BookletChart™

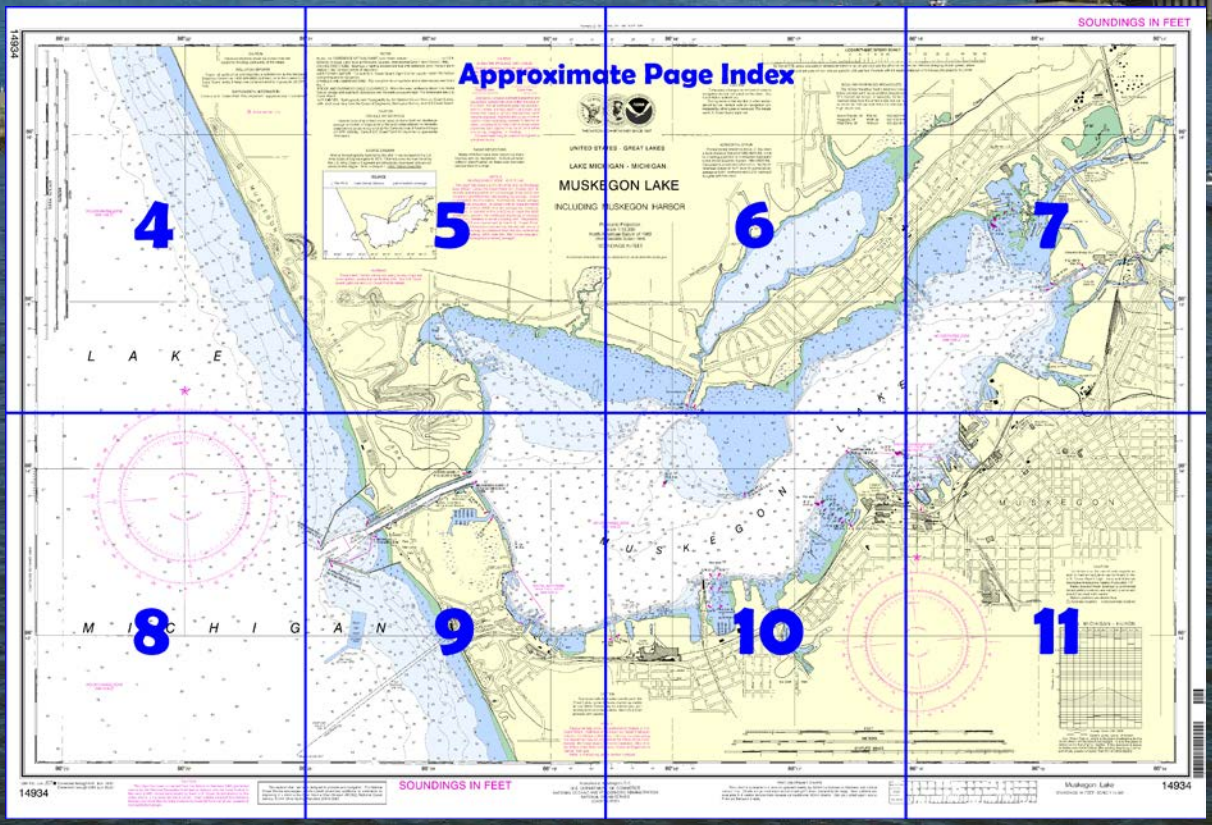
Muskegon Lake, Including Muskegon Harbor

NOAA Chart 14934

A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.

- *Complete, reduced-scale nautical chart*
- *Print at home for free*
- *Convenient size*
- *Up-to-date with Notices to Mariners*
- *Compiled by NOAA's Office of Coast Survey, the nation's chartmaker*



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=14934

(Selected Excerpts from Coast Pilot).
Muskegon Harbor, 31 miles SSE of Little Sable Point, consists of Muskegon Lake and a dredged entrance channel which connects it with Lake Michigan. Facilities for a wide range of commerce are on the S shore of the harbor at the city of **Muskegon, Mich.,** and at its E end.
A lighted stack of the Consumers Energy Co. at the mouth of the Muskegon River in 43°15'16"N., 86°14'23"W. is prominent from Lake Michigan. Sand hills N and S of the harbor entrance may obstruct the stack from some directions.

Muskegon South Breakwater Light (43°13'30"N., 86°20'48"W.), 70 feet above the water, is shown from a pyramidal tower on the outer end of the S breakwater; a fog signal is at the light.
Muskegon Lake is about 4 miles long and varies from 2 miles wide at the W end to as little as 0.6 mile in the E part. The lake has central depths of 25 to 79 feet. Near mid-length of the lake, shoals marked at the outer edges by lights extend from the N and S shores and restrict the available width of deep water to 1,600 feet. There are many obstructions in the shallow parts of the lake, including cribs, pipelines, and submerged pilings and dock ruins.
The North Channel of the **Muskegon River** flows into the NE end of Muskegon Lake. The channel, at a river stage of about 2 feet above extreme low water, has depths of 2½ to 9 feet for 33 miles above the mouth to the former dam at **Newaygo, Mich.** Two fixed bridges, with a reported least clearance of 8 feet, cross the river about 0.3 mile and 0.4 mile above the mouth.
Bear Lake parallels the NW side of the NE end of Muskegon Lake and has its outflow through a narrow channel into its N side. **North**
A **speed limit** of 8 mph is enforced in Muskegon Harbor. (See **33 CFR 162.120,** chapter 2, for regulations.) A **slow-no wake speed** is enforced in the Bear Lake entrance channel.
A public docking facility is available mid-length of the S lakeshore at the Hartshorn Marina (43°13'48"N., 86°15'54"W.), jointly constructed by the city and the Michigan State Waterways Commission. Several private marinas are along the S shore of Lake Muskegon and can provide: transient berths, gasoline, diesel fuel, marine supplies, sewage pump-out, complete vessel repair, and hoists to 110 tons. A private marina is on the N shore at the outlet of Bear Lake. Transient berths, gasoline, diesel fuel, water, electricity, sewage pump-out, limited marine supplies, launching ramp, and harbormaster services are available. The harbormaster monitors VHF-FM channels 16 and 9. A 30-ton mobile hoist is available for engine repairs, and limited hull and electronic repairs.
Muskegon Harbor. Currents in the channel attain velocities up to 3 mph in either direction.
The outer basin is not adapted for anchorage of vessels, but reduces wave action in the entrance channel.
Mooring to the breakwaters, piers, and revetments is prohibited.
Mariners are cautioned against navigating outside channel limits in the vicinity of structures protected by stone riprap. In 2001, a rock bed was reported 30 feet N of the South Breakwater Light.
Anchorage.–Muskegon Lake affords good anchorage, generally sand or mud bottom. Special anchorages are in the SW part of the lake and on the S side at Muskegon. (See **33 CFR 110.1 and 110.81,** chapter 2, for limits and re he dredged entrance channel leads from deep water in Lake Michigan between converging breakwaters to an outer basin, thence between piers and revetments to Muskegon Lake. The outer ends of the breakwaters and piers, and the inner ends of piers, are marked by lights. A sound signal, which reportedly operates by keying the microphone five times on VHF-FM channel 79, is at the light on the south pier. (See Notices to Mariners and the latest edition of the chart for controlling depths.
Mooring to the breakwaters, piers, and revetments is prohibited.
Mariners are cautioned against navigating outside channel limits in the vicinity of structures protected by stone riprap. In 2001, a rock bed was reported 30 feet north of the South Breakwater Light.

