# Partners Build Capacity for Hazards Resilience in the Great Lakes

Improving a coastal community's ability to plan for and recover from hazardous events such as storms and flooding is at the heart of most resilience efforts, and the task requires the resources and skills of diverse groups. This case study focuses on the collaborative process used to develop the Great Lakes Coastal Resilience Planning Guide.

## Background

Local practitioners in the Great Lakes realized a need for hazard-related data for their communities that could be used to help inform local planning decisions involving stormwater management, infrastructure, land use planning, and other issues. Having access to visuals to see the issues was also important.

To help meet these needs, local leaders turned to a partnership effort led by the federal government's National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center. The Center-developed Digital Coast is a partnership formed to bring national organizations together to address coastal issues and deliver data, tools, and training to meet coastal communities' needs (*www.csc.noaa.gov/digitalcoast*).

The Digital Coast partnership and community-based partners from the Great Lakes are working together on a project that will help Great Lakes communities adapt to a changing climate. The result is the Great Lakes Coastal Resilience Planning Guide, which will provide local decision makers with educational information, methods, and examples for mapping, analyzing, and visualizing coastal hazards and adaptation strategies.

The planning guide was funded through the Environmental Protection Agency's Great Lakes Restoration Initiative. Digital Coast partners—the NOAA Coastal Services Center and Association of State Floodplain Managers—played a leadership role. Other Digital Coast participants included the American Planning Association, Coastal States Organization, National Association of Counties, National States Geographic Information Council, and The Nature Conservancy, while regional and local partners included Wisconsin Sea Grant, the University of Wisconsin–Extension, NOAA Great Lakes Environmental Research Lab, and other Sea Grant programs in this region.

## The Approach

Partnership participants were chosen because they could supply the information and expertise needed to develop a community resilience planning resource and provide technical assistance.

To ensure a collaborative process for developing the planning guide, the partnership established the following guiding principles:

- Repurpose existing resources as much as possible, since there already were many credible, relevant hazards-related tools, data, and information.
- Show how data and information can be used to help inform problems that practitioners are dealing with daily.
- Conduct pilots to learn what is locally relevant, but ensure resources the project builds are regionally applicable.

*Local workshop attendees test the planning guide.*


*Bluff erosion threatens property and homes in the Great Lakes.*

- Look for opportunities to incorporate other similarly funded products.
- Use a variety of formats (such as site visits, virtual focus groups, and a workshop) and an iterative process to obtain feedback and input from partners and practitioners.
- Commit to maintain and grow the planning guide.

This effort provides a good example of how a national partnership can operate at the local level. The Digital Coast partnership organizations consist of local professionals—the people who understand local needs and issues and can help shape resources that are relevant and useful in local decision-making. Additional benefits come from working with an established partnership. These partners work together well, which means more time is available to spend on product development. The partners are also dedicated to supporting each other because of their common goals, and they bring wide-ranging expertise and skills to expand resources and capabilities.

## Putting the Principles into Practice

### Working with Locals

To make sure the planning guide could be used in local decision-making, input from local practitioners on scope and content was critical. The project team used several activities to engage local practitioners.

- **Local site visits** – Representatives from Wisconsin Sea Grant and the Association of State Floodplain Managers met with each county's practitioners to discuss the project, obtain their feedback and ideas, and identify data and information. Being able to have a local partner that was trusted by the counties, knew the issues, and had worked on hazards projects in the past with these communities helped ensure that the planning guide was grounded in practical application and reality.
- **Virtual focus groups** – Three virtual focus groups were held via Web-meeting software and conference calls to discuss the different topic areas—flooding, shoreline change, and habitat—with regional, state, and local practitioners. First, focus group leaders provided a project overview, and then participants answered and discussed a series of questions.
- **Local Workshop** – University of Wisconsin–Extension led the planning and execution of a workshop to get input from local practitioners on a draft version of the planning guide. The partnership group was familiar with local and state practitioners, ensuring the right mix of participants at the workshop.
- **Local Pilot Projects** – To provide on-the-ground examples and better understand local decision processes, the partnership began to work with several communities. Using recommendations from the University of Wisconsin–Extension and Wisconsin Sea Grant, Brown, Sheboygan, and Ozaukee Counties were asked to serve as demonstration sites to help build the planning guide.


## Making the Most of Partners' Expertise and Resources

The goal of this effort was to provide a resource that could help practitioners look at their community issues from a hazards perspective.

The partnership pulled from its own expertise and resources to provide on-the-ground examples, data development methods, stories of what communities were doing, visualizations, and communication products:

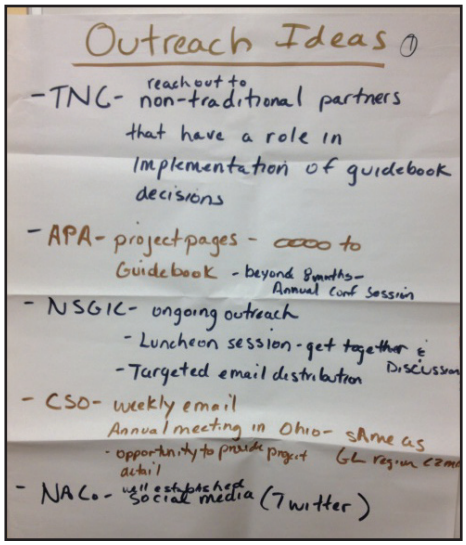
- The Association of State Floodplain Managers provided technical expertise on bluff erosion, flooding, flood policies, mapping, and spatial analysis.
- The American Planning Association identified planning practitioners' needs and provided technical assistance to these practitioners on how to incorporate hazards resilience issues into their planning processes.
- The Coastal States Organization identified state coastal program partners and coastal issues of importance for Great Lakes state-level programs.
- The National States Geographic Information Council identified geographic data sources and outreach and training opportunities.
- The Nature Conservancy provided local and regional ecological data and information and helped to make connections to other Great Lakes Nature Conservancy projects, such as the Climate Wizard and local case studies.
- The NOAA Coastal Services Center provided content on risk and vulnerability assessments, served as the project liaison to other NOAA and Great Lakes Restoration Initiative projects, and built story maps to help communicate hazard risks.
- Wisconsin Sea Grant leveraged existing relationships with local communities and provided expertise and knowledge on local planning issues and hazards.
- The University of Wisconsin–Extension provided local and regional expertise and knowledge on hazards for the local workshop.
- Great Lakes Sea Grants provided staff members dedicated to climate change outreach and training.
- NOAA's Great Lakes Environmental Research Lab provided credible climate data and information.

## What's Next?

The Great Lakes Coastal Resilience Planning Guide is an online resource that will be updated as needed. Near-term updates will include additional examples of how communities are using hazards data and information when making land use decisions.

Part of the maintenance and growth plan for this project involves other Great Lakes Restoration Initiative projects, particularly those focusing on the economic impacts of extreme precipitation, visualizations that depict different lake level scenarios, habitat restoration, and historical, current, and future lake level data.

The partnership is also developing an outreach and training strategy focused on building awareness and providing technical assistance to Great Lakes communities.




*Outreach and training discussion notes.*