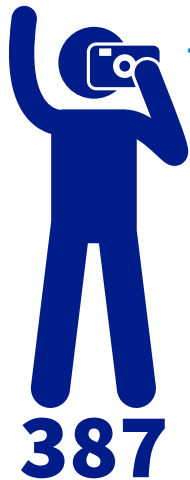


# AMERICAN SAMOA RELIES ON THE DIGITAL COAST



**387**  
American Samoa visitors  
to the Digital Coast.  
(763,454 nationwide)



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

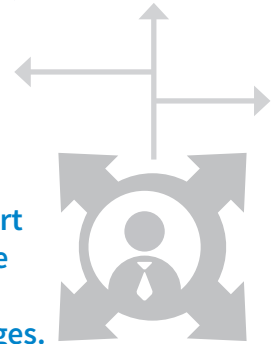
## DATA

**41** gigabytes of high-resolution elevation data available for American Samoa.



## TOOLS

**50+** decision-support tools applicable for American Samoa challenges.



## TRAINING

Over **1,800** leaders in the U.S. used a Digital Coast training program.



## GEOSPATIAL SERVICES

Over **\$145,000** in private-sector geospatial services awarded for the Pacific region.



## INFORMATION

- American Samoa's coral reefs and associated ecosystems have an average economic value of more than \$11 million per year.
- Forestry is the American Samoa's largest land cover category (63.88%).

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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 American Samoa.

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



# American Samoa Recap

*NOAA and the Digital Coast are devoted to supplying American Samoa 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 American Samoa, 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 41 gigabytes of high-resolution elevation data covering American Samoa'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/ccaphighres](http://coast.noaa.gov/digitalcoast/data/ccaphighres)

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

## 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. American Samoa's managers have found it particularly 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 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

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

### Coastal Inundation Mapping

[coast.noaa.gov/digitalcoast/training/inundationmap](http://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](http://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](http://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](http://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 \$145,000 was awarded to private geospatial firms to conduct mapping projects in the Pacific 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 American Samoa and the Pacific Islands.

### Assessing Potential Hazard Risk in Tutuila, American Samoa

[coast.noaa.gov/digitalcoast/stories/tutuila](http://coast.noaa.gov/digitalcoast/stories/tutuila)

Often the hazards that pose threats to the islands of American Samoa happen simultaneously, resulting in many different types of damage to property, resources, and life. Local managers developed the Tutuila Hazard Assessment Template (T-HAT) to identify areas at risk for multiple hazards within the main island of Tutuila. T-HAT, a lightweight Internet mapping application, uses GIS hazard data collected from NOAA’s Office for Coastal Management–Pacific Islands and allows users to query the data for hazard information. The tool has helped the American Samoa Coastal Management Program assess permits in light of potential hazard risks.

## **Understanding the Present by Studying the Past through Lidar in American Samoa**

[coast.noaa.gov/digitalcoast/stories/as-lidar](https://coast.noaa.gov/digitalcoast/stories/as-lidar)

Studying the past may provide important lessons on human resilience and resource conservation. On the small islands of Ofu and Olosega, researchers used high-resolution lidar and other modalities to locate archaeological sites and learn more about how island settlers thousands of years ago responded to sea level fluctuations and other environmental changes. The sheer number of inland features identified by lidar images suggests that the prehistoric population was much larger than that of today. The evidence revealed that island residents stayed resilient to coastal changes by introducing flexibility to food production and food collection systems.

## **Producing Hydrography Data from Lidar for American Samoa**

[coast.noaa.gov/digitalcoast/stories/as-watershed](https://coast.noaa.gov/digitalcoast/stories/as-watershed)

Identifying waterways affected by excessive sediment and runoff is vital for properly monitoring and managing coastal, nearshore, and coral reef areas. However, existing hydrographic data made accurate assessments difficult because the data were derived from older topographic maps and many local features had since changed. Using NOAA lidar data and U.S. Geological Survey imagery, partners worked together to extract hydrography features and process the data, resulting in high-resolution, very accurate hydrography data. Local and federal agencies and organizations are relying on the data for research and management applications.

## **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.