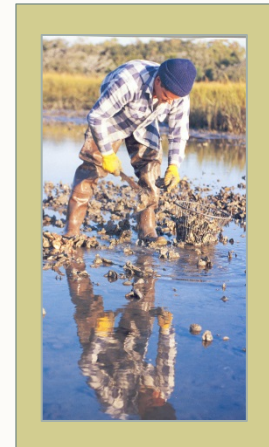


# THE HISTORY OF OYSTER MANAGEMENT OVER THE PAST CENTURY



PRESENTED BY DR. LOUIS B. DANIEL III  
N.C. DIVISION OF MARINE FISHERIES



# AN ACT TO PREVENT THE DESTRUCTION OF OYSTERS . . .

- In 1822, the N.C. General Assembly passed the state's first law to regulate commercial fishing: An Act to Prevent the Destruction of Oysters and for Other Purposes in this State.
  - Restricted harvest gear to hand tongs
  - Prohibited export of North Carolina oysters to other states
  - Specified penalties for violations
- There were no provisions for enforcement.
- There was little commercial effort, anyway.





# PRE-CIVIL WAR

- As transportation lines improved, with steamboat and railroad lines, North Carolina's oyster industry grew.
- In 1858, the General Assembly passed the state's first law that provided for granting people the right to use public water bottom for private oyster cultivation.



# POST CIVIL WAR

- Renewed interest in oysters followed the War Between the States and Reconstruction.
- Laws were enacted setting a September through April commercial oyster season and allowing export to other states.
- By 1884, North Carolina oystermen were already extending harvest on oyster beds to their production limit.
- Federal officials advocated for private control of large tracts of oyster beds to increase productivity.
- The General Assembly created the first Shellfish Commission, the forerunner of the Marine Fisheries Commission.



# OYSTER WARS

- By the 1890s, Maryland and Virginia had greatly depleted the natural oyster beds in the Chesapeake Bay, causing Baltimore canneries to open oyster houses in North Carolina.
- With the oyster houses came the Chesapeake Bay fishermen, who introduced modern methods of oyster harvesting, including dredges.
- North Carolina residents were only allowed to dredge in the deeper waters of Pamlico and Roanoke sounds, but a loophole in the law allowed non-residents to dredge elsewhere.
- Rumors of serious conflicts (mostly unsubstantiated) and fear that these fishing methods would deplete North Carolina oyster beds led to a law prohibiting any harvest by non-residents.
- The law was enforced by National Guard troops, and more than 300 non-resident vessels left.
- Returning to hand-harvest-only management and limited dredging resulted in declines in oyster harvest and the closing of many of the canneries.

