

Frequently Asked Questions About Shore Protection During Great Lakes High Water

November 15, 2019

Michigan has more than 3,000 miles of Great Lakes shoreline. The Department of Environment, Great Lakes, and Energy (EGLE) protects, preserves, and restores these shorelines through many programs including the permitting of shore protection structures. Excessive or poorly designed structures can increase damage to neighboring properties and disrupt the natural processes along the shoreline. Record lake levels were set in Lakes Superior, Erie, and St. Clair this past summer and Lakes Michigan and Huron are just inches below their historic highs. This year the number of shore protection permits requested are up nearly three times from five years ago.

EGLE is working to help shoreline property owners protect property threatened by erosion resulting from high lake levels, including:

1. Expediting review of all permit applications for shoreline protection and prioritizing by level of risk to public health and safety. In some cases where homes or critical infrastructure are at risk permits can be issued in a matter of days.
2. Dedicating additional staff to assisting property owners and local officials in understanding the permit process.
3. Creating an internal response team on Great Lakes erosion issues to coordinate statewide activities, including streamlining and expediting permitting, providing help to permit applicants, and communicating with the public, local officials, and others.
4. Launching a new webpage called Great Lakes High Water Levels at Michigan.gov/HighWater. Property owners can find information and links to helpful topics, begin the permitting process, and review a list of potential contractors at this webpage.
5. Creating streamlined permitting processes for Great Lakes shoreline protection projects including a new Minor Project Category and revising EGLE's procedure for activities not constituting a use in a Critical Dune Area.
6. Exercising its emergency permit authority to issue permits where they are needed to protect the public health, safety, or welfare.
7. Holding workshops and informational sessions for the public on Great Lakes high water levels and permitting.
8. Providing grant funding opportunities for local coastal communities for long-term planning related to coastal resiliency and master planning through EGLE's Coastal Zone Management Program.

Property owners can call EGLE's *Environmental Assistance Center* at 800-662-9278 (tell the operator you need information about Great Lakes shoreline erosion issues), or by e-mail to EGLE-Assist@Michigan.gov.

What types of permits are needed for shoreline protection on the Great Lakes?

To install shoreline protection on the Great Lakes, you will need a permit from both EGLE and the United States Army Corps of Engineers (USACE). Only one application is needed for both agencies (the Joint Permit Application is submitted through Michigan.gov/MiWaters); however, the permits are issued separately. Other local regulations may also apply. If the water level is at or above the proposed structure, a permit is required regardless of the ordinary high water mark elevation.



It is important to submit all the needed application information upfront to avoid delays due to missing information on the application. MiWaters, the online permitting database noted above, provides applicants information about the status of their applications.

Are permits required for work above of the Ordinary High Water Mark (OHWM)?

If the water level is at or above the proposed structure, a permit is required regardless of the OHWM elevation. The OHWM elevations for the lakes are as follows: Lake Michigan and Huron 580.5 feet, Lake Superior 602.6 feet, and Lake Erie 572.2 feet (International Great Lakes Datum 1985).

How should I begin the process?

The first thing you should do is find an experienced shoreline protection professional or contractor. The next step is to figure out what type of shoreline solution is best for your site. Possible shoreline solutions include permanent shoreline armoring, temporary erosion protection, or even moving homes and other structures away from the line of erosion.

What is the best shore protection design?

The design of shore protection structures should be specific to the site and the shore protection should avoid and minimize adverse impacts to the dunes, bluffs, the Great Lake, and other natural resources as much as possible. EGLE cannot design projects, so you will need to hire an engineer, contractor, consultant, or other professional that has experience with designing and permitting of shoreline protection structures. Information on different shoreline protection types can be found under the heading "Living on the Coast" on EGLE's Great Lakes High Water Levels webpage, Michigan.gov/HighWater.

For projects in Critical Dune Areas, structures should be located at the base of the dune that poses a danger to human health and safety, such as erosion that is threatening a house. Retaining structures are not permitted in the foredune as they cut off the sediment supply needed to build beaches and dunes during lower water periods.

My project is in a critical dune area. Is there additional information needed to process my application for a permanent shore protection structure?

In most cases, you will also need to apply for a [special exception](#) if you are in a Critical Dune Area. An application for a special exception is similar to a variance and must be submitted with the permit application in [MiWaters](#). The proposed shore protection will not meet the permitting criteria without a special exception. In your special exception application, make sure to identify if the structure is lakeward of the dune crest or if there are impacts to slopes with grades measuring 33 percent or greater. The law requires the site plans be prepared by a registered professional architect or a licensed professional engineer. The applicant must identify the human health and safety issues that are threatened by erosion. Include the distance between the house and the eroding bluff on the application for special exception and on the plans.

Applicants may expedite their application for special exception by providing a letter from the local unit of government indicating approval of the proposed project or waiving their right to comment. All critical dune area applications also require a permit or waiver letter from your local [Soil Erosion and Sedimentation Control agent](#).

Shore protection is expensive. What are the alternatives?

Moving your house further landward gives you a natural buffer from shoreline erosion, and often costs less than construction and maintenance of permanent shore protection. There are

professional structure movers experienced in relocating structures a safer distance from the shoreline. A permit to move the structure is required from EGLE's Water Resources Division, if the property is in a high risk erosion area or a critical dune area.

Are sandbags an option for shore protection?

Sandbags are not an effective solution for long-term shore protection. Sandbags as shore protection are not a preferred method of protecting against erosion as the bags are temporary, they cannot withstand wave energy or ice movement, the bags break open and become litter that impacts water quality and wildlife on the shoreline and in the lake, and they slump and cannot hold the slope and shoreline erosion continues. There are alternatives – riprap revetments or relocating structures to a safer site.

In addition, using lake bottomlands as a source of sand to fill sandbags also has an adverse impact to the environment and public trust and will likely not be permitted because doing so removes natural sand from the littoral drift process along the water's edge that provides necessary material for shoreline and beach creation, stabilization, erosion protection, and wave energy dispersal.

Who must remove structures that fall into the lake?

Under the law, a property owner is responsible for ensuring that their structures are removed from lake bottomlands and water in the event these structures become obsolete. Local units of government may also have requirements regarding recovery of structures that are in danger of falling into the lake.

How will permit applications be prioritized?

EGLE will be expediting review of all permit applications for shoreline protection by level of risk to public health and safety. In some cases where homes or infrastructure are at risk, permits can be issued in a matter of days. Although still expedited, shore protection for stairways, decks, or boardwalks will be lower priority.

EGLE can also issue emergency conditional permits when needed. If EGLE has a complete application, an emergency conditional permit may be written the same day the public notice is posted in MiWaters. EGLE will then continue the processing of the application that includes the 20-day period for public comment. An application for an emergency conditional permit should include site photos describing the emergency, and site plans with cross-sections of the proposed project including the distance from the edge of erosion to the identified structure in danger.

EGLE urges caution when evaluating waterfront property for damage from waves and water and when taking site photos. Waves may have scoured sand from below the land above it creating an overhang. You could be in danger when walking out on the overhang to document the eroding shoreline or when walking beneath the overhang and it collapses.

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