This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Director, Charting and Geodetic Services, Attention: N/CG22, National Ocean Service, NOAA, Rockville, Maryland 20852.

CAUTION
CHANGES in BUOYAGE

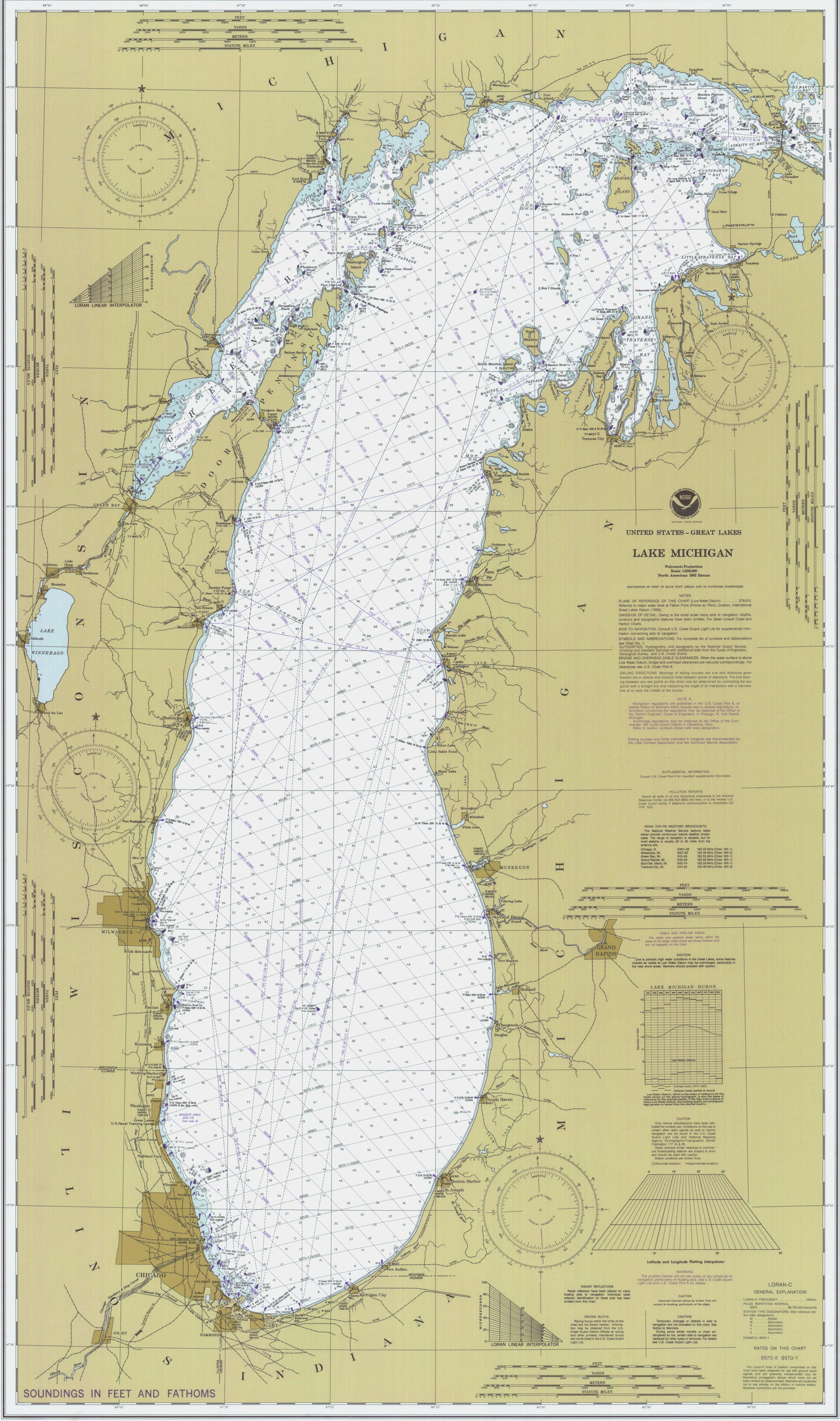
Mariners are advised that authorized aids to navigation are being changed to conform to maritime standards of the International Association of Lighthouse Authorities Maritime Buoyage System, Region B. Significant changes are: black port hand buoys to green; black and white vertically striped buoys to red and white vertically striped buoys; and lateral lights from white to red or green as appropriate. Changes to aids to navigation will be announced in the Defense Mapping Agency Hydrographic/Topographic Center weekly Notice to Mariners and the U.S. Coast Guard Local Notice to Mariners.