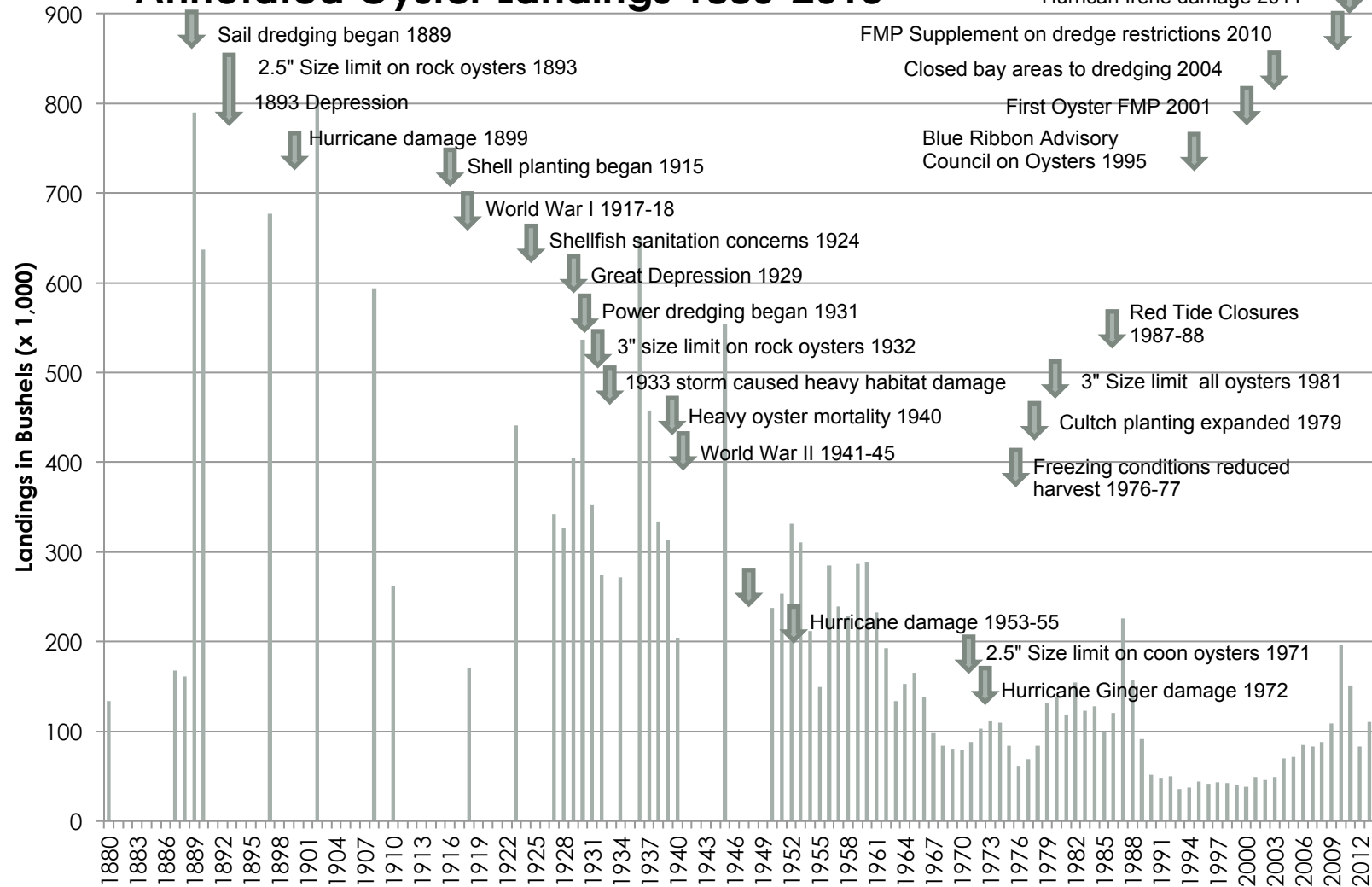


## EARLY 20<sup>TH</sup> CENTURY

- In the latter 1800s and early 1900s, a series of laws were passed that reinstated a dredging season and defined areas where it was allowed.
- This led to an increase in landings and reopening of the canneries.
- Oyster landings reached the highest level on record in 1902 at 806,363 bushels and have steadily declined since then.



