Introducing the North Carolina Coastal Atlas

a project of

renci
East Carolina University
Center for Coastal System Informatics and Modeling
Division of Coastal Management
National Oceanic and Atmospheric Administration
Cooperative Institute for Climate and Satellites
Sea Grant North Carolina

Joyner Library
Background

• Need for atlas identified by managers and researchers to make coastal data available
  – Shoreline data
  – Sea level rise potential maps

• Other states using digital coastal atlases: Virginia, Maryland, Oregon, Washington...

• Precursor: NCCOHAZ- North Carolina Coastal Hazards Portal
Process

- Develop or Expand Atlas Partnership
- Identify Project Capacity
- Assess Usability
- Develop/Revise Tools
- Assess User Needs
Needs Assessment Results

- 85 participants: planners, project managers, biologists, natural resource managers, engineers, real estate, etc.
- Visualization and communication most popular projected use
- Ecosystem health, natural resources data and shorelines - highly ranked thematic maps
- Essential categories: wetlands, waterbodies, shorelines, flood and hazard zones
Welcome to the North Carolina Coastal Atlas

The coast of North Carolina is extensive, dynamic and rich with natural resources and vibrant culture. The North Carolina Coastal Atlas is a collaborative effort to enable access to coastal data and inform coastal managers, scientists, students and the interested public. The Atlas provides selected geospatial data, visualization tools, and thematic maps focused on coastal resources and hazards. We hope these data and map tools can help inform decision-making for sustainable use of the coast.

Explore the Coast
Launch interactive maps and tools to access geospatial data layers for online mapping and downloaded.

View Thematic Maps
Examine estuarine and ocean shorelines, potential impacts of sea level rise, and other natural and cultural resource thematic maps.

Learn More
Discover research papers, scientific reports, articles, data and other digital products with a bibliography provided by Voyager Library.
View Thematic Maps

Click on images of maps to go directly to the thematic map viewer.

**Sea-Level Rise Maps**

Because of its vast areas of low-lying land near the coast, North Carolina is considered the third most vulnerable state in the U.S. Sea level rise influences rates of shoreline erosion, health of salt marshes and other wetlands, and salinity levels in estuarine rivers. Higher sea levels will increase the likelihood of flooding during heavy rainfall and may cause stronger storm surges and property damage as a result of coastal storms. The Sea Level Rise thematic maps feature potential inundation regions based on elevations and depict critical infrastructure in selected municipal areas.

[More information](#)

**Ocean and Estuarine Shoreline Maps**

Shoreline erosion is a significant problem within the North Carolina’s coastal area. Barrier islands and coastal wetlands protect shorelines and waterfront communities by absorbing the impact of storm surges, wind, and waves. Sea level rise and intense storms put our public infrastructure, coastal communities and habitats for fish and other wildlife at risk. The Estuarine Shoreline thematic maps allow users to distinguish between undeveloped and stabilized shorelines, and depict where docks, piers and other structures are located.

[More information](#)
Future Plans

• Move past technology bottleneck to provide tools: data upload/download, print to pdf,…
• Refine methodology for municipality maps
• Revise shoreline maps
• Add publications, bibliography, info pages
• Add data (demographic), new thematic maps
• Community contributions (photos)