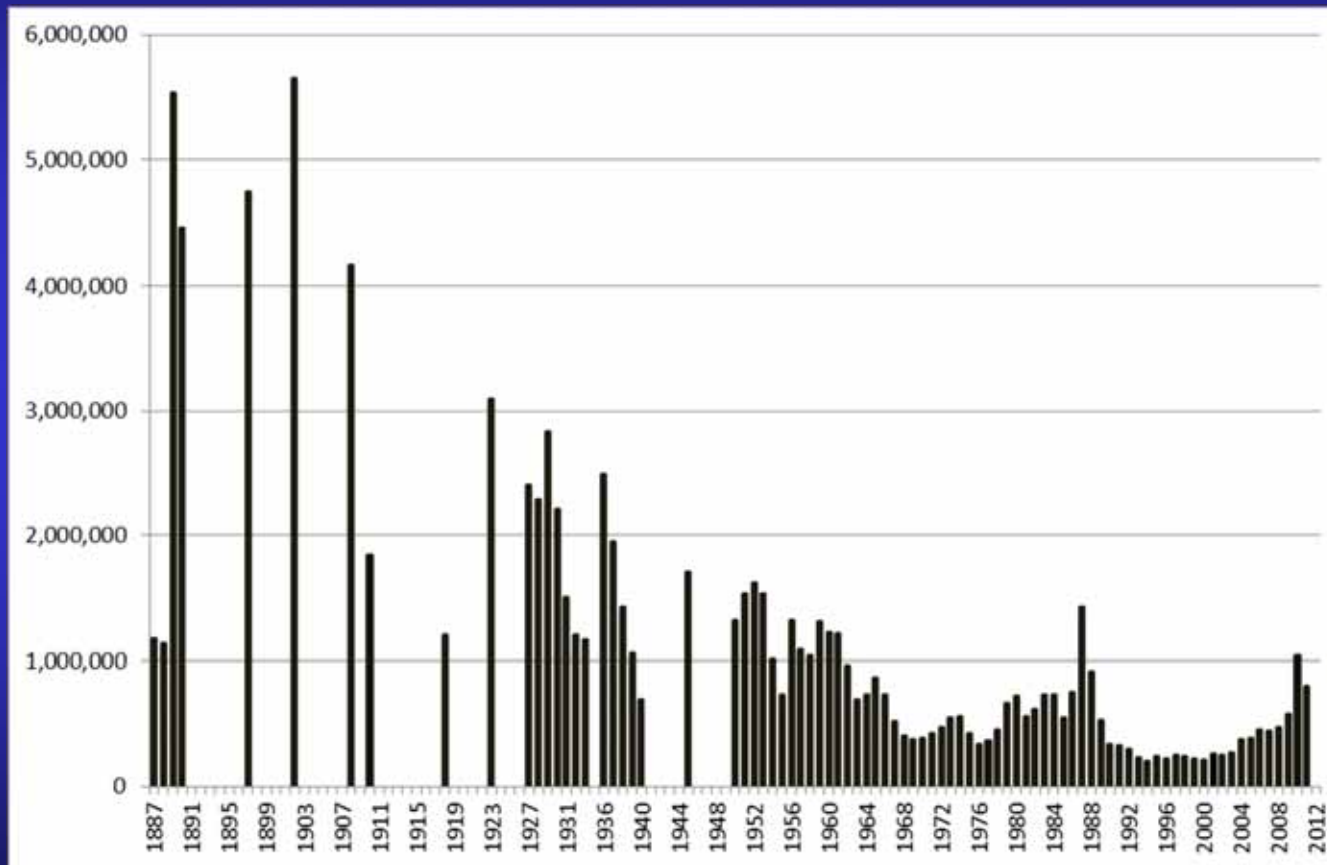


Historical Landings



N.C. OYSTER STOCK STATUS

- Manage by fishery management plans
- Assess overfishing and overfished status
- Stock Assessment



