

TODAY'S WEATHER:

www.wunderground.com/us/mi/kewadin

STORM CENTRAL

www.gtlakes.com/storm-central/

WIND MAP

<http://hint.fm/wind/>



Beach July 2015–water level 580.0

TNN hopes this journey to a greater beach proves to be a round trip to 2015 from conditions July 2020 (below) to the prior boardwalk design (above). This is the third high water period in our lifetime. It has been the worst season of them all for erosion.

These reports will continue through the year. Please share recovery stories of beach, bluff, Marram grass, and mixed cobble bird habitat. TNN News will publish stories of interest.

And please guide children and visitors to stay on the beach path. Keep dogs on a leash to respect the space shore birds' need for undisturbed breeding.

Same beach July 2020–water level 582.2



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Dear Neighbor,

TNN operates virtually – no physical facility and no employees. TNN engages support partners within the limits of resources.

TNN News curates articles to your interests. Your donation finances work to address challenges to lifestyle and environment..

We appreciate your commitment.

Mail check & form to TNN, P.O. Box 887, Elk Rapids, MI 49629- PAY PAL on website.

UPDATE: THE JOURNEY TO A GREATER BEACH.

Off-shore 'Sill Type' Breakwater on a Coved Beach - Antrim County, MI Coast

By: Keith Termaat

TNN News has reported on the quest to stabilize a beach along the GT Bayshore with a breakwater just offshore. Skeptics may say the beach would have enlarged anyway because of a water level decline in Lake Michigan. Reality is this one rock high breakwater design plus the incidental decline in water level worked together. In fact, water level declined very slowly during this period. We'll have to wait for the effect of seasonal water level increase to the July-August peak. See *Story* below.

Photo to the right shows mid-April conditions.

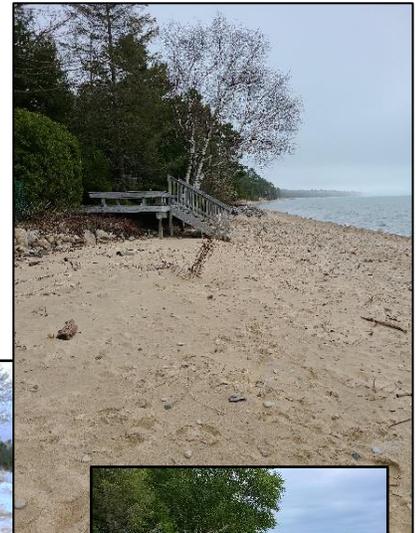
Water level 580.61. A gain of 48 feet from bluff to waters' edge of which up to 15 feet can be attributed to water level decline.

Photo at right, March windblown sand on top of snow. A natural force re-asserts itself to restore beach and bluff. **Level 580.64**

Photo below, mid October 2020 Granite boulders nearly covered by new sand just inland of the windblown surf. **Level 582.0**



START at right: July 2020 - Memorial Day storm took eight feet of bluff and beach. Decided to build breakwater after three years of watching and waiting. **Level 582.4**



Above, end August. Breakwater as built. Stake marks OHWM 20 inches down **Water level 582.2**

NOTE: Water levels per US Army Corps of Engineers.

STORY. This third in a series story chronicles results of the breakwater installed August 30-31, 2020. Since then, beach 'tourist' neighbors have come by to see results for themselves. TNN is gratified that documented facts matter and spread by word of mouth. (TNN donors can receive an in-person on-site explanation by appointment.) Several residents alongshore have already built, planned, or expressed support for this solution should damaging high waters persist. There are reports of groins being removed and of a breakwater planned seaward of an existing seawall to restore the beach by natural forces. *Cont'd Page 2*

COASTAL LIFESTYLES – MICHIGAN

SURF America's 3rd Coast

Courtesy: of 'Pure Michigan' **EXCERPT**

<https://www.michigan.org/article/trip-idea/how-to-surf-the-great-lakes-americas-third-coast>

Great lakes breakers were surfed a century ago. A significant wave of surfers arrived in the Midwest to sprout small surfing communities across the Great Lakes. Now, 'Third Coast' surfing is more popular than ever!

Ryan Gerard has surfed most of his life. That passion led him to open [Third Coast Surf Shop](#) in St. Joseph and New Buffalo. Go with Ryan's spotlight Michigan's surf lifestyle in a video.

<https://youtu.be/iq8aGt0FJUY>

Greatness of the Lakes makes surfing possible; (5,400 cubic miles) of water and 10,900 miles of shore, more than East and West coasts combined!



Photo Courtesy of Pure Michigan

Tips for first-time surfing Great Lakes:

1. Check Weather. Waves are smaller in summer, making it the perfect time to learn to surf. Larger waves and prime surfing time are fall, winter and spring. In summer, a stand-up paddle board is a cool way to get a feel for balance.

