



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

# EGLE's Role and Responses to High Water

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East/West Michigan Air and Waste Management  
Association and Environmental Law Section Joint  
Conference

November 17, 2020

# Great Lakes Water Levels

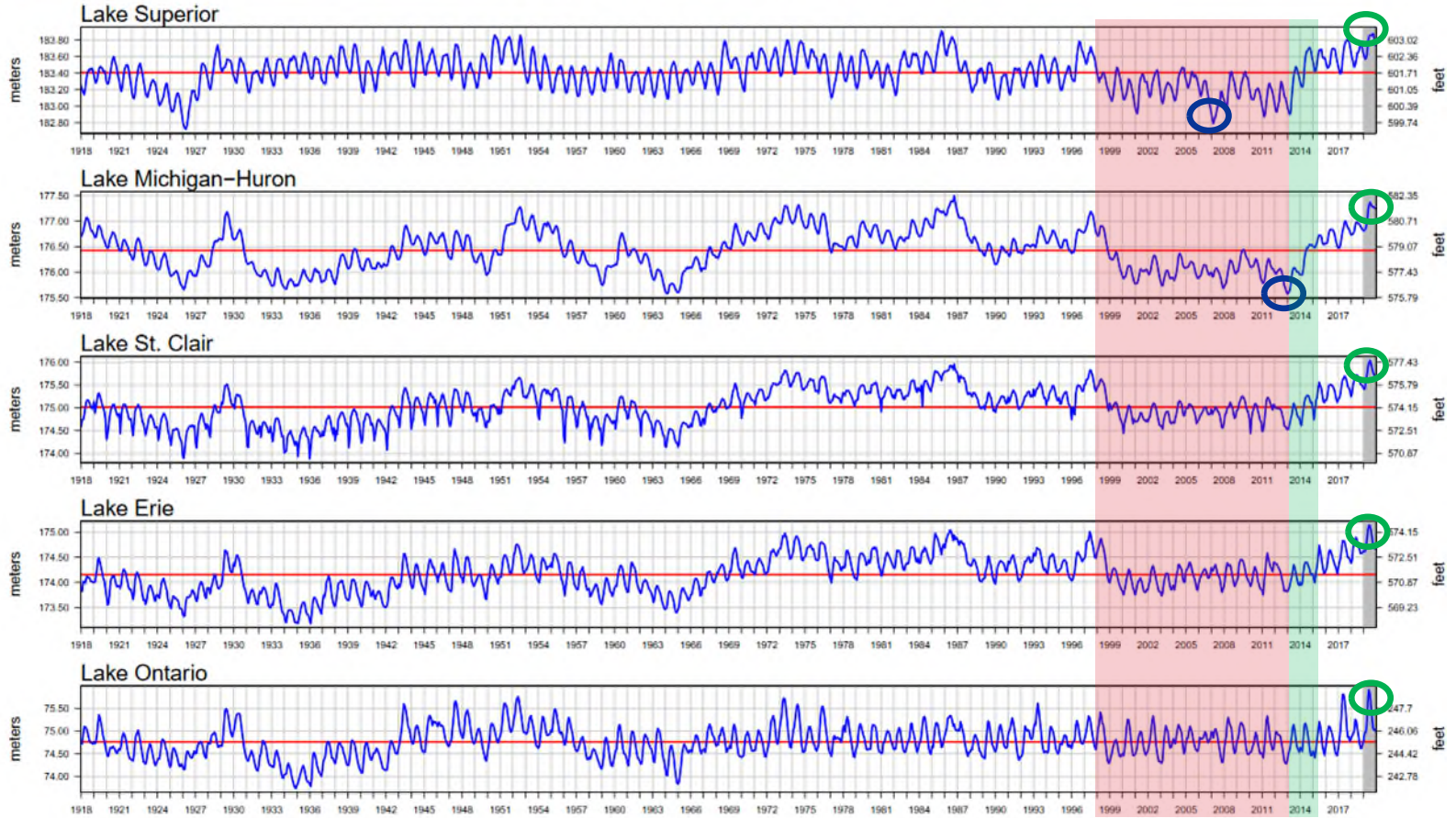


- Water levels are cyclical with periods of low and high water
  - Can last for several years
  - Influenced by precipitation, runoff, and evaporation
- All the Great Lakes are currently at or near record highs

