

BookletChart™

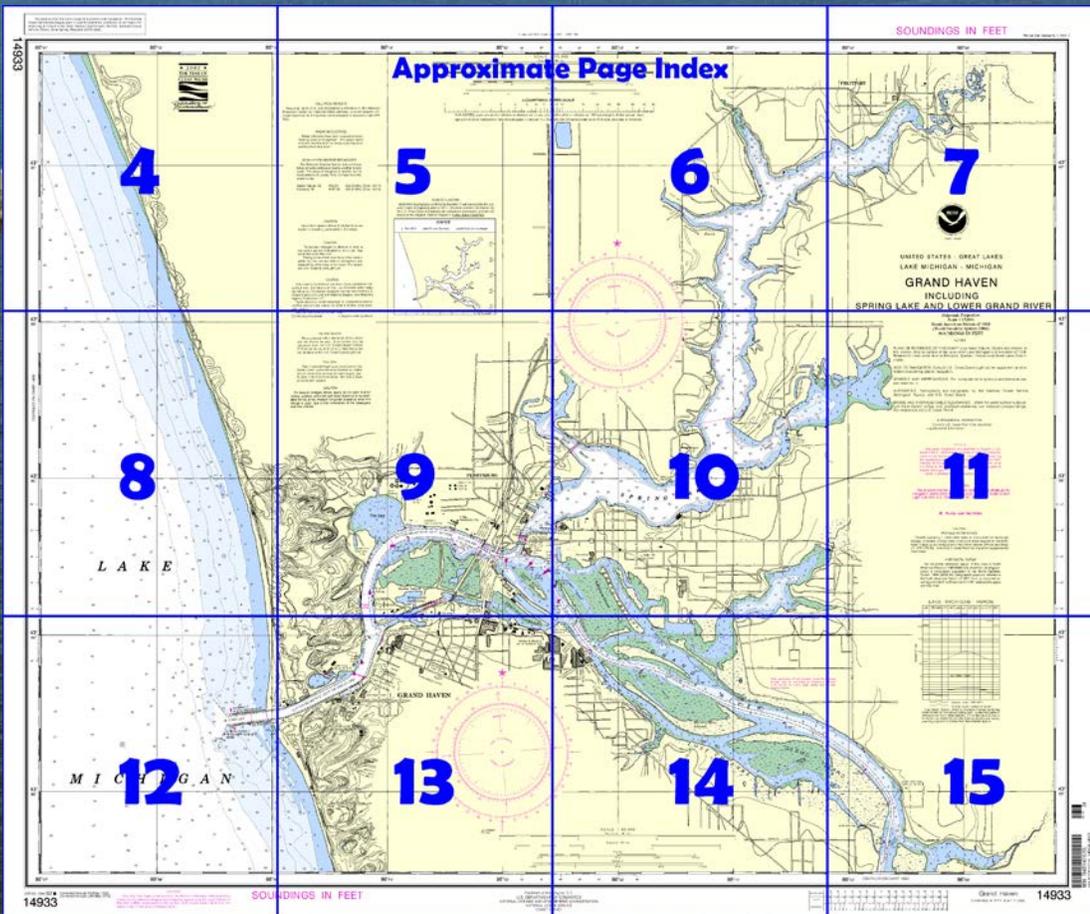


Grand Haven – Spring Lake and Lower Grand River NOAA Chart 14933

*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.

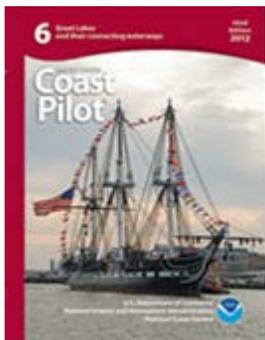
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

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=14933>



(Selected Excerpts from Coast Pilot).
Grand Haven, Mich., is a city and harbor on the **Grand River**, 43 miles S of Little Sable Point. The towns of **Ferrysburg, Mich.**, and **Spring Lake, Mich.**, front the N side of the river. These communities are not visible from Lake Michigan because of sand dunes and hills immediately N and S of the harbor entrance. The principal commodities handled in the port are coal and sand.

Grand Haven South Pierhead Entrance Light (43°03.5'N., 86°15.4'W.), 42 feet above the water, is shown from a red fog signal building on the outer end of the S pier; a fog signal is at

the light.

Channels.—The dredged entrance channel leads E from deep water in Lake Michigan between parallel piers at the mouth of Grand River and upstream for about 16 miles. The outer ends of the piers are marked by lights. South Pierhead Entrance Light and an inner light on the S pier form a range useful for approaching the harbor. There is a turning basin on the S side of the channel 2.3 miles above the mouth. A side channel extends N to the deep water in Spring Lake 2.7 miles above the mouth. In April-June 2004, the controlling depths were 15.4 feet (21 feet at midchannel) in the entrance and between the piers to the Grand Haven municipal marina (except for lesser depths from 5.7 to 9 feet in a large area off the piers of the municipal marina and at the entrance to South Channel.) A shoal area encroaches into the middle of the channel in about 43°04'00"N., 86°14'11"W., with a depth of 20 feet gradually decreasing to bare at the edge of the channel; a buoy marks the outer edge of the area. From the municipal marina, the controlling depths were 13.9 feet (21 feet at midchannel) to Lighted Buoy 4, thence 17.6 feet in the left half and 8 feet in the right half of the channel to the railroad bridge at Ferrysburg, thence 7 to 12 feet in the turning basin. In 1978, the controlling depths were 15 feet from the railroad bridge to the entrance channel to Spring Lake; thence in June-July 1980, 12 feet into Spring Lake; thence in October 1997, 4 feet from the Spring Lake channel to the C-Way Construction Co. gravel pits at Bass River. The channel limits from Ferrysburg to the upstream project limit are well marked by buoys. The channels are subject to shoaling.