OYSTER STOCK ASSESSMENT

- Classic stock assessments methods not available for oysters due to life history characteristics and problems with age determination
- New Mg/Ca ratio methods for ageing



OTHER ASSESSMENT METHODS

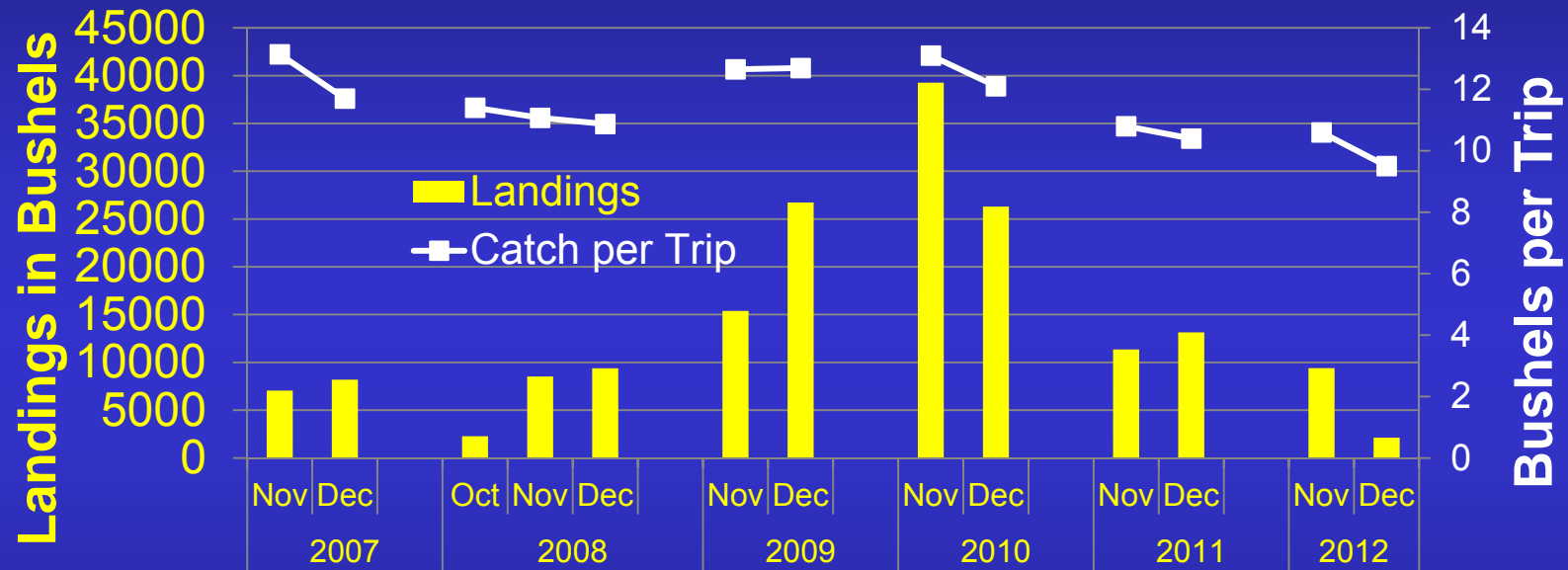


Use independent
indices for stock
status

Too few indices to
assess oysters



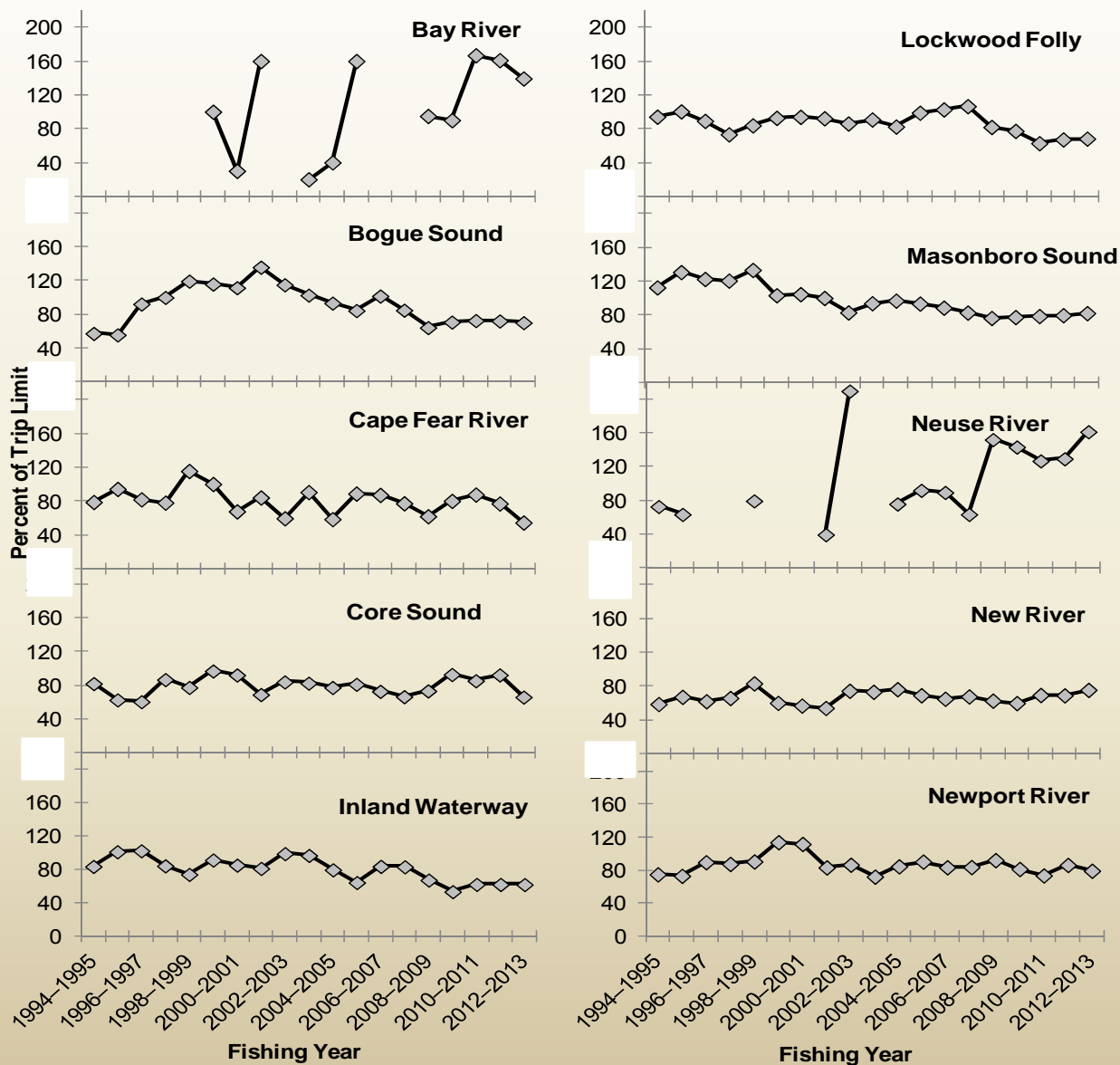
LANDINGS?



Market, weather, pollution closures,
rule changes, other fisheries



Percent of Trips Reaching the Trip Limit - Overfishing



OVERFISHED?

- No quantitative assessment
- Use a qualitative assessment
- Oysters continue to be impacted by water quality and habitat loss and disease concerns
- Status = concern



We are not alone

- Only three states have quantitative stock assessments: Maryland, Virginia and Delaware
- One of three states managing oysters using a fishery management planning system: Delaware, Texas and North Carolina



What is the alternative?

