information portals on Atlantic coastal fish species and habitats which were collected and analyzed for indicator, threat, and action information. The Assessment is web-based, enabling all resource managers to access this information at: http://www8.nos.noaa.gov/bhv/spatbibindex.html.



Illustrative Snap Shot of the Species-Habitat Matrix

Snap Shot of the Assessment of Existing Habitat Information

How You Can Get Involved

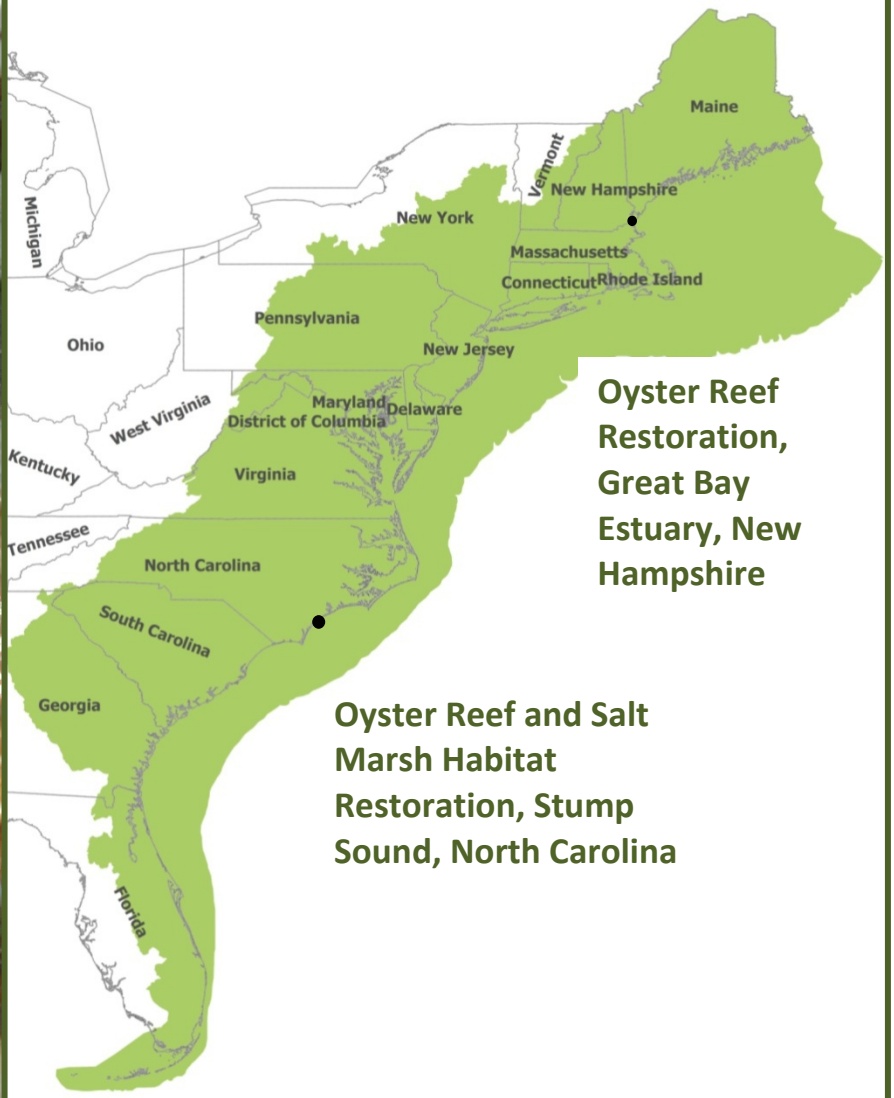
You can help the Partnership develop, refine, or achieve the following:

- ☑ Conservation strategies
- ☑ Long-term funding strategies
- ☑ Partners from the national, regional, and local levels

For more information on the Partnership visit us at: www.atlanticfishhabitat.org

Or contact Lisa Havel, Atlantic Coastal Fish Habitat Partnership Coordinator at: 703.842.0743 or lhavel@asmfc.org

