

A dramatic photograph of a large, curling wave on Lake Michigan. The wave is a deep teal color with white foam at its base and crest. The sky is a clear, vibrant blue, and several seagulls are visible in flight. The text "LAKE MICHIGAN" is superimposed in a white, distressed, hand-painted font across the top of the image.

LAKE MICHIGAN

THE UPS AND DOWNS!



FROM 95,000 TO 20,000 YEARS AGO

Ice covered  
most of the  
continent





# Glacier at Oval Beach

Ice age leaving

14000 Years ago

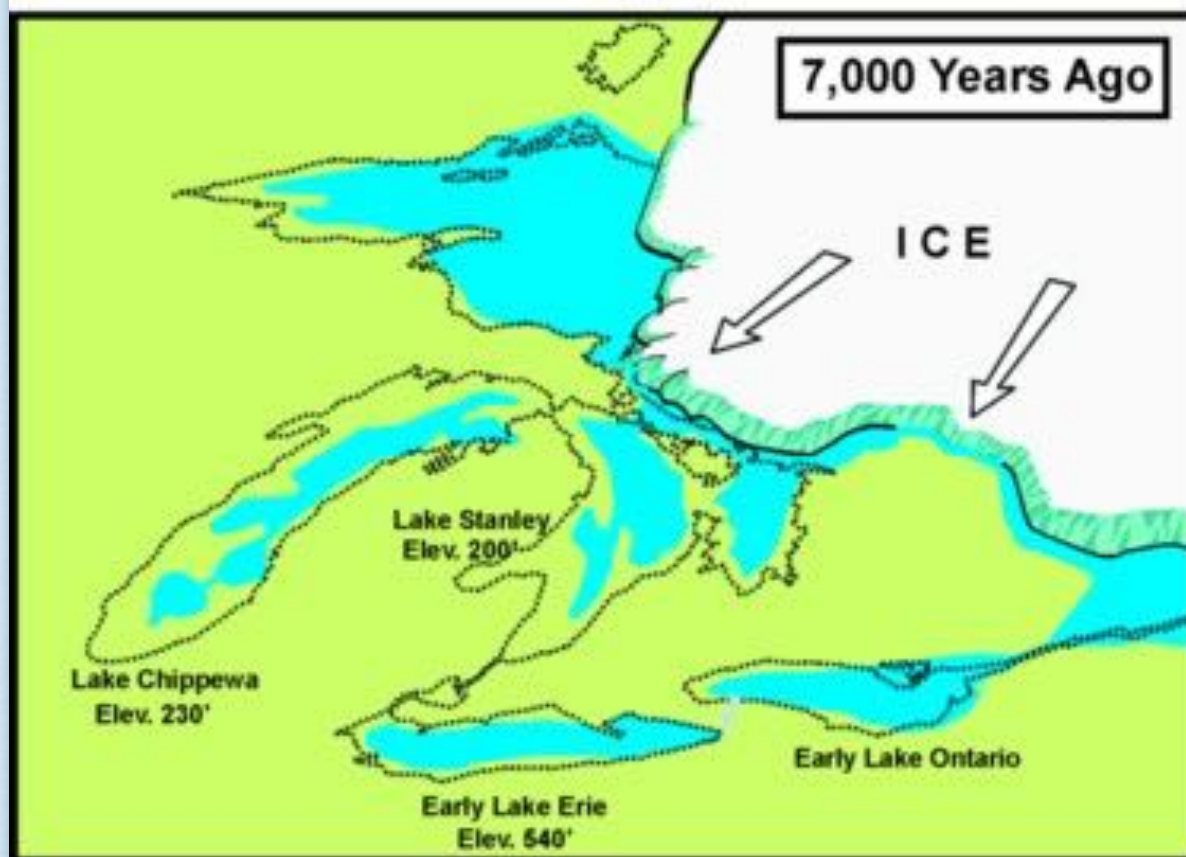
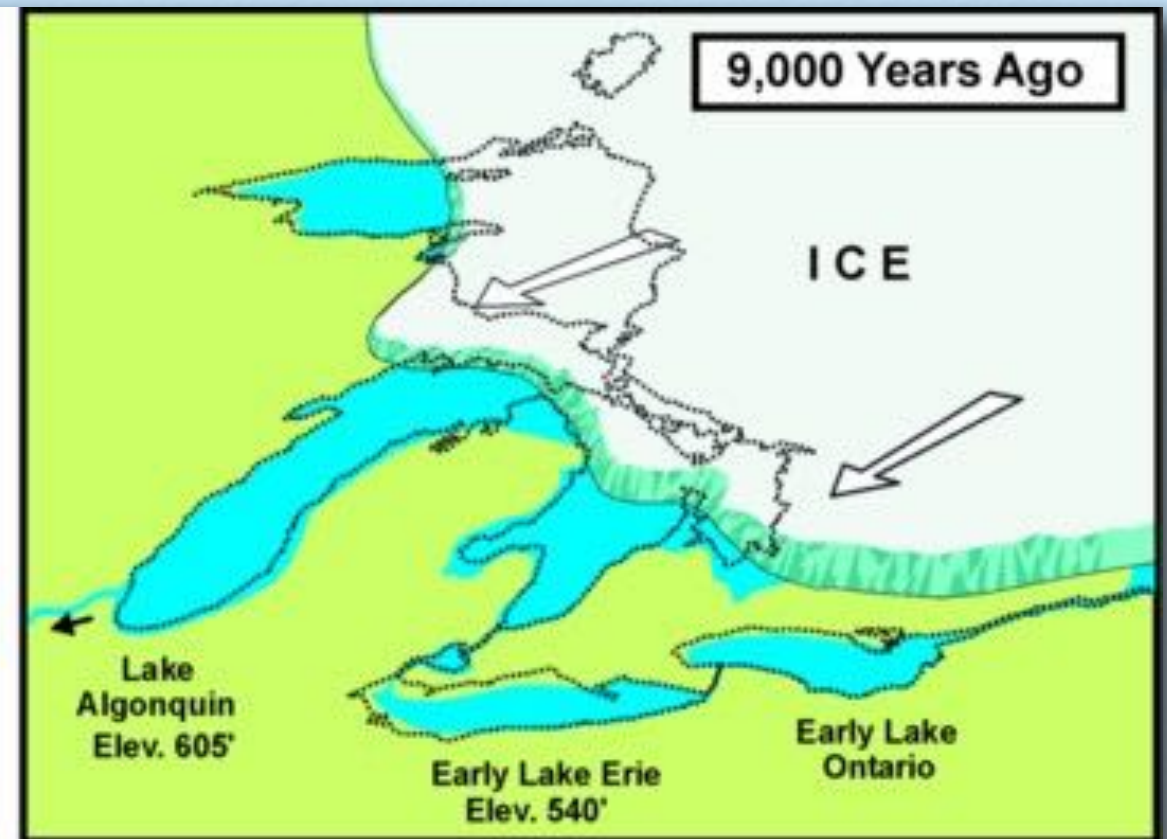
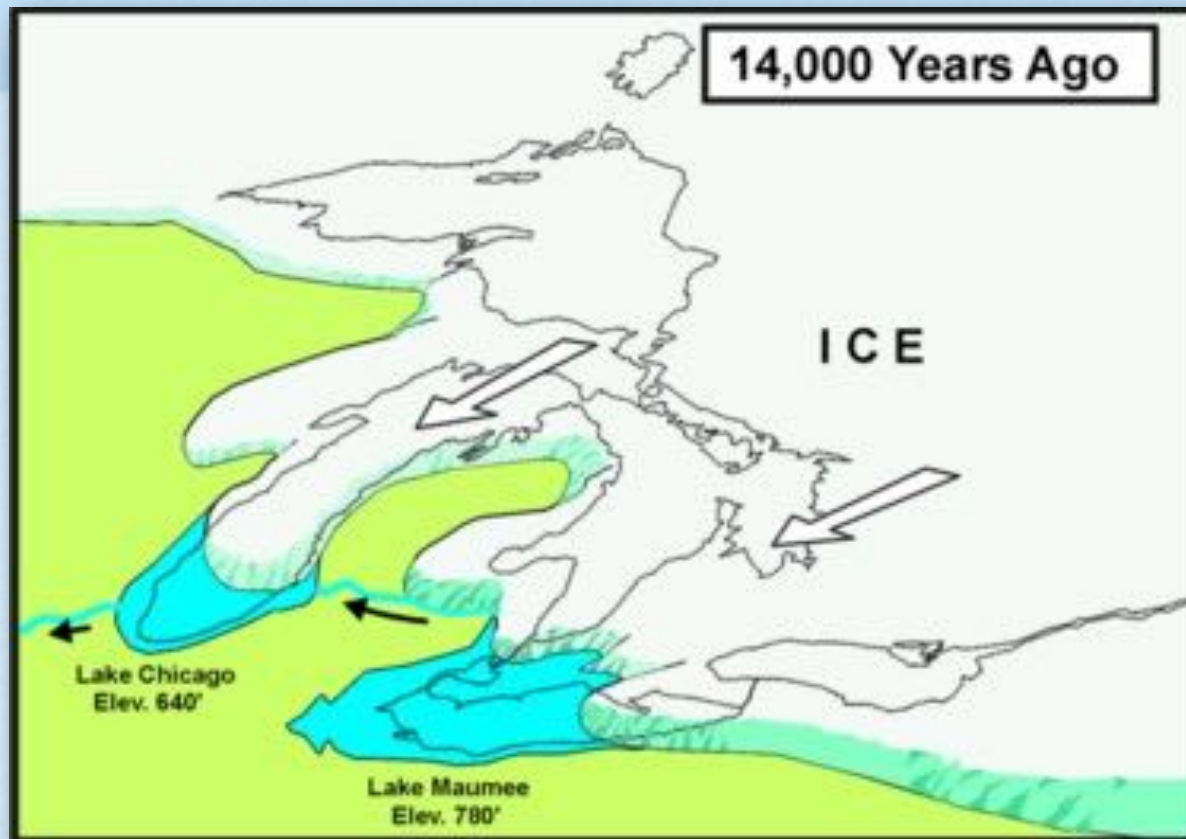
Ice up to a mile  
thick

