Reefs, Rakes, and Permitting Dredge Islands in North Carolina

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Beacon Island: Living Shoreline

- Living shoreline and patch reefs of bagged oyster shell
- Partnered with NC Coastal Federation
- Funded by grants from Toyota TogetherGreen, NOAA, Restore America’s Estuaries and the Southeast Aquatic Resources Partnership
- Local fishermen did bagging and construction

https://www.nccost.org/project/beacon-island/
Beacon Island: Living Shoreline
Cape Fear River: Natural Islands

• Large estuary supporting ca. 100 pairs of nesting oystercatchers, as well a large wintering aggregation
• ≥50% of AMOY nesting on natural islands
Cape Fear River: Losing Shell Rakes

- Historic declines in oyster populations = lack of building materials for maintenance of shell rakes?
Cape Fear River: Oyster Reefs

- Mitigation funding available to benefit in-water resources
- Received awards to site, permit, and construct oyster reefs
- Determined area was substrate-poor
- Selected four locations, three near nesting rakes
- Reefs consist of sills and patches of bagged shell, loose shell, and reef balls
Cape Fear River: Oyster Reefs

- So far, funding has been enough to construct one oyster reef
- Waiting to see if spat settles on the substrate
Cape Fear River: Shell Rakes

Rake is emergent on normal high tides
Cape Fear River: Dredged-material Islands

- Two active dredged-material islands on Cape Fear River
- NFWF award to design and permit an expansion of their footprints
- Opportunity to explore feasibility of adding design features to benefit birds and marine life
- Challenges: fisheries, additional features compatible with continuing sediment placement