

E.A.S.T Sub - Watershed
Alongshore Trek – Eastport to ER



ALONGSHORE – BEACH TREK ALONG THE EAST SHORE OF GT BAY®

Eastport Barnes Park to Elk Rapids Dam Beach BY: Township Neighbors Network (TNN)

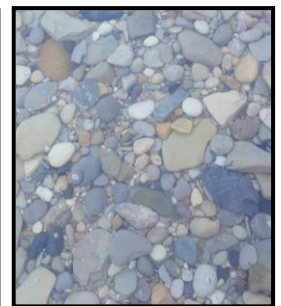
Why this 15 mile Trek? Observe condition of GT Bay east shore due to water level extremes for IJC to address, and prepare for autumn beach and water conferences.



This amazing shoreline provides great scenery, long vistas, diverse habitats, and beach recreation. Water levels change with storms, seasons and decades. Beaches are much better than in the low water years. Common sense response to water level change helps property and ecology values. This beach on the East Bay shore is real - current reality is different.

Water clarity is vital - Clear this summer! Zebra mussels are gone.

cobble in clear water



ER Real Estate Broker. Markets have priced-in GT Bay water levels change as part of big water, broad vistas, gorgeous sunsets and beaches. It's the quality of the beach that's important – more so than size. Beach grooming is beneficial to property values as is regulating water levels – within a range that balances property values with ecology. **Save Our Shorelines.org:** "Shoreline development increases property values and is an important source of tax revenue for local governments (& schools). Beach grooming is necessary to keep property values high and allow beach enjoyment".

Living on East Shore of Grand Traverse Bay

Quiet mornings with bird calls after a family evening and kids in the water. Last night's loon cries have faded and a bald eagle carrying a fish remains a memory. Herons and humming birds visit - and sometimes a deer or coyote. Few seagulls and sandpipers are seen. Morning coffee on the deck with surf sounds and long vistas is a favorite.

July TNN Trek along the East shore of Grand Traverse Bay. (at or below OHWM)

Readers know the low water story from these pages – those years ended in January 2013. This is the story of higher water eroding parts of the east shore of GT Bay. To see what's happening, TNN trekked 15 miles alongshore of the Bay's mid-north reaches: the south half of Birchview Road to Elk Rapids' Dam Beach (Zone A) and Creswell Road north to Eastport's Barnes Park (Zone B). Please see Map.

Smaller high quality groomed beaches are balanced by willows, shrubs, guzzles, marshes, and ponds that protect the shore and can harbor life. Not much Macro-biotic life was seen in the shallows – Cause? Likely deep water Quagga mussels. Parts of the beach are submerged under 1 ft. of water; too high or about right? Depends on your lot - there is wide variation for neighboring lots.

Some beaches, bluffs and dunes were seen eroding – the water is pristine.

Shore erosion is due in part from excess outflows from Lake Superior (sidebar on P. 2) but mostly heavy rain and snow, and complete ice cover in two of the last three winters. In this, the 4th summer of higher water, mud flats are gone. The last of the crud on cobble and rocks sheeted off in spring like wet wallpaper, and was scoured away by sand. Woody debris from eroded roots is still seen washed-up alongshore and as shadows in low spots in the water to be cleared by repeated 'blows' or storms.

Sugar sand beaches.

Public beaches use heavy equipment to groom the sugar sand we love. But machine grooming was rarely seen alongshore for non-public beaches. People TNN chatted with alongshore understand the benefit of sand – and beach grass, willows and native plants that hold sand. They know that sand is a gift that keeps on giving and protects the shore. These folks labor wisely to groom their sand garden by hand to balance greenery, sunbathing and play.

Residents are the first line of defense for the 664 parcels along the eastern shoreline.

TNN NEWS

2016 Summer Edition

Excessive Water Level Range

Range is greater for L. Michigan than for L. Superior & Lower Lakes.

As a start, TNN suggests a water level range of 4½ feet - Low 576.8 - High 581.3 feet (July 2016 is 580.4).

Extreme high water was tough on shore owners during 1986 record highs. On GT Bay east shore, a small number had to harden their shore to protect homes built to code during normal water level times.

