



NORTH CAROLINA Coastal Reserve and National Estuarine Research Reserve

November 8, 2010



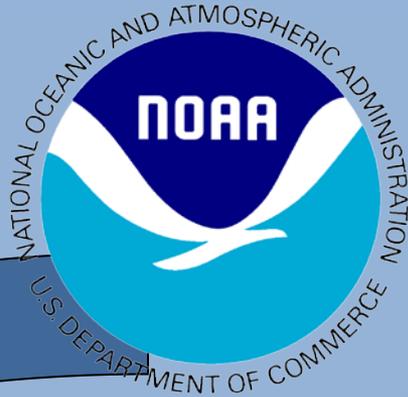
Overview



- Organization Structure and History
- Organization Purpose
- Sites
- Focus Areas and Program Activities
- Challenges
- Future Activities
- Collaboration within DCM



Organizational Structure



**North Carolina
Coastal Reserve &
National Estuarine Research Reserve**

Program History

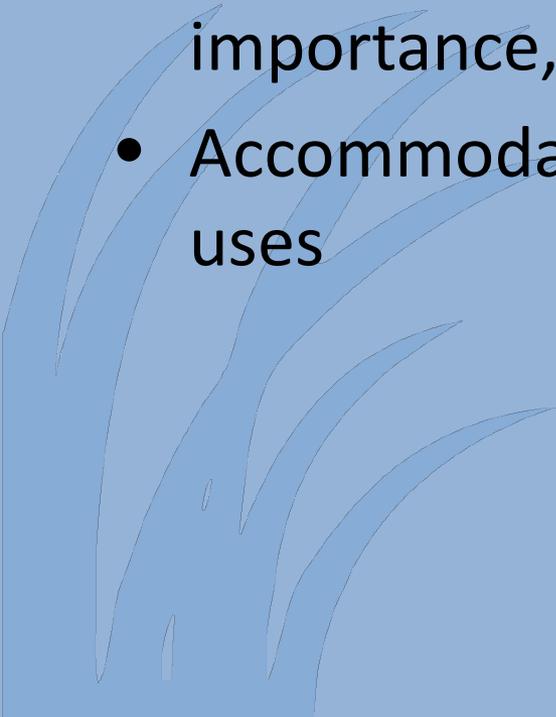


- N.C. National Estuarine Research Reserve (NCNERR) designated in 1985, 1991
- N.C. Coastal Reserve created in 1989 per amendment to N.C. Coastal Area Management Act (CAMA)
- CAMA stipulates that the Coastal Reserve shall be carried out in coordination with the NERRS
- N.C. Administrative Code includes the NCNERR within the Coastal Reserve
- Reserves are also State Nature Preserves

Program Purpose



- Protect representative coastal N.C. ecosystems
- Conduct relevant research to inform sound management of coastal resources
- Increase understanding of coastal ecosystems, their importance, and the effects humans have on them
- Accommodate compatible, traditional recreational uses

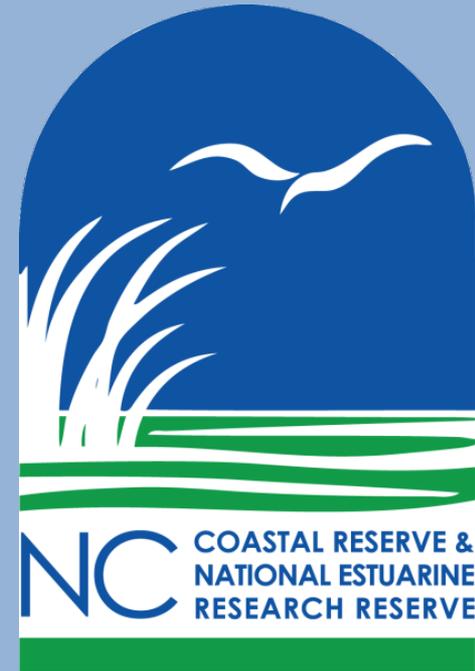


NCCR & NCNERR



North Carolina Coastal Reserve

1. Kitty Hawk Woods
 2. Buxton Woods
 3. Emily and Richardson Preyer Buckridge
 4. Permuda Island
 5. Bald Head Woods
 6. Bird Island
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7. Currituck Banks
 8. Rachel Carson
 9. Masonboro Island
 10. Zeke's Island



