



The State of Louisiana and the Digital Coast

The Digital Coast is a partnership effort and community resource for organizations that manage the nation's coastal resources.

Initiated and led by the National Oceanic and Atmospheric Administration (NOAA) Office for Coastal Management, the Digital Coast provides geospatial data and the tools and methods needed to turn these data into useful information. Digital Coast resources range from high-resolution data to on-site training opportunities. People use these resources to address timely coastal issues, including land use, coastal conservation, hazards, ocean planning, community resilience, and coastal economics, all of which are of critical importance to the state of Louisiana. The site was launched in 2008.

Louisiana Benefits

The numbers below are from fiscal year 2015.

DIGITAL COAST BY THE NUMBERS

6,298 Louisiana visitors to the Digital Coast website

120 Louisiana communities that used the Digital Coast

817 Gigabytes of high-resolution elevation data available for the state

456,615 Total visitors to the Digital Coast website

411% Return on investment*

*More information on the benefits and costs of the Digital Coast can be found here: <http://1.usa.gov/1O8fDa>

DATA

Louisiana elevation, land cover, aerial imagery, and county-level socioeconomic data, provided by various trusted sources, are available through the Digital Coast's Data Access Viewer. Some of the most commonly accessed Louisiana-based data are highlighted below.

Coastal Lidar

coast.noaa.gov/digitalcoast/data/coastallidar

Over 817 gigabytes of high-resolution elevation data covering Louisiana's entire coastal zone are available. This type of data is critical to the development of models that examine potential local flooding impacts from coastal storms and sea level rise.

Land Cover

coast.noaa.gov/digitalcoast/data/ccapregional

Land cover data provide inventories of coastal intertidal areas, wetlands, and adjacent uplands for the coastal regions. These data are used to identify high-priority landscapes for Louisiana's coastal protection and restoration efforts.

Economics: National Ocean Watch

coast.noaa.gov/digitalcoast/data/enow

This program provides time-series data on the ocean and Great Lakes economy, which includes six economic sectors dependent on the oceans and Great Lakes. Louisiana's coastal counties can use this information to gain insight into their local coastal economies.

TOOLS

The Digital Coast website provides access to over 50 data analysis, visualization, and other decision-support tools that assist coastal managers in deriving critical information from coastal data sets. Many of these tools are web-based, which extends the reach of GIS functions to anyone with an Internet connection.

Coastal County Snapshots

coast.noaa.gov/digitalcoast/tools/snapshots

Complex local data sets are automatically formatted into easy-to-understand stories, complete with charts and graphs, with this web tool. Local officials use the snapshots as a planning tool, since the information helps them assess their county's resilience to flooding and understand the benefits provided by natural resources.

C-CAP Land Cover Atlas

coast.noaa.gov/digitalcoast/tools/lca

This tool from the Coastal Change Analysis Program (C-CAP) 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 of interest (salt marsh losses to open water, for instance) can be highlighted. This type of information is useful for planning purposes. Louisiana's officials found it particularly helpful as they worked to assess ecosystem health after Hurricane Katrina.

Economics: National Ocean Watch Explorer

coast.noaa.gov/digitalcoast/tools/enow

Making Louisiana'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 Louisiana'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.

CanVis

coast.noaa.gov/digitalcoast/tools/canvis

This visualization tool helps users "see" potential impacts from coastal development or water level change. Users can download background pictures and insert objects (hotels, houses, and other features) of their choosing. This tool helped Louisiana to visualize sea level rise and green infrastructure techniques.

OpenNSPECT

coast.noaa.gov/digitalcoast/tools/opennspect

This tool is being used to investigate potential water quality impacts from development, other land uses, and climate change. The tool simulates erosion, pollution, and their accumulation from overland flow. Uses include helping communities identify areas for restorable wetlands and riparian buffers to reduce pollution and flooding in watersheds.

TRAINING

In fiscal year 2015, 18 Louisiana coastal professionals received training on a variety of technical and process-based topics through the Digital Coast (coast.noaa.gov/digitalcoast/training/list). Courses taught participants a variety of skills, such as planning and facilitating collaborative meetings and tips and tricks for using OpenNSPECT.

GEOSPATIAL CONTRACTING

Through the Digital Coast, coastal organizations in need of geospatial data or services benefit from the use of the NOAA Office for Coastal Management's Coastal Geospatial Services Contract (coast.noaa.gov/idiq/geospatial.html). This contracting vehicle provides a way for local, state, and federal agencies to take advantage of a streamlined process to obtain services from the nation's top geospatial firms. In fiscal year 2015, over \$3.6 million was awarded to private geospatial firms to conduct mapping projects in the Southeast coastal zone, 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 Louisiana.

Illustrating the Importance of Critical Infrastructure Data for Louisiana Coastal Parishes

coast.noaa.gov/digitalcoast/stories/criticalnola

Louisiana planners understand that critical facilities, such as police stations, hospitals, and utility facilities, need to be out of harm's way to be effective during an emergency. To assess preparedness, the Louisiana Geographic Information Center used the Coastal County Snapshots' Flood Exposure tool to identify those structures located within the flood zone. The snapshots helped the counties better prepare and respond to hazard events.

Assessing the Impacts of Hurricane Katrina in Louisiana

coast.noaa.gov/digitalcoast/stories/katrina

Breton Sound in Louisiana was one of the areas hit hard by Hurricane Katrina in August of 2005. To quickly assess the impacts and recovery from the storm, managers needed accurate land cover data. Managers used C-CAP land cover data to compare flood conditions in the two weeks following Hurricane Katrina to the same area in spring 2006. The analysis determined that in less than one year the area experienced a significant loss of marsh and the addition of open water. This information was used to help assess the overall Gulf Coast impacts in a report to Congress.

Providing Easily Accessible Maps to Aid Ecosystem Restoration in the Gulf of Mexico

coast.noaa.gov/digitalcoast/stories/ecosystem-restoration

The Gulf of Mexico faces a number of environmental stressors from wetland degradation, seasonal "dead zones," declining fisheries, and impacts from oil spills. To deal with these issues, the Gulf of Mexico's coastal management community is working hard to increase its restoration efforts. The Ocean Conservancy aimed to assist in these efforts by creating a series of maps depicting various types of ocean information. They used data from MarineCadastre.gov and the Coastal Change Analysis Program to ensure comprehensive, authoritative, and accurate information.

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.