U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies

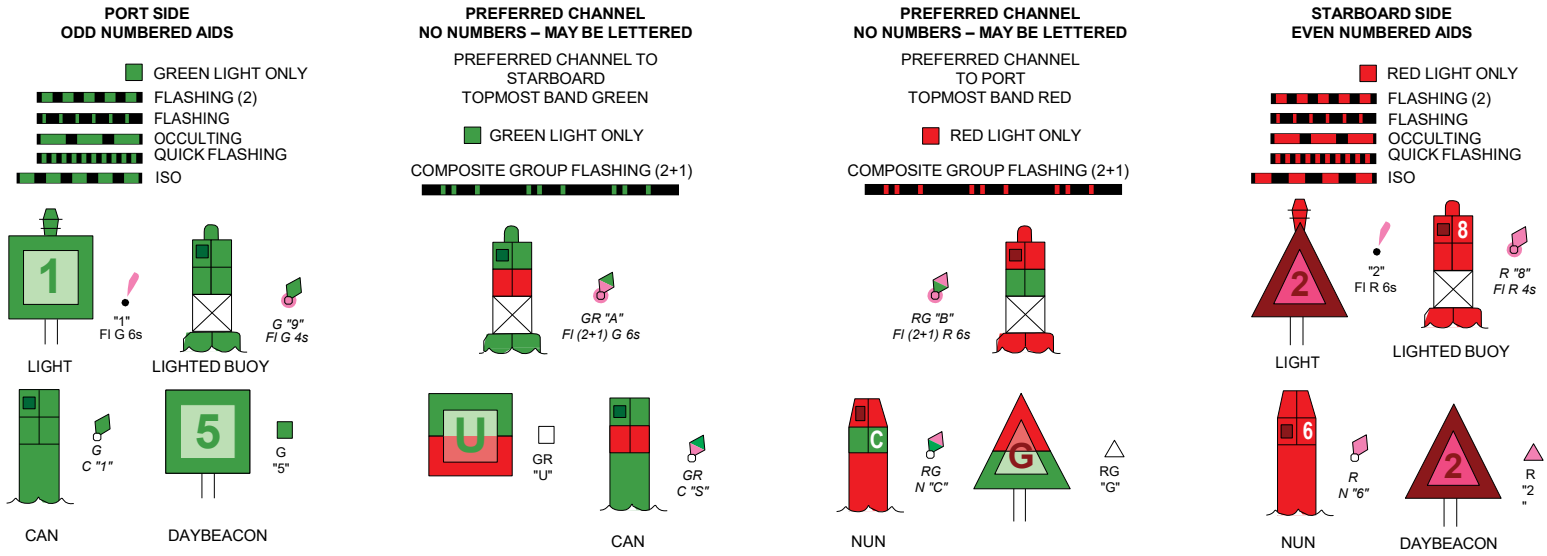
RCC Cleveland	Commander 9th CG District Cleveland, OH	(216) 902-6117

Navigation Manager Regions

To make suggestions, ask questions, or report a problem with a chart, go to https://www.nauticalcharts.noaa.gov/customer-service/assist/