Large riprap stones have been placed along the lakesides and ends of the piers, and navigation should not be attempted close to these structures. Mooring to the piers or revetments is prohibited. The lower part of Grand River has connecting shallow side channels separated from the main river by low marshy islands. Several connected bays, or bays, have very shallow entrances with deep water inside. The J.B. Sims Power Plant is on Harbor Island. Intake pipes on the W side of the island in the intake mode pose no threat to watercraft. The intakes have a compressed air blowback system to clear the screens. This blowback is capable of capsizing a small recreational vessel. The area is surrounded by rope barriers and is marked by signs. Grand Haven has numerous small-craft facilities along both sides of Grand River, in South Channel, and in Spring Lake. The public docking facility, constructed by the city and the Michigan State Waterways Commission, is on the E side of the river just below the junction with South Channel. Transient berths, gasoline, diesel fuel, water, ice, electricity, sewage pump-out facilities, marine supplies, launching ramps, and harbormaster services are available in the harbor. The harbormaster monitors VHF-FM channels 16 and 9. Lifts to 50 tons are available for hull and engine repairs.

Grand Haven, Mich. Danger.—The J.B. Sims Power Plant is on Harbor Island. Intake pipes on the W side of the island in the intake mode pose no threat to watercraft. The intakes have a compressed air blowback system to clear the screens. This blowback is capable of capsizing a small recreational vessel. The area is surrounded by rope barriers and is marked by signs.

Currents.—High-water periods on the Grand River are usually for two months during the spring. During these periods, currents may reach 3 to 5 mph. Currents up to 5 mph should be expected after periods of heavy precipitation, regardless of season.

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

RCC Cleveland

Commander

9th CG District

(216) 902-6117

Cleveland, OH

Table of Selected Chart Notes

Ⓟ Pump-out facilities

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

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.

CAUTION

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

Aids upstream of the Grand Haven-Ferrysburg Bridge may be relocated as necessary without prior notice to mark deep water outside the channel limits.

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 private buoys are not all listed in the U.S. Coast Guard Light List.

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

For bascule bridges, whose spans do not open to a full vertical position, unlimited overhead clearance is not available for the entire charted horizontal clearance when the bridge is open, due to the inclinations of the drawspans over the channel.

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 0.064" northward and 0.191" westward to agree with this chart.

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.

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 National Imagery and Mapping Agency Publication 117.

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) ◦ (Approximate location)

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.

Grand Rapids, MI	KIG-63	162.55 MHz (Chan. WX-1)
Hesperia, MI	WWF-36	162.47 MHz (Chan. WX-3)

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).

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.

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.

SOURCE DIAGRAM

Most of the hydrography identified by the letter "J" was surveyed by the U.S. Army Corps of Engineers prior to 1974. 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.

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.

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

NOTES

PLANE OF REFERENCE OF THIS CHART (Low Water Datum). Depths are referred to the normal sloping surface of the river when Lake Michigan is at elevation 577.5 ft. Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985).

AUTHORITIES. Hydrography and topography by the National Ocean Service, Geological Survey, and U.S. Coast Guard.

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

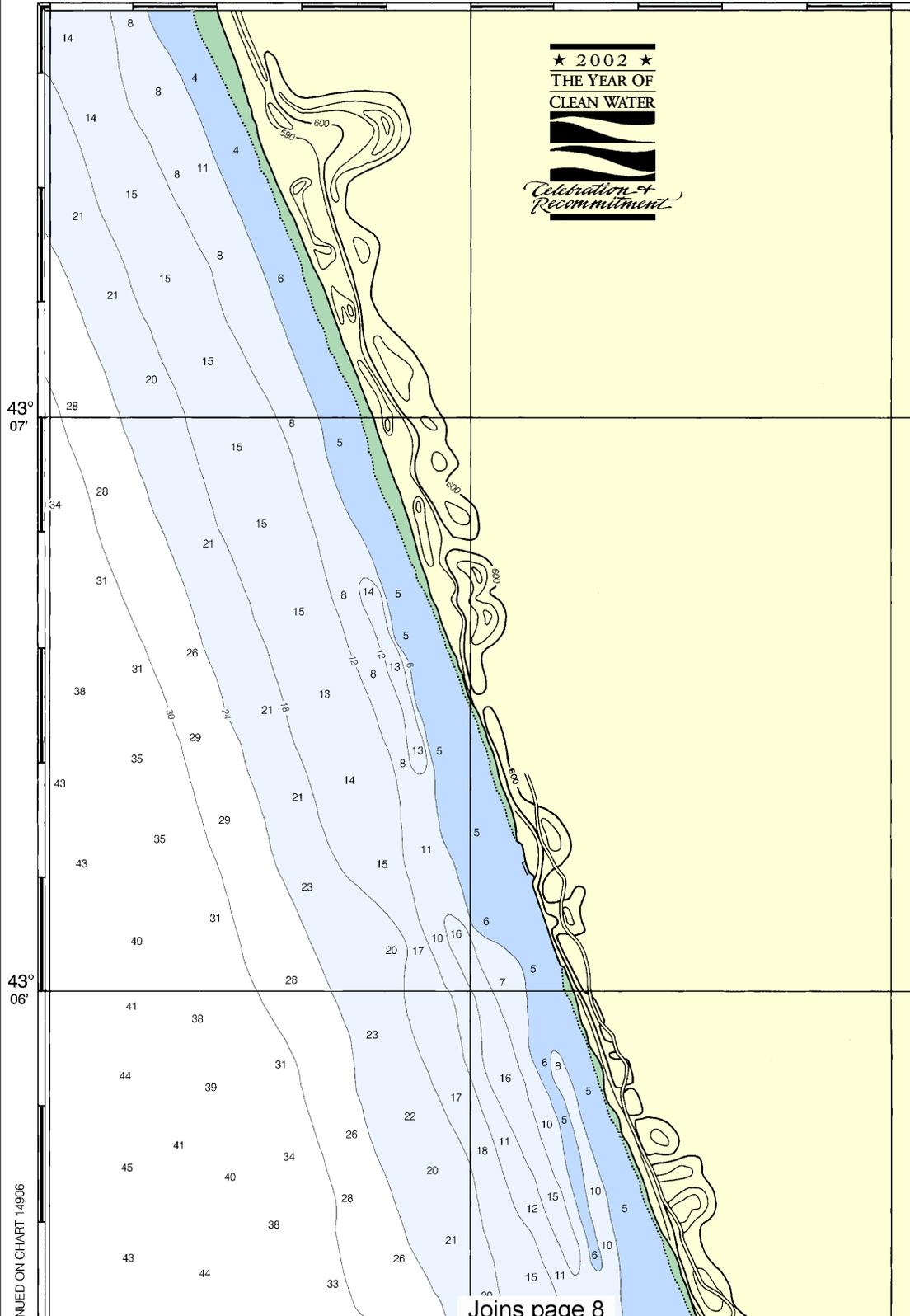
This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

