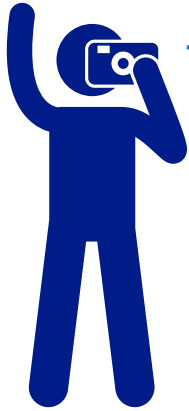


CALIFORNIA RELIES ON THE DIGITAL COAST



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

72,992

California visitors to the Digital Coast.
(763,454 nationwide)



DATA

6,655 gigabytes of high-resolution elevation data available for California.



TOOLS

50+ decision-support tools applicable for California challenges.



TRAINING

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



GEOSPATIAL SERVICES

Over **\$355,000** in private-sector geospatial services awarded for the West Coast region.



INFORMATION

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- Five percent of the population in San Mateo County (36,541 people) lives in a floodplain.
- This state developed 410 square miles of coastal lands from 1996 to 2010, an area almost the size of Los Angeles.
- 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 California.

Digital Coast
coast.noaa.gov/digitalcoast



California Recap

NOAA and the Digital Coast are devoted to supplying California 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 California, 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 6,655 gigabytes of high-resolution elevation data covering California'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 California'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 California 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. California officials have found it particularly helpful as they work to use natural infrastructure to mitigate the impacts of flooding and climate change.

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.

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.

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.

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 \$355,000 was awarded to private geospatial firms to conduct mapping projects in the West Coast region, including the acquisition of lidar and acoustic data.

DIGITAL COAST IN ACTION

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

Assessing Fire Hazard Risk in Southern California

coast.noaa.gov/digitalcoast/stories/californiafire

Southern California is at great risk from wildfires because of its particular combination of weather, topography, and native vegetation, as well as the Santa Ana winds that appear in the spring and late fall. To analyze areas at risk from wildfire and their proximity to urban developments, as well as changes to these risks over time, the Global Ecosystem Center used Digital Coast C-CAP land cover data sets. The analysis demonstrated that parts of the region experienced high growth rates in areas that are at a significant risk of fire. This information is being used to develop better strategies for land use management, natural resource management, and vulnerability.

Increasing Resilience in the San Francisco Bay Area

coast.noaa.gov/digitalcoast/stories/rising-tides

The shoreline of the San Francisco Bay is a diverse mix of residential neighborhoods, urban waterfronts, recreational areas, industrial lands, and critical habitat, all connected by a network of freeways, railroads, power lines, and municipal infrastructure. With projected sea level rise, much of the region's shoreline and its vital components are likely to be at risk. Partners in the region used a combination of Digital Coast data and local data to mimic the methods of the Digital Coast's Sea Level Rise Viewer for inundation maps. Then, they combined that information with social vulnerability index data to assess community vulnerability. Digital Coast resources helped the project team better understand the causes and components of sea level rise vulnerability and risk, develop adaptation actions to respond to those risks, and effectively build stakeholder capacity to engage in adaptation planning.

Supporting Wave Energy Permitting in California

coast.noaa.gov/digitalcoast/stories/waveca

The State of California and federal agencies receive many permits for proposed wave energy projects off the coast. To respond to these applications, the agencies must identify possible species and habitats that could be affected by the proposed project areas. Using data from the MarineCadastre.gov, partners worked with the Digital Coast to create a series of maps of proposed projects. Resource managers and stakeholders used the maps to evaluate potential impacts, provide an overview of all the permit applications, and help determine research priorities and gaps.

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.