- Oyster Bar (rock) surveys
- Maryland, Virginia, Delaware and Texas
- Requires information on the location, size and population parameters of the oyster habitat throughout the state



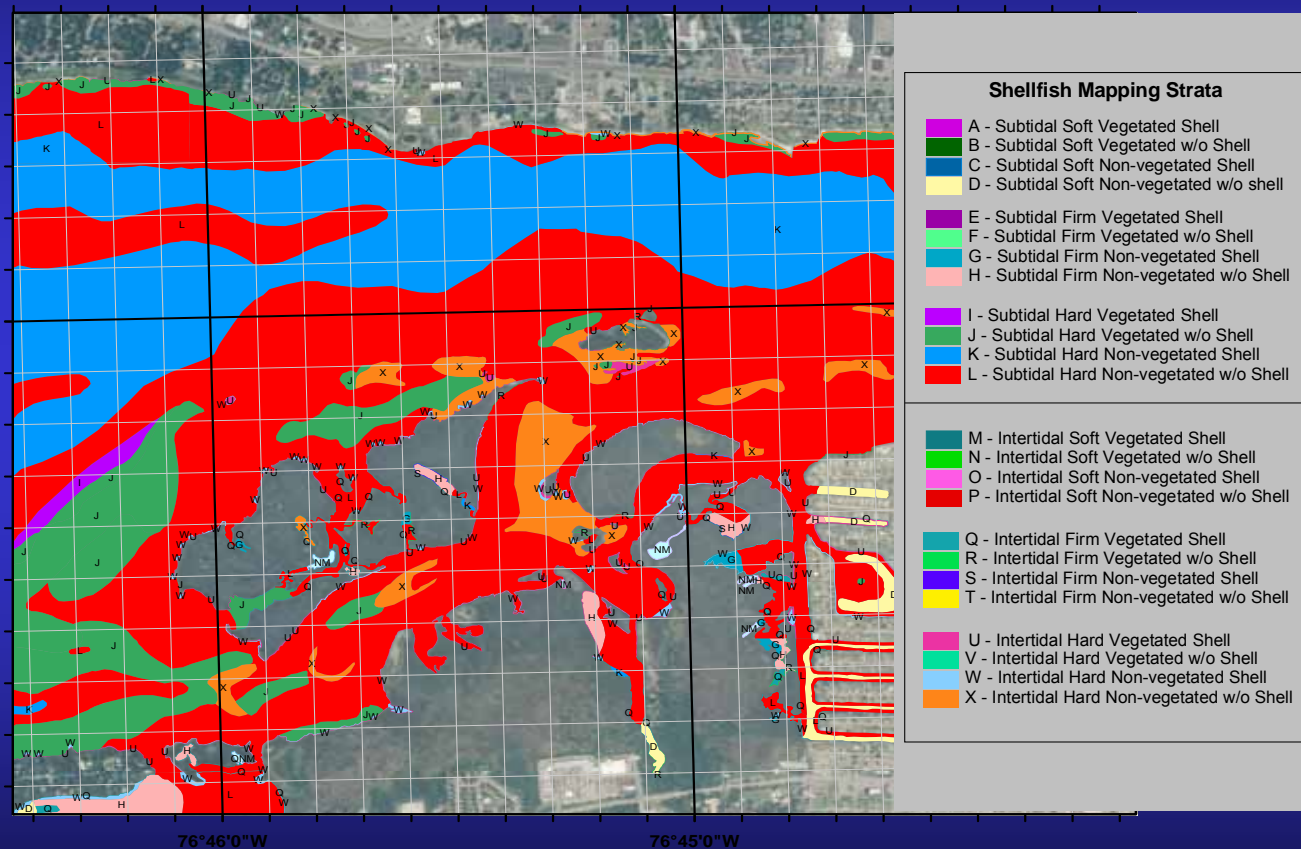
Shellfish and Habitat Mapping

Program objectives:

1. Locate and map shellfish producing areas, and Submerged Aquatic Vegetation (SAV).
2. Delineate potentially productive bottom.
3. Determine shellfish concentrations and abundance within productive bottom types by a stratified random sampling scheme.
4. Quantify habitat types.



