ALABAMA RELIES ON THE DIGITAL COAST

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

6,841
Alabama visitors to the Digital Coast.
(672,942 nationwide)

DATA
1,072 gigabyte of high-resolution elevation data available for Alabama.

TOOLS
50+ decision-support tools applicable for Alabama challenges.

TRAINING
117 leaders in the state used a Digital Coast training program.

GEOSPATIAL SERVICES
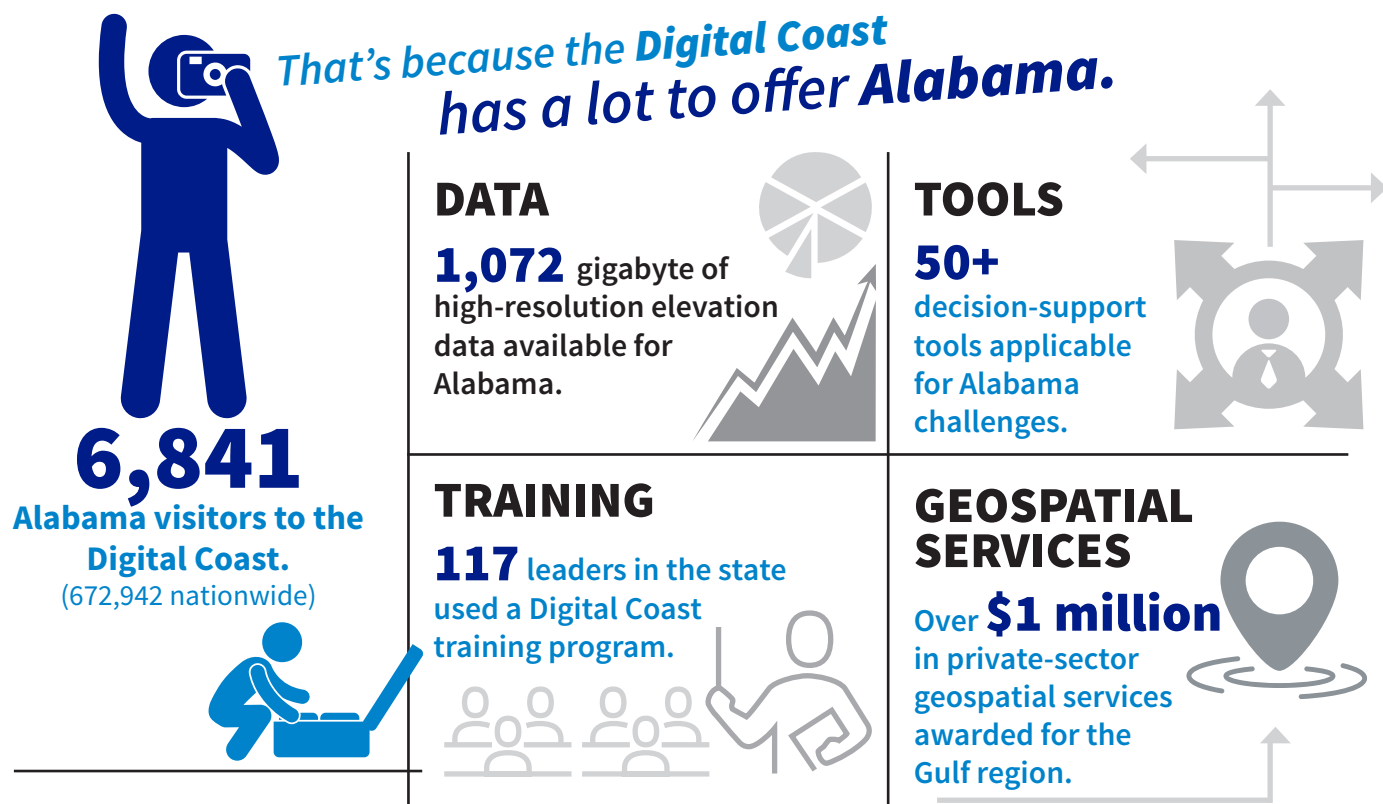Over **$1 million** in private-sector geospatial services awarded for the Gulf region.

