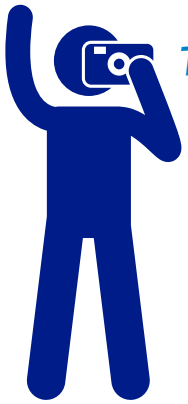
NORTH CAROLINA RELIES ON THE DIGITAL COAST



*That's because the **Digital Coast** has a lot to offer **North Carolina.***

34,459
North Carolina visitors to the Digital Coast.
(763,454 nationwide)

DATA

13,977 gigabytes of high-resolution elevation data available for North Carolina.

TOOLS

50+ decision-support tools applicable for North Carolina challenges.

TRAINING

97 leaders in the state used a Digital Coast training program.

GEOSPATIAL SERVICES

Over **$430,000** in private-sector geospatial services awarded for the Southeast and Caribbean region.

INFORMATION

- Sixteen percent of the population in New Hanover County lives in a floodplain.
- Wetland is the state's largest land cover category (25%).
- Tourism and recreation is the largest employer among the state's ocean-dependent economic sectors.

SAVING TIME AND MONEY

411% was the return on investment calculated for the Digital Coast.

IT'S A WEBSITE.

NOAA owns the Digital Coast, but the resources inside, while vetted by NOAA for applicability and quality, come from various organizations with one common but important thread: content is solely focused on coastal community needs. The site contains not only data, but also the tools, training, and information communities need to make data truly useful. Three out of four Digital Coast users surveyed say they couldn't do their jobs without this important resource!

The short report that follows highlights Digital Coast interactions with the State of North Carolina.

Digital Coast
coast.noaa.gov/digitalcoast

North Carolina Recap

NOAA and the Digital Coast are devoted to supplying North Carolina with the data, tools, and information most needed by coastal communities. This report highlights the resources frequently used during this reporting period. Please visit the website (coast.noaa.gov) to learn more or contact NOAA (coastal.info@noaa.gov) with your questions or suggestions.

DATA

Data represent the core component of the Digital Coast. For North Carolina, data holdings include elevation, land cover, aerial imagery, and county-level socioeconomic data. Examples are highlighted below.

Coastal Lidar

coast.noaa.gov/digitalcoast/data/coastallidar

Over 13,977 gigabytes of high-resolution elevation data covering North Carolina's entire coastal zone are available. These types of data are critical for all types of modeling, including those that predict flooding potential.

Land Cover

coast.noaa.gov/digitalcoast/data/ccapregional

This satellite imagery is used to inventory and categorize the landscape—wetlands, development, forests, agriculture use, etc. Nothing provides a big picture view of a region like land cover data. These data are used to identify high-priority landscapes for North Carolina's coastal protection and restoration efforts. Comparing one year to another is also a good way to spot and document trends.

Economics

coast.noaa.gov/digitalcoast/data/enow

Information about the ocean-dependent economy in North Carolina helps people understand how the decisions that impact the coast can also impact the bottom line.

TOOLS

"Data alone is not enough" is a frequent Digital Coast refrain. Going the extra step and including the tools and training needed to make data truly useful is a hallmark of the Digital Coast website. Users have access to over 50 data analysis, visualization, and other decision-support tools. Examples are highlighted below.

Coastal County Snapshots

coast.noaa.gov/digitalcoast/tools/snapshots

Pick a county and hit a button to generate easy-to-understand handouts. Behind the simple charts and graphs are complex county-level data about flooding, wetlands, and economics. Local officials use the snapshots as a planning and communication tool.

Land Cover Atlas

coast.noaa.gov/digitalcoast/tools/lca

This tool makes land cover data easier to access and understand by eliminating the need for desktop GIS software. General trends in land cover change (such as forest losses or new development) are summarized, and specific changes (salt marsh losses to open water, for instance) can be documented. This type of information is useful for planning purposes. North Carolina's officials found it particularly helpful to model potential future growth and land cover change.

Economics: National Ocean Watch Explorer

coast.noaa.gov/digitalcoast/tools/enow

Making North Carolina's economic data easier to use is the goal of this tool. The economic data provided by the Digital Coast focus on six sectors that depend on the oceans and Great Lakes: living resources, marine construction, marine transportation, offshore mineral resources, ship and boat building, and tourism and recreation. This tool helps users discover which sectors are the largest contributors to North Carolina's coastal economy in various parts of the state, which sectors are growing and declining, and which account for the most jobs, wages, and gross domestic product.