Methodology



Sampling Data

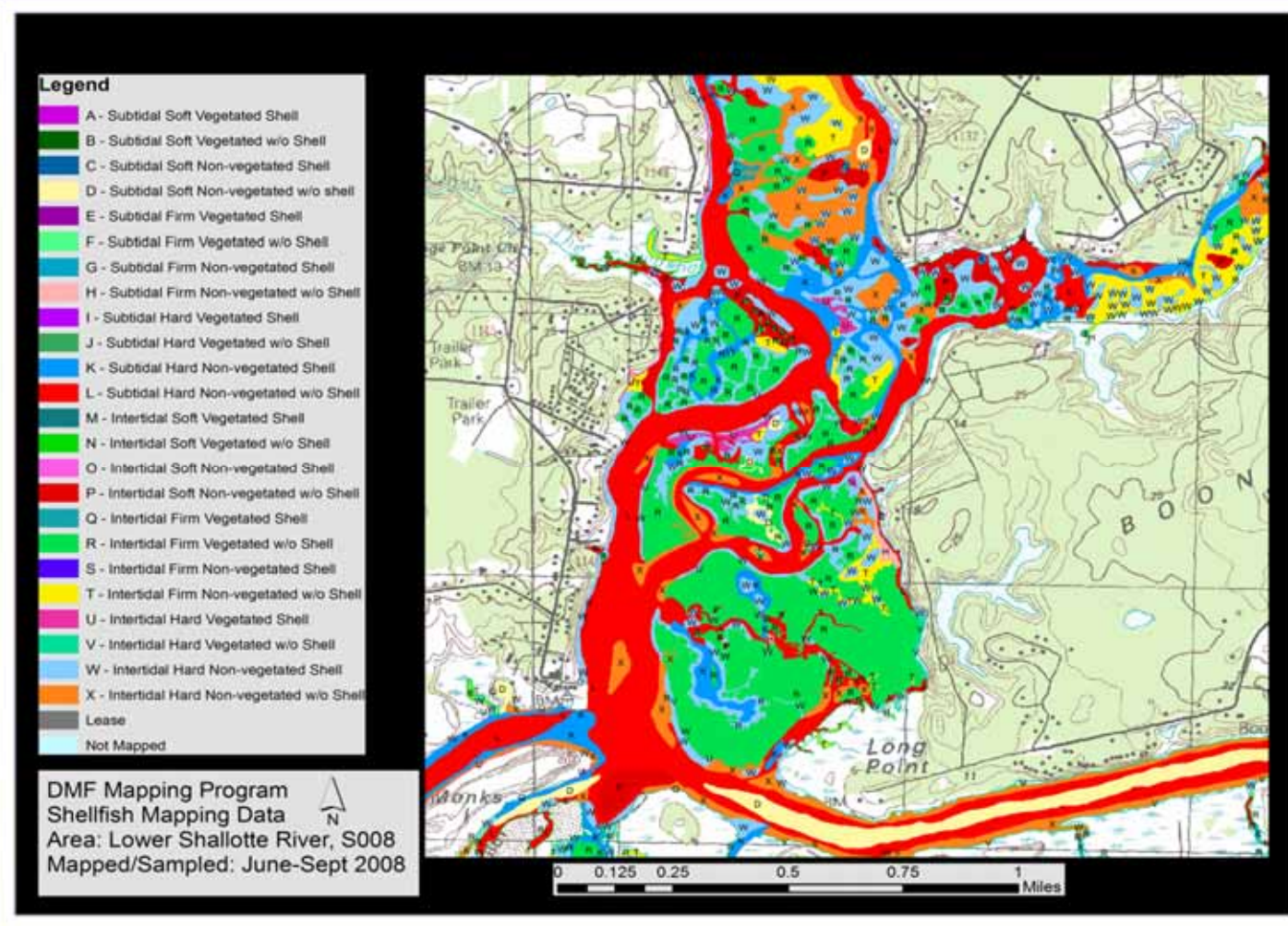
- Density and size class data for all oysters, clams and scallops
- Water temp, salinity, dissolved oxygen for both surface and bottom of sample
- Latitude and longitude for samples
- Substrate composition and characteristics
- Submerged aquatic vegetation species and density class



