NORTH CAROLINA OYSTER BLUEPRINT

An Action Plan for Restoration and Protection

Highlights and Overview: 2021-2025

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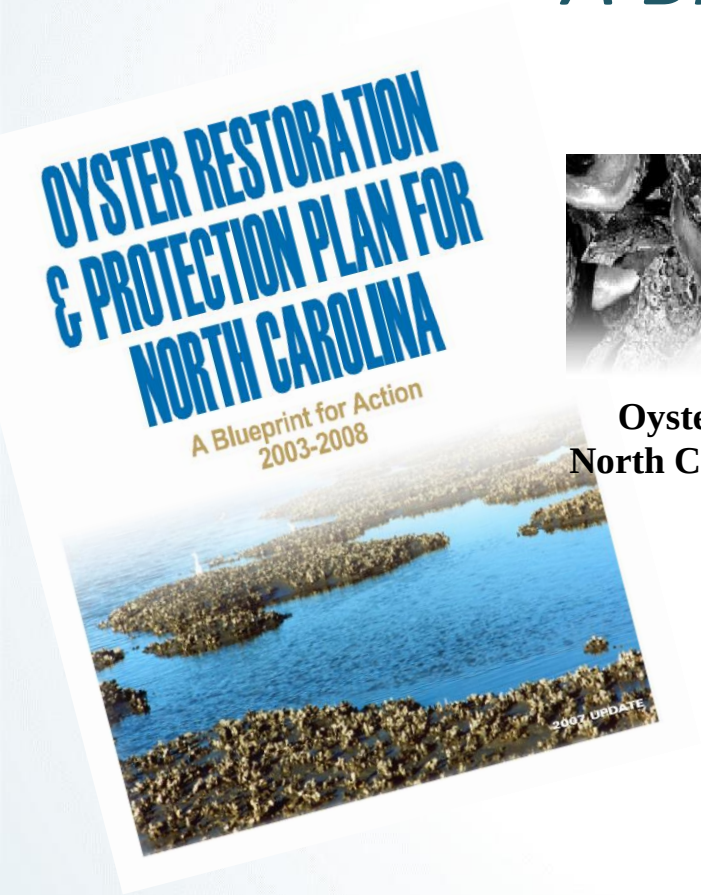
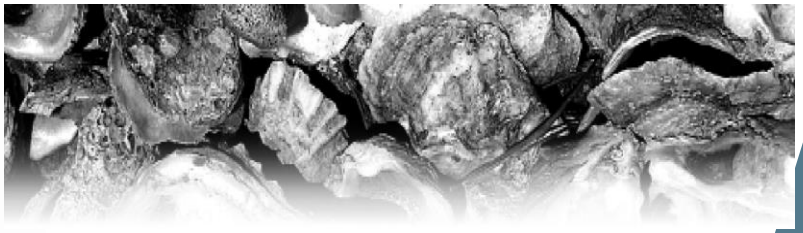
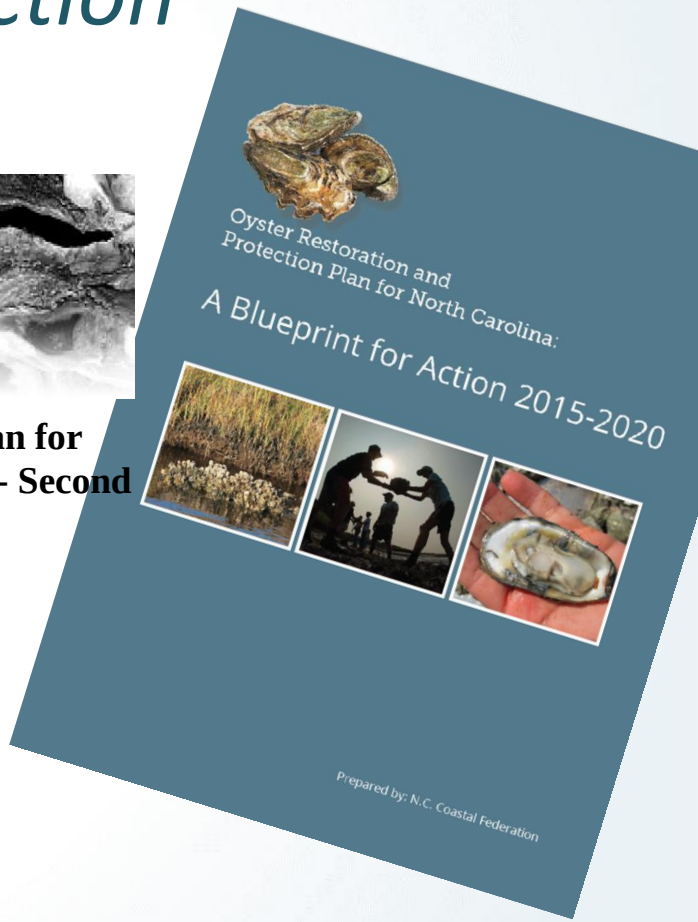
Oyster Restoration and Protection Plan for North Carolina: A Blueprint for Action