North Carolina National Estuarine Research Reserve

Virginia

Currituck Banks NCNERR

Kitty Hawk Woods NCCR

Emily and Richardson Preyer
Buckridge NCCR

Buxton Woods NCCR

Cape
Hatteras

Rachel Carson NCNERR

Cape Lookout

Permuda Island NCCR

Masonboro Island NCNERR

Zeke's Island NCNERR

Bald Head Woods NCCR

Bird Island
NCCR

Cape Fear

Raleigh

Roanoke River

Chowan River

Albemarle Sound

Tar River

Neuse River

Pamlico Sound

Cape Fear River

Atlantic Ocean

South
Carolina

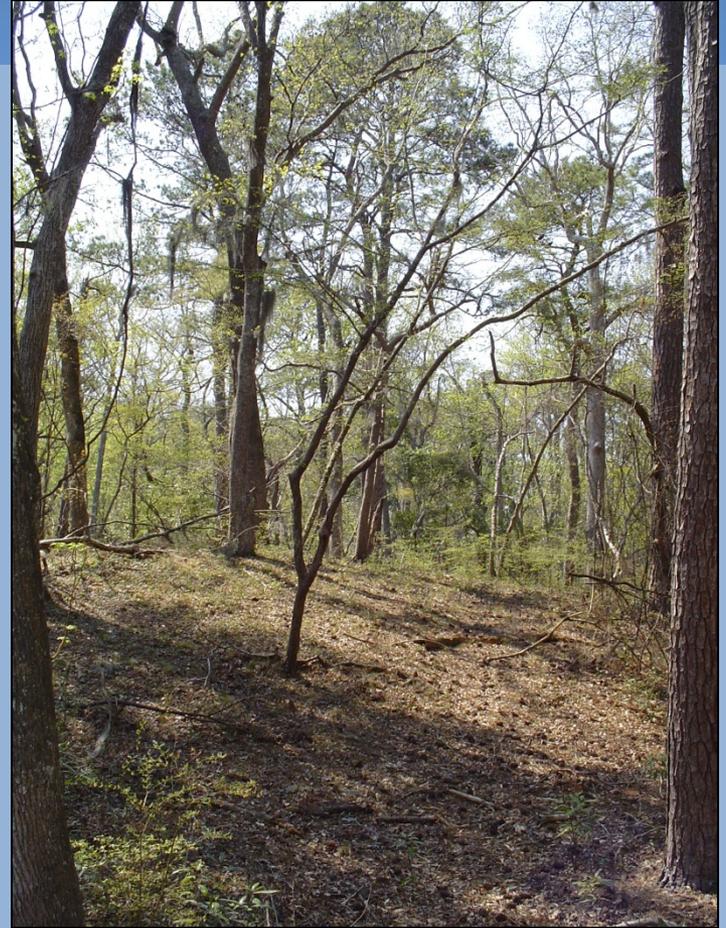
-  Reserve Office
-  Monitoring Data
-  Water Quality
-  Weather



Reserve Site	Acreage	County(ies)	Component of the NCNERR	Habitats
Currituck Banks	965	Currituck	Yes	Salt marsh, mud and sand flats, submerged aquatic vegetation (SAV), ocean beach, upland dunes, shrub thickets, maritime forest, interdunal ponds
Kitty Hawk Woods	1,877	Dare	No	Maritime deciduous swamp, maritime forest, salt marsh
Emily and Richardson Preyer Buckridge	27,000	Tyrrell and Hyde	No	Non-riverine swamp forest, peatland Atlantic white cedar, pond pine woodland
Buxton Woods	968	Dare	No	Maritime forest, shrub thicket, dune ridges, permanently flooded freshwater marshes
Rachel Carson	2,315	Carteret	Yes	Salt marsh, mud and sand flats, beach, dune, shrub thicket, maritime forest, SAV, dredge spoil areas
Permuda Island	50	Onslow	No	Shrub thicket, salt marsh
Masonboro Island	5,653	New Hanover	Yes	Salt marsh, mud and sand flats, ocean beach, dune, shrub thicket, dredge spoil areas, grasslands
Zeke's Island	1,635	New Hanover and Brunswick	Yes	Salt marsh, mud and sand flats, shrub thicket, maritime forest, ocean beach, dune
Bald Head Woods	173	Brunswick	No	Maritime forest
Bird Island	1,196	Brunswick	No	Salt marsh, mud and sand flats, ocean beach, dune, maritime dry grassland, maritime wet grassland, shrub thicket, maritime shrub swamp