FY14 On-The-Ground Fish Habitat Projects



Oyster Reef Restoration, Great Bay Estuary, New Hampshire

Oyster Reef and Salt Marsh Habitat Restoration, Stump Sound, North Carolina

On-The-Ground Projects

Spotlight on Oyster Reef Restoration in Great Bay Estuary, New Hampshire

Project Partners

NOAA New Hampshire Coastal Program

The Nature Conservancy

US Fish and Wildlife Service

Atlantic Coastal Fish Habitat Partnership

Restored oyster reef in NH

As ecosystem engineers, oysters play a significant role in maintaining a healthy and stable environment by anchoring sediments, providing nursery habitat for estuarine-dependent and migratory fishes, buffering against ocean acidification, and filtering the surrounding water column. Like many coastal regions around the world, Great Bay Estuary, located in Rockingham County, New Hampshire, has experienced a recent reduction in adult oyster populations. In fact, there has been a 90% decline in oyster standing stock since 1970 due to overharvesting, reduced spawning activity, sediment pollution, and disease.

This project will help mitigate these losses by adding 400,000 oysters near the mouth of the Lamprey River, Great Bay Estuary, in a two-stage process. First, 200 tons (about 200 yd^2) of surf clam (*Spisula solidissima*) will be planted in the estuary as a solid foundation for the living reef. Second, Eastern oyster (*Crassostrea virginica*) larvae will be set on shells in the laboratory, and transferred to volunteer homes and nursery rafts for grow out. These spat, over 350,000, will then be hand planted onto the surf clam reef for permanent establishment. At completion, two acres of oyster reef will be restored to the estuary, with a target density of 50 spat/m^2. Oyster restoration is considered a "highest priority" strategy in the 2010 Piscataqua Region Estuaries Partnership Comprehensive Conservation Management Plan, and if successful will support species including river herring (*Alosa pseduoharengus* and *Alosa aestivalis*), winter flounder (*Pseudopleuronectes americanus*), and striped bass (*Morone saxatilis*).

Following a competitive selection process, the Atlantic Coastal Fish Habitat Partnership recommended this project to receive conservation funding from the U.S. Fish and Wildlife Service to support the construction, monitoring, and outreach components of this project. These restoration efforts also rely heavily on community volunteers in the New Hampshire Oyster Conservationist program to lend their time and private docks to growing oyster spat over a ten week program.

For more information on the Partnership visit us at: www.atlanticfishhabitat.org

Project text and **photos courtesy of NYSDEC/PEP**

ON-THE-GROUND PROJECTS

Spotlight on Oyster Reef and Salt Marsh Restoration in Stump Sound, North Carolina

The shoreline in Stump Sound, Holly Ridge, North Carolina, has been experiencing erosion from boat wakes and storms, as well as degradation due to dredging, shoreline hardening, and high harvest pressure on natural oyster reefs, which in turn has led to a reduction in available habitat for estuarine-dependent species. This project will protect 200 ft. of estuarine shoreline in the sound by restoring 0.05 acres of fringing oyster (*Crassostrea virginica*) reef and 0.07 acres of tidal salt marsh (*Spartina alterniflora*) habitat. The restored oyster reefs and salt marshes will directly benefit a number of species including red drum, sheepshead, spotted seatrout, weakfish, spot, Atlantic croaker and penaeid shrimp.

Restoration Project Area

Approximately 3,000 bushels of oyster shells will be added to Stump Sound to create a 200' x 12' x 1.5' (L x W x H) reef waterward of the 3,000 salt marsh seedlings that will be planted along the shoreline. The loose shell will be colonized by oyster larvae, and will transform it into a living reef almost immediately. The living reef will protect the adjacent salt marsh, allowing for the *S. alterniflora* seedlings to take root and trap sediments for marsh accretion and increased stabilization.