Cold cold cold





# LAURENTIDE ICE SHEET





# A LOT OF WATER





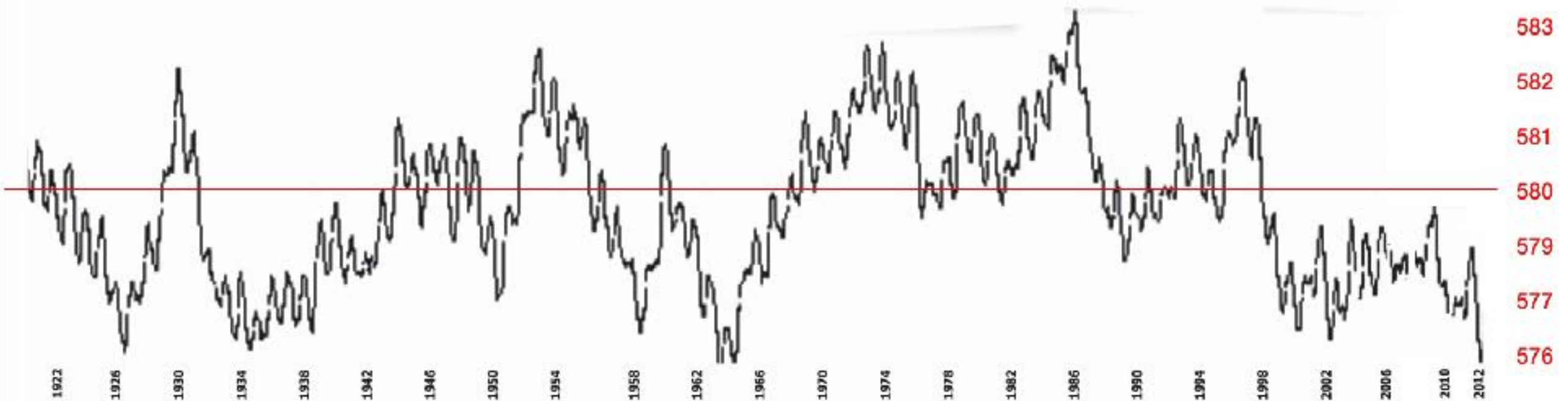
# GREAT LAKES SUPERLATIVES

- The five Great Lakes - Erie, Huron, Michigan, Ontario, and Superior - contain about 20% of the world's fresh water. They contain enough water to cover forty eight of the United States with a lake ten feet deep.
- A drop of water that enters the upper end of Lake Superior will travel through that lake, exiting via the St. Marys River into Lakes Huron and Michigan. From there the droplet will eventually flow into the St. Clair River, into Lake St. Clair, and then into the Detroit River and Lake Erie. The water drop will leave Lake Erie by way of the Niagara River, drop over Niagara Falls, and enter Lake Ontario. From there, it will enter the St. Lawrence River and eventually exit into the Atlantic Ocean. The water droplet's journey through the Great Lakes will take approximately 320 years!
- The five Great Lakes collectively cover about 95,000 square miles of surface area - an area roughly equivalent to the states of New York and Ohio. The total shoreline of the Great Lakes is 10,900 miles
- There are about 35,000 islands in the Great Lakes, and most of them are in Lake Huron. The world's largest island in a freshwater lake is Huron's Manitoulin Island, and it harbors the world's largest freshwater lake on an island.
- Lake Superior is by far the largest of the Great Lakes. It is the world's 2nd largest freshwater lake, after Lake Baikal in Russia. Superior is 1,332 feet deep at its deepest, and it could hold all of the other Great Lakes plus three extra Lake Eries.
- Because Erie is so shallow, it is prone to developing extremely rough waters very quickly during storms. As a consequence, it is the resting place for about 1,150 wrecked ships.