2. Get the Right Equipment. Short boards are best for advanced surfers, long boards for beginners. Wetsuits are crucial for safety in colder seasons, with hood, booties, and gloves.

3. Learn the Moves. Take a lesson, bring a friend and tackle the sport as a group! Learning together is safer.

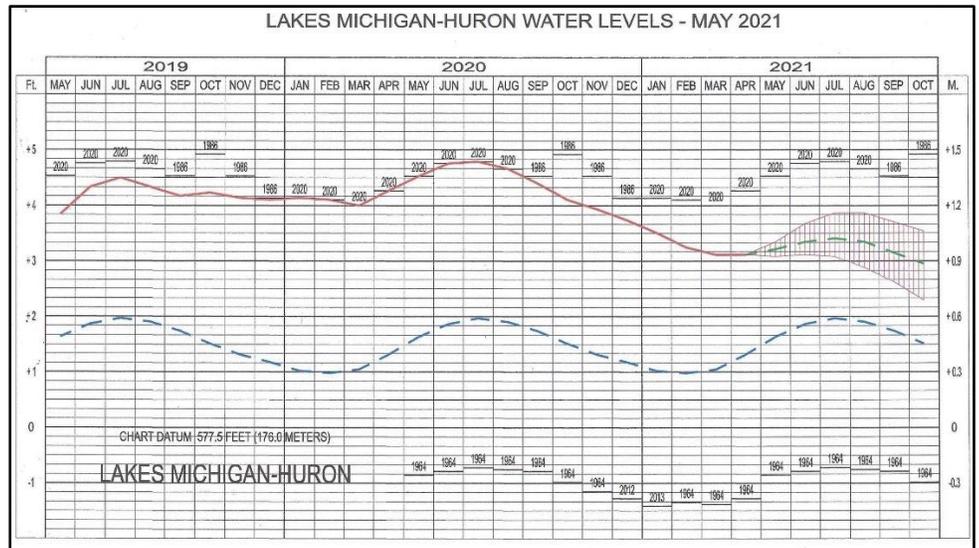
Then catch the perfect wave!

UPDATE: JOURNEY TO A WIDER DEEPER BEACH. *Cont'd from page 1.*

Broad deep beaches have many benefits ranging from recreation (grandchildren love them) to environmental as habitat for Piping Plovers and other shore nesting birds is restored. It also appears that nearshore water is deeper at breakwater and beach as sand builds seaward, as well as landward by wave action. The timeless harmony of natural forces assisted by thoughtful human action prevails. Replanting beach grasses destroyed by high water comes next. We await with anticipation the reemergence of long-gone species of native crayfish, frogs, and fish fingerlings. It is humbling to rediscover the beneficent powers of Mother Nature based on 50 years of personal observation assisted by expert consultants.

LAKE MICHIGAN-HURON WATER LEVEL – May 7, 2021. BY: US Army Corps of Engineers

<https://www.lre.usace.army.mil/Missions/Great-Lakes-Information/Great-Lakes-Water-Levels/Water-Level-Forecast/Monthly-Bulletin-of-Great-Lakes-Water-Levels/>



Projected May 7 water levels show Lake Superior rose 4 inches; Lake Michigan rose 1 inch from April. Downstream lakes rose also. Forecast May 7 levels for all lakes are below this time last year. Lake Superior is 4 inches below last year, Lakes Michigan-Huron, St. Clair, and Erie are 15 inches below last year, and Lake Ontario is 26 inches below last year. All the lakes remain above their long-term monthly average levels, except for Lake Ontario. Projected water levels for June 7 show Lake Michigan-Huron to rise 2 inches from May.

FEMA ENVIRONMENTAL ASSESSMENT - GREAT LAKES SHORELINE STABILIZATION

Draft Programmatic Environmental Assessment (PEA) **Public comment expires May 12, 2021.**

BY: Federal Emergency Management Agency (FEMA) **ABSTRACT: Link to 208 Page Document**
<https://www.fema.gov/emergency-managers/practitioners/environmental-historic/region/5>.

Proposed action(s) for shoreline stabilization measures on Great Lakes States Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota. The PEA will evaluate measures eligible for FEMA grants to evaluate potential impact of (FEMA) proposed projects on the human and natural environment. Purpose of shoreline stabilization assistance FEMA Grants is to reduce risks from erosion hazards that affect people, structures, and infrastructure by mitigating the effects of flowing water, wave, or wind.