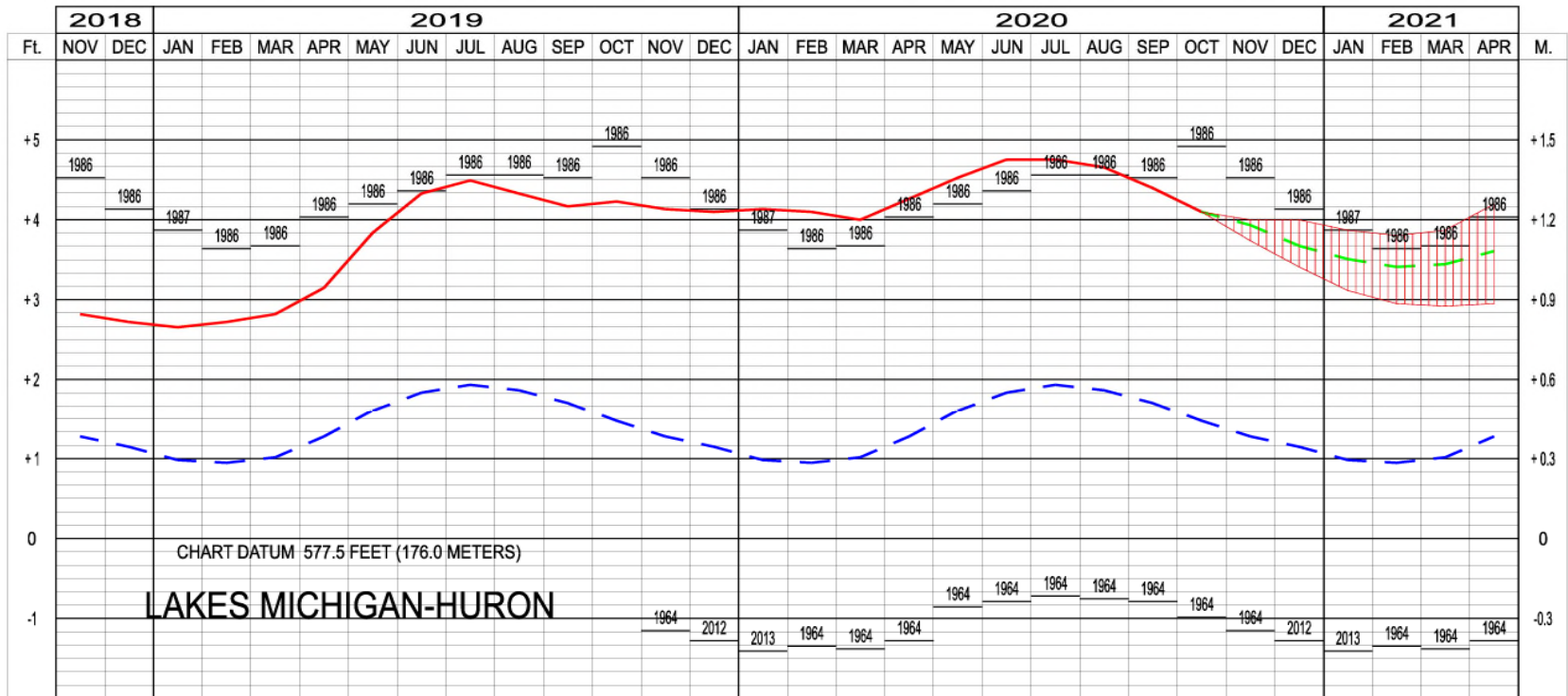


### Great Lakes Water Levels (1918–2020)

— Monthly Mean Level    — Long Term Average Annual



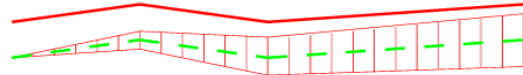
# LAKES MICHIGAN-HURON WATER LEVELS - NOVEMBER 2020