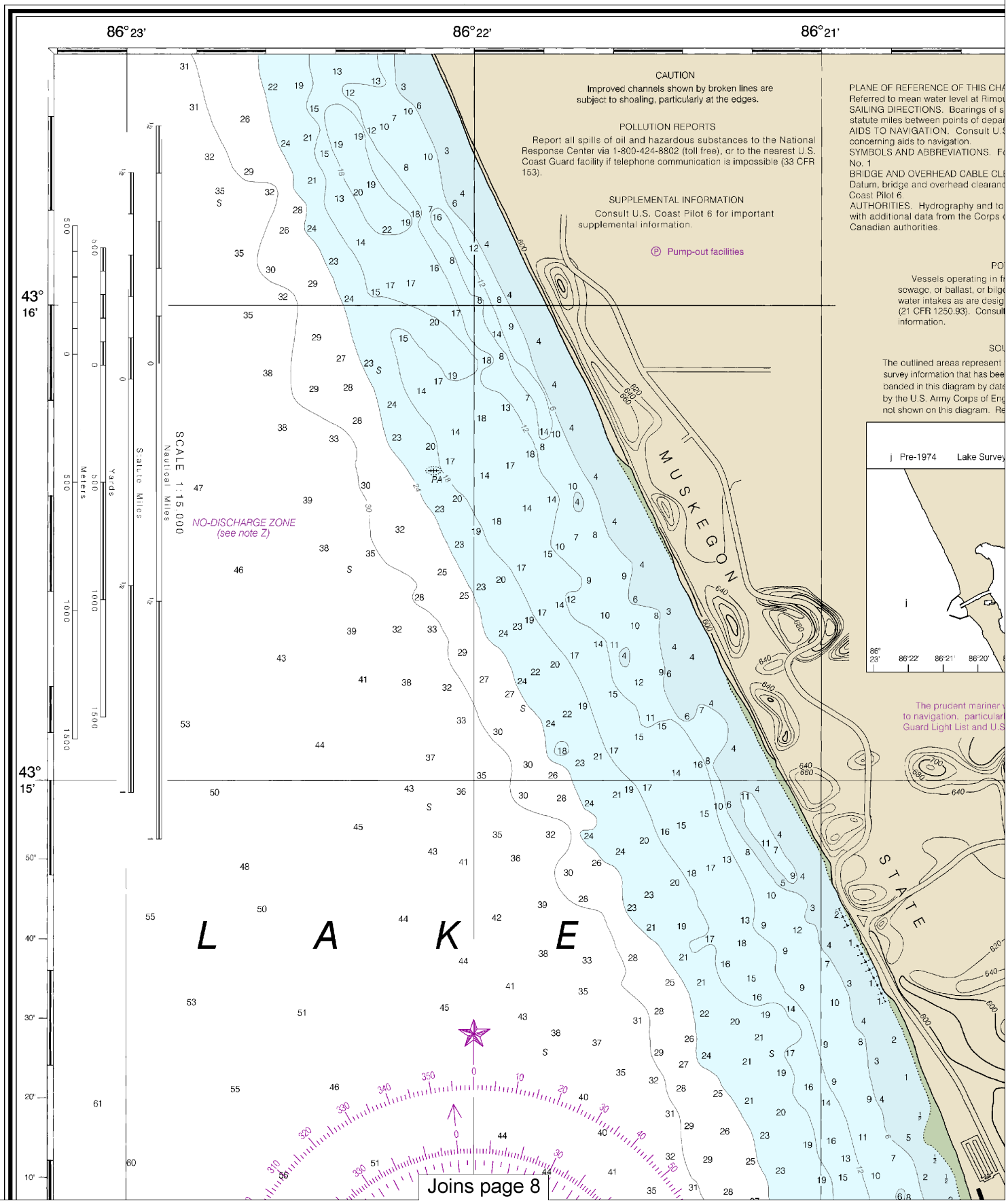
Lateral System As Seen Entering From Seaward

on navigable waters except Western Rivers



For more information on aids to navigation, including those on Western Rivers, please consult the latest USCG Light List for your area.
These volumes are available online at *http://www.navcen.uscg.gov*

14934



4

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:15,000~~

Nautical Miles: 0 — 1

Yards: 500 — 0 — 500 — 1000 — 1500

See Note on page 5.

Formerly LS 767, 1st Ed., Oct. 1901 KAPP 1491

86° 20' 86° 19' 50' 40' 30' 20' 10' 86° 18' 50'

NOTES

HART (Low Water Datum).....577.5 ft.
ouski, Quebec, International Great Lakes Datum (1985).
sailing courses are true and distances given thereon are in
arture.
U.S. Coast Guard Light List for supplemental information

For complete list of symbols and abbreviations see Chart

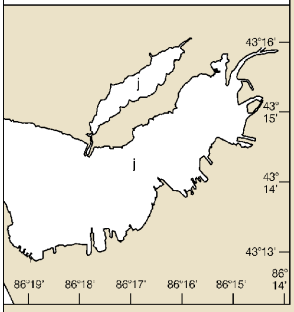
LEARANCES. When the water surface is above Low Water
nces are reduced correspondingly. For clearances see U.S.

topography by the National Ocean Service, Coast Survey,
s of Engineers, Geological Survey, U.S. Coast Guard, and

CAUTION
OTABLE WATER INTAKE
fresh water lakes or rivers shall not discharge
ge water within such areas adjacent to domestic
gnated by the Commissioner of Food and Drugs
ult U.S. Coast Pilot 6 for important supplemental

OURCE DIAGRAM
t the limits of the most recent hydrographic
een evaluated for charting. Surveys have been
ate and type of survey. Channels maintained
ngineers are periodically resurveyed and are
Refer to Chapter 1, United States Coast Pilot.

SOURCE
ey Surveys partial bottom coverage



WARNING
will not rely solely on any single aid
arly on floating aids. See U.S. Coast
S. Coast Pilot for details.

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.

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.

NOTE Z
NO-DISCHARGE ZONE, 40 CFR 140

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/.

MARINER ACTIVATED SOUND SIGNAL

MUSKEGON SOUTH BREAKWATER LIGHT - (MRASS) Horn is activated by keying mic 5 times on VHF-FM Ch 83A.

CA
Temporary chan
navigation are not inc
Local Notice to Marin
During some wint
gored by ice, certain
replaced by other type
see U.S. Coast Guard

HORIZON
The horizontal refe
is North American Datu
for charting purposes
to the World Geodetic
Geographic position
American Datum of 19
average of 0.051" north
to agree with this cha