14933

86°17'

86°16'

86°15'



Joins page 8

CONTINUED ON CHART 14906

POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free) or the Coast Guard facility if telephone communication is not possible (1-800-424-153).

RADAR REFLECTORS
Radar reflectors have been placed on floating aids to navigation. Individual reflector identification on these aids is omitted from this chart.

NOAA VHF-FM WEATHER BROADCAST STATIONS
The National Weather Service stations listed below provide continuous marine weather forecasts. The range of reception is variable. The range of reception is usually 20 to 40 miles from the antenna site.

Grand Rapids, MI	KIG-63	1
Hesperia, MI	WWF-36	1

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

CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. Local Notice to Mariners.
During some winter months or when affected by ice, certain aids to navigation may be replaced by other types or removed. See U.S. Coast Guard Light List.

CAUTION
Only marine radiobeacons have been shown on this chart. Limitations on the use of radiobeacons as aids to marine navigation can be found in Coast Guard Light Lists and National Imagery and Mapping Agency Publication 117.
Radio direction-finder bearings to coast stations are subject to error and should be used with caution.
Station positions are shown thus:
○ (Accurate location) ◦ (Approximate location)

RACING BUOYS
Racing buoys within the limits of this chart are not shown hereon. Information on racing buoys can be obtained from the U.S. Coast Guard Light Lists and National Imagery and Mapping Agency Publication 117.
Other private racing buoys are not all listed in the U.S. Coast Guard Light List.

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

CAUTION
For bascule bridges, whose spans do not rise vertically, unlimited overhead clearance is not available for the entire charted horizontal clearance. Bridge is open, due to the inclinations of the spans, over the channel.

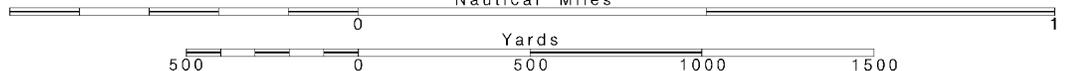
4

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:15,000
Nautical Miles

See Note on page 5.



86°14'

86°13'

50"

40"

30"

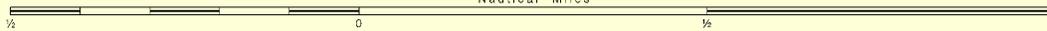
20"

10"

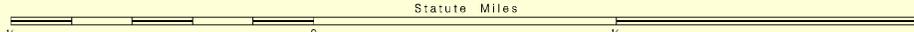
86°12'

50"

SCALE 1:15,000
Nautical Miles



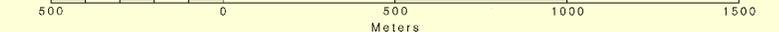
Statute Miles



Yards



Meters



LOGARITHMIC SPEED SCALE



To find SPEED, place one point of dividers on distance run (in any unit) and the other on minutes run. Without changing divider spread, place right point on 60 and left point will then indicate speed in units per hour. Example: with 4.0 nautical miles run in 15 minutes, the speed is 16.0 knots.

Distances to the National ... or to the nearest U.S. ... is impossible (33 CFR)

Shown on many individual radar ... has been

DCASTS ... listed ... but for ...

162.55 MHz (Chan. WX-1)
162.47 MHz (Chan. WX-3)

Broken lines are the edges.