Currituck Banks



Kitty Hawk Woods

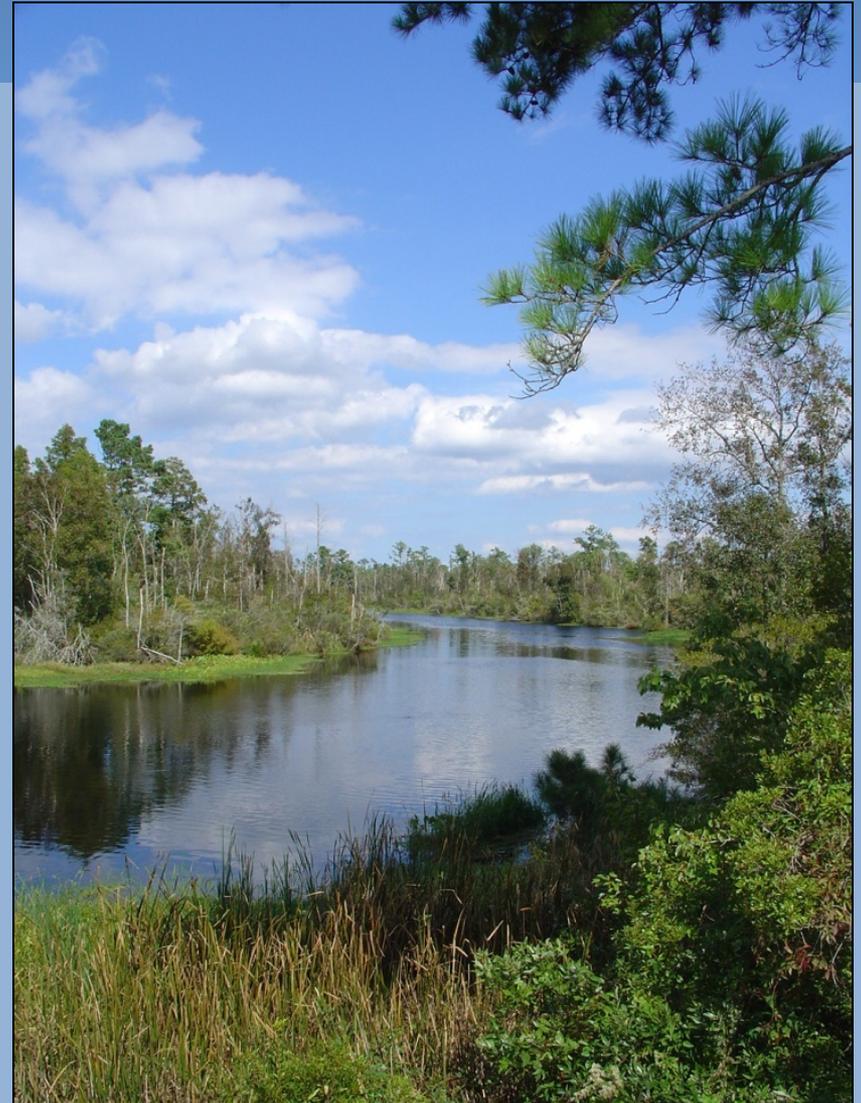




Sundew at Buckridge



Buxton Woods



Buckridge



Rachel Carson



Permuda Island





Masonboro Island



Zeke's Island



Bald Head Woods



Bird Island

Focus Areas



- Coastal growth and altered land use
- Storm water run-off and eutrophication
- Invasive species
- Storm impacts and sea level rise
- Visitor use