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

UNITED STATES - GREAT LAKES

LAKE MICHIGAN - MICHIGAN

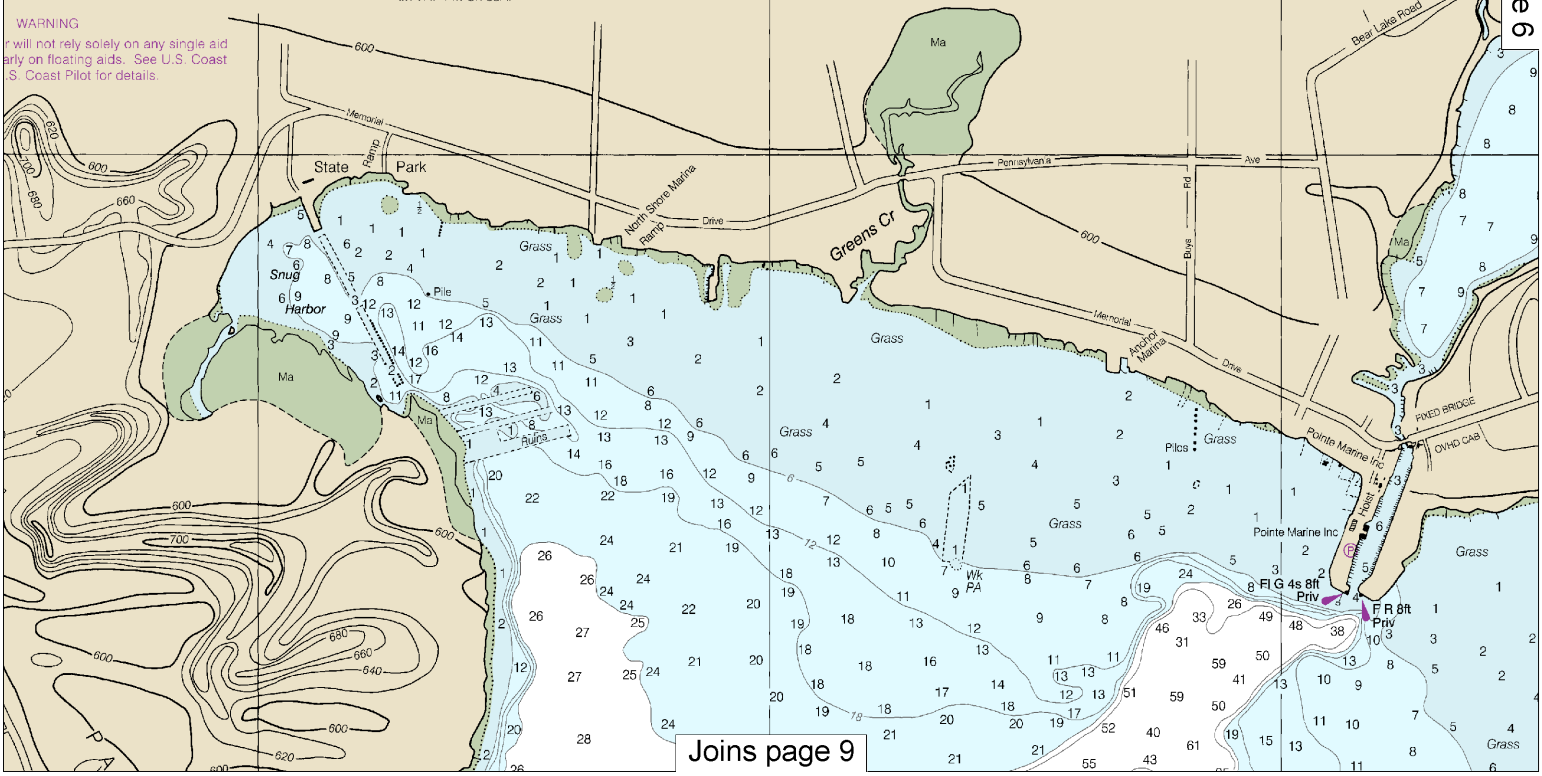
MUSKEGON LAKE

INCLUDING MUSKEGON HARBOR

Polyconic Projection
Scale 1:15,000
North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET

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



Joins page 6

Joins page 9

This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:20000. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.

Formerly LS 767, 1st Ed., Oct. 1901 KAPP 1491

86° 19' 50" 40" 30" 20" 10" 86° 18' 50" 86° 17'

CAUTION

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Covered wells may be marked by lighted or unlighted buoys.

RADAR REFLECTORS

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

NOTE Z

NO-DISCHARGE ZONE, 40 CFR 140

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MARINER ACTIVATED SOUND SIGNAL

MUSKEGON SOUTH BREAKWATER LIGHT - (45) Horn is activated by keying mic 5 times on VHF-FM Ch 83A.

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.

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 0.051" northward and 0.212" westward to agree with this chart.