Points in aids to this chart. See

When endang ... are ... For details

Have been calibrated for ... in the U.S. ... and Mapping

Commercial broad ... should be used

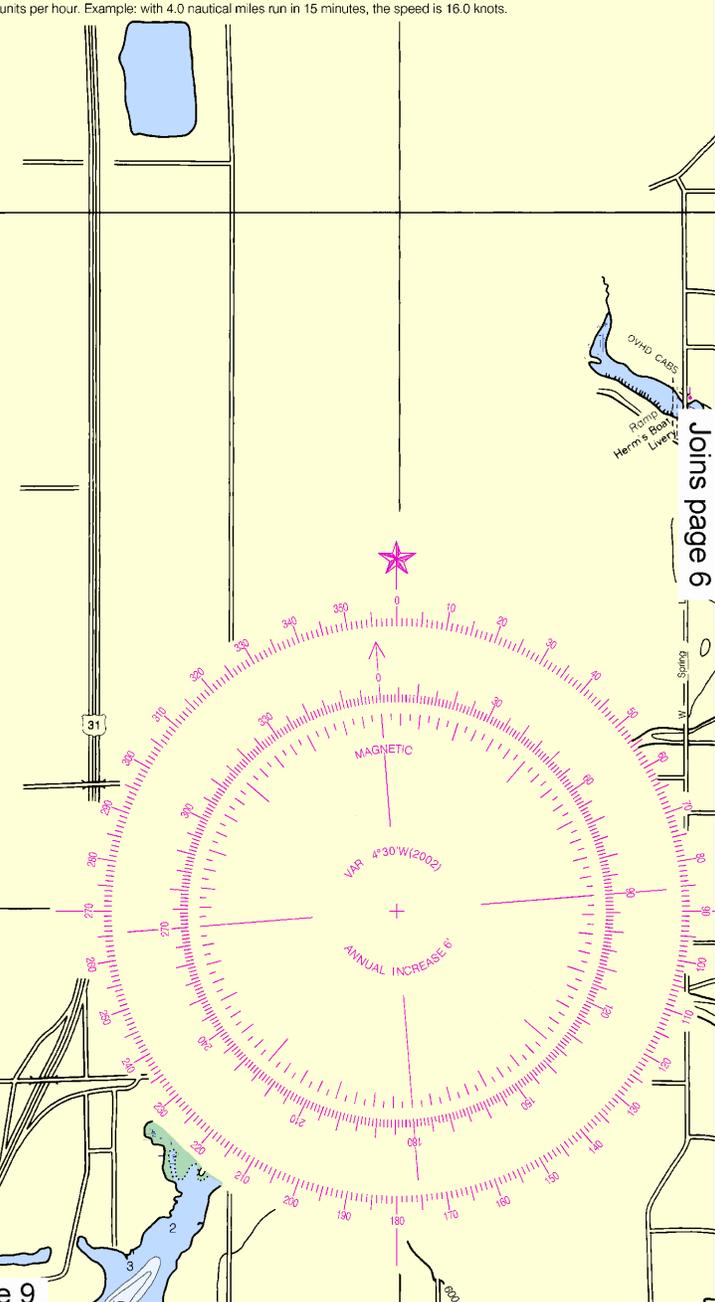
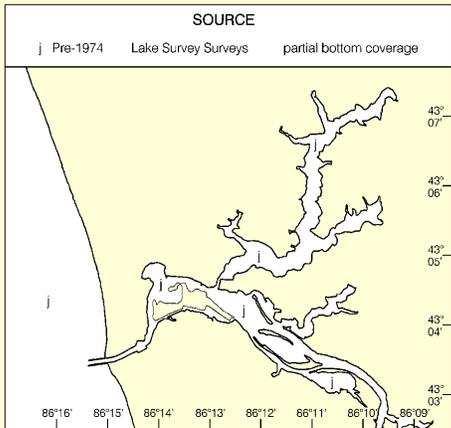
Approximate location)

Of this chart ... may be ... District ... buoys are ... Light List.

Conditions in the ... as visible ... merged, ... partners should

Do not open to a full ... is not avail- ... clearance when the ... of the drawspans

SOURCE DIAGRAM
Most of the hydrography identified by the letter "j" was surveyed by the U.S. Army Corps of Engineers prior to 1974. 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.



Joins page 6

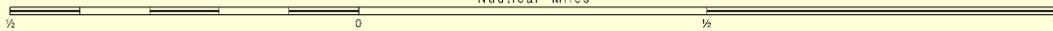
Joins page 9

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.

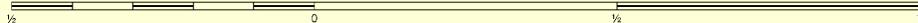


86°13' 50" 40" 30" 20" 10" 86°12' 50" 86°11'

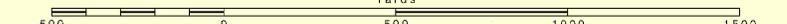
SCALE 1:15,000
Nautical Miles



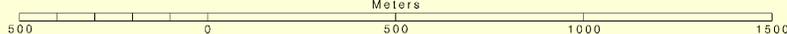
Statute Miles



Yards



Meters



LOGARITHMIC SPEED SCALE



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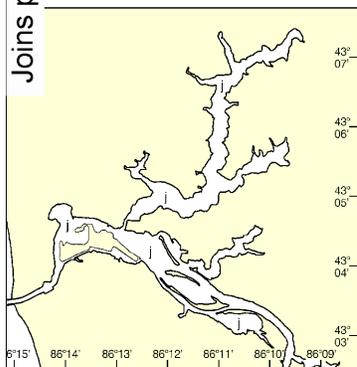
Joins page 5

SOURCE DIAGRAM

Hydrography identified by the letter "J" was surveyed by the U.S. Engineers prior to 1974. Channels currently maintained by U.S. Engineers are periodically resurveyed and are not shown. Refer to Chapter 1, United States Coast Pilot.

