The Nature Conservancy
New Hampshire

Turning the Tide in Great Bay

OYSTER REEF RESTORATION

Small but mighty, the Eastern oyster has historically played a vital role in the ecology of the Great Bay Estuary. As many as 1,000 acres of oyster reef may have covered Great Bay in 1970 and could filter the entire bay in less than 4 days! Today, more than 90 percent of these oysters have been lost due to pollution, historical over-harvesting, and disease. Just as coral reefs are critical to tropical marine habitats, oyster reefs are the ecosystem engineers of bays and estuaries. With their decline we've lost the vital services they provide to people and nature:

- **Cleaning water**—a single adult oyster can filter as much as 30 gallons per day;
- **Providing food and habitat** for a diversity of plants and animals, including fish, crabs and birds;
- **Removing nitrogen and other nutrients** that threaten the health of the system;
- **Serving as natural coastal buffers** from boat wakes, sea-level rise and storms.

The Nature Conservancy and The University of New Hampshire, together with our partners, are working to restore and rebuild degraded oyster reef habitat. **Thanks to the support and help from dedicated members, we've successfully restored a footprint of more than 35 acres of oyster reef since 2008.**

With your help, we can continue this work with our partner organizations, New Hampshire oyster farmers, scientists and oyster conservationist volunteers that grow oyster spat off their docks for restoration. We can create self-sustaining oyster reefs that play a vital role in improving the health of Great Bay and positively influence the fish, invertebrates, eelgrass and other species that live in the water, as well as the coastal communities that call this region home.

GOALS OF OYSTER REEF RESTORATION

1. Improve water quality in Great Bay.
2. Create and enhance important habitat for fish and invertebrates.

Dive deeper at **nature.org/nhoysters**

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Restoring Oyster Reef is year-round work.

Jan–Feb

Restoration sites selection based on information such as historic and current oyster beds and site conditions.

Mar–May

Complete permitting for restoration and pre-site assessments such as video monitoring and bathymetric mapping.

June

Construct reef base with clam shell at restoration sites utilizing barge operations.

July

Set oyster larvae on oyster shell in remote setting tanks at UNH Jackson Estuarine Lab. After about 1 week, move spat on shell out to a raft.

July–Sept

TNC's Oyster Conservationist (OC) volunteers and UNH staff (oysters on raft) raise oyster spat to juvenile size. Then, deposit live spat from raft onto the reef base.

Oct

Deposit juvenile and adult oysters from OC volunteers, the UNH lab and oyster farmers on a restored reef. Conduct post-restoration monitoring.

Nov–Dec

Conduct post-restoration monitoring and write report.

Turning the Tide at Great Bay