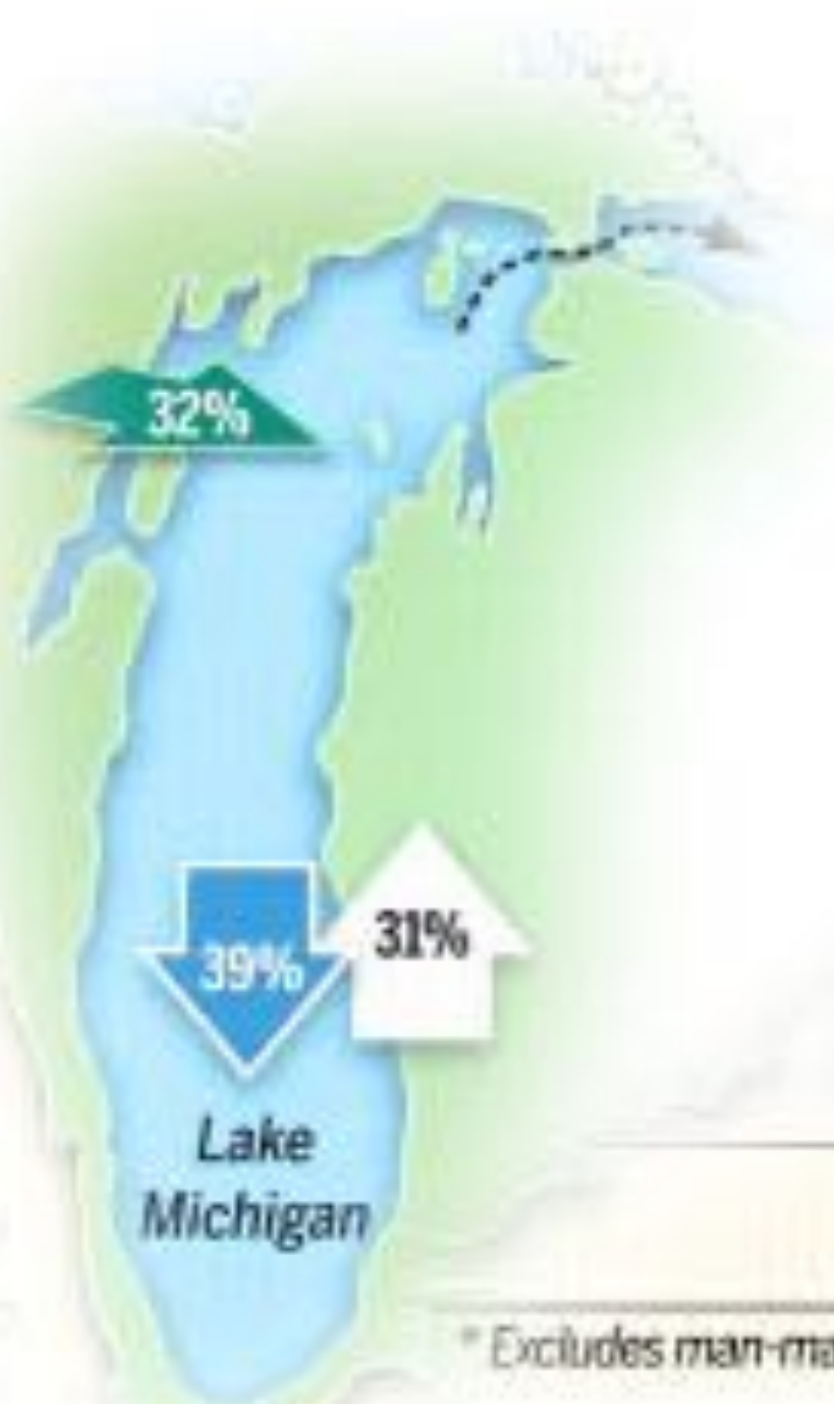
# A HISTORICAL LOOK

*Between 1913 and 2013 the level of Lake Michigan has had a high of 583 feet above sea level and a low of 576.2 feet for a maximum fluctuation of 6.8 feet.*