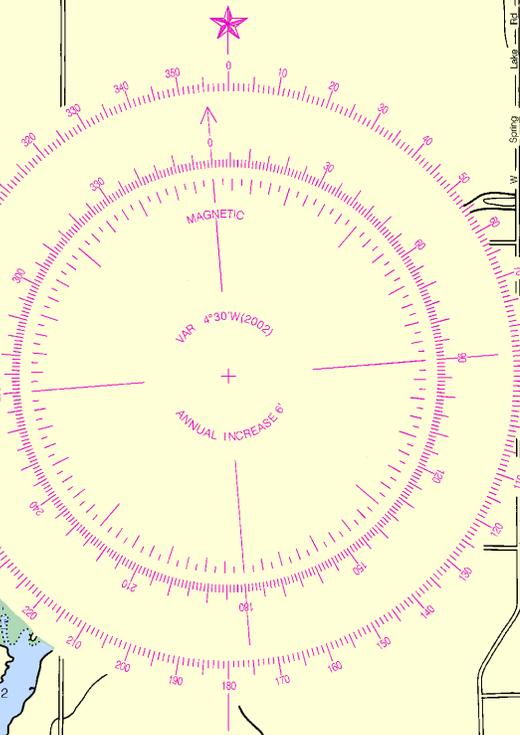
SOURCE

Lake Survey Surveys partial bottom coverage



31

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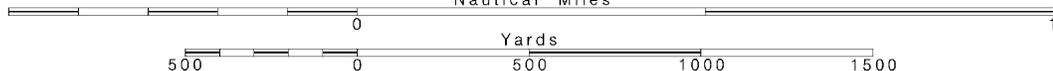
6

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

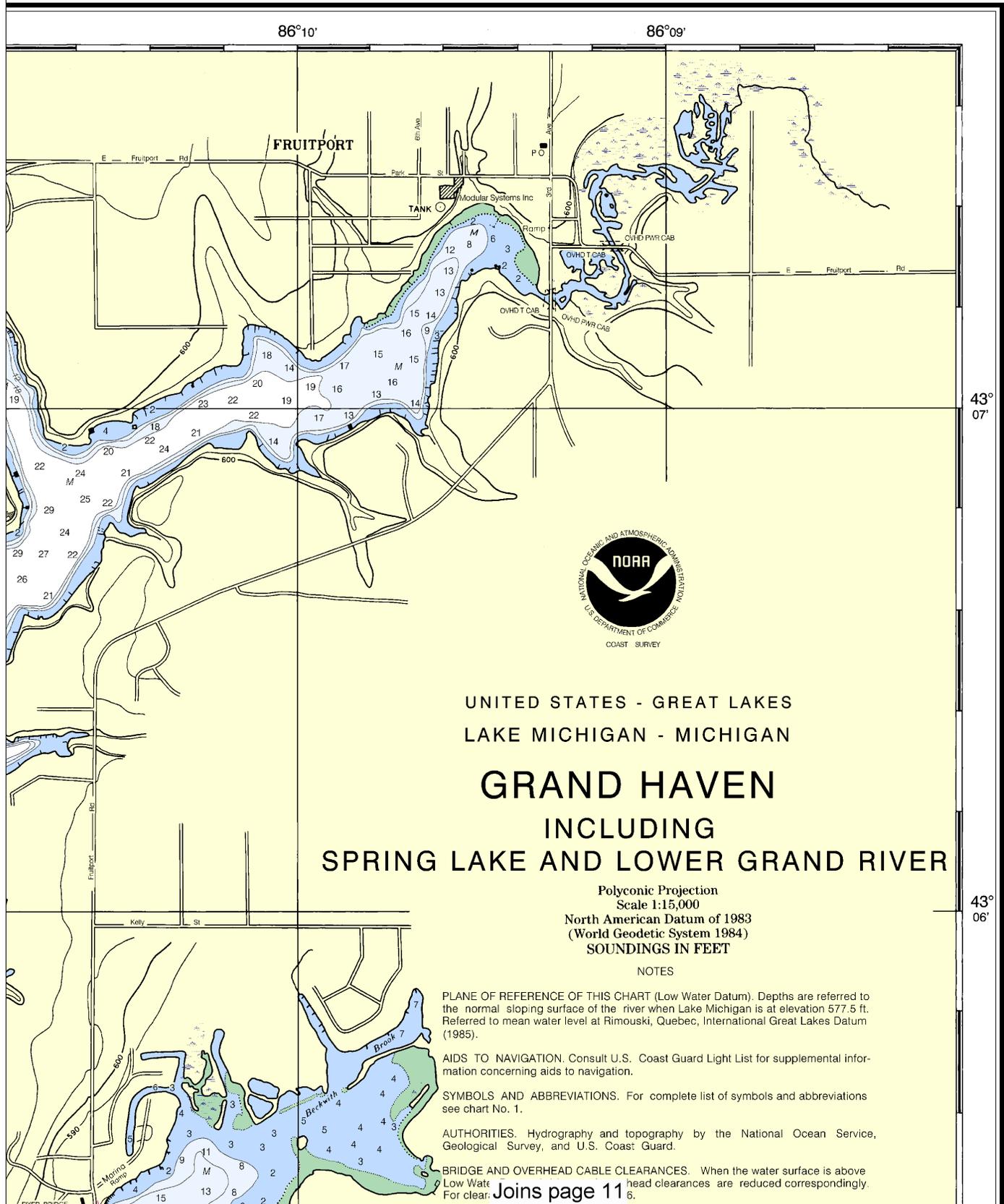
SCALE 1:15,000
Nautical Miles

See Note on page 5.



