

NC COASTAL FEDERATION INITIATIVE:

OYSTER HABITAT RESTORATION

Essential Species

Once thought of only as a tasty treat, oysters are now viewed as one of the most important, or “keystone” inhabitants of our estuaries. Forming reefs, filtering pollutants and serving as an important fishery are just a few of the vital functions our native eastern oyster (*Crassostrea virginica*) provides us – and all free of charge. These important values are often referred to as the three “F’s”: food, filter, and fish habitat.



■ **Food:** Oysters support a viable commercial and recreational fishery that is an important part of North Carolina’s cultural heritage. Oyster reefs also support the production of other commercially valuable species, such as blue crabs and finfish, valued at \$62 million annually.

■ **Filter:** As filter feeders, oysters remove harmful pollutants, sediment and excess algae from the water. One adult oyster is capable of filtering between 15-35 gallons of water a day.

■ **Fish Habitat:** Oyster reefs provide food and shelter for many estuarine and marine species including crabs, shrimp and flounder. One healthy oyster reef can be home to more than 300 different adult and juvenile organisms, including many important commercial and recreational species.

Oysters in Trouble

As a keystone species in the estuary, the health of the oyster reflects the health of the coastal ecosystem. Since the early 1900’s, North Carolina’s oyster population has declined by an estimated 90 percent, due to habitat loss, pollution, diseases, and harvest pressure. This decline in oysters is repeated throughout the Atlantic and Gulf coasts. The loss of our native eastern oyster mirrors the declines in water quality and fisheries in these coastal systems. Linking oyster restoration with efforts to protect and restore water quality will result in increased oyster habitat and healthier coastal environments.



NCCF staff, volunteers and researchers monitor the restored oyster reefs for at least three years.



Restoring Oyster Habitat – One Reef at a Time

Since 1998, NCCF has worked with its project partners to restore nearly twenty acres of oyster habitat along the central and southeastern coasts of North Carolina. These projects have involved thousands of community volunteer hours, over 70,000 bushels of shell, 3,000 shell bags and 20 million oyster larvae.

Restoring Oysters for the Future

The North Carolina Coastal Federation (NCCF) has helped to coordinate the “Oyster Blueprint,” an effort that links the restoration and protection of the native oyster population with a comprehensive restoration and protection strategy. With support from the NC General Assembly, significant progress is being made through the efforts of the Blueprint’s partners, including scientists, fishermen, policymakers and educators. An oyster hatchery program is being implemented (www.ncoysters.net), more oyster sanctuaries are being built, and increased resources are available to map oyster habitat and identify and remove water pollution hot-spots. Most importantly, the public is engaged in efforts to restore the oyster through education and actions such as shell recycling (www.ncfisheries.net), and reef building projects (www.nccoast.org). NCCF’s staff and citizen volunteers are actively involved in oyster restoration, following three key strategies: public education and stewardship, water quality protection and oyster habitat restoration and protection.

Get Involved in Our Oysters’ Future

There are many exciting opportunities to get involved in oyster restoration, such as shell recycling, oyster reef monitoring and community shell bagging events. For more information on how to volunteer, please visit our website at www.nccoast.org, call us at 252-393-8185, or email us at nccf@nccoast.org.

PROJECT PARTNERS

NCCF’s oyster habitat restoration and creation projects are made possible with the support of its partners, including:



PHOTO LEGEND

1. NC Division of Marine Fisheries barges spread the oyster shell to form the base of the new reefs. Free-swimming oyster larvae need the shell to settle upon and grow.
2. Volunteers create shell bags that will be used to seed the reefs with juvenile oysters, or “spat.”
3. Oyster shell bags are placed in tanks at an aquaculture facility where introduced oyster larvae can “set” (attach to) the shells.
4. Oyster larvae are spawned at a hatchery from mature local oysters, and then they are “set” onto the shell bags.
5. Oyster shells, which have been “set” with juvenile oysters (spat), are ready to be spread onto the new reefs to jump-start the reef forming process.
6. Volunteers “seed” the new reefs with thousands of oyster spat from the shell bags.
7. A newly-restored intertidal oyster reef.
8. An underwater view of a healthy oyster reef.

North Carolina Coastal Federation

“Citizens Working Together for A Healthy Coast”

The North Carolina Coastal Federation (NCCF) is the state’s only non-profit organization focused exclusively on protecting and restoring the coast of North Carolina through education, advocacy and habitat restoration and preservation. For more information call 252-393-8185 or check out NCCF’s website at www.nccoast.org.