Through a competitive selection process, the Atlantic Coastal Fish Habitat Partnership chose the N.C. Coastal Federation's project to receive U.S. Fish and Wildlife Service funding. This restoration is possible due to a collaborative effort between these organizations and the Z. Smith Reynolds Foundation, the N.C.Division of Marine Fisheries, the NO.AA Restoration Center, the Atlantic States Marine Fisheries Commission, and 100 volunteers.

Project Partners

North Carolina Coastal Federation

Atlantic Coastal Fish Habitat Partnership

Atlantic States Marine Fisheries Commission

National Oceanic and Atmospheric Administration – Restoration Center

Z. Smith Reynolds Foundation

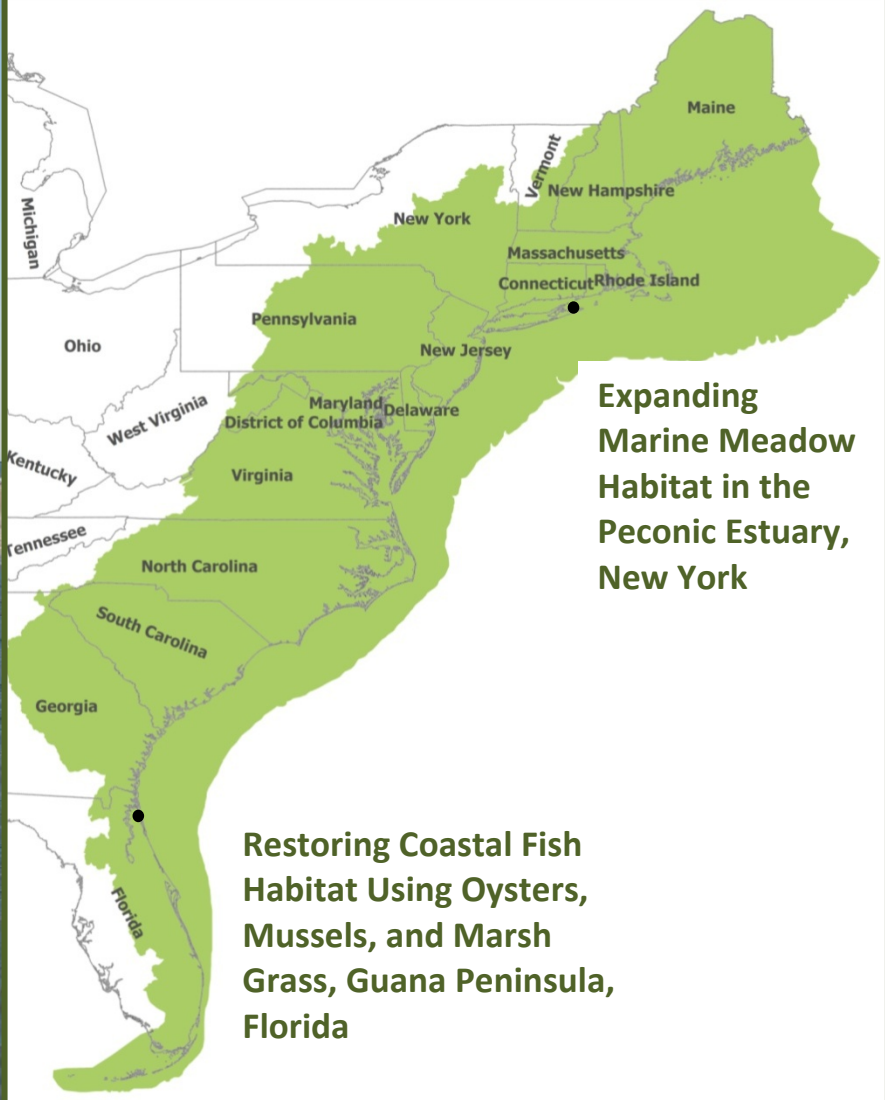
North Carolina Division of Marine Fisheries