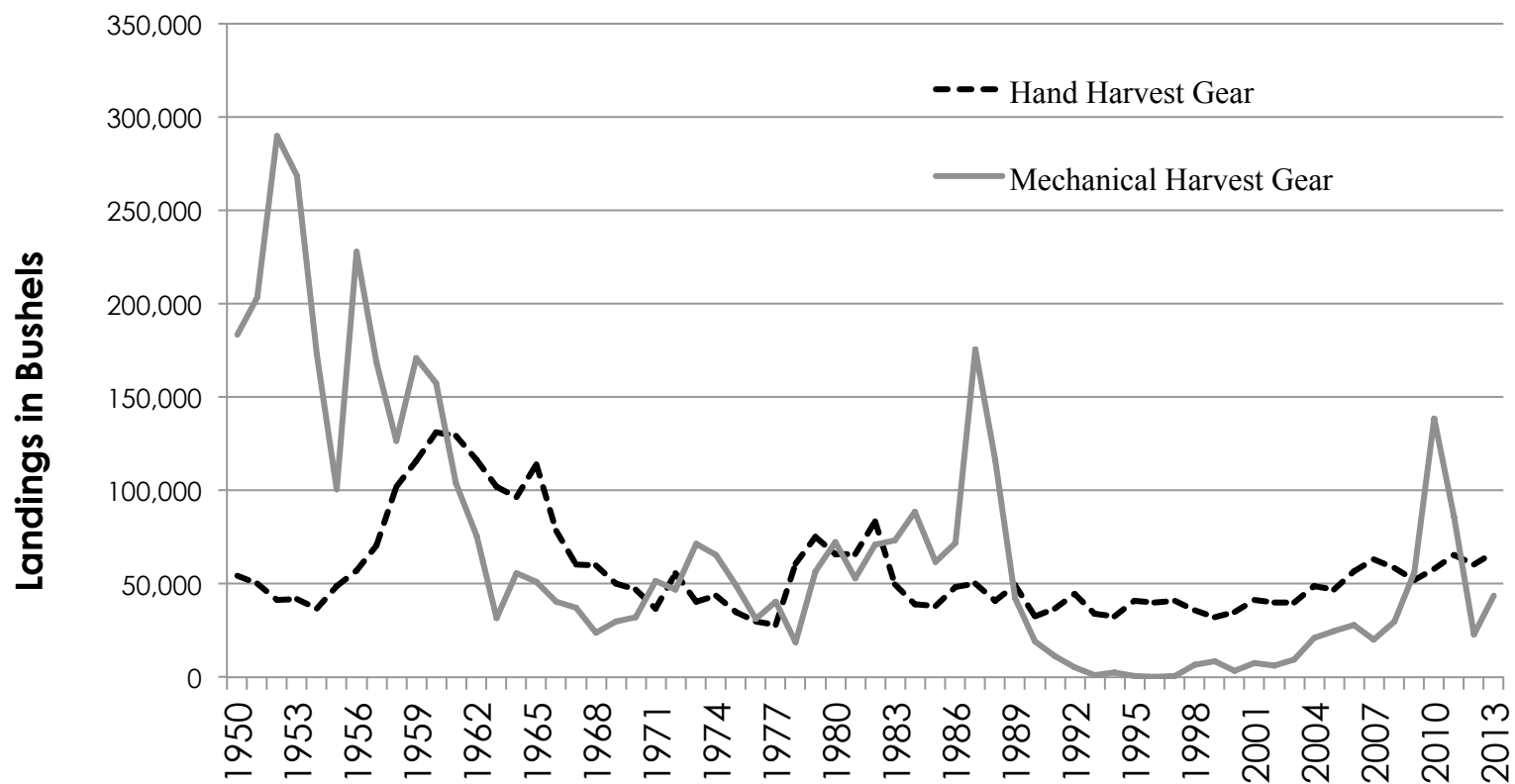
# Annotated Oyster Landings 1880-2013



## LATER 20<sup>TH</sup> CENTURY

- A 75 bushel per day harvest limit existed from 1947 until 1984.
- Since 1985 the limit has been set below 75 bushels.
- The current maximum limit allowed by rule is 50 bushels.
- Each year, the fisheries director establishes the limit up to 50 bushels by area or by gear by proclamation.