SOUNDINGS IN FEET

Nautical Chart Catalog No. 4, Panel C



UNITED STATES - GREAT LAKES
LAKE MICHIGAN - MICHIGAN

GRAND HAVEN

INCLUDING
SPRING LAKE AND LOWER GRAND RIVER

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

NOTES

- PLANE OF REFERENCE OF THIS CHART (Low Water Datum). Depths are referred to the normal sloping surface of the river when Lake Michigan is at elevation 577.5 ft. Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985).
- 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, Geological Survey, and U.S. Coast Guard.
- BRIDGE AND OVERHEAD CABLE CLEARANCES. When the water surface is above Low Water head clearances are reduced correspondingly. For clear Joins page 11 6.

This BookletChart has been updated through: Coast Guard Local Notice To Mariners: 4712 11/20/2012,
NGA Weekly Notice to Mariners: 4812 12/1/2012,
Canadian Coast Guard Notice to Mariners: 1012 10/26/2012.



Joins page 4

gered by ice, certain aids to navigation replaced by other types or removed. see U.S. Coast Guard Light List.

CAUTION
Only marine radiobeacons have been shown for surface use. Limitations on the use of signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Imagery and Mapping Agency Publication 117.

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

Station positions are shown thus:
○ (Accurate location) ◦ (Approximate location)

RACING BUOYS

Racing buoys within the limits of the chart are not shown hereon. Information obtained from the U.S. Coast Guard Office as racing and other private buoys not all listed in the U.S. Coast Guard Light List.

CAUTION

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

CAUTION

For bascule bridges, whose spans do not clear the water, the vertical position, unlimited overhead clearance is not shown hereon. For drawbridges, the entire charted horizontal clearance is not shown hereon. For swing bridges, the bridge is open, due to the inclinations of the spans over the channel.

CONTINUED ON CHART 14906

43° 06'

43° 05'

50'

40'

30'

20'

10'

43° 04'

50'

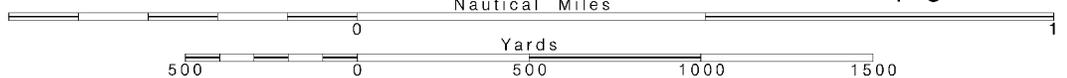
L A K E

Joins page 12

Printed at reduced scale.

SCALE 1:15,000

See Note on page 5.



Note: Chart grid lines are aligned with true north.

GRAND HAVEN INCLUDING SPRING LAKE AND LOWER GRAND RIVER

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

NOTES

PLANE OF REFERENCE OF THIS CHART (Low Water Datum). Depths are referred to the normal sloping surface of the river when Lake Michigan is at elevation 577.5 ft. Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985).

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, 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.

SUPPLEMENTAL INFORMATION

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

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.

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

CAUTION

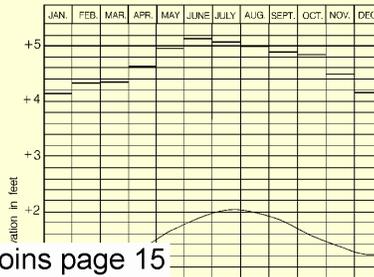
POTABLE WATER INTAKE

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.

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 0.064" northward and 0.191" westward to agree with this chart.

LAKE MICHIGAN - HURON



43°
06'

43°
05'

50'

40'

30'

20'

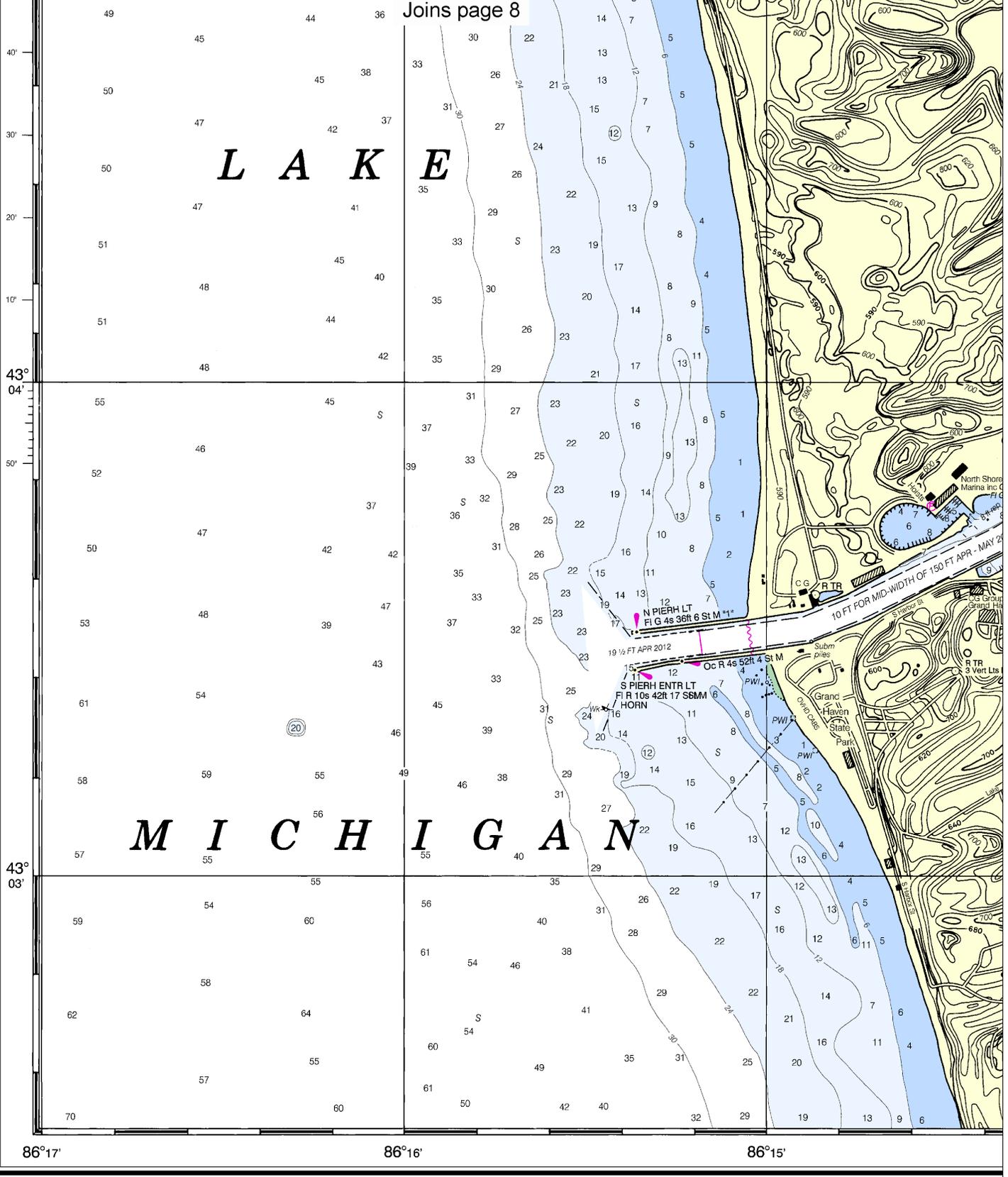
10'

