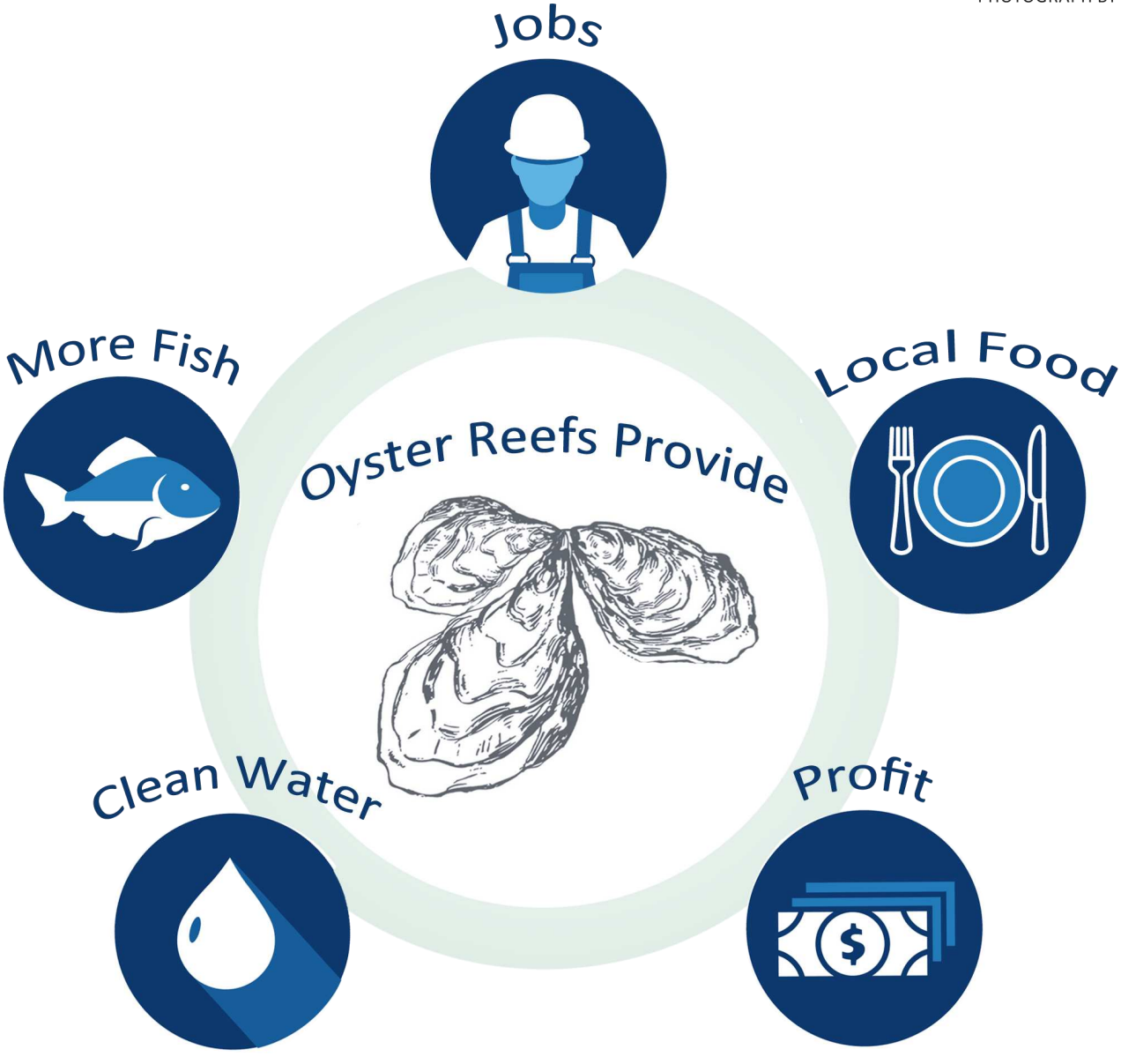
Increasing Our Oyster Population

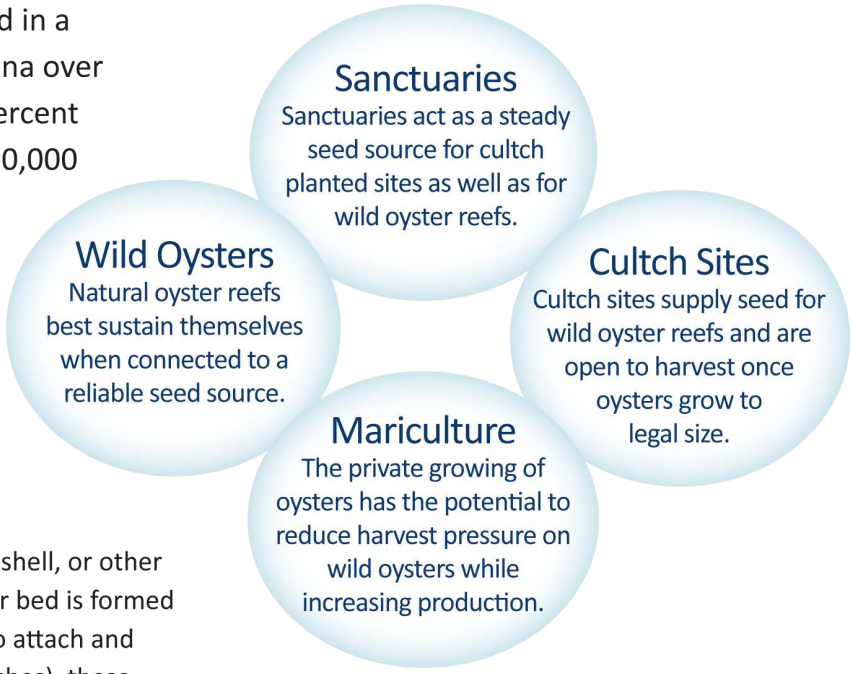
North Carolina Coastal Federation
35 years working together for a healthy coast

PHOTOGRAPH BY DANIEL PULLEN



Current State of Oysters in North Carolina

Historic overharvest, habitat loss, natural disasters, disease and poor water quality have resulted in a decline in oyster populations in North Carolina over the past century. Current harvest is 15-20 percent of the state's historic peak in 1889, when 800,000 bushels were harvested.



