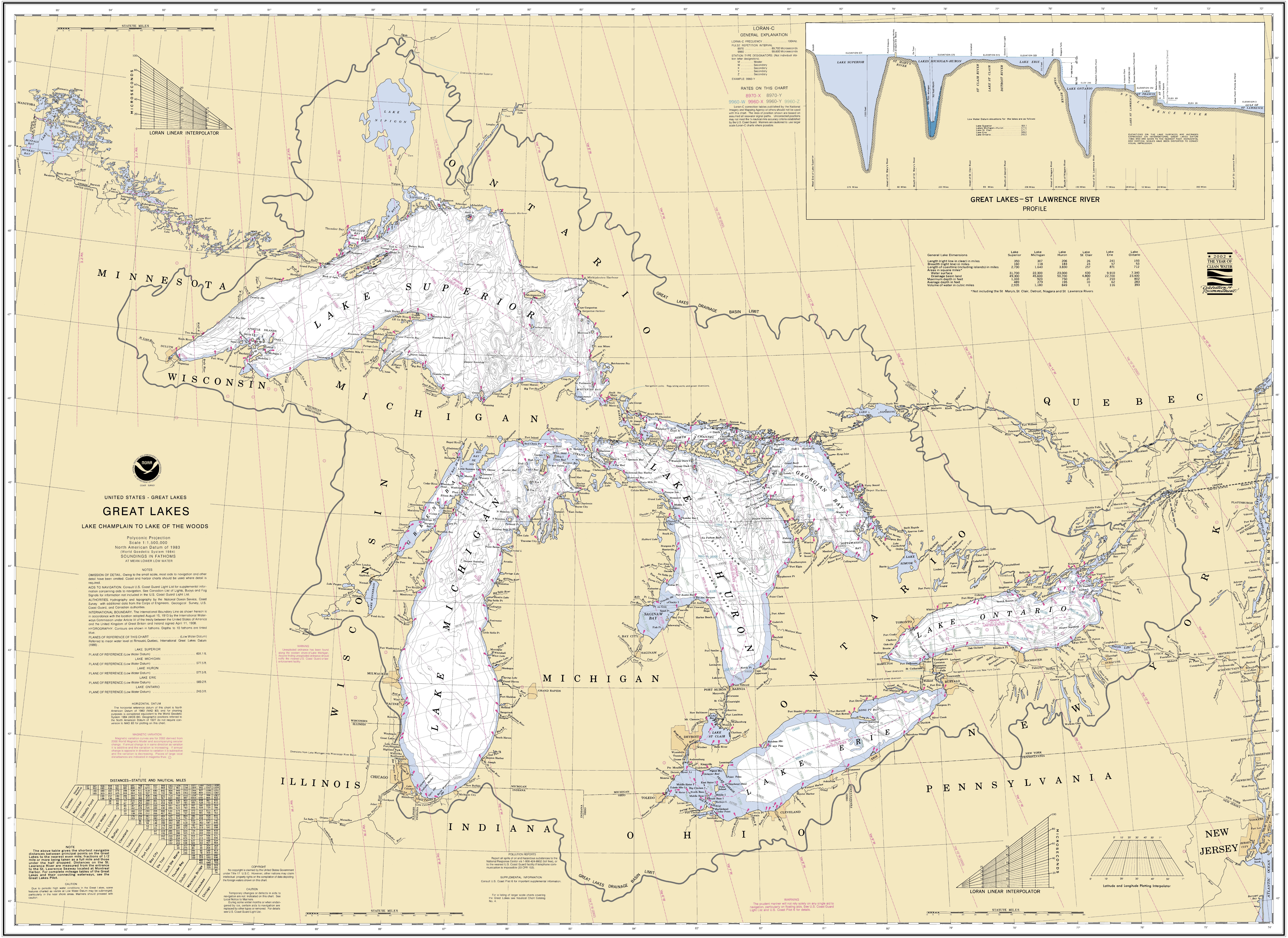
Formerly LS 0, 1st Ed., 1907 KAPP 1568

SOUNDINGS IN FATHOMS

Nautical Chart Catalog No. 4


STATUTE MILES
MICROSECONDS
LORAN LINEAR INTERPOLATOR
MANITOBA
LAKE OF THE WOODS
AULNEAU PENINSULA
BUFFALO BAY
MUSKEG BAY
Rainy River
International Falls
Var 1° E
No Variation (2002)
Var 1° W
Var 2° W
Var 3° W
Var 4° W
Var 5° W (2002)
LAKE NIPIGON
ONTARIO
Thunder Bay
ISLE ROYALE
MINNESOTA
DULUTH
Superior
APOSTLE ISLANDS
WISCONSIN
LAKE SUPERIOR
MICHIGAN
Michipicoten I
Sault Ste Marie
Diversions into Lake Superior
Navigation Locks. Regulating works and power diversions.
GREAT LAKES DRAINAGE BASIN LIMIT
NORTH CHANNEL
MANITOULIN ISLAND
STRAITS OF MACKINAC
GREEN BAY
LAKE MICHIGAN
LAKE HURON
GEORGIAN BAY
SAGINAW BAY
LAKE WINNEBAGO
MILWAUKEE
CHICAGO
ILLINOIS
INDIANA
OHIO
DETROIT
LAKE ST CLAIR
TOLEDO
CLEVELAND
LAKE ERIE
BUFFALO
TORONTO
LAKE ONTARIO
ROCHESTER
LAKE NIPISSING
LAKE SIMCOE
OTTAWA
MONTREAL
QUEBEC
LAKE CHAMPLAIN
NEW YORK
PENNSYLVANIA
NEW JERSEY
VERMONT
ATLANTIC OCEAN
GRAND RAPIDS
SYRACUSE
ALBANY
Diversions from Lake Michigan into Mississippi River Basin
Moses-Saunders and Long Sault Dams
Navigation and power diversion.
Power diversions
Navigation diversion into New York Canals
CANADA
UNITED STATES
Latitude and Longitude Plotting Interpolator
ELEVATION 601
LAKE SUPERIOR
ST. MARY'S RIVER
LAKES MICHIGAN-HURON
ELEVATION 578
ST CLAIR RIVER
LAKE ST CLAIR
DETROIT RIVER
ELEVATION 573
LAKE ERIE
ELEVATION 569
NIAGARA RIVER
LAKE ONTARIO
ELEV 245
LAKE ST FRANCIS
ELEVATION 152
L ST LOUIS
ELEV 69
ELEV 20
ST LAWRENCE RIVER
GULF OF ST LAWRENCE
ELEVATION 0
1333 Feet
925 Feet Michigan
752 Feet Huron
211 Feet
804 Feet
379 Miles
60 Miles
223 Miles
89 Miles
236 Miles
35 Miles
150 Miles
77 Miles
28 Miles
52 Miles
33 Miles
350 Miles

LORAN-C
GENERAL EXPLANATION

LORAN-C FREQUENCY .... 100kHz.
PULSE REPETITION INTERVAL
8970 .... 89,700 Microseconds
9960 .... 99,600 Microseconds
STATION TYPE DESIGNATORS: (Not individual station letter designators).
M .... Master
W .... Secondary
X .... Secondary
