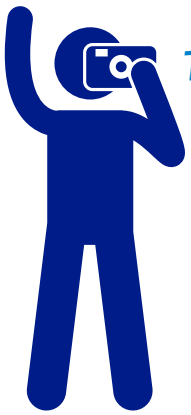
SOUTH CAROLINA RELIES ON THE DIGITAL COAST



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

29,959
South Carolina visitors to the Digital Coast.
(763,454 nationwide)

DATA

8,021 gigabytes of high-resolution elevation data available for South Carolina.

TOOLS

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

TRAINING

56 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

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- Forty-nine percent of the population in Charleston County lives in a floodplain.
- The state experienced 3,773 square miles of change from 1996 to 2010.
- Tourism and recreation is the largest employer among the state's ocean-dependent economic sectors.

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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 South Carolina.

Digital Coast
coast.noaa.gov/digitalcoast

South Carolina Recap

NOAA and the Digital Coast are devoted to supplying South 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 South 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 8,021 gigabytes of high-resolution elevation data covering South 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 South 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 South 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. South Carolina's officials found it particularly helpful as they worked to set aside land for conservation purposes while allowing for continued growth and prosperity.

Economics: National Ocean Watch Explorer

coast.noaa.gov/digitalcoast/tools/enow

Making South 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 South 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 and processing of lidar 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 South Carolina.

Building Resilient Communities Using a Beachfront Vulnerability Index in South Carolina

coast.noaa.gov/digitalcoast/stories/vulnerability-index

South Carolina's eight coastal counties have experienced rapid growth over the past two decades. With that growth comes mounting pressure to continue beachfront development while protecting these communities from erosion caused by natural forces. To assess community exposure and susceptibility to losses from storm surge and erosion, managers in South Carolina developed a Beachfront Vulnerability Index (BVI). The BVI combines data on elevation, long-term erosion rates, wave height, and more to establish a vulnerability score for each parcel along the South Carolina beachfront. Planners use these results to address vulnerable areas and incorporate mitigation and adaptation strategies in their beachfront management plans.

Economic Scorecard Helps Coastal Communities Assess Best Places for Offshore Wind Facilities

coast.noaa.gov/states/stories/economic-scorecard-helps-coastal-communities

Although other nations have used offshore wind facilities for decades, the technology is relatively new to the U.S. and the growth potential is large. Some communities, however, are concerned that wind facilities might have a negative impact on coastal tourism and recreation. For this reason a "scorecard" was developed that ranks potential impacts for 113 Atlantic coast geographies, primarily counties. Community profiles were also created for the 70 counties most vulnerable to negative impacts from wind energy facilities. This information is used by counties assessing the pros and cons of wind energy facilities. The Bureau of Ocean Energy Management created these assessments using economic data provided through NOAA's Digital Coast and its Economics: National Ocean Watch initiative.

Using Geospatial Techniques to Plan for Climate Change Impacts on Coastal Habitats in South Carolina

coast.noaa.gov/digitalcoast/stories/waccamaw

Sea level rise and its potential impacts are a concern for the Waccamaw National Wildlife Refuge, home to many sensitive species. Habitats for some species are already beginning to show signs of saltwater intrusion and other sea level rise-related impacts. The project team used the Sea Level Affecting Marshes Model to map predicted distributions of wetlands within the refuge and nearby North Inlet-Winyah Bay National Estuarine Research Reserve. These outputs were then used within the Habitat Priority Planner to target areas for conservation, including key habitats. Using these results, the reserve is educating community stakeholders about the trends and types of habitat impacts that could result from sea level rise, while the refuge and The Nature Conservancy are working with state and local organizations to conserve inland freshwater habitats beyond current refuge boundaries.

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.