Efforts to Restore Native Oysters

Cultch Planting

What is cultch planting?

A cultch site is where DMF plants cultch — recycled shell, or other materials such as stones and marl of which an oyster bed is formed — to provide a base for native free-floating larvae to attach and grow upon. After the oysters grow to legal size (3 inches), these areas are open to harvest.

Current oyster sanctuaries as part of the Senator Jean Preston Sanctuary Network

Oyster Sanctuaries

Oyster sanctuaries as part of the Senator Jean Preston Oyster Sanctuary Network are strategically located in Pamlico Sound. Together they create a self-sustaining interconnected network to supply seed — oyster larvae — to other harvestable reefs. These areas are closed to shellfish harvest but open to hook-and-line fishing. Sanctuaries help to create habitat for not only oysters but also shrimp, drum, crabs and other important commercial and recreational species.

Currently there are 15 areas designated as oyster sanctuaries in Pamlico Sound.

EACH YEAR, ONE ACRE OF OYSTER REEF PROVIDES:

- Over $2,619 in augmented recreational value
- $1,637 in augmented commercial finfish and shrimp production
- $11,000 in ecosystem services[1]

[1] Grabowski et al 2011. Assessing the long-term economic value and costs of the Crab Hole and Clam Shoal oyster reef sanctuaries in North Carolina.

Ecosystem service - any positive benefit that wildlife or ecosystems provide to people such as habitat for fish and improved water quality.

The 50 Million Oyster Initiative

FiftyMillion Oyster Initiative

Recent monitoring of oyster sanctuaries showed that for every acre of oyster sanctuary created, over 1 million oysters are restored to our coastal waters. The North Carolina Coastal Federation has recently launched an initiative to help DMF restore at least 50 acres of oyster reefs coastwide in three years, thereby restoring 50 million oysters to our sounds by 2020. Those 50 million oysters will filter 2.5 trillion gallons of water daily — providing cleaner water, better habitat and a stronger coastal economy.

Current Project: Swan Island Oyster Sanctuary

Oysters are going to get some help in 2017. The North Carolina Coastal Federation received $1.275 million from the NOAA Restoration Center, and North Carolina Division of Marine Fisheries put up $1.5 million from state appropriations to start the 50 Million Oyster Initiative.

The Plan for 2017

1. Build **15 acres** of oyster sanctuary in Pamlico Sound
2. Build **80 acres** of harvestable reefs statewide

As the first project of the 50 Million Oyster Initiative and as part of the Senator Jean Preston Oyster Sanctuary Network, grant funding and state appropriations in 2016/2017 allowed for the Swan Island Oyster Sanctuary to be constructed near South River.

The building of this sanctuary is unique, as it is a partnership between the state, a nonprofit and a private contractor. A North Carolina marine contractor has been hired to build the reef, and materials for the reef construction were purchased from a North Carolina supplier.

Swan Island Oyster Sanctuary and nearby cultch planting sites for 2017. Additional cultch sites are located throughout the state.

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How the Process Works: Your Input is Important

Both sanctuary and cultch sites are managed by the North Carolina Division of Marine Fisheries (DMF) through the following process:

SITE SELECTION

Public Input

Your opinions matter, and they matter most at this step. Public meetings are held statewide each summer and fall. The public is encouraged to attend and submit comments on where to locate sanctuaries and cultch plantings. Send written comments to:

Garry Wright at Division of Marine Fisheries
garry.wright@ncdenr.gov
P.O. Box 769, Morehead City, NC 28557

Field Work

Once a list of potential sites is created, DMF will investigate the site to see if it is suitable for restoration by looking at various biological parameters and logistics.

Modeling from Universities

N.C. State University and UNC Wilmington have developed various tools that help predict where oyster restoration efforts will be most successful. These tools use environmental parameters, historic reef location, connectivity modeling and information on known public use conflicts to aid site selection.

PERMITTING

Public Comment

After a site has been selected, DMF will secure state and federal permits to perform the restoration work. At this stage, there is opportunity for public comment on the issuance of the permit through the North Carolina Division of Coastal Management's permitting process.

CONSTRUCTION

Once permits are secured, DMF works with local contractors to purchase material. When feasible, private contractors and fishermen are hired to build the reefs.

To find out more or get involved please contact Erin Fleckenstein at 252-473-1607 or erinf@nccoast.org

EVERY
$1.00 INVESTED
IN THE STATE'S
HABITAT ENHANCEMENT
ACTIVITIES PROVIDES
$4.05 IN BENEFITS.*

**Callihan R., et al. 2016. Economic Analysis of the Costs and Benefits of Restoration and Enhancement of Shellfish Habitat and Oyster Propagation in North Carolina. RTI International. Prepared for the Albemarle-Pamlico National Estuary Partnership.*

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