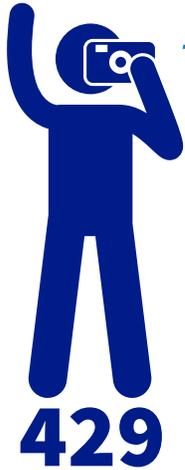


# USVI RELIES ON THE DIGITAL COAST



**429**  
USVI visitors to the  
Digital Coast.  
(672,942 nationwide)



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

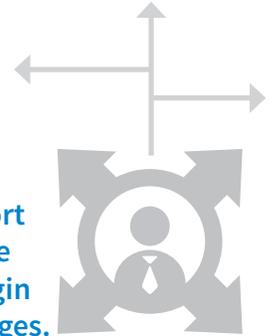
## DATA

**227** gigabytes of high-resolution elevation data available for the U.S. Virgin Islands.



## TOOLS

**50+** decision-support tools applicable for the U.S. Virgin Islands challenges.



## TRAINING

Over **2,000** leaders in the U.S. used a Digital Coast training program.



## GEOSPATIAL SERVICES

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



## INFORMATION

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- The territory experienced 14 square miles of change between 2002 and 2010.
- In 2012 the ocean economy accounted for nearly \$173 million in total wages.
- The territory's coral reefs have an average economic value of \$187 million per year.

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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 U.S. Virgin Islands.

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



# U.S. Virgin Islands Recap

NOAA and the Digital Coast are devoted to supplying the U.S. Virgin Islands 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 the U.S. Virgin Islands, 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 227 gigabytes of high-resolution elevation data covering the U.S. Virgin Islands' 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—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 the U.S. Virgin Islands' coastal protection and restoration efforts. Comparing one year to another is also a good way to spot and document trends.

## 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.

### Land Cover Atlas

[coast.noaa.gov/digitalcoast/tools/lca](http://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. U.S. Virgin Islands managers have found these data helpful while analyzing water quality, land use, and more.

### OpenNSPECT

[coast.noaa.gov/digitalcoast/tools/opennspect](http://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](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 the acquisition and processing of lidar data.

## DIGITAL COAST IN ACTION

The following stories illustrate how Digital Coast users are applying geospatial information resources to address coastal issues in the U.S. Virgin Islands and the Southeast U.S.

### Identifying Sources of Pollution That Impact Coral Reef Communities in the Virgin Islands

[coast.noaa.gov/digitalcoast/stories/coralreef-vi](https://coast.noaa.gov/digitalcoast/stories/coralreef-vi)

Land-based sources of sediment and pollution are a major threat to coral reefs. Local resource managers have the difficult task of identifying watersheds that contribute runoff leading to coral reef decline. The U.S. Environmental Protection Agency used NOAA’s land cover data from the Digital Coast, combined with coral reef survey data, to analyze the relationship between runoff and reef health in the U.S. Virgin Islands. This information was then used to inform land use decision-making processes in the area to decrease runoff and improve coral reef resilience.

## **Adapting to Sea Level Rise in Miami-Dade County, Florida**

[coast.noaa.gov/digitalcoast/stories/slr-miamidade](https://coast.noaa.gov/digitalcoast/stories/slr-miamidade)

Miami-Dade County, Florida, contains some of the most populated cities in the state. The population, combined with the location and topography, makes this county particularly vulnerable to sea level rise. The Miami-Dade Office of Sustainability worked with the NOAA Office for Coastal Management to host a workshop at which county department representatives learned how sea level rise could affect the county and generated ideas for how to adapt to these changes. To help participants understand how sea level rise might impact the work of each county department, maps were developed showing how predicted sea level rise might interact with saltwater intrusion, land cover and land use, zoning, emergency facilities, human infrastructure, and important natural features. Participants used the information from these maps to identify specific actions to adapt to climate change, including creating a centralized location for recording and sharing data representing hazards, climate, and vulnerabilities; developing and implementing climate-adaptive zoning, building codes, and permit process modifications; and accelerating existing restoration efforts to help protect the community against rising sea levels.

## **Applying Green Infrastructure to Stem Runoff and Safeguard Puerto Rico's Corals**

[coast.noaa.gov/digitalcoast/stories/playa-tamarindo](https://coast.noaa.gov/digitalcoast/stories/playa-tamarindo)

At Playa Tamarindo on Culebra Island, runoff from sediment and cars driving on the beach imperils coral reefs and a local waterway. Partners addressed the problem by planting vegetation in bare soil, installing a gravel parking lot to absorb excess water, and placing rocks in specific areas to channel excess water into thicker greenery, where it is absorbed. Using the Digital Coast's OpenNSPECT tool, scientists analyzed how effective these measures were in reducing polluted runoff, and then used this information to decide which natural-infrastructure improvements to pursue. Initial after-project studies show sediment loads in marine habitats have gone down, lessening the impacts to nearby corals in this NOAA Habitat Blueprint area.

## **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.