Three Editions

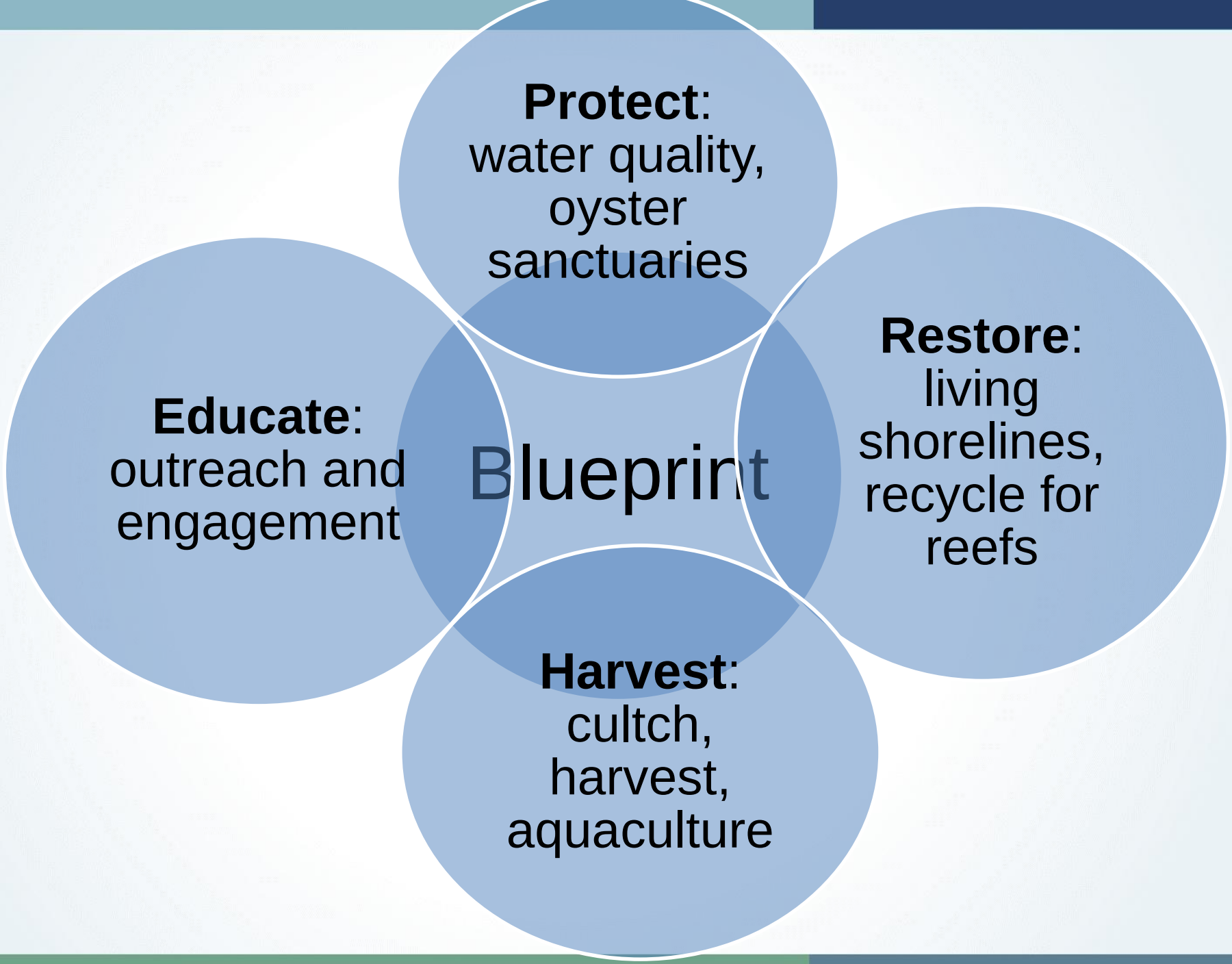




Oyster Restoration and Protection Plan for North Carolina: A Blueprint For Action - Second Edition
2008 – 2012



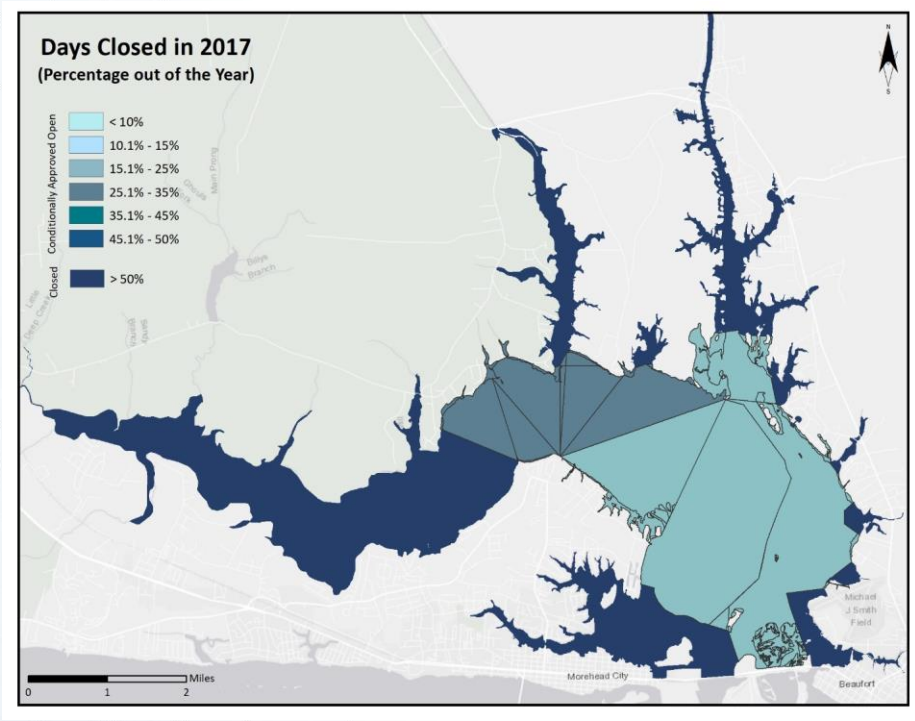
Partnerships and Collaborations are Key to Success


Protect: water quality, oyster sanctuaries
Educate: outreach and engagement
Blueprint
Restore: living shorelines, recycle for reefs
Harvest: cultch, harvest, aquaculture

WATER QUALITY

Pristine water quality is critical to oyster's success both to support estuarine habitat and ensure oysters are safe for human consumption. Thirty four percent of NC waters are closed to shellfish harvest due to bacteria transported by runoff or lack of monitoring. Concentrated efforts are needed to maintain and improve water quality in coastal NC.

Protect and restore water quality in shellfish growing waters that are both critically important and endangered.



- Stump Sound Watershed Restoration Plan Underway
- Application for Newport River Estuary Protection and Restoration Strategic Plan
- Prioritize additional waterbodies in need of protection- refine prioritization tool

SANCTUARIES

Oyster sanctuaries are strategically located and designed to provide oyster larvae for the wild population and cultch planted areas. They are protected from harvest but open to hook-and-line fishing.

Establish sufficient acreage of protected oyster reefs to support desired ecosystem services including: build fish habitat, supplement wild oyster stock and filter water.