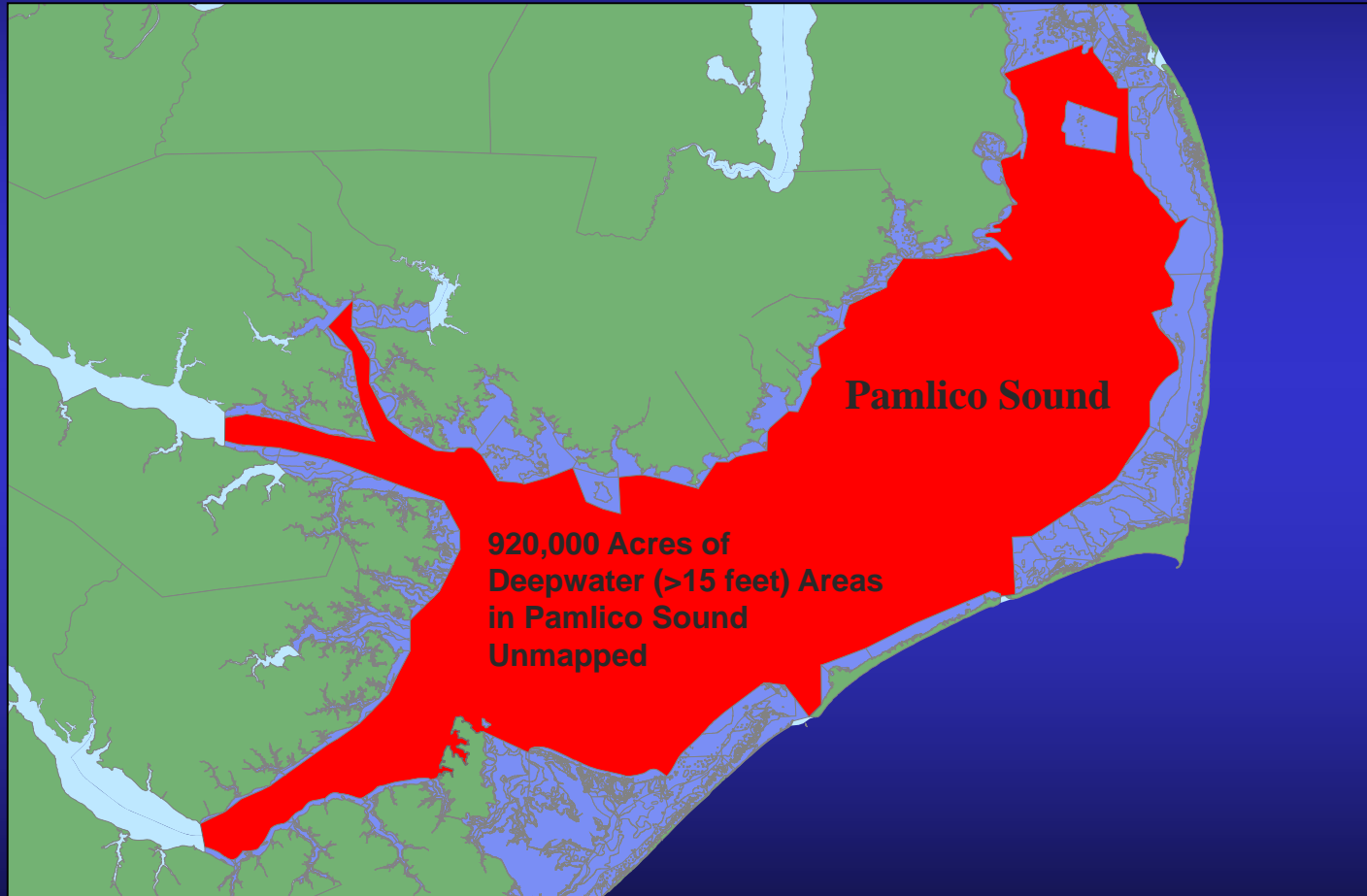
Mapping Efforts



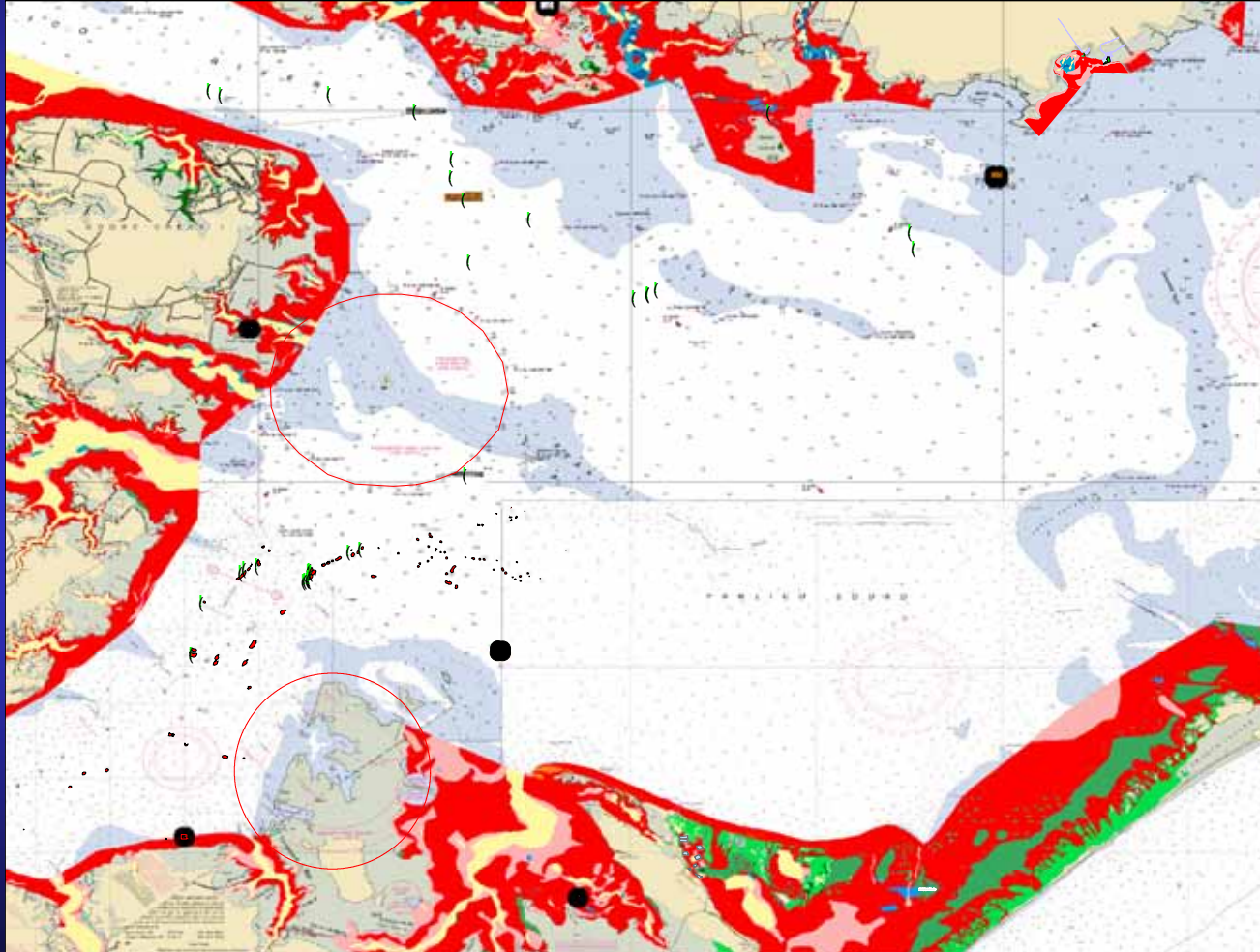
Mapping Efforts



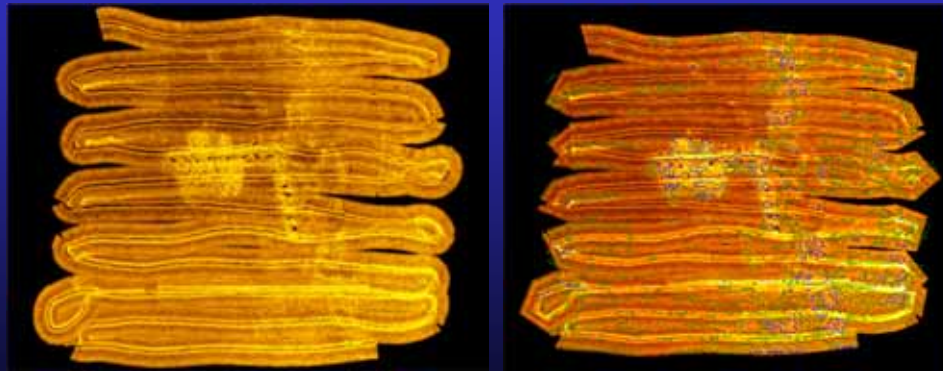