NOAA — NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION — U.S. DEPARTMENT OF COMMERCE — COAST SURVEY

UNITED STATES - GREAT LAKES

LAKE MICHIGAN - MICHIGAN

MUSKEGON LAKE

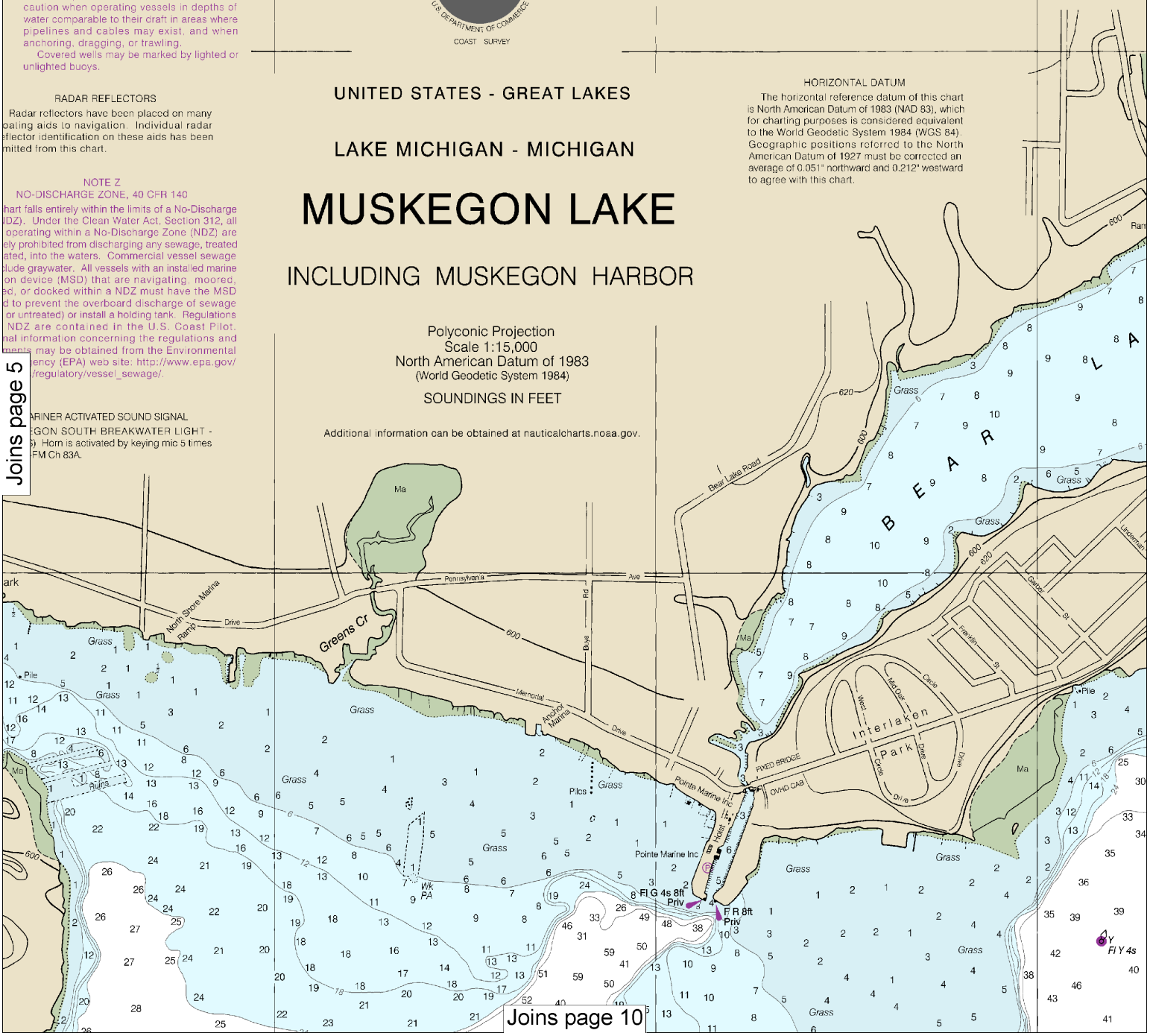
INCLUDING MUSKEGON HARBOR

Polyconic Projection
Scale 1:15,000
North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET

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

Joins page 5



Joins page 10

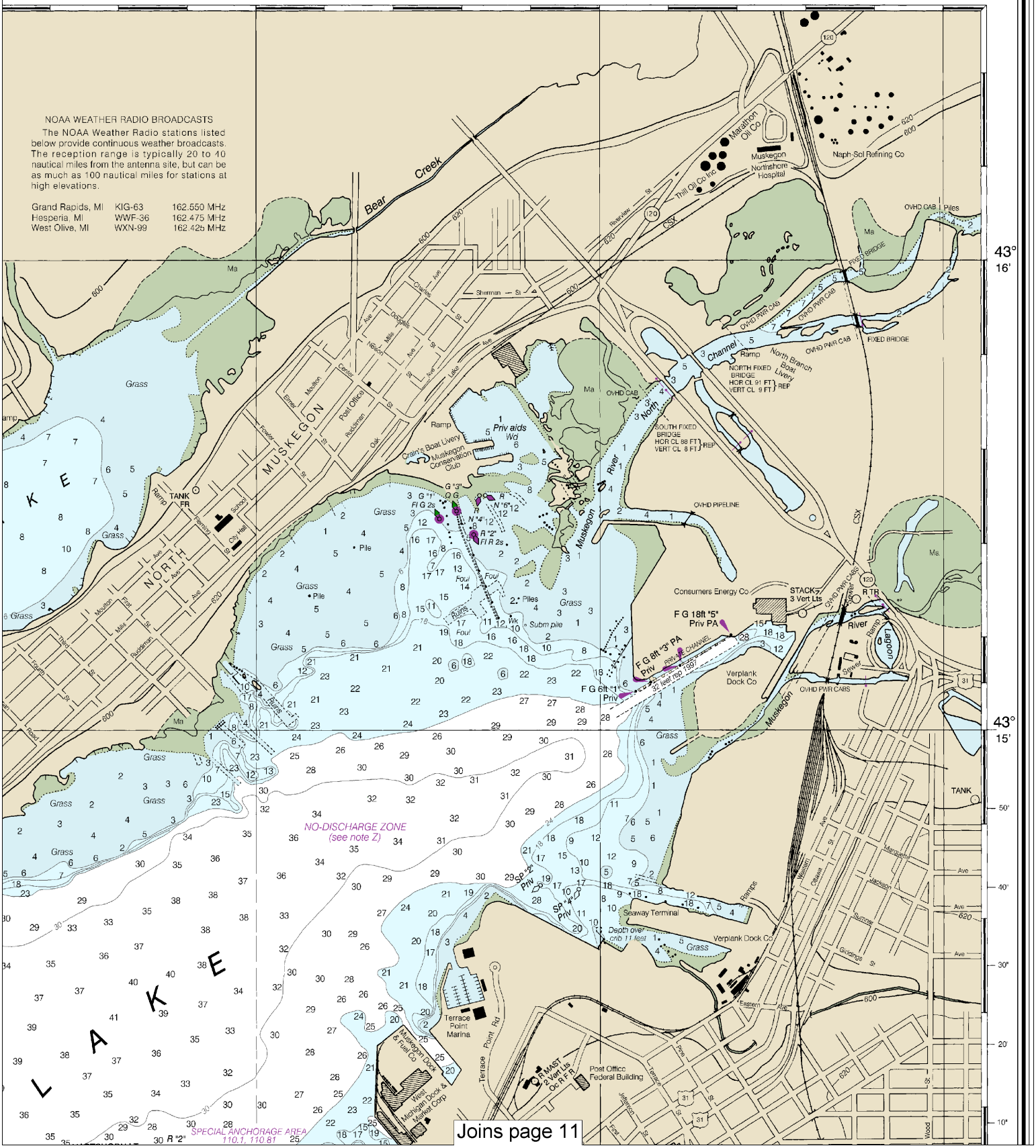
Printed at reduced scale. ~~SCALE 1:15,000~~