Water does not have to have extreme highs or lows: IJC must implement its 'Crisis Response Criteria'. **NOTE A.**

SAVE OUR SHORELINES "People have always kept beaches clean and safe." Per Michigan Beach Grooming Law 2012 PA 247, Great Lakes shore owners can maintain beaches without first seeking a permit from MDEQ. But federal law still applies below the Ordinary High Water Mark (OHWM). "Shoreline development increase property values and are an important source of tax revenue for local governments (and schools). Beach grooming is necessary to keep property values high and for enjoyment of the beaches".

NOTE A: News Reports: Erosion on the shores of Lake Michigan

Record Eagle-South Bend Tribune-Chicago Tribune-Milwaukee Sentinel report significant beach loss in their states. Higher water is reported to be the cause of eroding beaches, bluffs & dunes. – up 4 feet since 2012

International Joint Commission (IJC) U.S. Canada governs Great Lakes.

Lake Michigan (and Huron) levels vary much more than other Great Lakes. TNN Pres. Termaat with partner ROWI met with the U.S. - IJC Chair in May on higher water shore erosion. The IJC declined to regulate water levels by acting on its 'Crisis Response Criteria'.

IJC did approve excess water release from L. Superior at the Sault despite higher water on L. Michigan-Huron.

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Beaches

Public



Elk Rapids Veterans Memorial Beach is grand – and maintained with mechanical equipment to move and grade clean sand pumped from the Harbor.

Records show that up to 5 acres of beach lie below water that is now 1 foot above average and 4 inches above last July.

Pocket Beach

Willows and shrubs grow to water's edge leaving room to read a book or sunbathe but not Badminton. Natural growth protects the shore by holding sand and nudging human footprints into the water.

Pocket beaches can be 40 feet wide and 20 feet deep, maintained by raking and moving sand by hand. In 15 miles of shore trek, only 2 of 664 parcels showed signs of mechanical grooming



Eroded by high water
These shore owners have not been as blessed. Late spring storms eroded this beach which now lies in part below water's edge.

Boat hoists solve a problem

Small boats cannot be left unattended or will soon be claimed by surf driven sand.

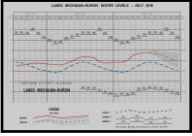
It takes paid brawn to place the hoist in Spring and remove it in autumn. Not to do so risks a metal pretzel twisted by winter storms or a hoist buried in sand..



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Lake Michigan-Huron July Water Levels



**1 ft. above
average – 4
in. above
last year**

Source: U.S. Army Corps of Engineers

VISIT TNN *ON-LINE:*

www.townshipneighborsnetwork.com

Serves Elk Rapids Elk Rapids Township-Village, Milton & Torch Lake Townships - between Grand Traverse Bay and the Chain of Lakes. This is literally an island on the east shore of L. Michigan's GT Bay.

LOCAL NEWS IN BRIEF - Regional

Kalkaska Health Center and Charlevoix Hospital joined the Munson Health Care System. TC to Charlevoix Bicycle Trail was approved in concept by all townships

Elk Rapids Township/Village.

Former Alden Lumber Site on US-31 rezoned from Industrial to Multi-family Residential. Means tested housing was proposed by a local church on Meguzee Point near ERHS. It was met by public opposition. ERV is waiting for new plans.

Milton Township

Has plan to acquire 400 acre Maplehurst Resort near Waring -Powell Rds. Access is from Cairn Hwy and US-31. GT Land Conservancy will fund \$2.975 million for acquisition and demolition.

Ownership transfers to Milton government to develop, manage, preserve, maintain. Milton also acquired land in Kewadin for a new beach park with 450 feet frontage on Elk Lake. This commits the Township to \$100K per year; \$300K of the \$1 million cost has been reserved to date.

Milton has 34 road-end parks totaling 12+ acres. Citizen complaints cited dog waste, garbage, overnight parking, tents, erosion. Milton has no care program for road ends.

Torch Lake Township.