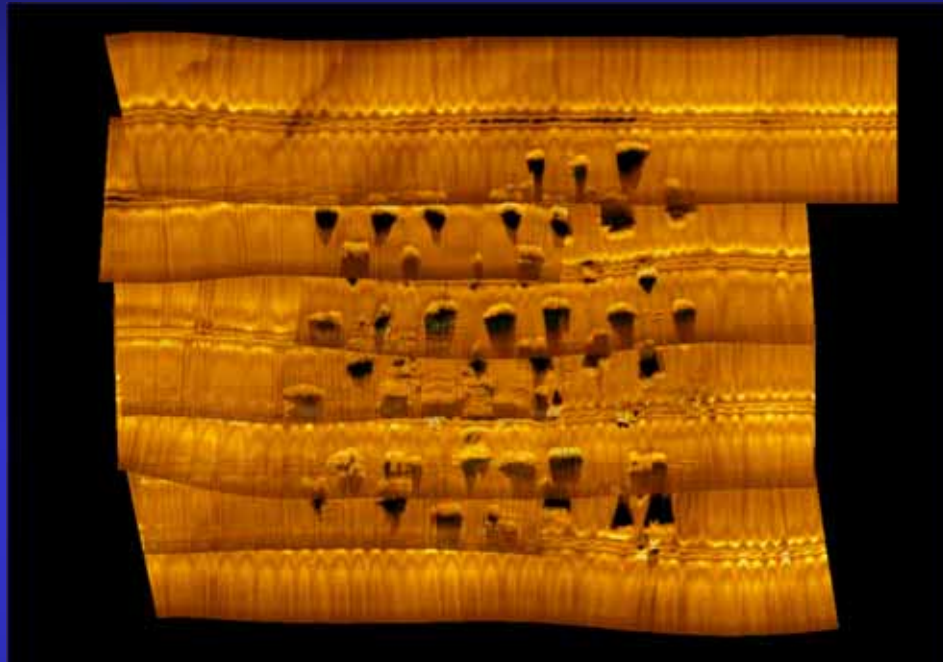
Deepwater Mapping Effort



Deepwater Mapping Effort



Remote Sensing of Benthic Habitat



Use of side scan sonar and other remote sensing techniques to map, classify and quantify oyster habitat on:

- Oyster sanctuaries
- Selected cultch planting sites
- Selected natural deep water oyster rock locations