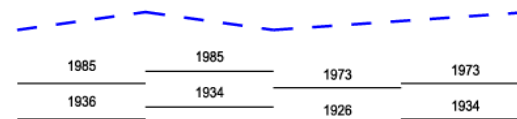
## LEGEND

LAKE LEVELS

RECORDED  
PROJECTED



AVERAGE \*\*  
MAXIMUM \*\*  
MINIMUM \*\*



\*\* Average, Maximum and Minimum for period 1918-2019





Swimmers Cove Road,  
Alpena

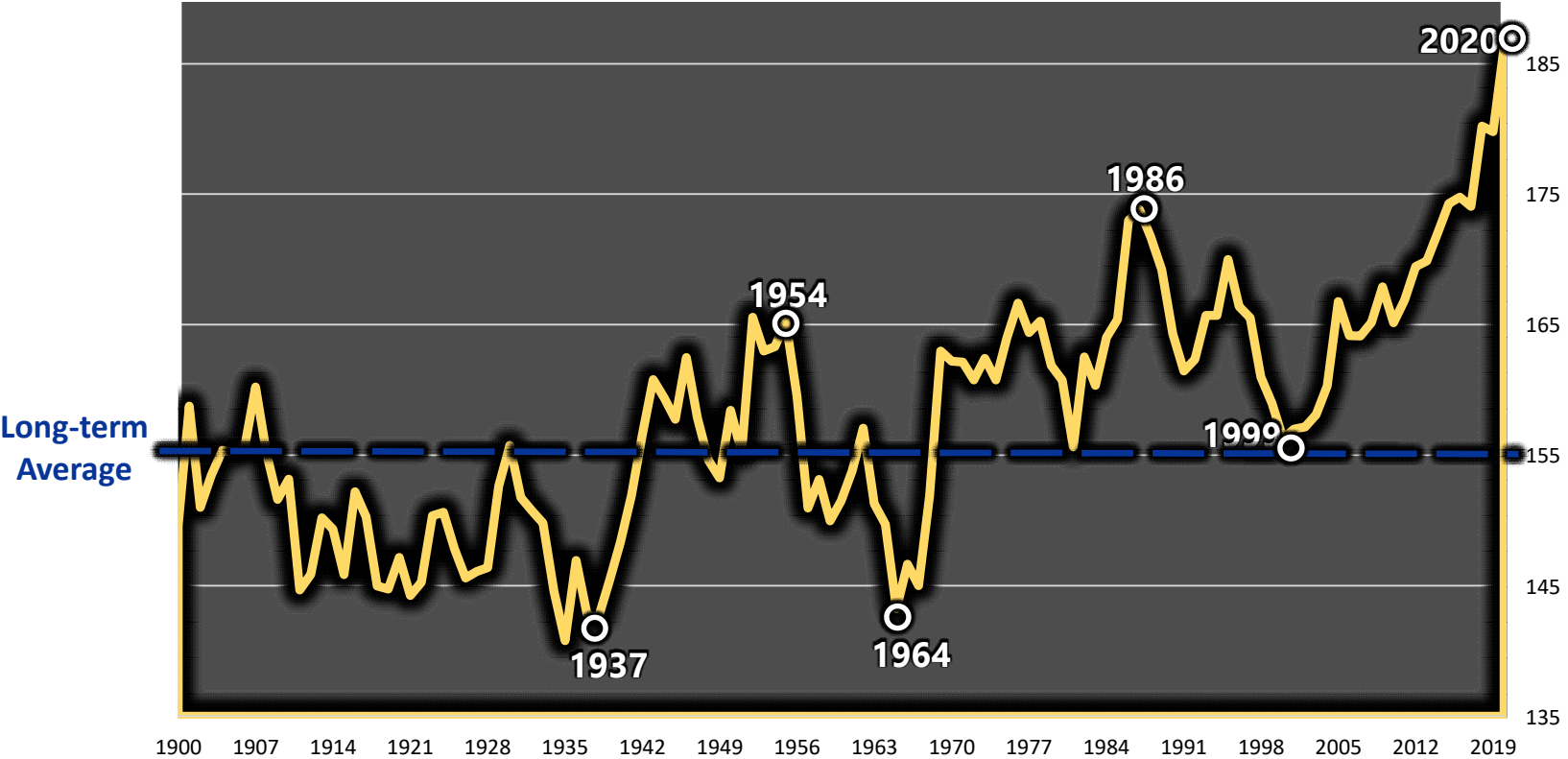


# Why is there so much water?

- Overall, the last 10 years have been MUCH wetter than normal across the Great Lakes states.
- As a whole, the state of Michigan is in the middle of the wettest 1 year period, 3 year period, and 5 year period since records began over 120 years ago.



# Michigan 5-Year Rolling Total Precipitation



# So what does it all mean?

- Substantial risk/damage to property, infrastructure, and natural resources along the coastlines for the last 2-3 years.
- Catastrophic impacts in the last few months in some areas.
- Permitting staff & private design/construction contractors are already over-capacity.
- EGLE's role is specific to permitting shore protection structures and assisting coastal communities in planning to prevent future crises.





