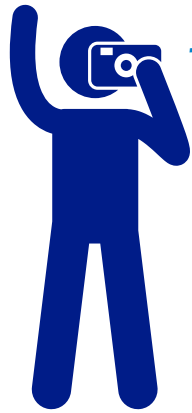


# WISCONSIN RELIES ON THE DIGITAL COAST



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

**5,579**

Wisconsin visitors to the Digital Coast.  
(560,176 nationwide)



## DATA

**315** gigabytes of high-resolution elevation data available for Wisconsin.



## TOOLS

**50+** decision-support tools applicable for Wisconsin challenges.



## TRAINING

**5** leaders in the state used a Digital Coast training program.



## GEOSPATIAL SERVICES

Over **\$870,000** in private-sector geospatial services awarded for the Great Lakes region.



## INFORMATION

- Six percent of the population in Douglas County lives in a floodplain.
- Forestry is the state's largest land cover category (34%).
- Tourism and recreation is the largest employer among the state's Great Lakes-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 Wisconsin.

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



# Wisconsin Recap

*NOAA and the Digital Coast are devoted to supplying Wisconsin 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 Wisconsin, 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 315 gigabytes of high-resolution elevation data covering Wisconsin'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 Wisconsin'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](http://coast.noaa.gov/digitalcoast/data/enow)

Information about the coastal economy in Wisconsin 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.

### Lake Level Viewer (U.S. Great Lakes)

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

Visualize lake level changes that range from six feet above to six feet below historical long-term average water levels in the Great Lakes, along with potential shoreline and coastal impacts. Communities can use the data behind the tool for habitat and hydrological analysis.

## 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.

## Great Lakes Coastal Resilience Planning Guide

[greatlakesresilience.org](https://greatlakesresilience.org)

This guide provides hazard and climate change resources that Great Lakes counties and municipalities can use to communicate about coastal issues and inform existing and future plans and policies on land use, infrastructure, and natural resources. The guide shows how coastal communities are using science-based information to address coastal hazards such as flooding, shore erosion, and lake-level fluctuations.

## 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. Wisconsin 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](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.

## Wisconsin Coastal Atlas

[wicoastalatlas.net](https://wicoastalatlas.net)

This atlas is a web resource that helps people understand coastal issues, share coastal data, and inform their decision-making about the sustainable use of the Great Lakes. The atlas pulls in data and resources from the Digital Coast.

## CanVis Visualizations

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

This visualization tool helps users “see” potential impacts from coastal development or lake level change. Users can download background pictures and insert objects (hotels, houses, and other features) of their choosing. This tool is easily paired with the Lake Level Dashboard ([greatlakesresilience.org/maps-tools-data/tools/great-lakes-water-level-dashboard](https://greatlakesresilience.org/maps-tools-data/tools/great-lakes-water-level-dashboard)) to visualize the impacts of lake level changes and potential coastal flood hazards. A case study of their use is available for Brown County, Wisconsin ([greatlakesresilience.org/case-studies/land-use-zoning/applying-tools-visualize-coastal-flooding](https://greatlakesresilience.org/case-studies/land-use-zoning/applying-tools-visualize-coastal-flooding)).

## OpenNSPECT

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

## VDatum

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

This tool converts elevation data among tidal, orthometric, and ellipsoidal vertical datums, allowing users to establish a common reference system for all elevation data sets. VDatum is also used with other bathymetric data sets to address issues related to dredging in areas such as the Sheboygan River.

## 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 2016, over \$870,000 was awarded to private geospatial firms to conduct mapping projects in the Great Lakes region, 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 Wisconsin and the Great Lakes region.

### Observing Landscape Changes at the Municipal Level in Wisconsin

[coast.noaa.gov/digitalcoast/stories/wi-ccap](https://coast.noaa.gov/digitalcoast/stories/wi-ccap)

Land cover change data show how an area's landscape has changed over time. Wisconsin used the Digital Coast's Coastal Change Analysis Program data from 1996 and 2006 to analyze land cover changes over those 10 years. Managers broke down the data to a smaller scale so they could see changes at the municipal level and show development patterns in the area. By comparing this information between municipalities, managers were able to see the effects of past land cover decisions and evaluate future planning options.

### Advancing Restoration in the Great Lakes Region

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

The Great Lakes watershed is the largest system of fresh surface water in the world and is a source of abundant natural resources. However, urban and industrial development has degraded water quality, posing threats to wildlife and human health. The Great Lakes Commission identified two watersheds to restore, and the Habitat Priority Planner on the Digital Coast was used to help managers determine how best to restore these watersheds.

### Communicating Coastal Flooding Risks around the Great Lakes

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

Residents in Green Bay, Wisconsin, are concerned about flood risks but don't have the information necessary to determine their home's proximity to the flood zone. Using the Digital Coast's CanVis software, managers in Brown County took photos of properties and created before-and-after flooding photos to show residents what could happen. From these visualizations, shoreline property owners will gain critical insight into how to protect themselves and their property from flooding.

## 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.