Nautical Miles: 0 — 1

Yards: 500 — 0 — 500 — 1000 — 1500

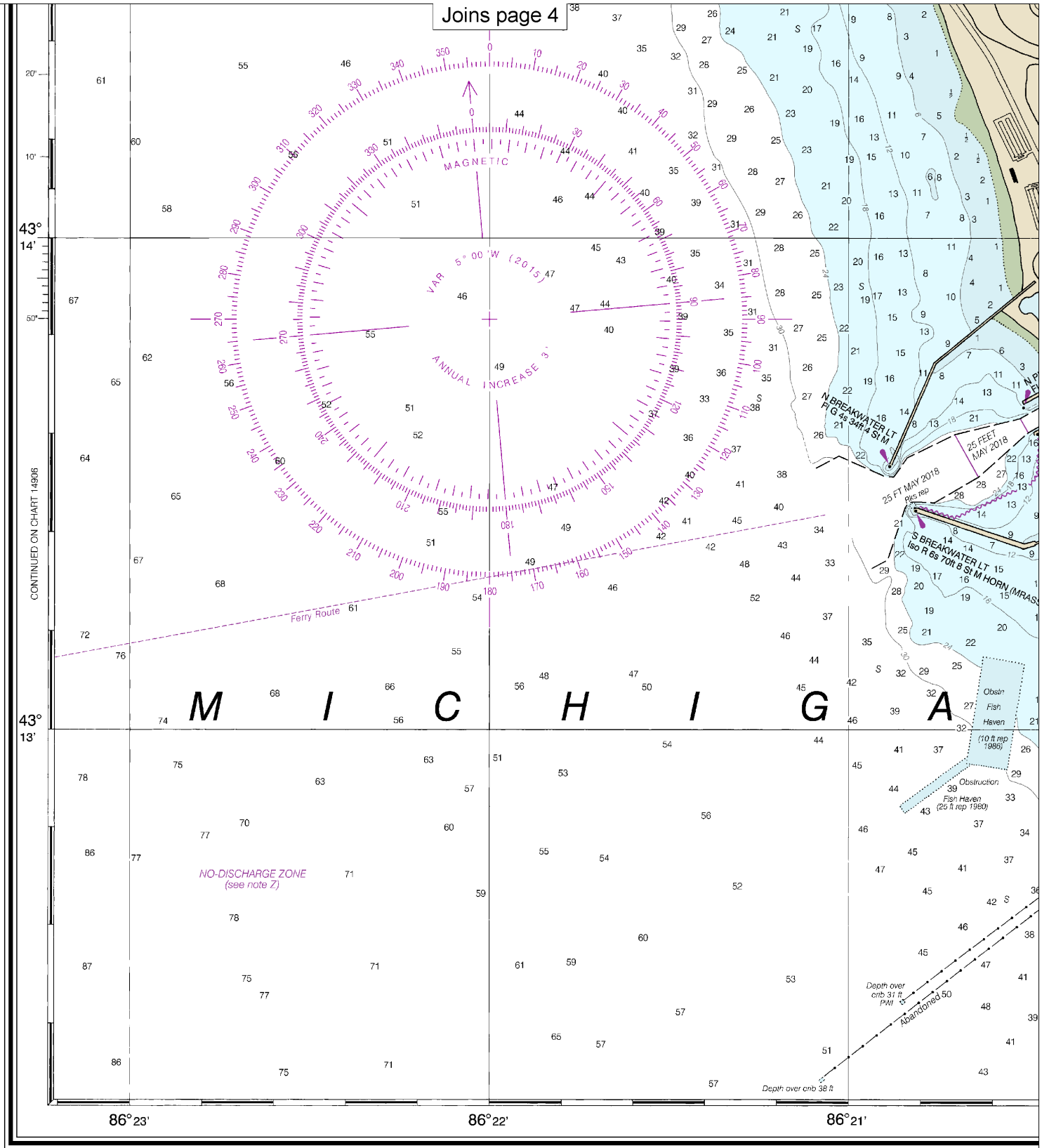
See Note on page 5.

Note: Chart grid lines are aligned with true north.



Joins page 11

This is the Last Edition of this chart. It will be canceled on Apr 5, 2023
30th Ed., Dec. 2015. Last Correction: 10/3/2022. Cleared through:
LNM: 5122 (12/20/2022), NM: 5322 (12/31/2022), CHS: 1122 (11/25/2022)



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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, disc
about this chart at http://www.nauticalcharts.noaa.gov

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Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:15,000~~