43°
04'

50'

L A K E

M I C H I G A N



24th Ed., May /02 ■ Corrected through NM May 18/02
 Corrected through LNM May 07/02
14933

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.

SOUNDINGS IN FEET

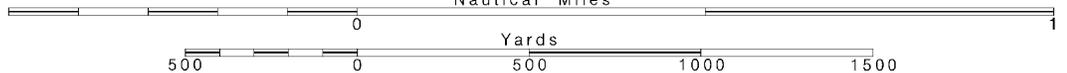
12

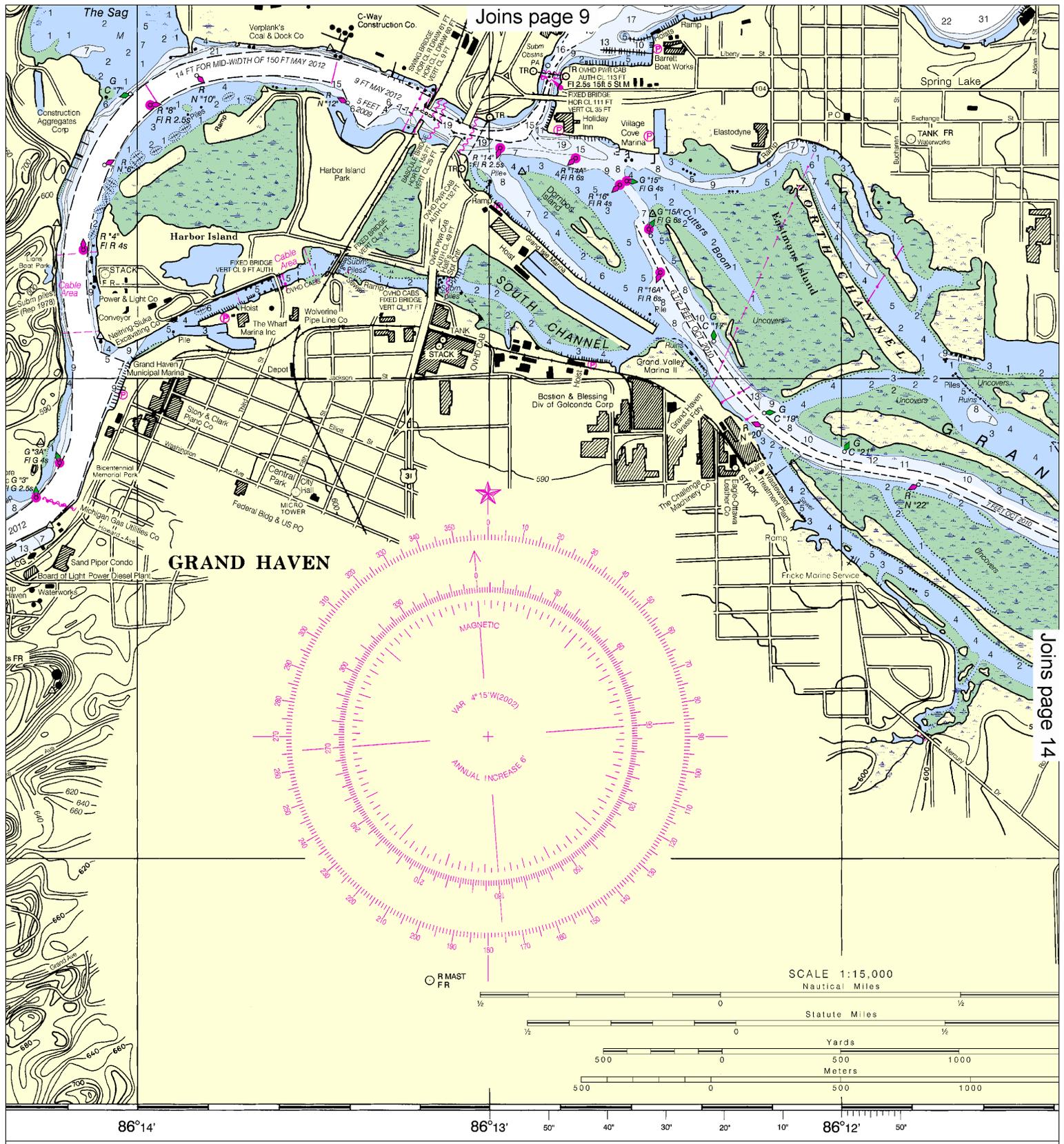
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:15,000
Nautical Miles

See Note on page 5.



