

# Parcels in High Risk Erosion Areas of Houghton Township, Keweenaw County

HREAs identified East to West      Date of Designation: March 14, 2018

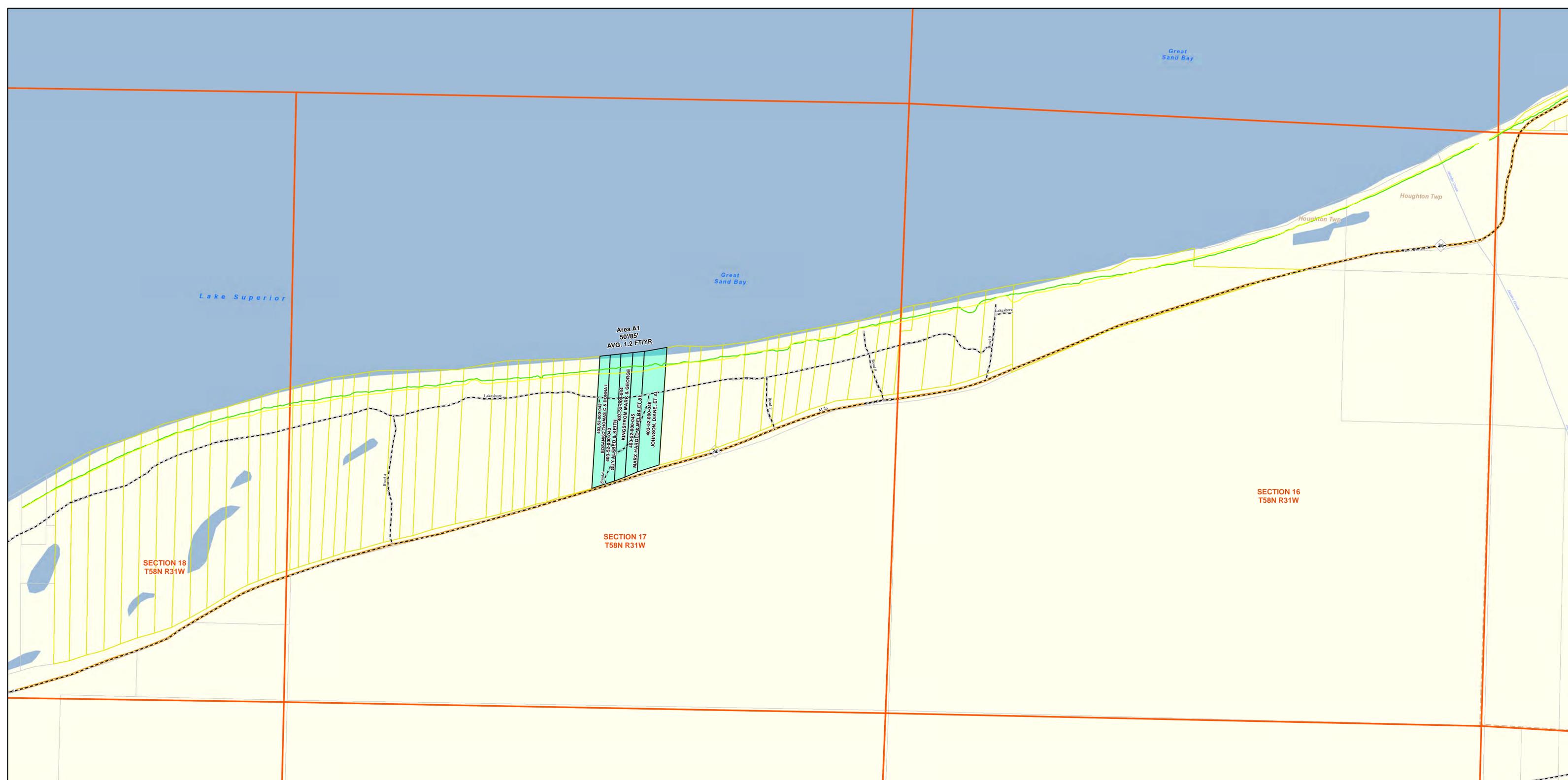
HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
A1	1	42-403-52-000-046	1.2	50	85
A1	2	42-403-52-000-045	1.2	50	85
A1	3	42-403-52-000-044	1.2	50	85
A1	4	42-403-52-000-043	1.2	50	85
A1	5	42-403-52-000-042	1.2	50	85

HREA\* - Some parcels may be in multiple HREAs due to their large size.

30 yr PRD\* is the Projected Recession Distance (feet) landward from the Erosion Hazard Line for readily moveable structures including those structures 3,500 square feet or less and built on a basement, crawlspace or pilings. Additional restrictions may apply per Administrative Rules 281.21-22.

60 yr PRD\* is the Projected Recession Distance (feet) landward from the Erosion Hazard Line for non-readily moveable structures such as large structures and septic systems.

**Designation runs with the land including subsequent splits. Absence of a property number does not guarantee the property is located outside of an HREA. Contact the Great Lakes Shorelands Unit, Water Resources Division, DEQ in Lansing or the local DEQ field office for assistance.**



Area A1  
50'x85'  
AVG. 1.2 FT/YR

SECTION 17  
T58N R31W

SECTION 16  
T58N R31W

SECTION 18  
T58N R31W

403-52-000-042  
BOSSMAN, JAMES C & DONNA I  
403-52-000-043  
GUYALLER, KEITH  
403-52-000-044  
KINGSTROM, MARK & GEORGE  
403-52-000-045  
MARK, MARCO & MELBA, ELA  
403-52-000-046  
JOHNSON, DIANE, ET AL

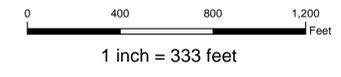
# High-Risk Erosion Area Update - 2017

Houghton Township, Keweenaw County  
T58N, R31W Section 17

Great Sand Bay

## High Risk Erosion Areas 30 YR/60 YR Projected Recession Distance (Feet) Average Annual Rate of Recession (FT/YR)

AREA A1: 50'x85' (Avg. 1.2 FT/YR)



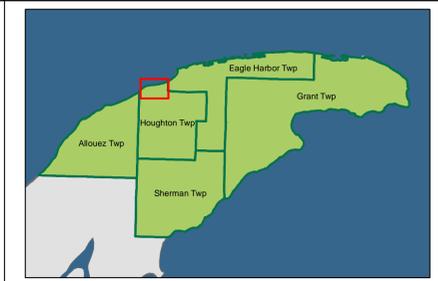
- Roads
- Sections
- HREA Parcels
- 1983 HREAs (approximate)
- Parcels
- De-Designated Parcels

**MAP INFORMATION:**

This map identifies potential High-Risk Erosion Areas under Part 323, Shorelands Protection and Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The shaded areas indicate recession of at least one foot per year.

Background imagery, as well as roads and survey data were provided by the State of Michigan, Center for Shared Solutions and Technology Partnerships.

Questions regarding this map should be directed to the Michigan Department of Environmental Quality at 517-284-5567.



Map Created by: Jeremy Jones  
Environmental Quality Analyst  
Water Resources Division  
Michigan Department Of Environmental Quality  
9/14/2017

Recession/Accretion values for each area were calculated using the Digital Shoreline Analysis System from the USGS (Thaler, E.R., Himmelstoss, E.A., Zichichi, J.L., and Ergul, Ayhan, 2009, Digital Shoreline Analysis System (DSAS) version 4.0 - An ArcGIS extension for calculating shoreline change: U.S. Geological Survey Open-File Report 2008-127).