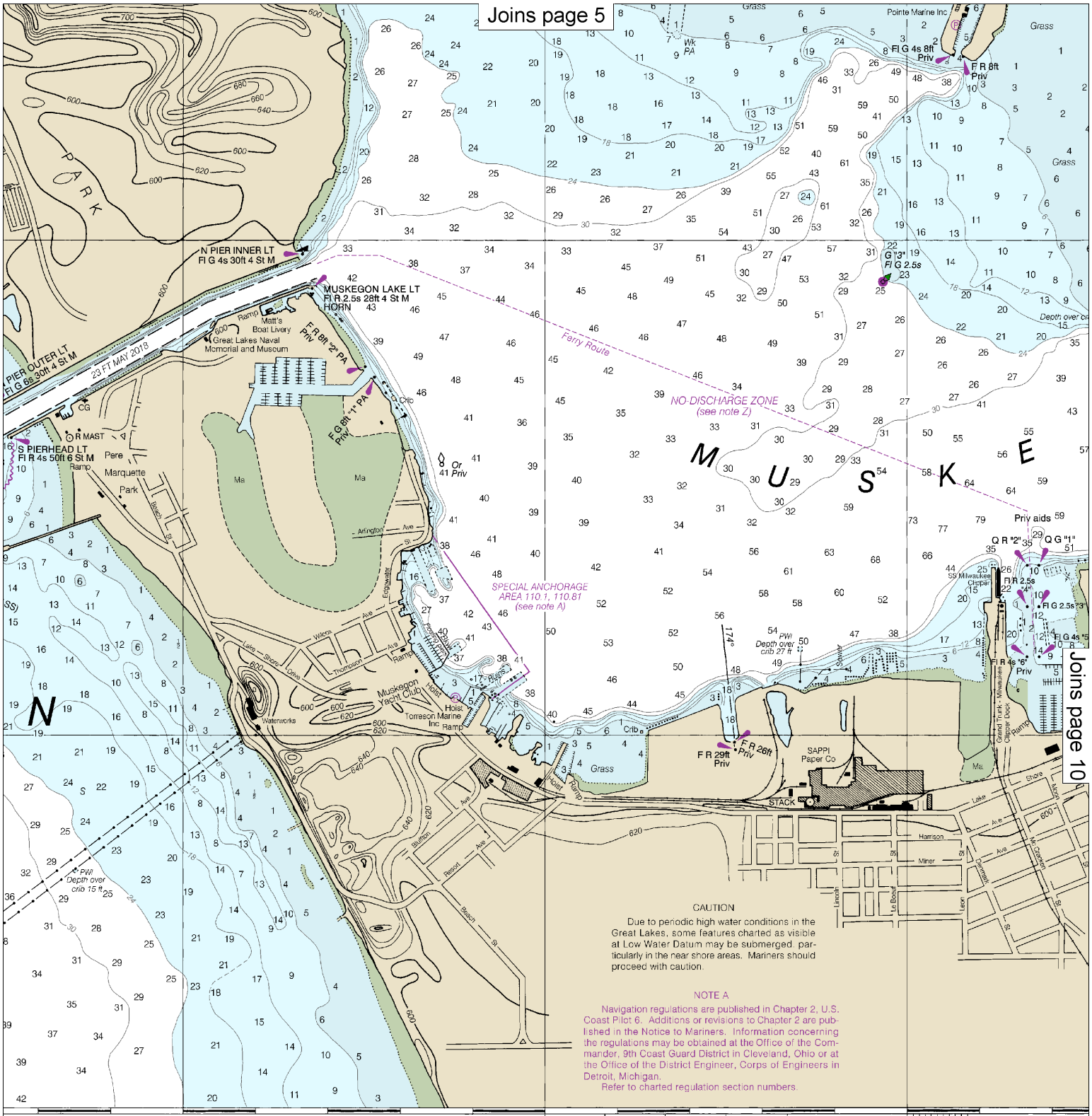
Nautical Miles

0 1

Yards

500 0 500 1000 1500

See Note on page 5.



crepancies or comments
ov/staff/contact.htm.

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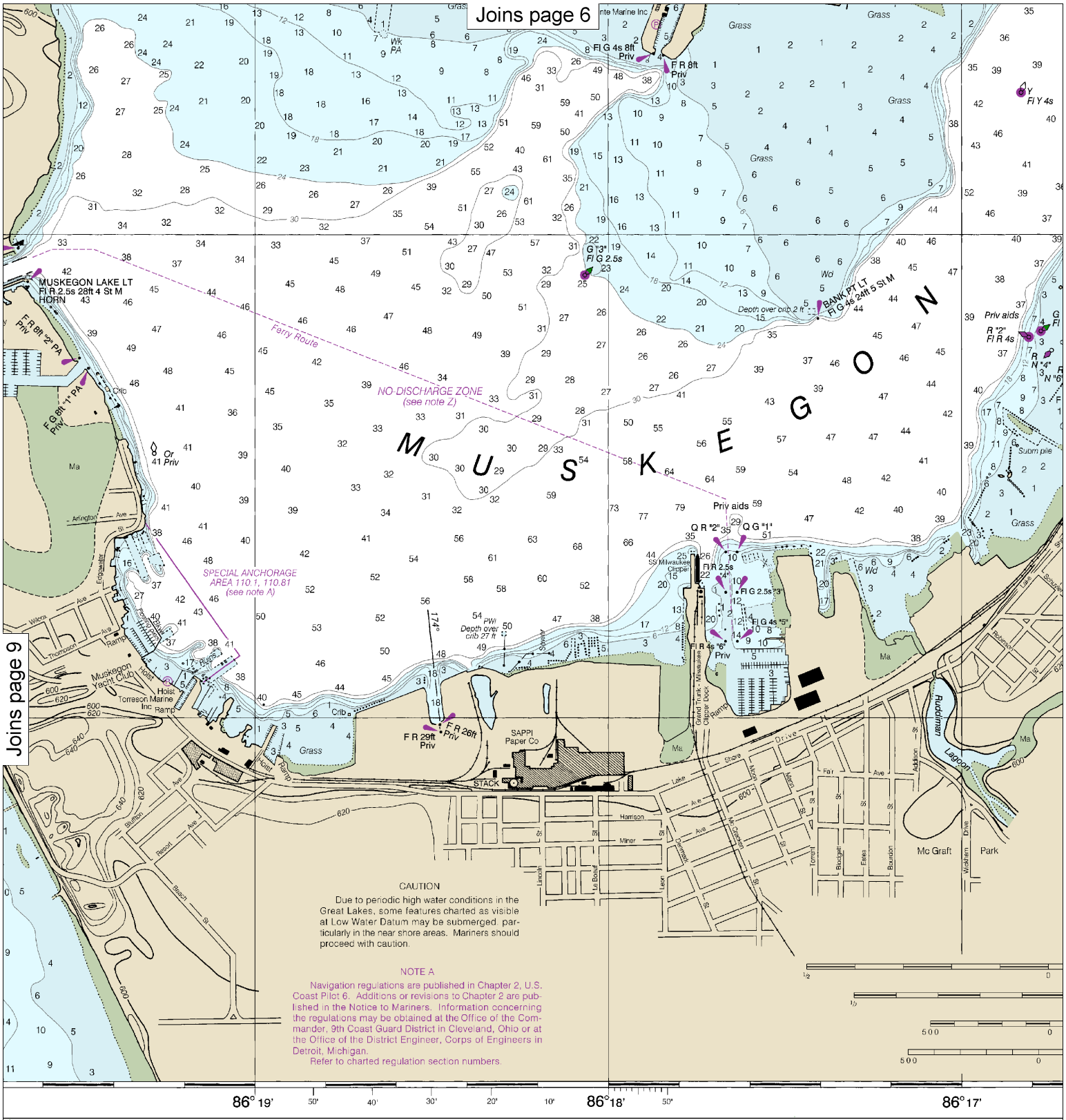
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