US Fish and Wildlife Service

For more information on the Partnership visit us at: www.atlanticfishhabitat.org

Project text and p**hotos courtesy of North Carolina Coastal Federation**

FY13 On-The-Ground Fish Habitat Projects



Expanding Marine Meadow Habitat in the Peconic Estuary, New York

Restoring Coastal Fish Habitat Using Oysters, Mussels, and Marsh Grass, Guana Peninsula, Florida

ON-THE-GROUND PROJECTS

Spotlight on Expanding Marine Meadow Habitat in the Peconic Estuary

Marine meadows play an important role in providing ecosystem services while serving as preferred or essential habitat for a wide array of native fish species. However, eelgrass populations have been declining globally in recent decades. In New York waters, it is estimated that over 80% of eelgrass habitat has been lost since the 1930's due to natural and anthropogenic causes. To address the need to re-establish submerged aquatic vegetation in the Peconic Estuary, the Cornell Cooperative Extension (CCE) is proposing the use of a multi-pronged approach to bringing back this important underwater habitat.

CCE staff will conduct restoration planting at sites in the eastern portions of the estuary, where water quality conditions are suitable to eelgrass (*Zostera marina).* Additionally, they will conduct pre- and post- monitoring to ensure restoration sites are suitable and to track the progress of the plantings.

Representative photo of assembled planting units for restoration.

The public will have an opportunity to take part in these restoration efforts through participation in two land-based workshops, during which they will have an opportunity to help assemble planting units, in addition to learning about the importance of marine habitat and what they can do to help preserve and restore local seagrass species.

The project will create important habitat for cunner, tautaug, winter and summer flounder, porgies, seahorses, squid (eggs), striped bass, black sea bass, bluefish, menhaden, hard clam and bay scallop.

The U.S. Fish and Wildlife Service has provided the Atlantic Coastal Fish Habitat Partnership with conservation dollars to fund numerous components of the project, including staff support, boat time, and workshop materials. On-the-ground, local level efforts, such as the Expanding Marine Meadow Habitat in the Peconic Estuary project, are helping to address regional habitat priorities and coastwide conservation objectives identified by the Atlantic Coastal Fish Habitat Partnership.

Project text and photo provided by Cornell Cooperative Extension of Suffolk County.

For more information on the Partnership visit us at: www.atlanticfishhabitat.org

Project Partners

Cornell Cooperative Extension of Suffolk County

Moore Charitable Trust

Suffolk County

Town of East Hampton

Peconic Estuary Program

US Fish and Wildlife Service

Atlantic Coastal Fish Habitat Partnership

ON-THE-GROUND PROJECTS

Spotlight on Restoring Coastal Fish Habitat Using Oysters, Mussels, and Marsh Grass at Guana Peninsula

Project Partners

Friends of the Guana Tolomato Matanzas Reserve

Guana Tolomato Matanzas National Estuarine Research Reserve

University of North Florida

US Fish and Wildlife Service

Atlantic Coastal Fish Habitat Partnership

The Tolomato River (Intracoastal Waterway) on the Guana Peninsula in northeast Florida was once home to oyster reefs, which provided important habitat for a number of resident and transient finfish species, and emergent vegetation such as *Spartina alterniflora,* which lent valuable feeding habitat to juvenile fishes, and improved water quality. Over time however, the area has been impacted by over-harvesting, expanded human occupancy near the waterway, water pollution, increasing wave action as a result of river traffic and channel dredging, climate change, and sea level rise. The resulting disappearance of oyster reef and *Spartina alterniflora* salt marsh has reduced habitat for important fish and associated species. This project will reduce shoreline erosion, preserve damaged salt marsh environment and accelerate *Spartina* growth.

Southern portion of the proposed restoration site.

This project, located specifically at Wright's Landing, in the Guana Tolomato Matanzas National Estuarine Research Reserve, will restore and enhance fish habitat by preventing shoreline erosion and promoting shoreline accretion using a combination of mussel and oyster-based living shorelines. Combined with *Spartina alterniflora* planting, living shorelines have stopped or reversed erosion and provided critical habitats for plants, fishes, and invertebrates. Specifically, restored marsh and reef will provide nursery and feeding habitat for forage fishes (mummichog, silversides) that utilize emergent salt marsh habitats, as well as juvenile commercial and recreational species (drum, shrimp) that utilize oyster reef and shallow nearshore habitats.