COMMERCIAL OYSTER LANDINGS BY GEAR 1950-2013

# TODAY'S COMMERCIAL FISHERY

## 2013 Oyster Landings

- 110,892 bushels (586,619 pounds of meat)
- \$3.4 million ex-vessel value

## Participation

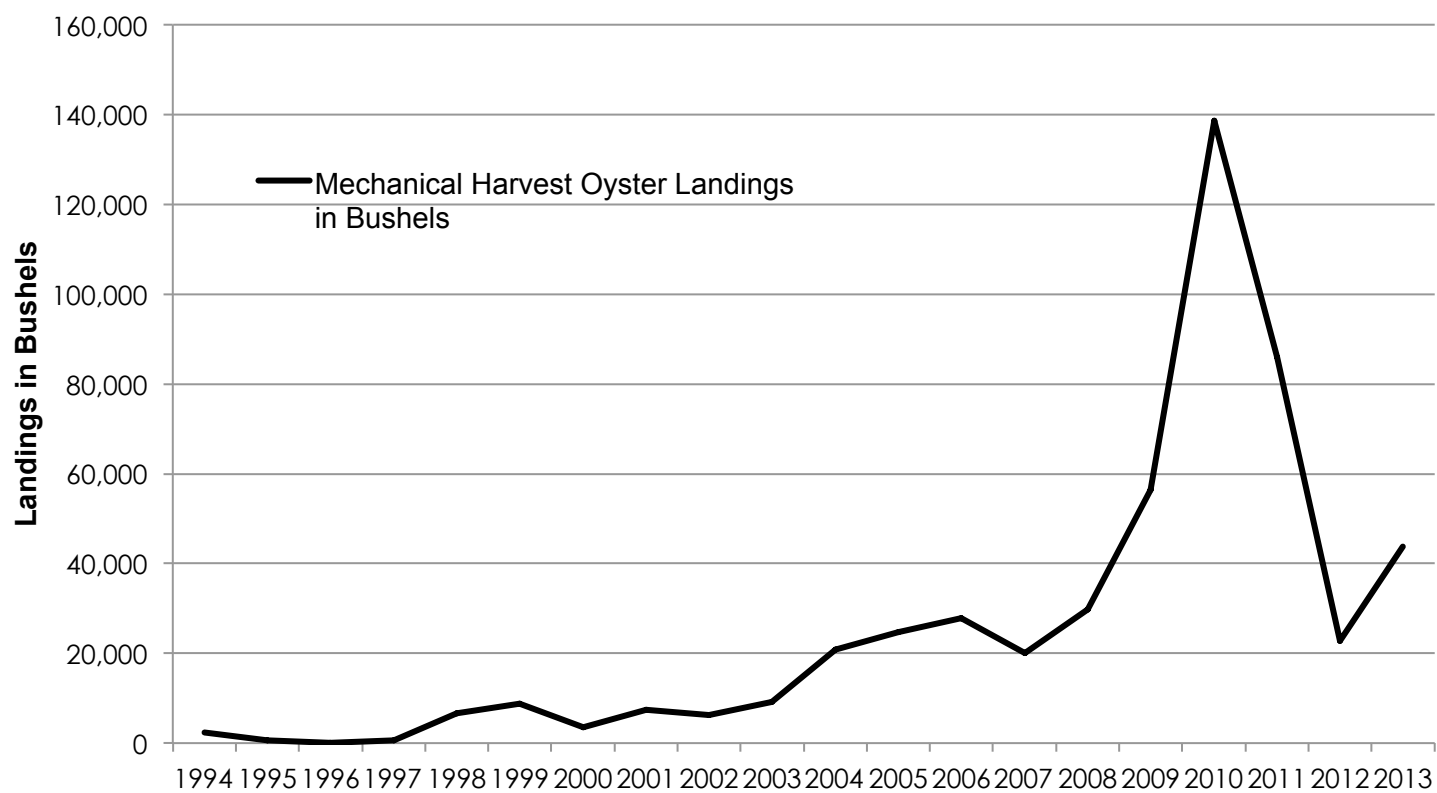
