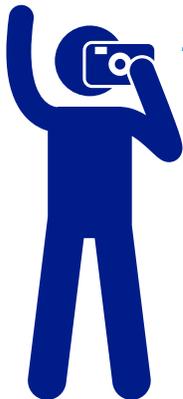


# HAWAI'I RELIES ON THE DIGITAL COAST



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

# 10,817

Hawai'i visitors to the Digital Coast.  
(672,942 nationwide)



## DATA

**819** gigabytes of high-resolution elevation data available for Hawai'i.



## TOOLS

**50+** decision-support tools applicable for Hawai'i challenges.



## TRAINING

Over **2,000** leaders Nationwide used a Digital Coast training program.



## GEOSPATIAL SERVICES

Over **\$9.6 million** in private-sector geospatial services awarded Nationwide.



## INFORMATION



- Nine percent of the population in Honolulu County lives in a floodplain.
- The state experienced 475.87 square miles of change from 1992 to 2010, mostly agricultural area.
- 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 Hawai'i.

**Digital Coast**  
[coast.noaa.gov/digitalcoast](http://coast.noaa.gov/digitalcoast)



# Hawai'i Recap

*NOAA and the Digital Coast are devoted to supplying Hawai'i 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](http://coast.noaa.gov)) to learn more or contact NOAA ([coastal.info@noaa.gov](mailto:coastal.info@noaa.gov)) with your questions or suggestions.*

## DATA

Data represent the core component of the Digital Coast. For Hawai'i, 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](http://coast.noaa.gov/digitalcoast/data/coastallidar)

Over 819 gigabytes of high-resolution elevation data covering Hawai'i'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](http://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 Hawai'i's coastal protection and tsunami evacuation efforts. Comparing one year to another is also a good way to spot and document trends.

### Economics

[coast.noaa.gov/digitalcoast/data/enow](http://coast.noaa.gov/digitalcoast/data/enow)

Information about the ocean-dependent economy in Hawai'i 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.

### Tsunami Information Service

[coast.noaa.gov/digitalcoast/tools/tsunamimap](http://coast.noaa.gov/digitalcoast/tools/tsunamimap)

This tool provides tsunami evacuation maps and information for Hawai'i and Guam. Residents and visitors can interact with maps and find education and awareness information on the web or by downloading the app.

## Coastal County Snapshots

[coast.noaa.gov/digitalcoast/tools/snapshots](https://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.

## Sea Level Rise and Coastal Flooding Impacts Viewer

[coast.noaa.gov/digitalcoast/tools/slr](https://coast.noaa.gov/digitalcoast/tools/slr)

This web-based data viewer provides coastal managers and scientists with a preliminary look at local sea level rise and coastal flooding impacts. The viewer is a screening-level tool that uses nationally consistent data sets and analyses. Data and maps provided can be used at several scales to help Hawai'i communities gauge trends, inform climate adaptation planning, and prioritize actions for different scenarios.

## Land Cover Atlas

[coast.noaa.gov/digitalcoast/tools/lca](https://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. Hawai'i officials have found it particularly helpful in the identification and assessment of priority ecological areas for the conservation efforts of the state's Department of Land and Natural Resources.

## Economics: National Ocean Watch Explorer

[coast.noaa.gov/digitalcoast/tools/enow](https://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.

## 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](https://coast.noaa.gov/digitalcoast/training/home).

## Coastal Inundation Mapping

[coast.noaa.gov/digitalcoast/training/inundationmap](https://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](https://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](https://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](https://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 \$9.6 million was awarded to private geospatial firms to conduct mapping projects Nationwide, including facilitation of climate adaptation data.

## DIGITAL COAST IN ACTION

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

### Assessing Climate Change and Coastal Hazards in Kaua'i

[coast.noaa.gov/digitalcoast/stories/Kauai](https://coast.noaa.gov/digitalcoast/stories/Kauai)

The island of Kaua'i is up against a variety of coastal hazards, all of which are exacerbated by sea level rise. The Kaua'i general plan, which provides guidance on land use policy and development, didn't incorporate climate hazard and sea level rise guidance. To correct this flaw, county managers updated the plan using data from the Sea Level Rise Viewer, a tool available from NOAA's Digital Coast. Armed with this information, officials were able to identify planning and policy options that will increase the island's resilience.

### Capturing Traditional Knowledge to Inform Restoration Planning in Hawai'i

[coast.noaa.gov/digitalcoast/stories/hirestoration](https://coast.noaa.gov/digitalcoast/stories/hirestoration)

The He'eia wetland and fishpond on the eastern side of O'ahu, Hawai'i, was historically a thriving agricultural area with healthy native wetland habitat, high concentrations of wet taro farming, and a highly productive fishpond. Today these lands are severely degraded by invasive species and sedimentation caused by a discontinuation of traditional water and land management practices. A local nonprofit, Kāko'o 'Ōiwi, worked with local partners and the NOAA Office for Coastal Management to survey indigenous elders to guide restoration efforts. Restoring the area is ongoing work that will provide food security, restore native wetland habitat, and maintain the practice of Hawaiian culture.

## 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.