More than 1,000 linear feet of eroding shoreline will be restored using living shorelines. Created oyster shell reefs, and coir fiber logs with ribbed mussels will be established separately and in combined fashion to examine their relative effectiveness on erosion reduction, sediment capture and enhancement of success of *Spartina* plantings. Marsh accretion, fish and invertebrate habitat usage, and *Spartina* seedling success will be monitored by researchers and volunteers.

The U.S. Fish and Wildlife Service has provided the Atlantic Coastal Fish Habitat Partnership with conservation dollars to fund numerous components of the project, including supplies for restoration, monitoring, and personal safety, in addition to travel and contracted services. On-the-ground, local level efforts, such as the Restoring Coastal Fish Habitat Using Oysters, Mussels, and Marsh Grass at Guana Peninsula project, are helping to address regional habitat priorities and coastwide conservation objectives identified by the Atlantic Coastal Fish Habitat Partnership.

Project text provided by Guana Tolomato Matanzas National Estuarine Research Reserve. Photo provided by Matt Kimball.

For more information on the Partnership visit us at: www.atlanticfishhabitat.org

FY12 On-The-Ground Fish Habitat Projects

Eelgrass Restoration, Buzzards Bay, Massachusetts

Sturgeon Habitat Restoration, James River, Virginia

Mangrove Restoration, Indian River Lagoon, Florida

ON-THE-GROUND PROJECTS

Spotlight on Restoring the Mangroves of the Indian River Lagoon

Project Partners

Marine Resources Council of East Florida

US Fish and Wildlife Service

Atlantic Coastal Fish Habitat Partnership

The Indian River Lagoon is a 156-mile bar-built coastal estuary that covers an area of approximately 3,575 square kilometers. It supports coastal mangrove wetlands, salt marshes, intertidal and subtidal flats, and riparian wetlands and floodplains, which provide important habitat to numerous fish species. Unfortunately, the rate of shoreline and wetland destruction has increased, due to decades of urbanization and the spread of invasive plant species. This project will restore over 10 acres of coastal habitat wetlands to the Lagoon.

The project sites are located in the Pelican Island National Wildlife Refuge and adjacent public lands and will involve removing 5 acres of invasive plants and planting over 8,500 linear feet of shoreline with wetland species such as mangroves and *spartina* grass to create new fish nursery habitat. Volunteers will help remove invasives, plant natives, and remove trash and monofilament line for recycling.

Pelican Island National Wildlife Refuge

A unique aspect of this project is the restoration of mangrove forests, which in addition to providing nursery habitat for commercial and game fish species, are critical to maintaining the overall health of the coastal ecosystem by helping to trap and cycle organic materials, chemical elements, and nutrients. Nearly 80% of mangrove forests have been destroyed or isolated from the Indian River Lagoon, which is significant considering that mangrove forests found in the Lagoon constitute about 20% of the total amount of mangroves found in the eastern United States.

The U.S. Fish and Wildlife Service has provided the Atlantic Coastal Fish Habitat Partnership with conservation dollars to fund numerous components of the project, including the removal of invasives and the purchase and installation of plants. On-the-ground, local level efforts, such as the Restoring the Mangroves of the Indian River Lagoon project, are helping to address regional habitat priorities and coastwide conservation objectives identified by the Atlantic Coastal Fish Habitat Partnership.

Project text and photo provided by Marine Resources Council of East Florida.