SOU



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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

SOUNDINGS IN FEET

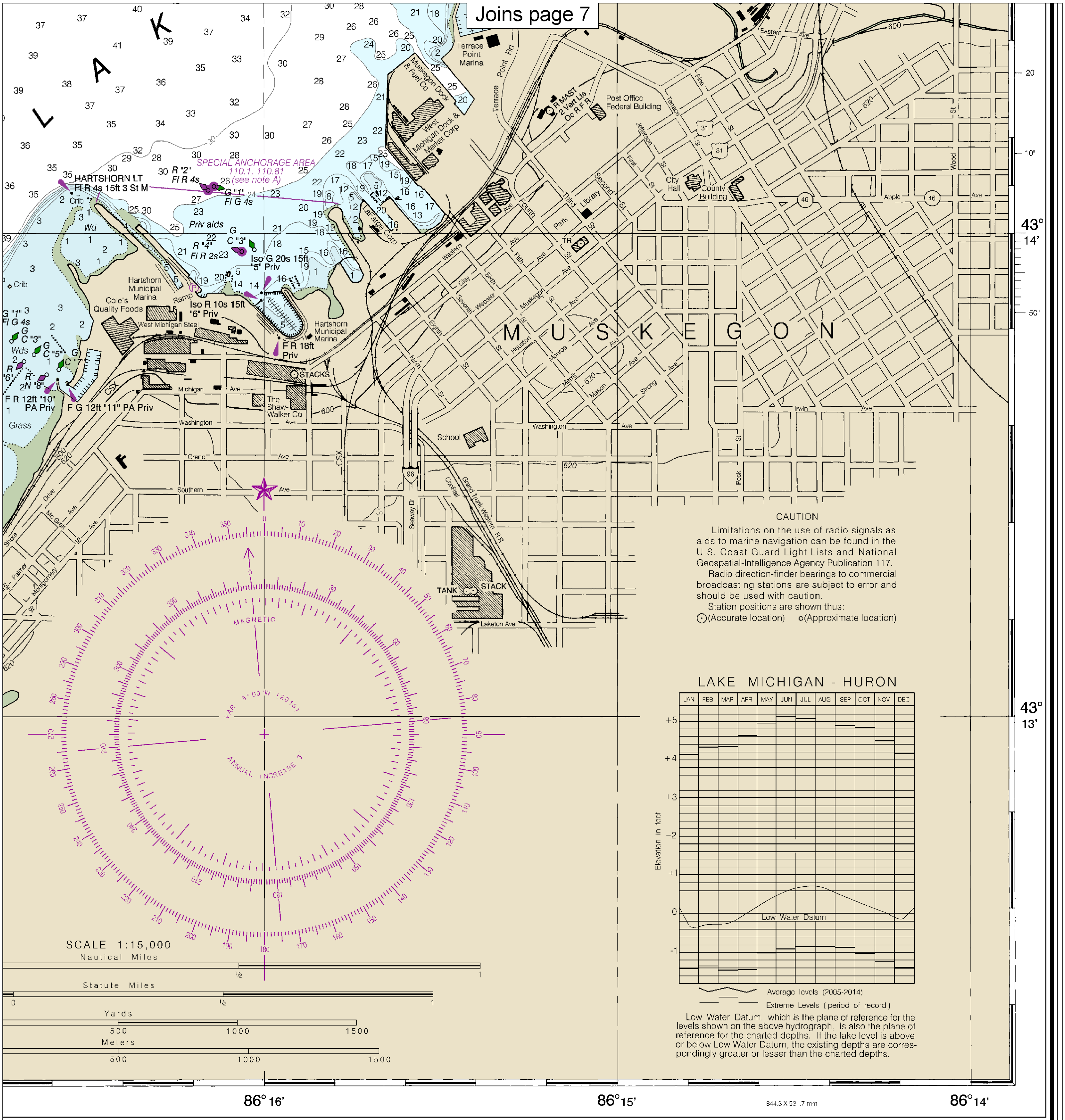
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:15,000~~

Nautical Miles
0 1

Yards
500 0 500 1000 1500

See Note on page 5.



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

Muskegon Lake

SOUNDINGS IN FEET - SCALE 1:15,000

14934

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.
Channel 9 – Communications between boats and ship-to-coast.
Channel 13 – Navigation purposes at bridges, locks, and harbors.
Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.
Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.
Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!

All Hazards NOAA Weather Radio NOAA's National Weather Service

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.
http://www.nws.noaa.gov/nwr/

Quick References

Nautical chart related products and information	—	**http://www.nauticalcharts.noaa.gov**
Interactive chart catalog	—	**http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml**
Report a chart discrepancy	—	**http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx**
Chart and chart related inquiries and comments	—	**http://ocsdata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs**
Chart updates (LNM and NM corrections)	—	**http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html**
Coast Pilot online	—	**http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm**
Tides and Currents	—	**http://tidesandcurrents.noaa.gov**
Marine Forecasts	—	**http://www.nws.noaa.gov/om/marine/home.htm**
National Data Buoy Center	—	**http://www.ndbc.noaa.gov/**
NowCoast web portal for coastal conditions	—	**http://www.nowcoast.noaa.gov/**
National Weather Service	—	**http://www.weather.gov/**
National Hurrican Center	—	**http://www.nhc.noaa.gov/**
Pacific Tsunami Warning Center	—	**http://ptwc.weather.gov/**
Contact Us	—	**http://www.nauticalcharts.noaa.gov/staff/contact.htm**

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This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

NOAA's Office of Coast Survey The Nation's Chartmaker