Formerly LS 7, 1st Ed., Feb. 1899

SOUNDINGS IN FEET AND FATHOMS

Nautical Chart Catalog No. 4, Panels B, C

14900 LORAN-C OVERPRINTED


FEET
YARDS
METERS
STATUTE MILES
M I C H I G A N
W I S C O N S I N
I L L I N O I S
I N D I A N A
MAGNETIC
VAR 2°00'W (1984)
ANNUAL INCREASE 9'
VAR 5°00'W (1984)
ANNUAL INCREASE 8'
VAR 2°45'W (1984)
ANNUAL INCREASE 9'
LORAN LINEAR INTERPOLATOR
MICROSECONDS
GREEN BAY
DOOR PENINSULA
LITTLE BAY DE NOC
BIG BAY DE NOC
ST MARTIN I PASSAGE
ROCK I PASSAGE
Porte des Morts Passage
Washington Island
STURGEON BAY
Escanaba
Gladstone
Rapid River
Menominee
Marinette
Oconto
Green Bay
De Pere
Appleton
Neenah
Menasha
Kaukauna
LAKE WINNEBAGO
Oshkosh
Fond du Lac
Sturgeon Bay
Algoma
Kewaunee
Two Rivers
Manitowoc
Rawley Point
Sheboygan
Port Washington
MILWAUKEE
South Milwaukee
Racine
Kenosha
WISCONSIN
ILLINOIS
Winthrop Harbor
Zion
Waukegan
Great Lakes
U.S. Naval Training Center
Lake Forest
Highland Park
Glencoe
Wilmette
Evanston
CHICAGO
JOLIET
HAMMOND
GARY
Michigan City
New Buffalo
MICHIGAN
INDIANA
Benton Harbor
St. Joseph
South Haven
Saugatuck
Douglas
Holland
Port Sheldon
Grand Haven
GRAND RAPIDS
MUSKEGON
Whitehall
Montague
Little Sable Point
Pentwater
Ludington
Big Sable Pt.
Manistee
Onekama
Arcadia
Frankfort
Point Betsie
Sleeping Bear Pt.
MANITOU PASSAGE
South Manitou Island
North Manitou Island
Leland
GRAND TRAVERSE BAY
Traverse City
Elk Rapids
Charlevoix
Lake Charlevoix
Boyne City
LITTLE TRAVERSE BAY
Petoskey
Harbor Springs
BEAVER ISLAND
St James
STRAITS OF MACKINAC
Mackinaw City
St. Ignace
Mackinac I
Bois Blanc I
STURGEON BAY
Manistique
Naubinway
Port Inland
DANGER AREA 204.175 (see note A)
SOUNDINGS IN FEET AND FATHOMS
LAKE MICHIGAN - HURON
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.
Elevation in feet
+5 +4 +3 +2 +1 0 -1
Low Water Datum
Average levels (1974-1983)
Extreme Levels (period of record)
Latitude and Longitude Plotting Interpolator
0' 10' 20' 30'
88°30' 88°00' 87°30' 87°00' 86°30' 86°00' 85°30' 85°00'
46°00' 45°30' 45°00' 44°30' 44°00' 43°30' 43°00' 42°30' 42°00' 41°30'
(JOINS CHART 14860)

UNITED STATES - GREAT LAKES

LAKE MICHIGAN

Polyconic Projection
Scale 1:500,000
North American 1902 Datum

SOUNDINGS IN FEET IN BLUE TINT AREAS AND IN FATHOMS ELSEWHERE

NOTES

PLANE OF REFERENCE OF THIS CHART (Low Water Datum) .... 576.8 ft. Referred to mean water level at Father Point (Pointe au Pere), Quebec, International Great Lakes Datum (1955).

OMISSION OF DETAIL. Owing to the small scale many aids to navigation, depths, contours and topographic features have been omitted. For detail consult Coast and Harbor Charts.

AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

SYMBOLS AND ABBREVIATIONS. For complete list of symbols and abbreviations see Chart No. 1.

AUTHORITIES. Hydrography and topography by the National Ocean Service, Charting and Geodetic Services with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

BRIDGE AND OVERHEAD CABLE CLEARANCES. When the water surface is above Low Water Datum, bridge and overhead clearances are reduced correspondingly. For clearances see U.S. Coast Pilot 6.

SAILING DIRECTIONS. Bearings of sailing courses are true and distances given thereon are in statute and nautical miles between points of departure. The true bearing between any two points on this chart may be determined by connecting the two points with a straight line and measuring the angle of its intersection with a meridian line at or near the middle of the course.

NOTE A

Navigation regulations are published in the U.S. Coast Pilot 6, or weekly Notice to Mariners which include new or revised regulations. Information concerning the regulations may be obtained at the Office of the District Engineer, Corps of Engineers, in Chicago, Ill. and Detroit, Michigan.

Anchorage regulations may be obtained at the Office of the Commander, 9th Coast Guard District in Cleveland, Ohio.

Refer to section numbers shown with area designation.

Sailing courses and limits indicated in magenta are recommended by the Lake Carriers Association and the Dominion Marine Association.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 6 for important supplemental information.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

NOAA VHF-FM WEATHER BROADCASTS

The National Weather Service stations listed below provide continuous marine weather broadcasts. The range of reception is variable, but for most stations is usually 20 to 40 miles from the antenna site.

Chicago, Ill.	KWO-39	162.55 MHz (Chan. WX-1)
Milwaukee, Wi.	KEC-60	162.40 MHz (Chan. WX-2)
Green Bay, Wi.	KIG-65	162.55 MHz (Chan. WX-1)
Grand Rapids, Mi.	KIG-63	162.55 MHz (Chan. WX-1)
Sault Ste. Marie, Mi.	KIG-74	162.55 MHz (Chan. WX-1)
Traverse City, Mi.	KIH-22	162.40 MHz (Chan. WX-2)

CABLE AND PIPELINE AREAS

The cable and pipeline areas falling within the areas of the larger scale charts are shown thereon and are not repeated on this chart.

CAUTION

Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged, particularly in the near shore areas. Mariners should proceed with caution.

Low Water Datum, which is the plane of reference for the levels shown on the above hydrograph, is also the plane of reference for the charted depths. If the lake level is above or below Low Water Datum, the existing depths are correspondingly greater or lesser than the charted depths.

CAUTION

Only marine radiobeacons have been calibrated for surface use. Limitations on the use of certain other radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and Defense Mapping Agency Hydrographic/Topographic Center Publication 117 (A & B).

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:

⊙(Accurate location) o(Approximate location)

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot 6 for details.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

RACING BUOYS

Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other privately maintained buoys are not all listed in the U.S. Coast Guard Light List.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Notice to Mariners.

During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

LORAN-C

GENERAL EXPLANATION

LORAN-C FREQUENCY .... 100kHz.
PULSE REPETITION INTERVAL
8970 .... 89,700 Microseconds
STATION TYPE DESIGNATORS: (Not individual station letter designators).
M .... Master
W .... Secondary
X .... Secondary
Y .... Secondary
Z .... Secondary
EXAMPLE: 8970-Y

RATES ON THIS CHART

8970-X 8970-Y

The Loran-C lines of position overprinted on this chart have been prepared for use with ground wave signals and are presently compensated only for theoretical propagation delays which have not yet been verified by observed data. Mariners are cautioned not to rely entirely on the lattices in inshore waters. Skywave corrections are not provided.

SOUNDINGS IN FEET AND FATHOMS

30th Ed., Mar. 24/84 ■

14900
LORAN-C OVERPRINTED

CAUTION
This chart has been corrected from the Notice to Mariners published weekly by the Defense Mapping Agency Hydrographic/Topographic Center and the Local Notice to Mariners issued periodically by each U.S. Coast Guard district to the print date shown in the lower left hand corner.

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102

METERS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

(Lake Michigan)
SOUNDINGS IN FEET & FATHOMS - SCALE 1:500,000

14900
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