## Residential Shoreline Erosion Impacts:

- Property Damage
- Public Health & Safety























# Infrastructure Impacts:

- Wastewater
- Drinking Water
- Communications
- Energy
- Transportation
- Commerce
- Public Safety
- Public Health











## Inland Flooding:

- Property Damage
- Public Health
- Recreation & Tourism













Crooked Lake, Barry County



## Shoreline Flooding/Inundation:

- Property Damage
- Infrastructure Damage
- Public Health
- Public Safety







# What is EGLE doing about it?

## Internal response team

- Expediting Permits
- Assisting Customers
- Communication



# EGLE Action - Expediting Permits

- Prioritizing based on risk to homes, critical infrastructure, and human health & safety
- Staff reassignments and overtime
- Exercising emergency permitting authority
- Streamlining permitting processes, where allowed by law:
  - Minor Project category for temporary sandbag stabilization.
  - Modifying critical dune procedures

# Shoreline Protection Permits

- Both EGLE and the U.S. Army Corps of Engineers (USACE) Permits are required prior to placing shore protection or other structures on the Great Lakes bottomlands.
- EGLE/USACE joint permit application (JPA) is available at:  
[www.michigan.gov/jointpermit](http://www.michigan.gov/jointpermit)

The USACE retains jurisdiction over traditionally navigable waters including the Great Lakes, connecting channels, other waters connected to the Great Lakes where navigational conditions are maintained, and wetlands directly adjacent to these waters.



## AN EGLE Permit provides the following authorizations:

- Water Quality Certification under Section 401 of the Clean Water Act
- Coastal Zone Certification
- Screening and Coordination with State and Federal Endangered Species Program
- Screening and Coordination with the State Historic Preservation Office (SHPO)





# Part 325 Great Lakes Submerged Lands

- Regulates construction activities lakeward of the Ordinary High Water Mark (OHWM) through permit application process
- Conveys Great Lakes public trust bottomlands for specific uses through deeds, leases and use agreements

