

Reefs, Rakes, and Permitting Dredge Islands in North Carolina

Lindsay Addison
coastal biologist



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.nccoast.org/project/beacon-island/>

Beacon Island: Living Shoreline



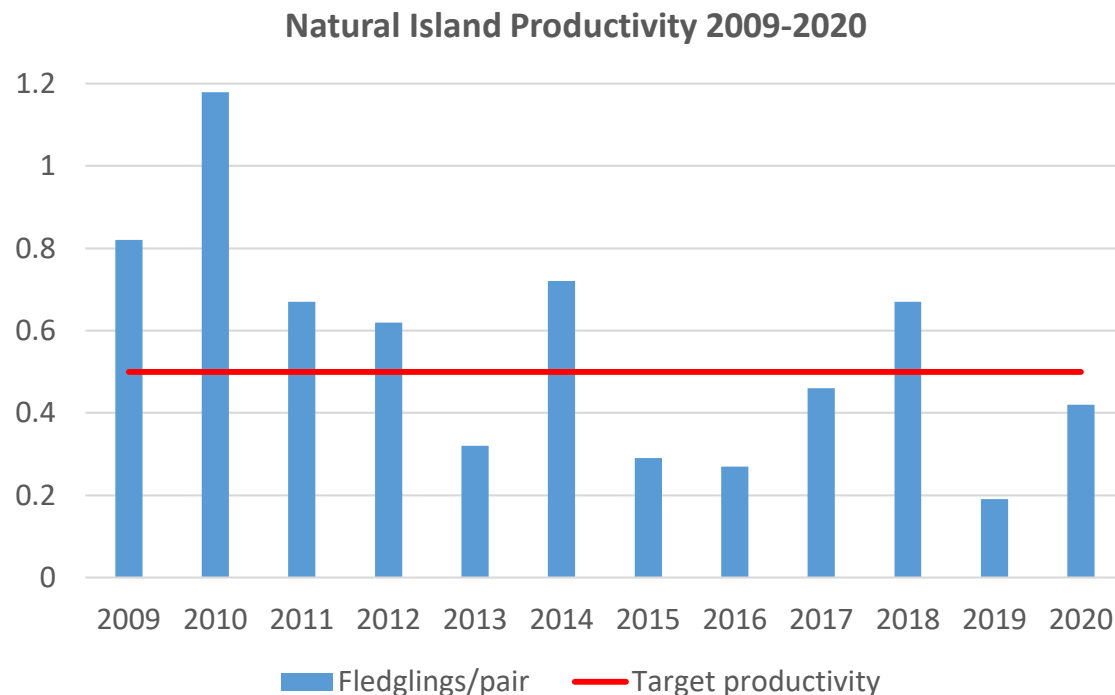
Cape Fear River: Natural Islands

- Large estuary supporting ca. 100 pairs of nesting oystercatchers, as well a large wintering aggregation
- $\geq 50\%$ 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



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