Y .... Secondary
Z .... Secondary
EXAMPLE: 9960-Y

RATES ON THIS CHART
8970-X 8970-Y
9960-W 9960-X 9960-Y 9960-Z

Loran-C correction tables published by the National Imagery and Mapping Agency or others should not be used with this chart. The lines of position shown are based on assumed all seawater signal paths. Uncorrected positions may not meet the ¼ nautical mile accuracy criteria established by the U.S. Coast Guard. Mariners are cautioned to use larger scale Loran-C charts where possible.

GREAT LAKES–ST LAWRENCE RIVER
PROFILE

Low Water Datum elevations for the lakes are as follows:

Lake Superior	601.1
Lakes Michigan–Huron	577.5
Lake St Clair	571.7
Lake Erie	569.2
Lake Ontario	243.3

ELEVATIONS ON THE LAKE SURFACES ARE AVERAGES EXPRESSED ON INTERNATIONAL GREAT LAKES DATUM (1985) AND ARE GIVEN TO THE NEAREST FOOT. HORIZONTAL AND VERTICAL SCALES HAVE BEEN DISTORTED TO CONVEY VISUAL IMPRESSION.

General Lake Dimensions	Lake Superior	Lake Michigan	Lake Huron	Lake St Clair	Lake Erie	Lake Ontario
Length (right line in clear) in miles	350	307	206	26	241	193
Breadth (right line) in miles	160	118	183	24	57	53
Length of coastline (including islands) in miles	2,730	1,640	3,830	257	871	712
Areas in square miles*						
Water surface	31,700	22,300	23,000	430	9,910	7,340
Drainage basin land	49,300	45,600	50,700	4,800	22,700	23,400
Maximum depth in feet	1,333	923	750	21	210	802
Average depth in feet	489	279	195	10	62	283
Volume of water in cubic miles	2,935	1,180	849	1	116	393

*Not including the St Mary's, St Clair, Detroit, Niagara and St Lawrence Rivers

★ 2002 ★
THE YEAR OF
CLEAN WATER
Celebration & Recommitment

UNITED STATES - GREAT LAKES

GREAT LAKES

LAKE CHAMPLAIN TO LAKE OF THE WOODS

Polyconic Projection
Scale 1:1,500,000
North American Datum of 1983
(World Goedetic System 1984)
SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

NOTES

OMISSION OF DETAIL. Owing to the small scale, most aids to navigation and other detail have been omitted. Coast and harbor charts should be used where detail is required.

AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation. See Canadian List of Lights, Buoys and Fog Signals for information not included in the U.S. Coast Guard Light List.

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

INTERNATIONAL BOUNDARY. The International Boundary Line as shown hereon is in accordance with the location adopted August 15, 1913 by the International Waterways Commission under Article IV of the treaty between the United States of America and the United Kingdom of Great Britain and Ireland signed April 11, 1908.

HYDROGRAPHY. Contours are shown in fathoms. Depths to 10 fathoms are tinted blue.

PLANES OF REFERENCE OF THIS CHART .... (Low Water Datum)
Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985).

LAKE SUPERIOR
PLANE OF REFERENCE (Low Water Datum) .... 601.1 ft.
LAKE MICHIGAN
PLANE OF REFERENCE (Low Water Datum) .... 577.5 ft.
LAKE HURON
PLANE OF REFERENCE (Low Water Datum) .... 577.5 ft.
LAKE ERIE
PLANE OF REFERENCE (Low Water Datum) .... 569.2 ft.
LAKE ONTARIO
PLANE OF REFERENCE (Low Water Datum) .... 243.3 ft.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83) and for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 do not require conversion to NAD 83 for plotting on this chart.

MAGNETIC VARIATION

Magnetic variation curves are for 2002 derived from 2000 World Magnetic Model and accompanying secular change. If annual change is in same direction as variation it is additive and the variation is increasing. If annual change is opposite in direction to variation it is subtractive and the variation is decreasing. Places of large local disturbances are indicated in magenta thus: ⊙

WARNING

Unexploded ordnance has been found along the western shore of Lake Michigan. Anyone finding unexploded ordnance should notify the nearest U.S. Coast Guard or law enforcement facility.

DISTANCES—STATUTE AND NAUTICAL MILES

Statute Nautical																		
Quebec	157 136	347 302	506 440	504 438	531 461	553 481	691 600	768 667	775 673	837 727	999 868	1061 922	1106 961	1379 1198	1501 1304	1084 942	1343 1167	1408 1224
Montreal		190 165	349 303	347 302	374 325	396 344	534 464	611 531	618 537	680 591	842 732	904 786	949 825	1222 1062	1344 1168	927 806	1186 1031	1251 1087
Tibbetts Point			159 138	157 136	184 160	206 179	344 299	421 366	428 372	490 426	652 567	714 620	759 660	1032 897	1154 1003	737 640	996 866	1061 922
Toronto				28 24	55 48	77 67	215 187	292 254	299 260	361 314	523 454	585 508	630 547	903 785	1025 891	608 528	867 753	932 810
Port Weller					27 23	49 43	187 162	264 229	271 235	333 289	495 430	557 484	602 523	875 760	997 866	580 504	839 729	904 786
Port Colborne						22 19	160 139	237 206	244 212	306 266	468 407	530 461	575 500	848 737	970 843	553 481	812 706	877 762
Buffalo							176 153	254 221	261 227	322 280	484 421	547 475	592 514	864 751	986 857	569 494	828 720	893 776
Cleveland								96 83	108 94	170 148	331 288	394 342	438 381	711 618	833 724	417 362	675 587	740 643
Toledo									54 47	116 101	278 242	340 295	385 335	658 572	781 679	363 315	622 541	688 598
Detroit										62 54	224 195	286 249	331 288	604 525	726 631	309 269	568 494	633 550
Port Huron											162 141	224 195	269 234	541 470	664 577	247 215	506 440	571 496
Bay City												187 162	232 202	504 438	627 545	210 182	468 407	534 464
De Tour													45 39	317 275	439 381	45 39	304 264	369 321
Sault Ste Marie														272 236	394 342	90 78	349 303	414 360
Thunder Bay															194 169	362 315	621 540	686 596
Duluth																485 421	743 646	808 702
Mackinac Bridge																	259 225	324 282
Milwaukee																		85 74
Chicago																		

NOTE

The above table gives the shortest navigable distances between principal points on the Great Lakes to the nearest even mile; fractions of 1/2 mile or more being taken as a full mile and those under the half dropped. Distances on the St. Lawrence River are measured from the entrance to the St. Lawrence Seaway located at Montreal Harbor. For complete mileage tables of the Great Lakes and their connecting waterways, see the Great Lakes Pilot.

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.

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CAUTION

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

POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

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

For a listing of larger scale charts covering the Great Lakes see Nautical Chart Catalog No. 4.

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.

27th Ed., Oct. /02 ■ Corrected through NM Oct. 26/02
Corrected through LNM Oct. 15/02
14500
LORAN-C OVERPRINTED

CAUTION
This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Imagery and Mapping Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

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 Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

SOUNDINGS IN FATHOMS

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

PRINT-ON-DEMAND CHARTS
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NSN 7642014010561
NIMA REFERENCE NO. 14XCO14500
ED. NO. 27