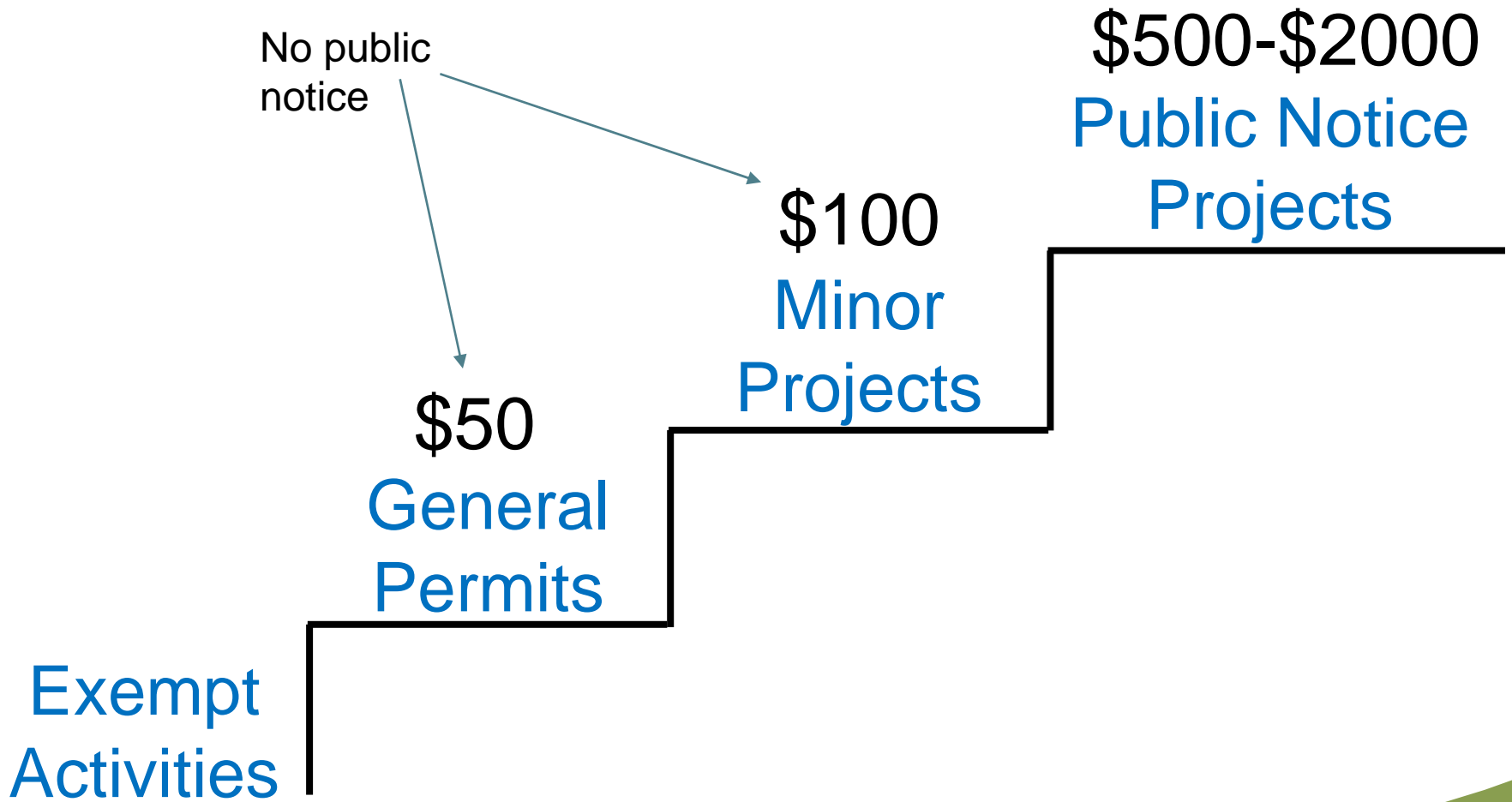
# ORDINARY HIGH WATER MARK

## REVISED ORDINARY HIGH WATER MARK (OHWM) FOR PART 325 GREAT LAKES SUBMERGED LANDS

	OHWM IGLD 1955	<b>OHWM IGLD 1985</b>
Lake Erie	571.6'	<b>572.2'</b>
Lake St. Clair	574.7'	<b>575.3'</b>
Lake Michigan/Huron	579.8'	<b>580.5'</b>
Lake Superior	601.5'	<b>602.6'</b>



# 3 Tiered Permitting System



# Shoreline Protection Permits

There are Minor Project Categories for shoreline protection in order to protect homes and critical infrastructure and avoid and minimize adverse impacts. (for example: MP Categories 41 and 49)

Projects that meet these MP categories can be expedited by EGLE, do not require a public notice, and have reduced application fees.

# How should I begin the process?

1. Find an experienced shoreline protection professional or contractor.
2. Decide what type of shoreline solution is best for your site.
3. Complete the application and be ready to communicate and turn around information requests quickly





# Shore protection is expensive. What are the alternatives?

Moving a 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



# What is the best shore protection design?

It Depends!

- The design of effective shore protection structures should be specific to the site and can be very complex.
- Shore protection should avoid and minimize adverse impacts as much as possible.

\*hire experienced professionals whenever possible.





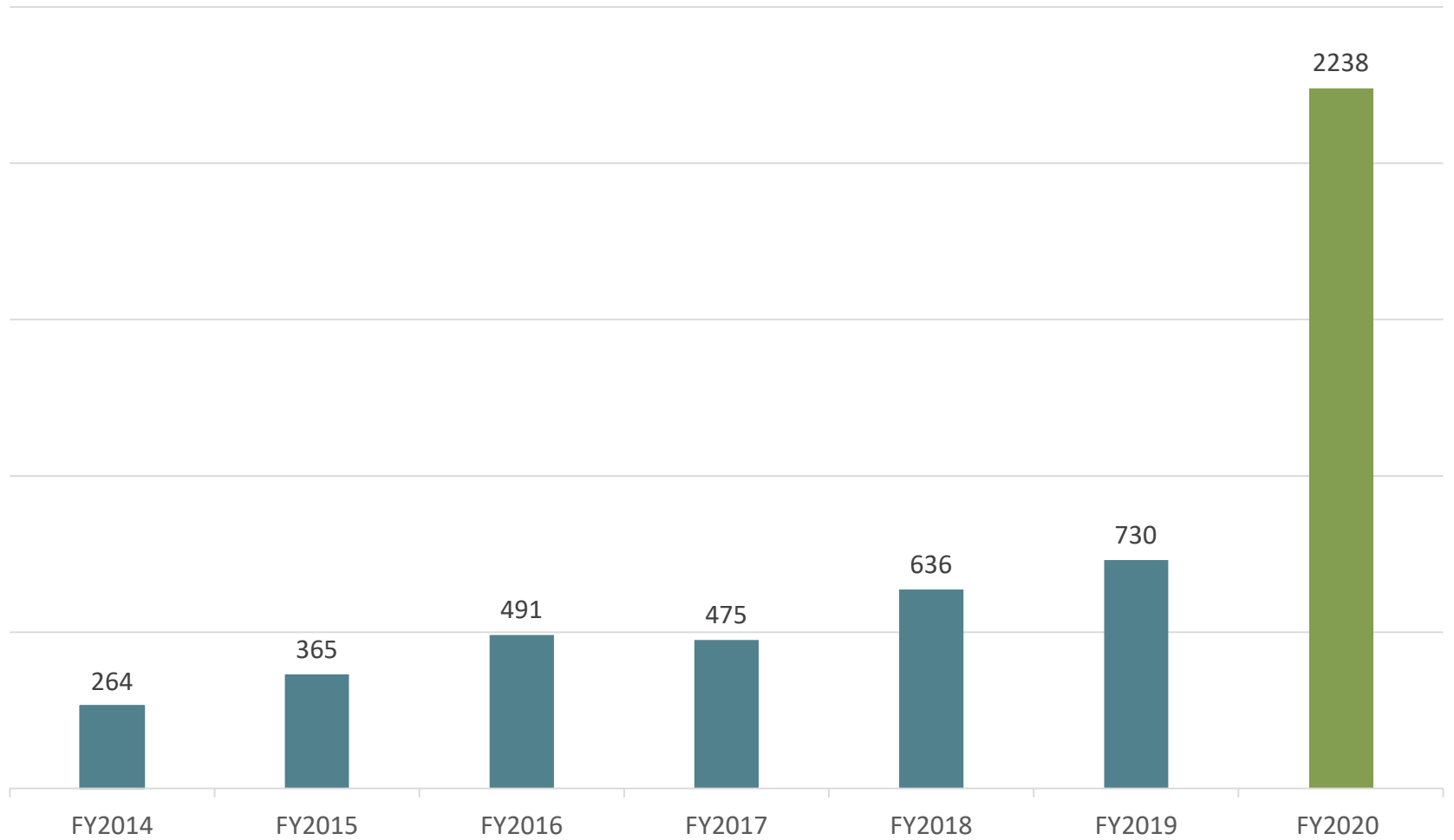
# Possible options to consider:

