

GREAT LAKES WATER LEVELS INFORMATIONAL MEETING



Coastal Hazard Resources



RESOURCES FOR GREAT LAKES COASTAL PROPERTY OWNERS

Coastal hazards like erosion and flooding along Wisconsin's Great Lakes coasts can be a threat to properties, particularly when water levels are high. Below is a list of available tools and resources to help individuals understand coastal hazards, weigh the risks coastal hazards pose to a property, understand options for addressing these hazards, and get started on implementing actions if necessary. While these tools can be helpful to gauge coastal hazard risk and develop a plan, major or immediate concerns should seek assistance from an engineer, geologist, or other qualified professional.

To find this document online, use web search

Resources for Great Lakes Coastal Property Owners



UNDERSTANDING COASTAL PROCESSES

When dealing with coastal hazards like erosion and flooding, it can be helpful to understand how the forces of nature like water levels and waves can combine to threaten your property.

Living on the Coast

Booklet describing natural coastal processes and overall strategies to manage risk to coastal properties. It's essentially Coastal Engineering 101 and a go-to resource for helping people to get a broad understanding of the issues facing their property.

publications.aqua.wisc.edu/product/living-on-the-coast-protecting-investments-in-shore-property-on-the-great-lakes/

ASSESSING VULNERABILITY

Flood and erosion hazard mapping combined with a sense of historic water level conditions can be combined to help understand the risk a particular property may face

from coastal hazards. While these tools can be helpful to gauge risk, any major and immediate concerns should seek professional assistance from an engineer, geologist, or other qualified professional.

Wisconsin Shoreline Inventory and Oblique Photo Viewer

View historic photos of the coast, assessments of bluff and shoreline conditions, and measurements of historic bluff and shoreline recession in a web-based, interactive map of Wisconsin coastal data.

floodatlas.org/asfpm/oblique_viewer/

FEMA Flood Map Service Center

A Search-By-Address tool to quickly see if a property is in a FEMA mapped floodplain, which indicates it is at high flood risk. Properties not in a FEMA mapped floodplain should still assume they are at a moderate to low flood risk.

msc.fema.gov/portal/search

Great Lakes Water Level Dashboard

Interactive visualization of Great Lakes water level records to see historic highs & lows.

https://www.glerl.noaa.gov/data/dashboard/GLD_HTML5.html

Lake Level Viewer

Interactive map that visualizes the extent of rising and falling water levels along the shores of the Great Lakes from six feet above average lake levels to six feet below average lake levels.

coast.noaa.gov/llv/

REVIEWING YOUR OPTIONS

Many possible options exist to address coastal hazard issues. The appropriate actions for a particular property are often situational and site specific. The best option for a property experiencing coastal hazard issues can range from do-nothing, implementation of site management best practices, relocation of a house, and when absolutely necessary, construction of shore protection structures. The resources below offer some considerations when weighing these options.

Adapting to a Changing Coast – Options and Resources for Lake Michigan Property Owners

Publication with an overview of 16 management options for adapting to changing bluffs and beaches. These options cover low-impact practices, bluff stability practices, structural shore protection, nature-based shore protection, and collaboration options.

publications.aqua.wisc.edu/product/adapting-to-a-changing-coast-for-property-owners/

Great Lakes Shore Protection Structures and Their Effects on Coastal Processes

Detailed fact sheet describing different types of shore protection structures and their potential impacts, both positive and negative, on the shoreline.

publications.aqua.wisc.edu/product/great-lakes-coastal-shore-protection-structures-and-their-effects-on-coastal-processes/

Stabilizing Coastal Slopes on the Great Lakes

Detailed fact sheet describing the coastal conditions and processes that can lead to bluff failure and some options for stabilizing the slope of a coastal bluff.

publications.aqua.wisc.edu/product/stabilizing-coastal-slopes-on-the-great-lakes/

IMPLEMENTING CONSTRUCTED MEASURES

If you decide that your best option is to proceed with constructed measures to protect your coastal property, then it's time to move forward and work with contractors, engineers, and potentially even your neighbors to consider, prioritize, and implement appropriate management actions.

Placing Erosion Control Structures on Great Lakes

Wisconsin Department of Natural Resources website with information on requirements and considerations for shore protection projects in Wisconsin

dnr.wi.gov/topic/Waterways/shoreline/GreatLakesErosionControl.html

Working with Engineers and Contractors on Shore Protection Projects

Fact sheet describing the process of finding and working with qualified coastal professionals (which can have unique challenges compared with working with engineers and contractors on typical projects).

publications.aqua.wisc.edu/product/working-with-engineers-and-contractors-on-shore-protection-projects/

Great Lakes Coastal Engineering Firms & Contractors

Partial list of known firms that have completed projects on Lakes Michigan or Superior. It is only a partial list and is in no way a list of "approved" or "recommended" firms.

seagrant.wisc.edu/our-work/focus-areas/coastal-processes-and-engineering/resources-for-property-owners/great-lakes-coastal-engineering-firms-and-contractors/