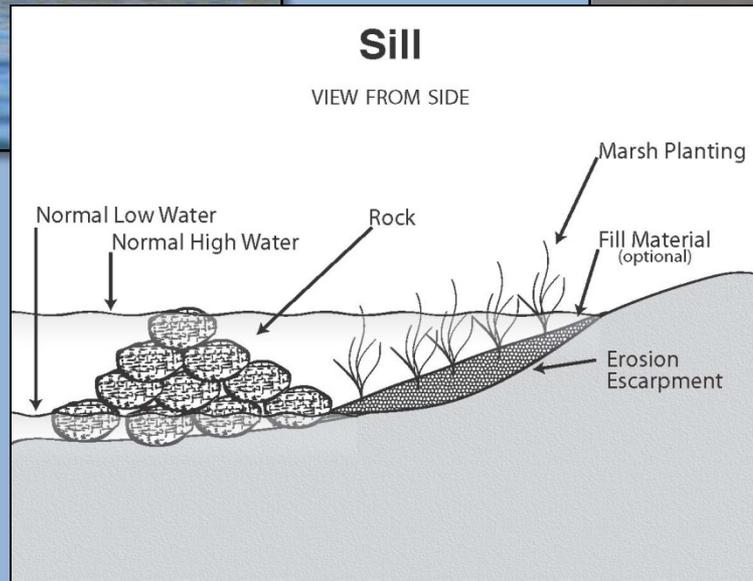




Research



**Function of
Natural v. Restored
Marshes**



**Estuarine Shoreline
Stabilization**

Marsh Sill Evaluation

Research



**In-situ
Monitoring**



SAV habitat and restoration

Coastal Training

- Stormwater management
- Sustainable development
- Septic system maintenance
- Coastal erosion
- Rainwater harvesting
- Species management and conservation
- Visitor management
- Rules and policies review
- Estuarine shoreline management
- Sea level rise





Education

- Volunteer-led public field trip series
- K-12 field trips
- Teacher workshops
- Youth summer camps
- Outreach field trips



2009

1,695 participants



Stewardship

- Boundary posting
- Trash and debris cleanup
- Development and enforcement of rules
- Public access
- Visitor use and misuse
- Land acquisition
- Invasive and feral species monitoring and management
- T/E species posting and monitoring
- Restoration
- Relationships with commercial users and adjacent property owners

Challenges



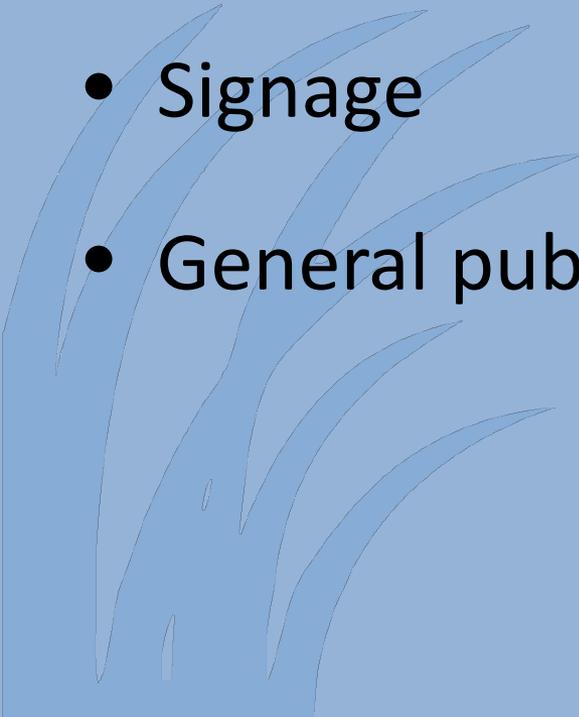
- Timely research to inform policy
- Resources



Future Activities



- Visitor quantification and impacts research
- Rules and policies review
- Signage
- General public education program



Collaboration within DCM



- Estuarine shoreline stabilization and marsh sill evaluation
 - Education programming for permitting and planning sections (e.g., new rules, sea level rise)
 - Administrative, permitting, legal, and financial support
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Carolina Estuarine Reserve Foundation

Working to support the North Carolina Coastal Reserve
and National Estuarine Research Reserve



www.CERFnc.org



www.nccoastalreserve.net