- Home/Structure Relocation
- Bioengineering
- Temporary Sandbags/Geotubes
- Rip Rap Shore Protection

# Things to Know

- Priorities: Protect homes and critical infrastructure such as roads, septic systems, wells
- Project should minimize impacts
- The right solution is site specific
- We typically:
  - do not permit “reclaiming” land
  - permit the least impactful option to protect the home and critical infrastructure

# Great Lakes Shoreline Permits





# EGLE Action – Assisting Customers

- ❑ New webpage: Great Lakes High Water Levels ([Michigan.gov/HighWater](https://Michigan.gov/HighWater))
  - General water level information
  - Contractor List
  - Permit application assistance
  - FAQ document (on [Michigan.gov/HighWater](https://Michigan.gov/HighWater))
- ❑ Customer assistance on-call (8:30-4:30, M-F):
  - Environmental Assistance Center (800-662-9278 or [EGLE-assist@Michigan.gov](mailto:EGLE-assist@Michigan.gov))
  - Identify that you are calling about high-water levels

# [Michigan.gov/HighWater](http://Michigan.gov/HighWater)

The screenshot shows the EGLE website header with navigation links: EGLE, Contacts, Permits, Online Services, Programs, Locations, and MI.gov. The main navigation bar includes: ABOUT EGLE, AIR, LAND, WASTE, WATER, and SUSTAINABILITY. A search bar is located below the navigation. The left sidebar lists various water-related topics, with 'Great Lakes' selected. The main content area displays the breadcrumb 'EGLE / WATER / GREAT LAKES / SUBMERGED LANDS' and the title 'Great Lakes High Water Levels'. The text describes the current high water levels in the Great Lakes, the impact on shorelines, and provides links for more information, including 'High Water Level Information for the Great Lakes', 'Living on the Coast: Protecting Investments in Shore Property on the Great Lakes', 'Great Lakes Shorelines Information for Permit Applicants', and 'Great Lakes Shoreline Protection Contractors List'. It also mentions 'Coming soon: Frequently Asked Questions about Shore Protection during Great Lake High Waters'. Below this, the 'Shoreline Protection Permits' section explains that permits are required from both EGLE and the U.S. Army Corps of Engineers (USACE) and provides a link for 'Applying for a Permit (Joint Permit Application)'. The final paragraph states that minor project categories for shoreline protection are available to applicants, can be expedited by EGLE, and have reduced application fees.