Zoning ordinance amendment is being discussed for Bay-front & Torch Lake decks in size, location, setbacks. ZBA Chair proposed decks be reviewed case-by-case without a zoning change. The matter was referred to committee. The Bay is Federal water – Torch L. is local water

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Guzzles*



Guzzles* are a low spot usually on a barrier beach over which the Bay now and then flows into ponds. Usually a guzzle floods in an on-shore storm. It can also be a very shallow channel through a sandbar – formed by outflow of a river, creek, or brook.

* This definition and the title of this piece are drawn from the book, Alongshore by John R. Stilgoe, published by Yale University Press in 1994. It is a cherished gift from daughter Barbara. This is a salt water book - excerpts were adapted to our freshwater seas while on the TNN trek alongshore the Grand Traverse Bay East shore.

Near-Shore Marshes

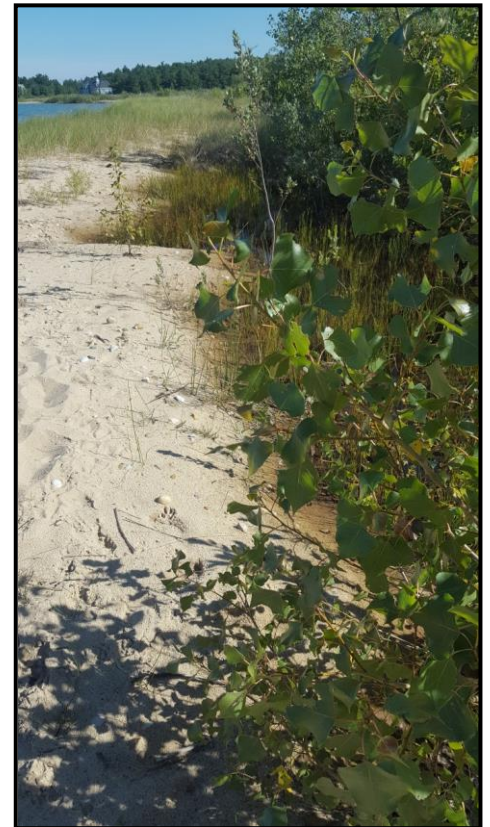
Storm driven sand overwhelms marshes during high water times – and sometimes builds them. Shore residents accept marshes to a point and build board walks across them. But sometimes the smell and insects are too much and a small marsh or pond may be filled-in by hand to form a pocket beach suitable for child play. (This was filled-in by surf)

Marshes 1000 feet inland (not shown)

Marshes behind barrier dunes, bluffs and barrier beaches only flow out. They are plugged to inflows from Bay waters.

Not by homes or streets whose bridges and culverts allow water flow to the Bay. Rather, streams are choked upland by fallen tree boles, mud banks, and eroded slopes. A farmer claims as a boy he caught salmon on the farm 1 mile in.

Inflows to large marshes from higher L. Michigan water could ease water level variation if carried out around the Lake.



Harbors: Cottage Harbor'



This group of boat hoists in front of Bay cottages forms a 'harbor'. Dozens exist to satisfy a prized desire of boating from home without a commute to the marina. But launch and removal of boats still depend on Elk Rapids Harbor.

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Bluffs



Eroded Bluff

Woody debris. Ground-up roots and bushes dislodged by storms soon deposit on shore. Debris lies in low spots on the



bottom near the shore – look for a shadow in the water.

A step too far



Harbors – Cont'd



Elk Rapids' Grace Harbor
Regional harbor - renowned statewide. Virtually all mid-east shore GT Bay boaters depend on ER Harbor – either with a slip - or seasonal /daily launch. The upper Harbor supports inland boaters.