For more information on the Partnership visit us at:
www.atlanticfishhabitat.org

ON-THE-GROUND PROJECTS

Spotlight on Eelgrass restoration with Conservation Moorings in Buzzards Bay

Project Partners

Massachusetts Division of Marine Fisheries

Town of Falmouth

Light Hawk Aerial Photography

US Fish and Wildlife Service

Atlantic Coastal Fish Habitat Partnership

Eelgrass (*Zostera marina*) meadows support complex trophic food webs and provide habitat for the forage, shelter and juvenile development of fisheries species. However, this habitat is declining in part due to damage from boating infrastructure. Traditional mooring chains drag on the seafloor, causing direct scour of eelgrass plants and degradation to the quality and function of eelgrass beds through increased turbidity. The project will restore eelgrass (*Zostera marina*), by replacing traditional moorings with elastic conservation moorings that minimize impacts to the seafloor by preventing chain drag.

Traditional mooring chain drag creating a scar

The project site is located in West Falmouth, Massachusetts. Through the replacement of traditional moorings with conservation moorings (that include flexible rodes and helical anchors) in concert with direct eelgrass planting, eelgrass will be restored in 7 mooring scars, each approximately 29m^2 of impact. This project will provide needed data in support of a long-term solution to mooring impacts to eelgrass. Monitoring will include pre-project scar measurements and mapping, and one month and annual post-project eelgrass shoot density and percent cover, scar measurements and mapping.

The U.S. Fish and Wildlife Service has provided the Atlantic Coastal Fish Habitat Partnership with conservation dollars to fund numerous components of the project, including coordination, equipment, monitoring, and permitting. On-the-ground, local level efforts, like the Eelgrass Restoration with Conservation Moorings in Buzzards Bay project, are helping to address regional habitat priorities and coastwide conservation objectives identified by the Atlantic Coastal Fish Habitat Partnership.

Please note, the mooring of boats and the establishment of mooring fields in seagrass beds is generally recognized as a significant source of damage to these important ecological communities across their range. As such, the Atlantic Coastal Fish Habitat Partnership is only providing support to specific remediation actions at this and other designated project sites, which address historic damage caused by the scouring effects of traditional chain and block-anchor mooring systems.

Majority of project text provided by Massachusetts Division of Marine Fisheries and USFWS. Photo credit: T. Evans, 2010.

For more information on the Partnership visit us at: www.atlanticfishhabitat.org

ON-THE-GROUND PROJECTS

Spotlight on James River Atlantic Sturgeon Habitat Restoration

A lack of clean, hard substrate has been noted as a limiting factor for the restoration of many anadromous species in the James River. The loss of this ideal spawning habitat is due to dredging and excess sediment entering the river from erosion. This project will promote the population of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) and other anadromous fishes of the Chesapeake Bay through the restoration of spawning and nursery habitat.

The project site is located in a tidal freshwater section of the James River where the dominate substrate is currently a fine sediment and where there is sufficient current to prevent excessive siltation. Many anadromous species, including Atlantic sturgeon, American shad, herring, and striped bass frequent this area.

James River Project Site

An artificial spawning reef will be constructed using approximately 2,500 tons of broken granite. Following construction, the site will be extensively monitored for spawning activity and outreach activities will publicize the project and its findings.

The objective of the project is to increase the spawning activity of Atlantic sturgeon and other anadromous fish in the James River by providing suitable clean hard spawning habitat. This project will also highlight the need to reduce sediment entering the river from soil erosion.

The U.S. Fish and Wildlife Service has provided the Atlantic Coastal Fish Habitat Partnership with conservation dollars to fund numerous components of the project, including reef construction, monitoring, and outreach. On-the-ground, local level efforts, like the James River Atlantic Sturgeon Habitat Restoration project, are helping to address regional habitat priorities and coastwide conservation objectives identified by the Atlantic Coastal Fish Habitat Partnership.

Project text and photo provided by James River Association.

Project Partners

James River Association

Virginia Commonwealth University

The Nature Conservancy

National Oceanic and Atmospheric Administration

US Fish and Wildlife Service

Luck Stone Corporation

Mary Anderson Harrison Foundation

Chesapeake Scientific

Virginia Institute of Marine Science

USGA

Atlantic Coastal Fish Habitat Partnership

For more information on the Partnership visit us at:
www.atlanticfishhabitat.org