One hundred years of Lake water levels  
The red numbers are feet above sea level  
The red line is the median level

# Water in - water out



Great Lakes  
water system,\*  
percentage of water gained  
or lost because of:

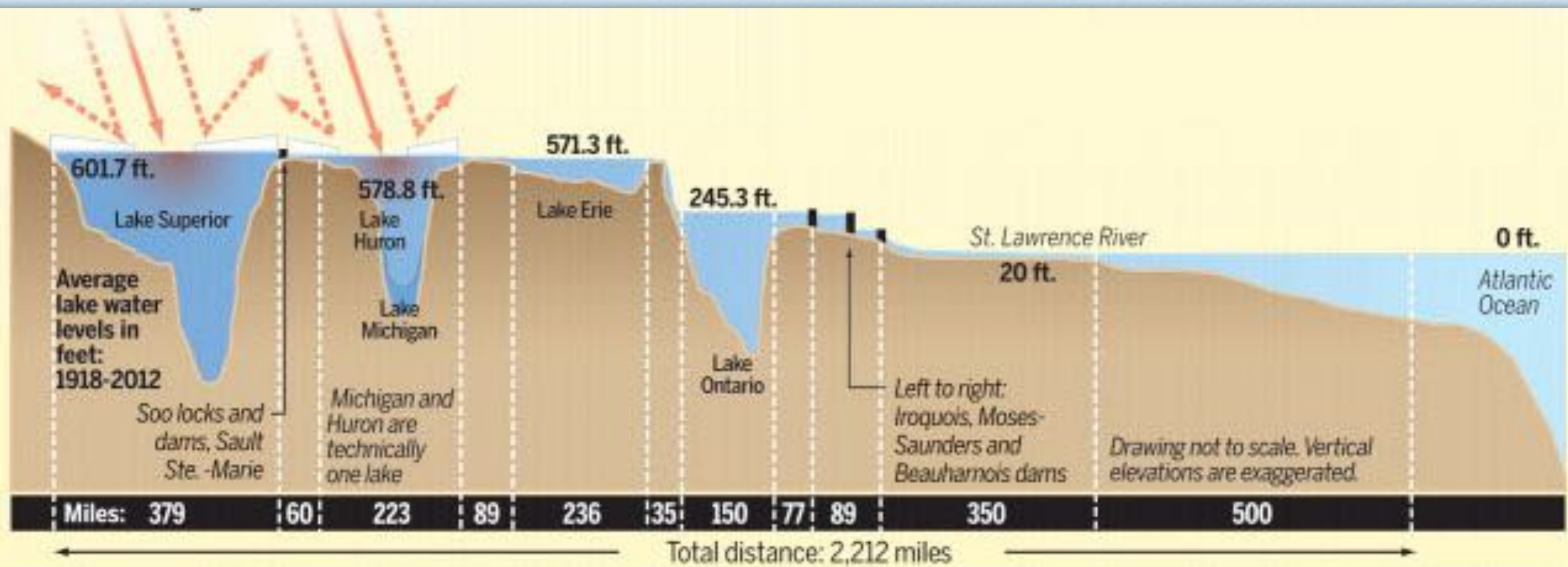


\* Excludes man-made diversions into or out of lakes.

