Living Shorelines

Water Quality

Oysters
Your Experience ➔ Common Challenges

- Louisiana
- Chesapeake Bay
- North Carolina
Experience

Common Challenges

Solutions
Hierarchy of Erosion Control Options

No Action

Relocation of Threatened Structures

Non-Structural Stabilization Measures
(Slope Grading, Marsh Creation, Bio-Engineering)

Combination Approaches
(Sills, Stone containment cells, breakwaters with plantings)

Hardening Structures
(Groins, Revetments, Bulkheads)
Functions and Values of a Living Shoreline

- Shoreline Stabilization
- Water Quality
- Productivity
- Habitat Enhancement
3 OPTIONS:
OYSTER REEF / SILL
WITH PLANTINGS

not to scale

EXISTING OR RESTORED MARSH GRASSES

OYSTER DOMES

SUBMERGED AQUATIC VEGETATION

LOOSE OYSTER SHELL

OYSTER BAGS

North Carolina Coastal Federation
Working Together for a Healthy Coast

ils. Lars Berkey, B-O design studio, PLLC
Value and Importance of Oysters

- Improve Water Quality
- Stabilize Shorelines
- Provide Habitat
- Important to Coastal Culture, Heritage and Economy
N.C. Oyster Restoration and Protection Plan: A Blueprint for Action
Currently in the Third Edition
Larger scale oyster sanctuaries are constructed throughout North Carolina’s sounds. These sanctuaries are typically closed to harvest, but open to hook and line fishing. They are strategically located and designed to as a reliable oyster larvae seed source for the wild population and cultch planted areas.
To create reefs, the N.C. Division of Marine Fisheries (DMF) annually deposits tens of thousands of bushels of oyster shell, marine limestone and/or clam shell — called “culch” — in shellfish waters. 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).
Oyster farming or mariculture has the potential to provide numerous benefits including increased water filtration and additional habitat for fish and other estuarine species. Oyster mariculture also has the potential to reduce harvest pressure off the native population while acting as an oyster larvae seed source to the surrounding waters.
Watershed restoration plans are in development for nearly a dozen coastal watersheds. We work locally to craft and implement these plans. They focus on improving water quality by restoring hydrology and wetlands and providing stormwater management.
These are typically smaller scale restoration efforts carried out by nonprofit organizations, universities or concerned community members. The reefs created are for shoreline protection and oyster habitat creation. They range in size from a tenth of an acre to two acres.