PEA evaluates impact of bioengineered stabilization including bank regrading, marsh and wetlands creation-restoration-enhancement, beach/dune nourishment; and hard measures such as revetments, bulkheads/seawalls, breakwaters, groins, jetties; and connected actions like infrastructure repair /relocation, piers, boardwalks, rain gardens/bioswales, structure acquisition/demolition or relocation. *Cont'd on Page 3*

FEMA - STUDY AREA Cont'd (In red)



Purpose of PEA: Identify potential adverse and beneficial effects associated with shoreline stabilization measures; Assure FEMA compliance with environmental & historic preservation; Address potential impacts of shoreline stabilization. The PEA would be used to streamline review of future applications for grant funding for shoreline stabilization projects on the Great Lakes.

April 10, 2021- Document 2882891



Photo: Courtesy of Olde Path Inc

PLANT MARRAM BEACH GRASS

Planting Time: March to May – Sep. to Dec.

Olde Path Inc.

<http://www.mydunegrass.com/about-dune-grass/planting-advice/>

Van's Pine Nursery

<https://www.vanspinesnursery.com/american-beach-grass/>

2022 TNN BOARD

Help Out TNN: Protect **resident lifestyles** along the Antrim Grand Traverse Bay coast and watershed. TNN serves Townships of Torch Lake, Milton, Elk Rapids, and Banks-Norwood to Elk Rapids. Director nominees are chosen from TNN members, donors.



WISCONSIN SEA GRANT Program has served the interests of TNN News readers. Its work has been featured in TNN News on topics related to shore erosion with ground-protected recommendations. TNN believes that saltwater experience provides freshwater insight into Lake Michigan-Huron. This conversation with retired UW Sea Grant leader, Anders Andren was featured in 'On Wisconsin'.

<https://onwisconsin.uwalumni.com/conversation/anders-andren/> PLEASE READ THE ENTIRE ARTICLE.

EXCERPT OF A CONVERSATION - Anders Andren

UW Sea Grant's long-time leader charts a new course. After two decades as Director of University of Wisconsin (UW) Sea Grant Institute, Andren is ready to sail off into retirement. The Finnish native was on the faculty of the College of Engineering. Under his leadership, Sea Grant Institute fostered studies of pollutants, invasive species, aquaculture, aquaponics. Photo: Bryce Richter



How did you become interested in marine science? I grew up on the Åland Islands in the Baltic, where shipping was a major business. My father was a sea captain. I spent a lot of time at sea in my youth. I traveled all over the world with him. Everywhere, you name it. Except landlocked countries. When he was about fifty, his ship company got heavily in the car-carrying trade between North America and Europe. He was asked to head up the operation for North America, and that's when I came over here for a year and check things out. Here I am.

UW-Madison is 1000 miles from a seashore. How do we have Sea Grant?

Well, the enabling legislation says that a Sea Grant Institute shall be situated on our nation's marine (ocean) or Great Lakes coast. In fact, every Great Lakes state has a Sea Grant Institute — Illinois and Indiana Sea Grant are combined. Wisconsin is one of the largest in the nation.

What's Sea Grant's role on campus? Actually, Sea Grant is a (UW) System institute. It's analogous to the land-grant concept, in that the law says that the nation should avail itself of our major universities, research universities, so that we will assure ourselves of sustainable ecological and economic improvements of our marine and Great Lakes resources.

It's absolutely and truly an embodiment of the Wisconsin Idea. We spend a lot of time understanding the research priorities of the Great Lakes, and we also have a lot of citizen stakeholder meetings along the shores of Lake Michigan and Lake Superior. And then we support over a hundred faculty, staff, and students throughout the System, plus places like Marquette, St. Norbert's, Lawrence — we support them to do research on the priorities that we determine.

What do you see as the current priorities for the Great Lakes? We're trying to understand the effect of global warming on the Great Lakes. For example, Lake Superior, in the last ten years has seen its average temperature ... three to five degrees warmer than the previous 150 years. The other huge area of concern is pathogens — viruses and bacteria have arrived from foreign continents; some of these show up on our beaches. They contribute to beach closings.

We're also looking at aquaculture and supporting a vigorous program. We're interested in cool-water fishes, primarily yellow perch. (At) a Midwest Friday-night fish fry; the delicacy is yellow perch. A year ago, no one knew how to get yellow perch to spawn more than once a year. But a breakthrough by Sea Grant-UW Milwaukee has found a way for aquaculturists spawn yellow perch at any time.

What's next for you? I've been fortunate to work with some of the world's best at what they do. It's a privilege to have the best staff anybody could have to work with — talented and just fun to be around. I'm going to keep active in a number of projects in Costa Rica, Tanzania, and Zimbabwe.

I understand that you also have a band. About ten years ago, my Sea Grant colleagues, and I put together a band, called the Not-So-Muddy-Waters Blues Band. We get together once a year, or every other year, to perform.