Diving into the Digital Coast: Great Lakes

Jan. 20, 2021

DIGITAL COAST: Coastal community leaders use the content found in this NOAA-sponsored website to address issues commonly associated with a changing climate and a growing population.

DATA: Find and download data for your coastal management needs.

U.S. Great Lakes Hardened Shorelines Classification 2019: This vector data set contains hardened shoreline classifications for the U.S. Great Lakes shoreline. The database consists of shoreline segments classified as either artificial or natural, along with structure type and condition. The data were created by digitizing shoreline using National Agriculture Imagery Program imagery from 2014 through 2017 and comparing it with oblique imagery.

TOOLS: Data alone is not enough. Use these tools to turn data into helpful information.

Lake Level Viewer (U.S. Great Lakes): This web-based tool creates visuals that capture lake level changes that range from six feet above to six feet below historical long-term average water levels in the Great Lakes. Potential shoreline and coastal impacts are also provided. This information can be used to determine appropriate preparations, including zoning restrictions, infrastructure improvements, and habitat conservation.

Coastal Flood Exposure Mapper: This online visualization tool supports communities that are assessing their coastal hazard risks and vulnerabilities. The tool creates a collection of user-defined maps that show the people, places, and natural resources exposed to coastal flooding. ***The current geography of this tool does not include the Great Lakes -- an expansion to the Great Lakes is planned for 2021.***

TRAINING: Digital Coast Academy offers a wide range of learning resources.

Virtual - Nature-Based Solutions for Coastal Hazards: This course is a starting point for coastal managers and planners preparing to design and implement green (natural) infrastructure projects to reduce natural coastal hazards in their communities.

Adaptation Planning for Coastal Communities: Attend this course to gain a thorough grounding and practical skills for incorporating adaptation strategies into planning processes.

Case Studies: Learn from these peer-to-peer case studies how other coastal practitioners have tackled thorny issues.

Amending Land Use Codes for Natural Infrastructure Planning: Learn how a Sea Grant agent is working with one community to audit and amend its existing land use codes and ordinances to be more inclusive of green infrastructure projects.

Enhanced Engagement and Risk Communication for Underserved Communities: Research Findings and Emerging Best Practices: To better understand how NOAA can effectively serve these stakeholders and develop culturally relevant and targeted resources to reach these communities, this literature review of risk communication strategies was created. Population focus areas include low-income populations, recent immigrants, ethnic communities, and rural

communities. Topics explored include effective risk communication approaches, barriers to risk communication, individual or community risk tolerance, and the types of information needed for a risk communication strategy.

Nature-Based Solutions: Benefits, Costs, and Economic Assessments: Use these three quick references to gain information about nature-based solutions, ecosystem services, installation and maintenance costs, and tips for assessing the costs and benefits of reducing coastal hazard impacts.

How to Map Open Space for Community Rating System Credit: This "how-to" provides a step-by-step approach for earning this credit (CRS Activity 420) in areas that are already protected, and identifying places where additional credit could be earned through future preservation efforts. It also provides templates and worksheets to compile verification information. The steps draw from FEMA's *Community Rating System Coordinator's Manual* (2017), and reference related elements in other Community Rating System activities, such as floodplain mapping (Activity 410). This page includes the video we showed during the training.

TOPICS: Gain easy access to the Digital Coast resources often associated with these topics.

STORIES: See how organizations are using Digital Coast resources to address coastal issues.

OTHER RESOURCES

Summary of the Digital Coast Act

Digital Coast Connections: Monthly newsletter that includes the latest Digital Coast data and resources.

GeoZone Blog: Tech talk for the Digital Coast

Digital Coast in your State: These reports showcase usage statistics and top data, tools, stories and resources for each state.

FEMA's Great Lakes Coastal Flood Study: This site provides information on FEMA's efforts to update Flood Insurance Rate Maps (FIRMs) in the Great Lakes.