INFORMATION

- Thirteen percent of the population in Mobile County lives in a floodplain.
- 25.3 percent of the state's coastal land cover changed from one type to another from 1996 to 2010, more than three times the national average.
- 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 Alabama.

Digital Coast
coast.noaa.gov/digitalcoast
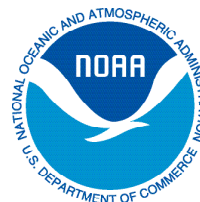
Alabama Recap

NOAA and the Digital Coast are devoted to supplying Alabama 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 Alabama, 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 1,072 gigabytes of high-resolution elevation data covering Alabama'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—coastal intertidal areas, wetlands, adjacent uplands, development, 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 Alabama'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 coastal economy in Alabama 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. Alabama officials have found it particularly helpful while conducting the Coastal Watershed Survey Program, which analyzes water quality, land use, and more.

Economics: National Ocean Watch Explorer

coast.noaa.gov/digitalcoast/tools/enow

This tool makes economic data easier to use. The economic data provided by the Digital Coast focus on six business sectors dependent 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 growing and declining, and which account for the most jobs, wages, and gross domestic product for coastal communities, the state, and the nation.

Sea Level Rise Viewer

coast.noaa.gov/digitalcoast/tools/slr

This web mapping tool visualizes community-level impacts from coastal flooding or sea level rise. Locals can see photo simulations of how future flooding might impact local landmarks, while GIS managers can download data related to water depth, connectivity, flood frequency, socioeconomic vulnerability, and more.

Coastal Flood Exposure Mapper

coast.noaa.gov/digitalcoast/tools/flood-exposure

Access coastal hazard risks and vulnerabilities with this tool, which creates a collection of user-defined maps that show the people, places, and natural resources exposed to coastal flooding. Coastal managers can save time and download the maps to share with stakeholders and communicate flood exposure impacts.

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 2018, over $1 million was awarded to private geospatial firms to conduct mapping projects in the Gulf region, including the acquisition and processing of GIS data.

DIGITAL COAST IN ACTION

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

Gulf Ecosystem Study Uses Digital Coast Data
coast.noaa.gov/states/stories/gulf-ecosystem-study-uses-digital-coast-data
A status report for the Gulf of Mexico coast documented several environmental changes, such as overfishing being at an all-time low, natural habitats on the decline, artificial habitats on the rise, and urbanization increasing at faster rates than in previous reports. The findings are useful for people who document changes and look for causes and effects. Five NOAA partners and the University of Miami used Digital Coast economics data and the Land Cover Atlas tool to complete the report.

Analyzing the Impacts of Hurricane Katrina on Forest Ecosystem Services
coast.noaa.gov/digitalcoast/stories/katrinaforest
Trees are a good indicator of ecosystem health. Hurricane Katrina destroyed forests and habitats, significantly changing the land cover of the region. Loss in forest cover from 2001 to 2006 was analyzed using the NOAA Office for Coastal Management's C-CAP land cover data. A report was developed that outlined tree cover loss, the value of air-quality ecosystem services each year, and changes in those values due to changes in land cover. The report informed several post-Katrina restoration efforts, including the planting of 265 trees to help one area recover.

Assessing Gaps in Wetland Information to Strengthen Gulf Resilience

coast.noaa.gov/digitalcoast/stories/gulf-resilience

Surface elevation tables shed light on the ability of coastal wetlands to keep up with sea level rise. In the Gulf of Mexico region, tables are not evenly distributed and managers need help selecting areas for future table placement. Partners worked together to conduct a gap analysis of existing surface elevation tables across five Gulf states using a table inventory, NOAA Coastal Change Analysis Program data, digital elevation models, and other data sets. The results of the gap analysis were shared with resource managers and funding agencies to make strategic decisions about the future placement of surface elevation tables in the region.

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.