- Build 100 acres of sanctuary by 2025.
- Determine the feasibility of a protected reef designation in Southern waters.
- Refine estimates for how many acres of protected habitat is needed to reach ecosystem service goals.

Living Shoreline

Living shorelines are environmentally friendly shoreline stabilization techniques that help reduce shoreline erosion while simultaneously protecting and restoring valuable coastal marsh and oyster habitat.

Expand the use of living shorelines to become the most commonly used stabilization method in estuaries that support oyster habitats.

- Expand use of living shorelines to be most commonly used method. (3 miles added by 2025)
- Ensure protection of living shorelines constructed from oyster reef material.

Recycle for Reefs
Oyster shell is a valuable resource in the state of North Carolina. It is used in restoration activities to build new oyster reefs. Recycled oyster shells become a home to new oysters.

Create a cohesive oyster shell recycling program to provide 5 percent of material needed to support oyster habitat restoration strategies

- Recycled material to provide 5 percent of needed material by 2025 (~15,000 bushels).
- Identify priority reef locations for recycled shell, target 20 acres of reef.

CULTCH PLANTING

Cultch planting activities are carried out throughout shellfishing waters to replenish and rebuild wild oyster stock for harvest. Cultch refers to limestone marl, concrete, oyster shell or other material used as a base substrate in restoration activities. The cultch is colonized by oyster larvae that attach and grow to three-inch harvest size in 18-24 months. Cultch planting sites are open to public harvest once oysters reach legal harvest size (3 inches).

Use cultch planting to replenish and enhance oyster habitat for commercial harvest and ecosystem services

- Plant cultch to build 40 acres of harvestable oyster habitat
- Study existing program to determine if improvements can be made to maximize oyster growth and ROI.

Wild harvest of oysters is vital to our coastal economy and heritage. Efforts to refine harvest and management strategies through the state's Fisheries Management Plan and efforts to secure adequate resources for management and restoration will help ensure that wild harvest can continue in a sustainable manner.

WILD HARVEST

Sustainably manage natural oyster habitats within public trust areas to perpetuate ecosystem services and wild harvest.

- Improve the science and monitoring that informs the FMP-work towards a state stock assessment.
- Coordinate with various state plans: CHPP and FMP in particular.

Shellfish Aquaculture

Oyster farming or aquaculture has the potential to provide numerous benefits including increased water filtration and additional habitat for fish and other estuarine species. Oyster aquaculture also has the potential to reduce harvest pressure off the native population while acting as an oyster larvae seed source to the surrounding waters.

Build the shellfish aquaculture industry to create a $45 million industry by 2025.

- Grow industry to $45 million by 2025.
- Education and economic support for new and existing growers; comprehensive marketing and distribution; research and continued regulatory review and planning.
- Advance the Oyster Trail in North Carolina.

Outreach and Engagement

Outreach and engagement in the Blueprint and described activities is vital to the implementation of the plan. Tools such as the website, annual report, meetings and workshops, and press events/releases provide meaningful and engaging communication content to a variety of targeted audiences.

Create communication and outreach strategies that engage stakeholders and the general public to actively support the goals, strategies and actions outlined in the Blueprint.

- Continue to engage statewide oyster steering committee
- Leverage support with NC Aquariums, Museums and visitor's centers
- Expand the use of traditional and social media outlets- including field trips, public forums and school engagement.

Major Accomplishments

- North Carolina joined NOAA's National Shellfish Initiative
- Government, private agencies and other shellfish stakeholders coordinated habitat, water quality and fisheries management activities.
- Funding for oyster related programs increased by a factor of ten from 2003-2013.
- Annual oyster harvest increased from low of 34,500 bushels.
- Built ~400 acres of harvestable reef.

- Oyster Restoration and Growing are good for both the economy and environment- $1 invested =$4.05 in benefits
- Developed Strategic Mariculture Plan
- Shellfish aquaculture grew from $1 million to nearly $5 million industry
- Built ~50 acres of reef through oyster sanctuaries, living shorelines and patch reefs
- Water quality degradation continues to be a concern but some localized improvements were observed
- Researchers developed and refined tools to guide restoration, growing and enhancement efforts

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Questions?

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