EGLE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

Search

ABOUT EGLE AIR LAND WASTE WATER SUSTAINABILITY

WATER

- Great Lakes
- Areas of Concern
- Coastal Management
- Ballast Water Reporting
- Dredging Projects
- Shipwrecks
- Shoreland Management
- Submerged Lands
- Submerged Logs Recovery
- Water Use, Levels, & Diversion
- Great Lakes Coordination
- Michigan's Water Strategy
- Drinking Water
- Lakes & Streams
- Wetlands
- MIWaters

EGLE / WATER / GREAT LAKES / SUBMERGED LANDS

## Great Lakes High Water Levels

The Great Lakes are experiencing the highest water levels since 1986, and storms and wave action are causing erosion and flooding of the shoreline. Water levels on the Great Lakes are cyclical with periods of low and high water, with each period lasting for several years depending on the amount of precipitation, runoff, and evaporation that occurs. Great Lakes shorelines include bluffs, floodplains, coastal wetlands, sand dunes, and development, and the type of shoreline determines how high water levels will impact property. Due to the resulting erosion and threat to property that high water levels can cause, property owners are requesting information on permitting and technical resources that are available from the Department of Environment, Great Lakes, and Energy (EGLE).

[High Water Level Information for the Great Lakes](#)

[Living on the Coast: Protecting Investments in Shore Property on the Great Lakes](#)

[Great Lakes Shorelines Information for Permit Applicants](#)

[Great Lakes Shoreline Protection Contractors List](#)

Coming soon: [Frequently Asked Questions about Shore Protection during Great Lake High Waters](#)

Contact the Environmental Assistance Center (EAC) at 800-662-9278 or [EGLE-Assist@Michigan.gov](mailto:EGLE-Assist@Michigan.gov), if you have questions or need assistance. The EAC is staffed from 8:30 a.m. to 4:30 p.m. Tell the operator that you are calling about shoreline erosion and you will be transferred to a field staff person. After hours, please leave a message and someone will get back to you the next business day.

## Shoreline Protection Permits

Permits are required from both EGLE and the [U.S. Army Corps of Engineers \(USACE\)](#) prior to placement of any shore protection using the EGLE/USACE joint permit application information below.

[Applying for a Permit \(Joint Permit Application\)](#)

Minor Project Categories for shoreline protection projects that avoid and minimize adverse impacts are available to applicants (for example, MP Category 41). Projects that meet these MP categories can be expedited by EGLE, do not require a public notice, and have reduced application fees for the applicant.

# Information on different types of shoreline protection and Great Lakes Shoreline contractors is available at [Michigan.gov/HighWater](http://Michigan.gov/HighWater)



**EGLE** Great Lakes Shoreline Protection

Great Lakes shoreline protection contractors can assist you with construction on the shoreline and obtaining needed permits. In order to assist you in finding a contractor, the Department of Environment, Great Lakes, and Energy (EGLE) has compiled a list of available contractors. The success of your project is dependent on hiring a competent contractor to conduct the work. It is important that you do your due diligence when selecting a contractor. EGLE does not provide specific contractor recommendations.

When selecting contractors, you should carefully evaluate their qualifications. The WRD has put together the following suggestions to help you with that evaluation:

**Check credentials.** If you are looking for someone to help with Great Lakes shoreline protection, find out whether or not the contractor has a good background in the different shoreline protection options available (e.g., rock revetments, moving structures away from the shore, etc.). Is the contractor familiar with local, state, and federal laws pertaining to the shoreline? If a contractor is from out of state, make sure they are familiar with Michigan's environmental regulations.

**Examine workmanship.** Ask the contractor for examples of previous work similar to the services you are requesting, including EGLE permit numbers. What type of track record does this company have with local, state, and federal agencies? Request references that include clients who have had projects reviewed and approved by EGLE. Check all references. You can obtain copies of EGLE's permit including correspondence between EGLE and the contractor through [Michigan.gov/MWaters](http://Michigan.gov/MWaters).

**Ask others.** Ask colleagues and other businesses, such as real estate, developers, homebuilders, etc., that are routinely involved in shoreline concerns. Ask them about their experiences and knowledge regarding the contractor you are considering.