OpenNSPECT

coast.noaa.gov/digitalcoast/tools/opennspect

This tool is often used to investigate potential water quality and flooding impacts from climate change, development, and other land uses. Communities also use this information to reduce these impacts by identifying suitable areas for restoring wetlands and developing riparian buffers.

TRAINING

Coastal officials have to stay on top of their game, which is why the Digital Coast's "training academy" provides over 125 learning resources, from online courses to training brought to your location. A few examples are provided below. To see the full suite, visit *coast.noaa.gov/digitalcoast/training/home*.

Coastal Inundation Mapping

coast.noaa.gov/digitalcoast/training/inundationmap

This classroom course provides baseline information about the various types of flooding and teaches methods for mapping current and potential flooding scenarios. The course offers 16 hours of continuing education credits for the GIS Professional (GISP) and American Institute of Certified Planners (AICP), and Certified Floodplain Manager (CFM) professional certifications.

Green Infrastructure Practices and Benefits Matrix

coast.noaa.gov/digitalcoast/training/gi-practices-and-benefits

Green infrastructure (also called natural infrastructure) is the way to go for communities looking to reduce flooding. This quick handout provides important information about some of the most common techniques in use.

Seven Best Practices for Risk Communications

coast.noaa.gov/digitalcoast/training/risk-communication

The title alone speaks to most people—this is a skill everyone benefits from. The Digital Coast has many resources devoted to this topic, but this online training course is particularly popular.

GEOSPATIAL CONTRACTING

Through the Digital Coast, coastal organizations in need of geospatial data or services benefit from the use of the Coastal Geospatial Services Contract (*coast.noaa.gov/idiq/geospatial.html*). This contracting vehicle provides a way for local, state, and federal agencies to use a streamlined process to obtain services from the nation's top geospatial firms. In fiscal year 2017, over $430,000 was awarded to private geospatial firms to conduct mapping projects in the Southeast and Caribbean region, including the acquisition of GIS and elevation data.

DIGITAL COAST IN ACTION

The following stories illustrate how Digital Coast users are applying geospatial information resources to address coastal issues in North Carolina.

Using Spatial Data and Web Mapping Tools to Support Wind Energy Planning off the North Carolina Coast

coast.noaa.gov/digitalcoast/stories/wind-nc

North Carolina is exploring the idea of producing renewable wind energy offshore. The Bureau of Ocean Energy Management and other parts of the federal government are working to spur the rapid and responsible development of this resource and create task forces to discuss wind energy area designations. Using NOAA Digital Coast's Marine Cadastre National Viewer, each task force can create an interactive map, as opposed to a static map, that includes all relevant data. In North Carolina, this interactive map allowed members to pan, zoom, and add additional data sets as needed to fully determine if there were use conflicts with the proposed area.

Partnering to Map Oceans and Coasts for Multiple Needs in North Carolina

coast.noaa.gov/digitalcoast/stories/mappingneeds

Ocean and coastal maps are in high demand and can be used for a variety of purposes. As various agencies respond to the increased demand for geospatial data, they run a high risk of duplicating their efforts. To combine and coordinate NOAA's ocean and coastal mapping activies, and to disseminate data, NOAA formed the Integrated Ocean and Coastal Mapping program. This program has since gone on to gather lidar data from Cape Hatteras to Virginia Beach and the Currituck Banks National Estuarine Research Reserve. The partners have succeeded in increasing efficiency, eliminating duplication, and increasing the use of important data sets.

Modeling Future Development for Eastern North Carolina

coast.noaa.gov/digitalcoast/stories/modelgrowth

Civilian and military growth in North Carolina is causing loss of natural resources and encroachment on the region's military installations. Managers in North Carolina needed to work to preserve the function of the military bases while protecting vital ecosystems—and therefore needed to understand population and land use trends. NOAA Coastal Change Analysis Program data and other land cover aided managers with predictive urban growth models to simulate where population growth would occur. The results of the models provided the foundation for sustainable growth and resource management.

The Digital Coast Partnership

One of the goals of the Digital Coast is to unify groups that might not otherwise work together. As a result, the Digital Coast Partnership is building not only a website, but also a strong collaboration of coastal professionals intent on addressing common needs. Currently, the eight members of the Digital Coast Partnership include the American Planning Association, Association of State Floodplain Managers, Coastal States Organization, National Association of Counties, National Estuarine Research Reserve Association, National States Geographic Information Council, Nature Conservancy, and Urban Land Institute. The responsiveness of these organizations and the direct lines of communication fostered by the effort have proven essential for ensuring the success and continuing relevance of the Digital Coast, and for allowing the platform to evolve and adapt to changing needs and priorities.