- 908 fishermen
- 18,575 oyster fishing trips
- 747 vessels.

## Among top five species landed from:

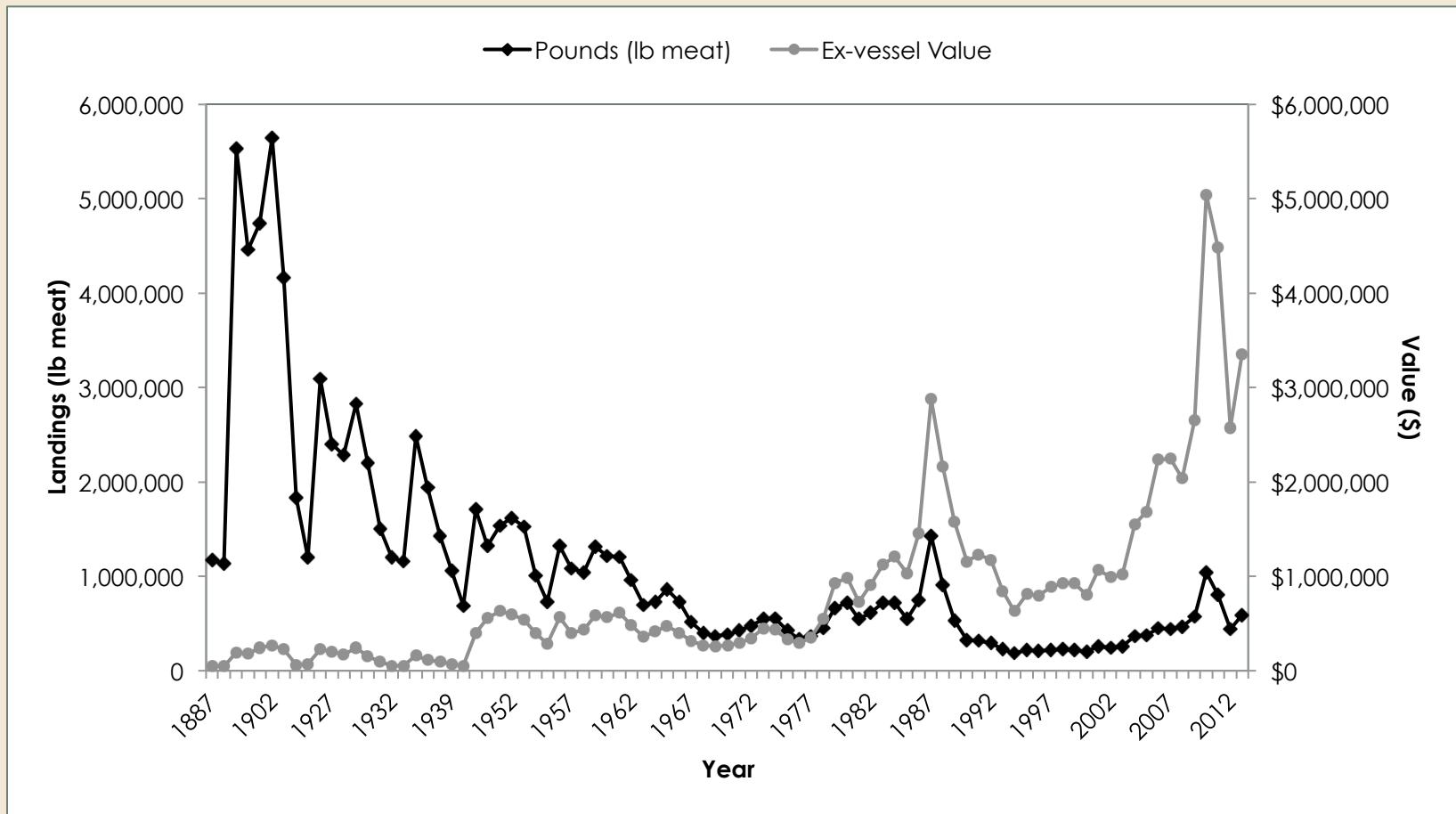
- Lockswoods Folly
- Topsail Sound
- Masonboro Sound
- Newport River
- Shallotte River