The contractors included on the list are not recommendations of EGLE. No attempt was made to compile a comprehensive list of contractors and listing or omission of any firm does not imply endorsement or disapproval. EGLE makes no endorsement or representation of any qualifications or lack of qualifications by any of the individuals or companies. Companies are included without a review of qualifications. The State of Michigan makes no warranties, expressed or implied, as to this list's accuracy or completeness, or to the competency, qualifications, or professional abilities of any contractor listed. This list is provided as a service by EGLE, and the user is advised to exercise good judgment in its use. **You should investigate these businesses similar to any other service or establishment that you would deal with.**

	Address	CITY_STATE_ZIP	Email	Phone	House Moving
42 North Custom Homes	P. O. Box 8531	Holland, MI 49422	<a href="mailto:david@42nhomes.com">david@42nhomes.com</a>	616-292-5241	
Adam Hass Fine Homebuilding, LLC		Grand Haven, MI	<a href="mailto:adamstevenhass@gmail.com">adamstevenhass@gmail.com</a>	616-402-9626	
Adams Marine Construction	8956 N Oceana Dr	Pentwater, MI 49449	<a href="mailto:adamsmarineconstruction@gmail.com">adamsmarineconstruction@gmail.com</a>	231-869-2196	
American Village Builders	4200 W Centre	Portage, MI 49024	<a href="mailto:wbutton@avbinc.com">wbutton@avbinc.com</a>	269-760-0986	
Andringa Construction	1589 71st st	Fennville, MI 49408	<a href="mailto:andringaid@comcast.net">andringaid@comcast.net</a>	269-214-4653	
Architectural Classics, LLC		Ludington, MI	<a href="mailto:klmcc@accs.com">klmcc@accs.com</a>	231-845-3885	



# EGLE Action – Communication

- Press Releases
- Blog Article  
([www.michigan.gov/mienvironment](http://www.michigan.gov/mienvironment))
- Local Units of Government Webinars
- Media Webinars
- Several local citizen meetings conducted and scheduled
- Conference panels

# EGLE Additional Efforts

- ❑ Mapping the predicted inundation along the Great Lakes Shoreline for future expected water level rise
- ❑ Notifying municipalities to encourage them to begin emergency planning efforts to protect their infrastructure and the public
- ❑ A high-water summit was convened to bring state and federal agencies together to plan and respond to extreme high-water levels.
- ❑ Working with county drain commissioners on emergency preparedness
- ❑ Informational sessions for local officials on planning and responding to extreme high-water levels

# INFRASTRUCTURE ISSUES

- High water/floods can affect wastewater systems ability to treat.
- Higher groundwater tables can infiltrate into municipal collection systems, and additional flow needs treatment.
- Inflow into municipal collection systems through emergency sanitary overflows, combined sewer treatment facilities can affect ability to treat.
- High water can flood stormwater detention ponds.
- High water/floods can flow into septic tanks and drain fields and affect treatment.
- High water/floods can expose and damage sewer pipes and pump stations.



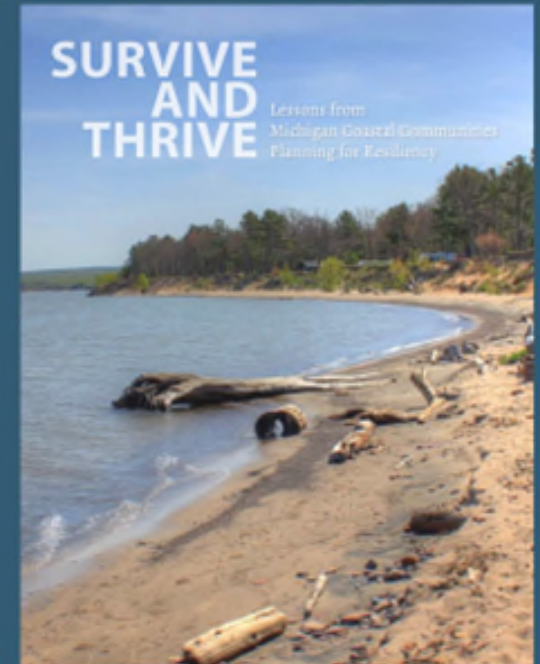
# Michigan Coastal Management Program

Preserve | Protect | Restore | Enhance | Wisely Develop

Helping coastal communities become hazard-ready by providing technical and financial assistance to local partners for creative coastal projects.

2021 Grant Funding Opportunity currently open; applications due December 20, 2019.

- Develop coastal community resilient master plans and implementing ordinances.
- Increase local knowledge of coastal hazards.
- Promote adaptation, accommodation, and coastal construction set-backs at the local level.



[Michigan.gov/CoastalManagement](https://Michigan.gov/CoastalManagement)

**EGLE**

[Michigan.gov/EGLE](https://Michigan.gov/EGLE)

Contact: Ronda Wuycheck  
([wuycheckr@michigan.gov](mailto:wuycheckr@michigan.gov) or 517-420-5921)

Michigan Department of  
**Environment, Great Lakes, and Energy**

[Michigan.gov/EGLE](http://Michigan.gov/EGLE)



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# Questions?





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