Photo by Tom Vranich

Silted-up public harbor

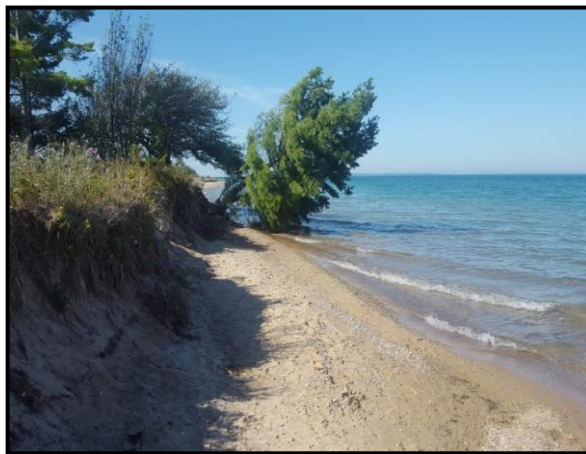
This harbor of thirteen slips silted up with sand driven by higher water and lies empty. Area boaters travel the Elk Rapids Harbor for launch and take-out.

Photo by permission of owner



Bluffs and Dunes

The power of water is greatest north of Old Mission (Zone B). The Peninsula protects the East shore of the Bay at more southern latitudes. But eroded bluffs are also seen in Elk Rapids Township and in Milton Township. Storm driven high water undercut the foot of the bluff and cascaded sand, natural plants and a White Pine into the 'sea'



Only once did TNN see a natural dune that slid into the Bay. Like bluff erosion more commonly seen, undercutting cascaded sand, White Pines and a Hemlock into the 'sea'



See the side bar for more Bluff images

Manmade shore hardening
Seawalls



Groins



Shore Hardening



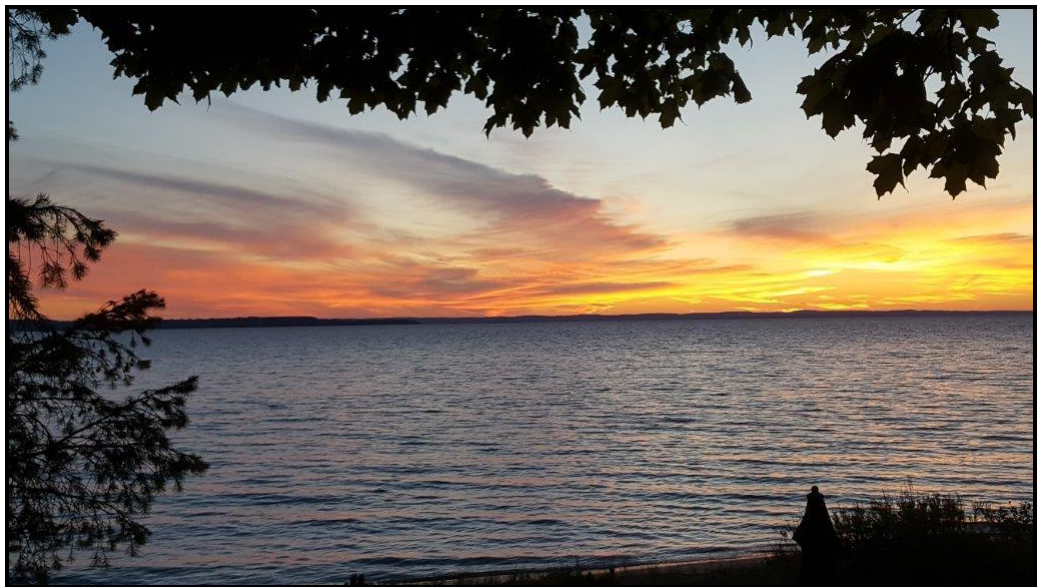
Blue Shale bluff
Hardens the shore naturally for a few hundred feet alongshore - shale bluffs are reported to be extensive in Zone C below Norwood.

Shore hardening structures protect only a small part of the shoreline.

Seawalls range from rocks, boulders and timber alongshore. Groins perpendicular to the shoreline are most commonly rock filled timber cribs, vertical boards jetted into the sand, and grout bags.

Living on East Shore of Grand Traverse Bay is quiet mornings listening to bird calls after an evening with family and kids in the water. Last night's loon cries have faded and the lovely sight of a bald eagle carrying a fish remains a sweet memory. Herons and humming birds visit - and the occasional deer and coyote. Morning coffee on the deck with surf sounds and long vistas of the Bay in soft light is a favorite time.

And of Course the Sunsets!



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