ANNUAL MECHANICAL HARVEST OYSTER LANDINGS IN BUSHELS  
1994-2013



COMMERCIAL OYSTER LANDINGS IN POUNDS AND VALUE

# TODAY'S RECREATIONAL FISHERY

- Oysters are commonly harvested recreationally from Oct. 15 to March 31 by hand, rake, and tong.
- People may harvest one bushel of oysters per person, not to exceed two bushels per boat, for personal consumption.
- Recreational landings are unknown.
  - No license is required to harvest oysters for personal consumption.
  - Current recreational fishing surveys do not include oyster harvest.



# CULTCH PLANTING

- Cultch planting began in North Carolina In 1915.
- Planting efforts peaked in 1934 with 825,000 bushels of seed oysters relayed and 78,567 bushels of oyster shells planted.
  - These plantings were closed until 1936 when landings doubled to approximately 800,000 bushels (Chestnut1951).
- Cultch planting efforts have recently decreased to approximately 200,000 bushels annually due to limited funding, shell availability, increased costs, and competition with other states for resources.
  - For instance, Virginia is paying \$2.20 per bushel while North Carolina only pays \$1.00.





CULTCH PLANTING

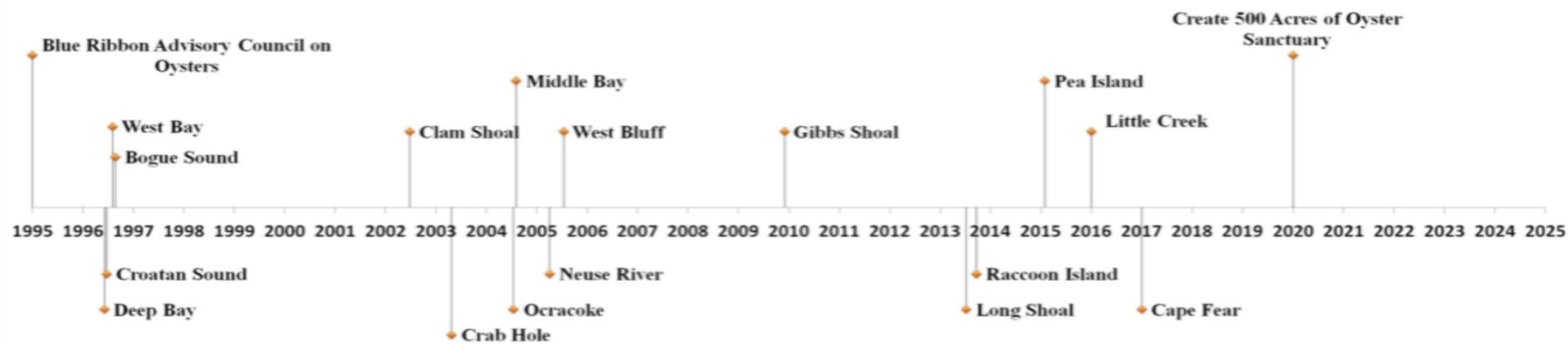
# OYSTER SANCTUARIES

- The Oyster Sanctuary Program began in 1996.
- There are currently 13 sanctuaries in North Carolina totaling 309 acres.
- Six sanctuaries, totaling about 200 acres, are planned.
- The sanctuaries are constructed with a variety of materials, such as mined rock, concrete reef balls and recycled construction materials.
- They are of varying height and complexity of materials.
- They focus on improving larval supply and connectivity between oyster reefs.