Lake Michigan Huron project



# A HUGE RIVER





# SPLIT ROCK ON LAKE SUPERIOR





# SOO VIEW





# MACKINAC BRIDGE





# FROM HURON TO ERIE

Belle Isle  
in the  
Detroit  
River





# NIAGRA FALLS AND ON TO LAKE ONTARIO





# ST LAWRENCE SEAWAY LOCKS





# DOUGLAS LAKESHORE 1986





# DOUGLAS LAKESHORE 1986



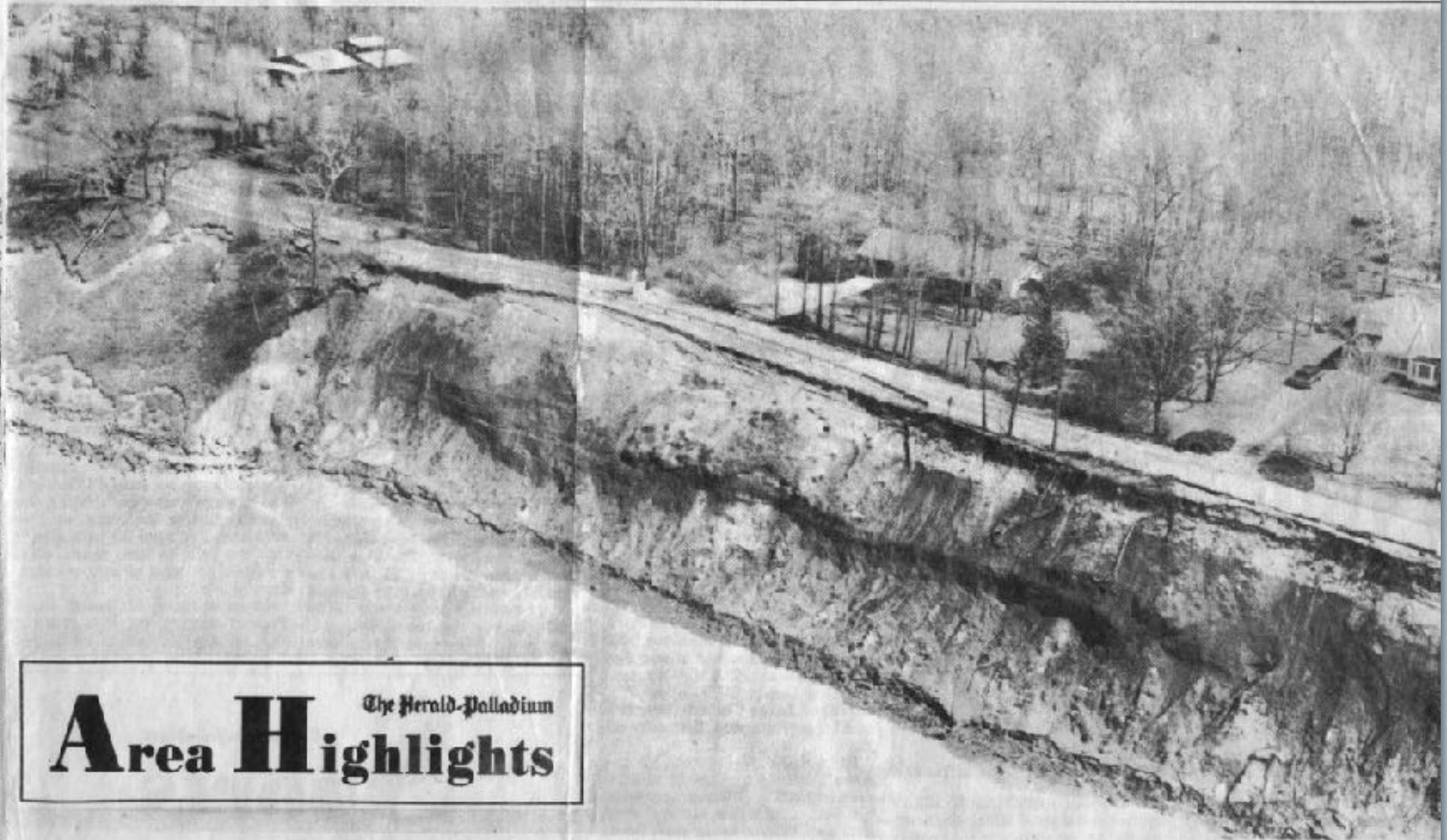


# LAKESHORE DRIVE 1986

THE HERALD-PALLADIUM, Benton Harbor - St. Joseph, Michigan

MARCH 29, 1986

PAGE THIRTEEN



## **Area H** The Herald-Palladium **Highlights**

**SAUGATUCK TOWNSHIP EROSION:** Severe Lake Michigan shoreline erosion has damaged Lakeshore Drive just south of Douglas in Saugatuck Township

and forced officials to close road about one month ago. Township Clerk Patricia Birkholz said officials had to close road because it is no longer safe for drivers.

Township and Allegan County officials are now considering possibility of rerouting road, she said. (H-P Aerial Photos by Chief Photographer Harry Smith)



# OLD HARBOR 2002





# OVAl BEACH 1953





# STEVE'S BEACH 1977





# STEVE'S BEACH 1986





# STEVE'S BEACH 2013





# OVAL BEACH 1953





# OVAL BEACH 1953





# SINGAPORE SITE 1953





# OVAL SOUTH OLD PIER 1963





# OVAL SOUTH OLD PIER 2013





# OVAL SOUTH OLD PIER 2013





# OVAL BEACH 2013





# KALAMAZOO HARBOR 2012





THATS ALL FOLKS