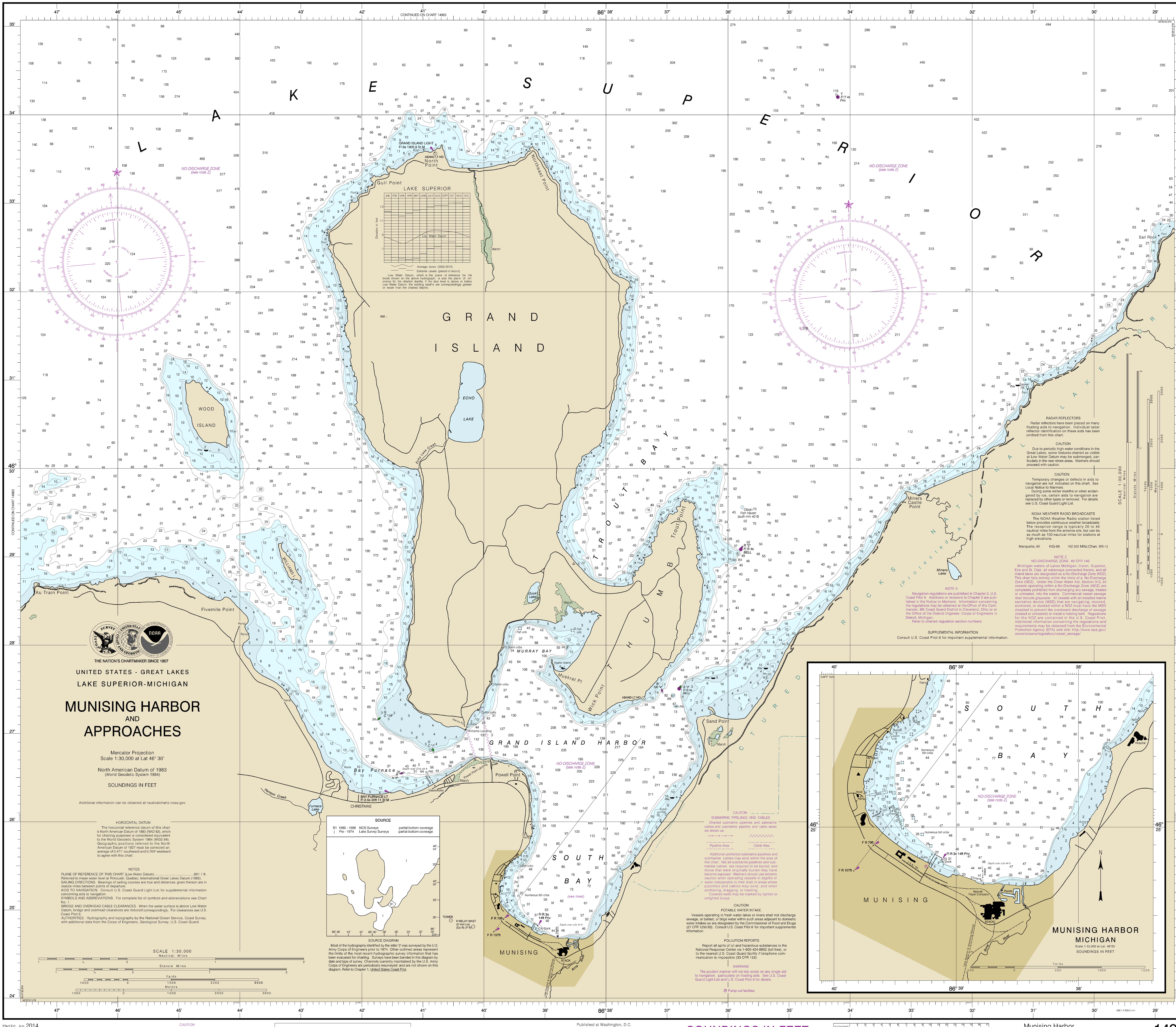
Formerly LS 931, 1st Ed., 1862 KAPP 1525



THE NATION'S CHARTMAKER SINCE 1807

UNITED STATES - GREAT LAKES

LAKE SUPERIOR-MICHIGAN

MUNISING HARBOR AND APPROACHES

Mercator Projection
Scale 1:30,000 at Lat 46° 30'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET

Additional information can be obtained at nauticalcharts.noaa.gov.

LAKE SUPERIOR

Average levels (2003-2012)
Extreme Levels (period of record)

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.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.471" southward and 0.764" westward to agree with this chart.

NOTES

PLANE OF REFERENCE OF THIS CHART (Low Water Datum)..601.1 ft. Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985).
SAILING DIRECTIONS. Bearings of sailing courses are true and distances given thereon are in statute miles between points of departure.
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
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.
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.

SCALE 1:30,000
Nautical Miles
Statute Miles
Yards
Meters

SOURCE

B1	1990 - 1998	NOS Surveys	partial bottom coverage
j	Pre - 1974	Lake Survey Surveys	partial bottom coverage

SOURCE DIAGRAM

Most of the hydrography identified by the letter "j" was surveyed by the U.S. Army Corps of Engineers prior to 1974. Other outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels currently maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

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.

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.

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.

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Marquette, MI KIG-66 162.550 MHz (Chan. WX-1)

NOTE Z
NO-DISCHARGE ZONE, 40 CFR 140

Michigan waters of Lakes Michigan, Huron, Superior, Erie and St. Clair, all waterways connected thereto, and all inland lakes are designated as a No-Discharge Zone (NDZ). This chart falls entirely within the limits of a No-Discharge Zone (NDZ). Under the Clean Water Act, Section 312, all vessels operating within a No-Discharge Zone (NDZ) are completely prohibited from discharging any sewage, treated or untreated, into the waters. Commercial vessel sewage shall include graywater. All vessels with an installed marine sanitation device (MSD) that are navigating, moored, anchored, or docked within a NDZ must have the MSD disabled to prevent the overboard discharge of sewage (treated or untreated) or install a holding tank. Regulations for the NDZ are contained in the U.S. Coast Pilot. Additional information concerning the regulations and requirements may be obtained from the Environmental Protection Agency (EPA) web site: http://www.epa.gov/owow/oceans/regulatory/vessel_sewage/.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 6. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 9th Coast Guard District in Cleveland, Ohio or at the Office of the District Engineer, Corps of Engineers in Detroit, Michigan.
Refer to charted regulation section numbers.

SUPPLEMENTAL INFORMATION

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

CAUTION
SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

Pipeline Area — Cable Area

Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.
Covered wells may be marked by lighted or unlighted buoys.

CAUTION
POTABLE WATER INTAKE

Vessels operating in fresh water lakes or rivers shall not discharge sewage, or ballast, or bilge water within such areas adjacent to domestic water intakes as are designated by the Commissioner of Food and Drugs (21 CFR 1250.93). 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 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

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.

Pump-out facilities

23rd Ed., Jun. 2014
14969

CAUTION
This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence 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. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

NOAA encourages users to submit inquiries, discrepancies or comments about this chart at http://www.nauticalcharts.noaa.gov/staff/contact.htm.

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U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

SOUNDINGS IN FEET

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 1–31

Munising Harbor
SOUNDINGS IN FEET - SCALE 1:30,000

Last Correction: 4/14/2015. Cleared through:
LNM: 4616 (11/15/2016), NM: 4616 (11/12/2016), CHS: 1016 (10/28/2016)

To ensure that this chart was printed at the proper scale, the line below should measure six inches (152 millimeters).
If the line does not measure six inches (152 millimeters), this copy is not certified safe for navigation.

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