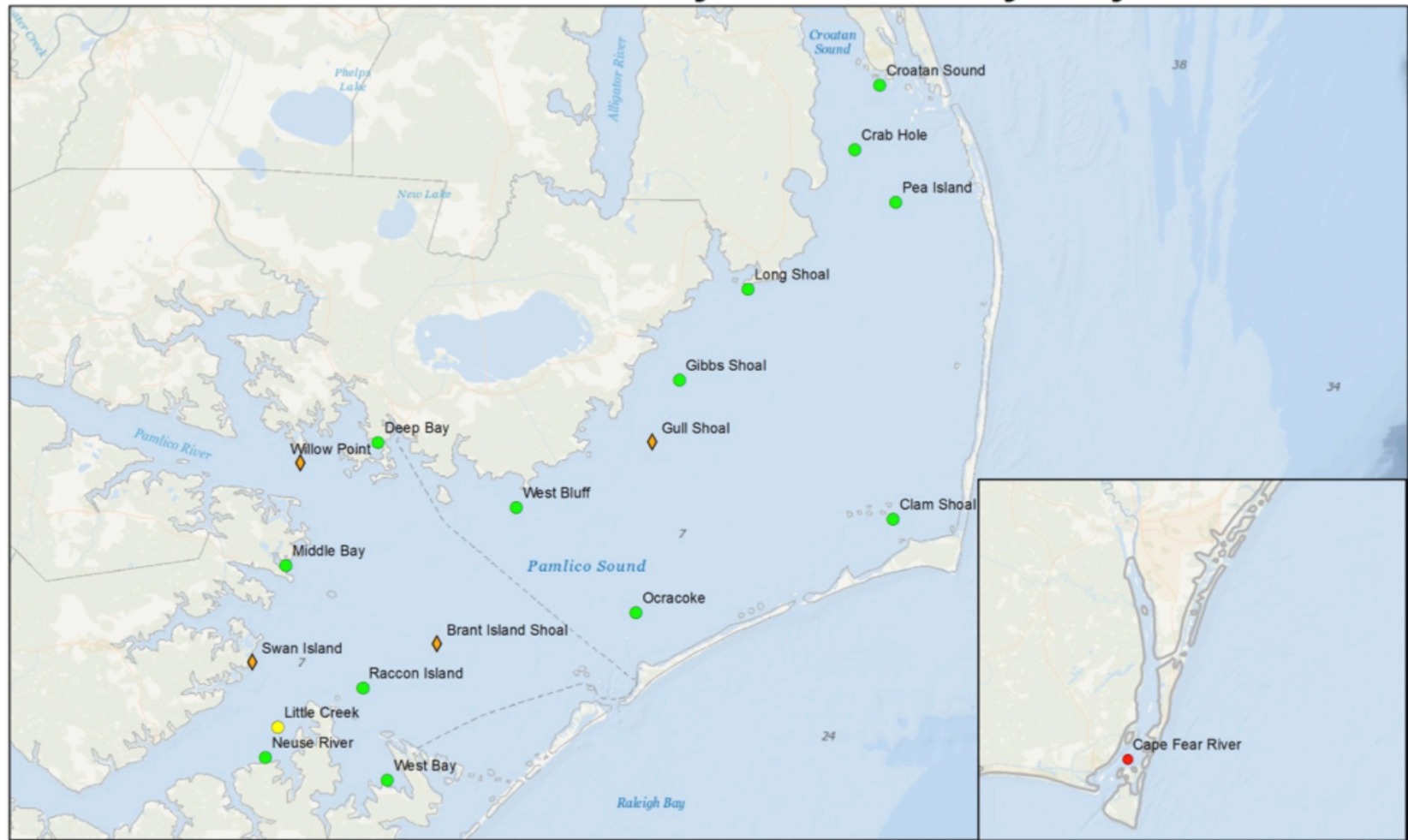




### North Carolina Oyster Sanctuary Network Progression



# Current North Carolina Oyster Sanctuary Projects



## NCDMF Oyster Sanctuaries

- Existing
- Permitted, Not Developed
- Funded, Not Permitted

## Proposed USACE Sanctuaries

- ◆ Brant Island Shoal
- ◆ Gull Shoal
- ◆ Swan Island
- ◆ Willow Point

0 5 10 20 Miles



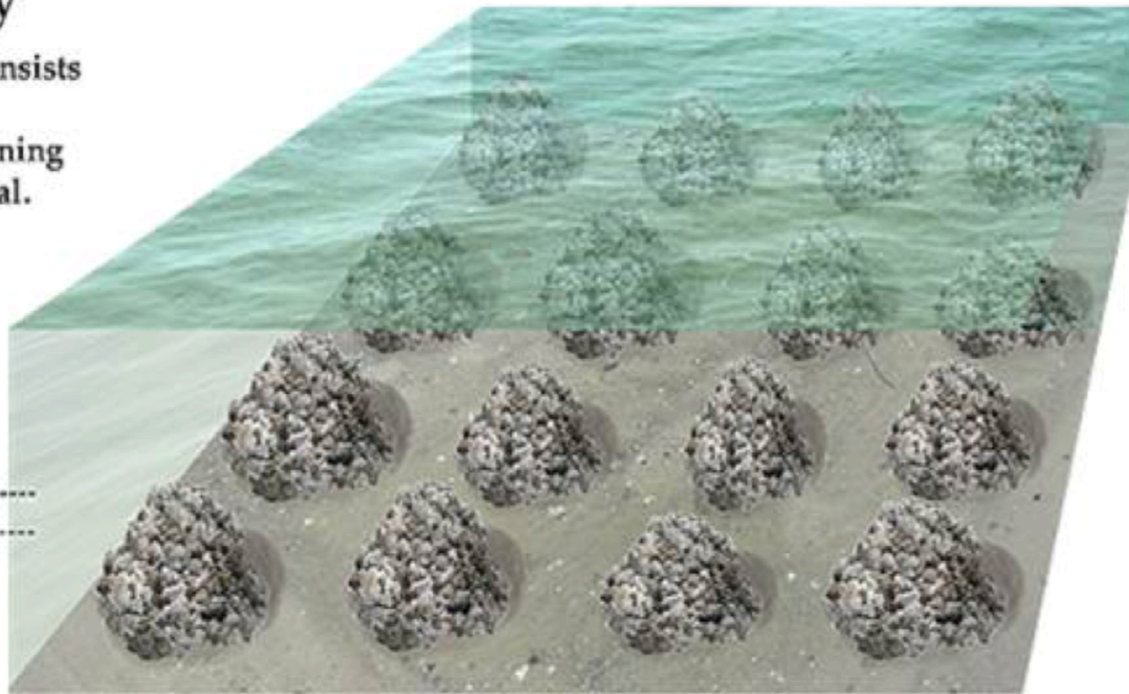


## Oyster Sanctuary

The typical sanctuary consists of mounds of rip rap, with each mound containing about 150 tons of material.

7-foot  
clearance

6-foot  
mounds  
of rip rap



OYSTER SANCTUARY

# OYSTER SHELL RECYCLING

- While the Oyster Shell Recycling Program lost funding in 2013, the Division of Marine Fisheries is continuing it at a lower level.
- There are 93 active collection sites ranging from Cabarrus County to Dare County.
- Division staff collects and delivers shell to coastal stockpile sites
- Recycling sites provide about 20,000 bushels of shell per year and is used for cultch plantings.





OYSTER SHELL RECYCLING

# WHAT THE FUTURE HOLDS

- Jean Preston Sanctuary
  - The Division of Marine Fisheries plans to work with stakeholders and the scientific community to form a plan to maximizes the benefits to the resource and stakeholders.
- Expanded interest in aquaculture
  - The Division of Marine Fisheries plans to work with industry to:
    - Expand opportunities.
    - Streamline the lease and permitting process.
  - The Division of Marine Fisheries supports the development and future funding of research and production hatcheries.







QUESTIONS?