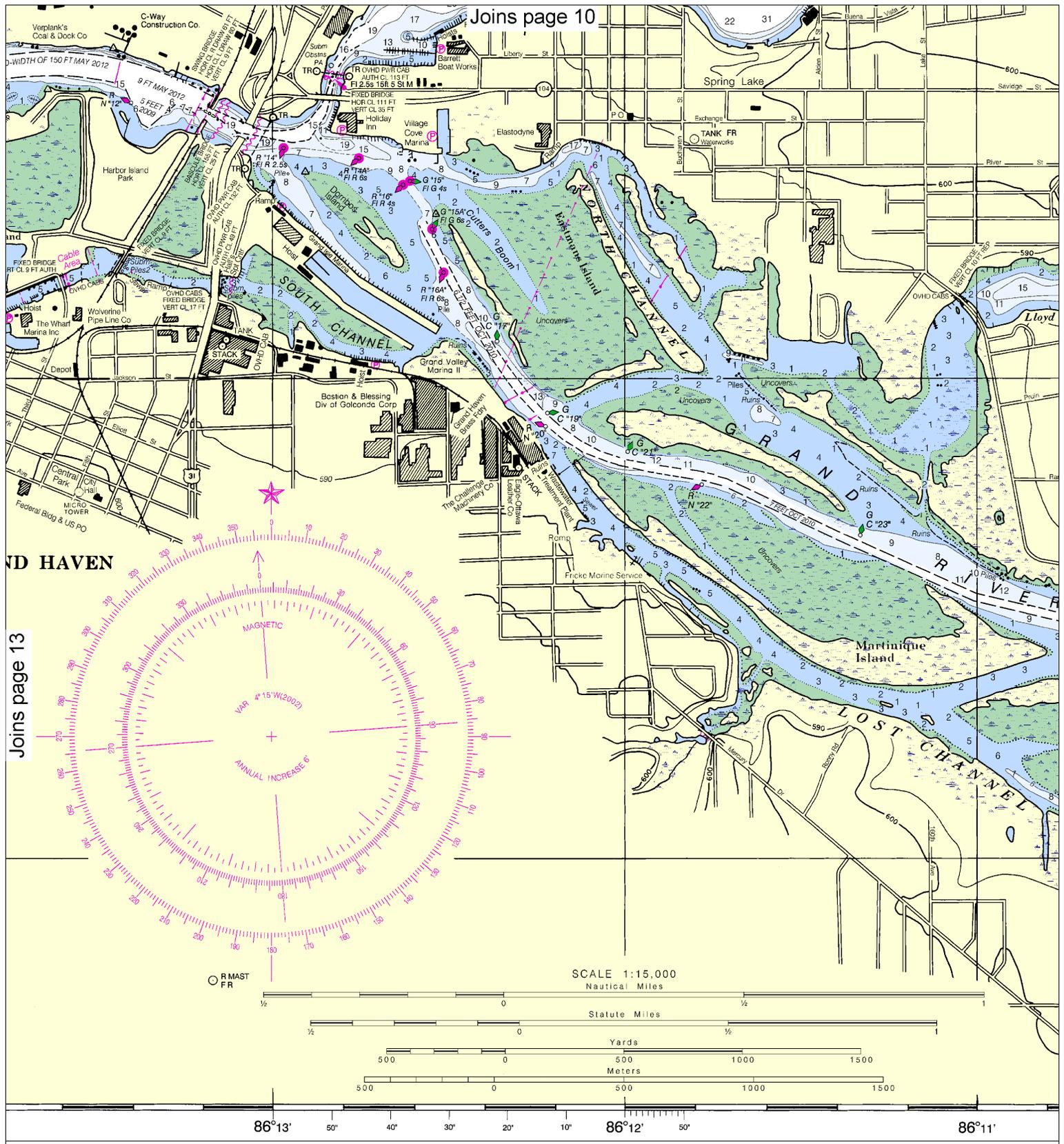


Joins page 9

Joins page 14

EET

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



Joins page 10

Joins page 13

AND HAVEN

14

Note: Chart grid lines are aligned with true north.

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

Printed at reduced scale.

SCALE 1:15,000
 Nautical Miles

See Note on page 5.



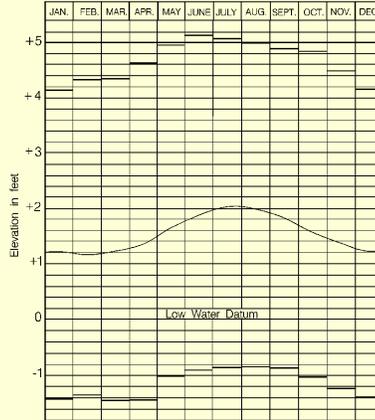
CAUTION
POTABLE WATER INTAKE

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.

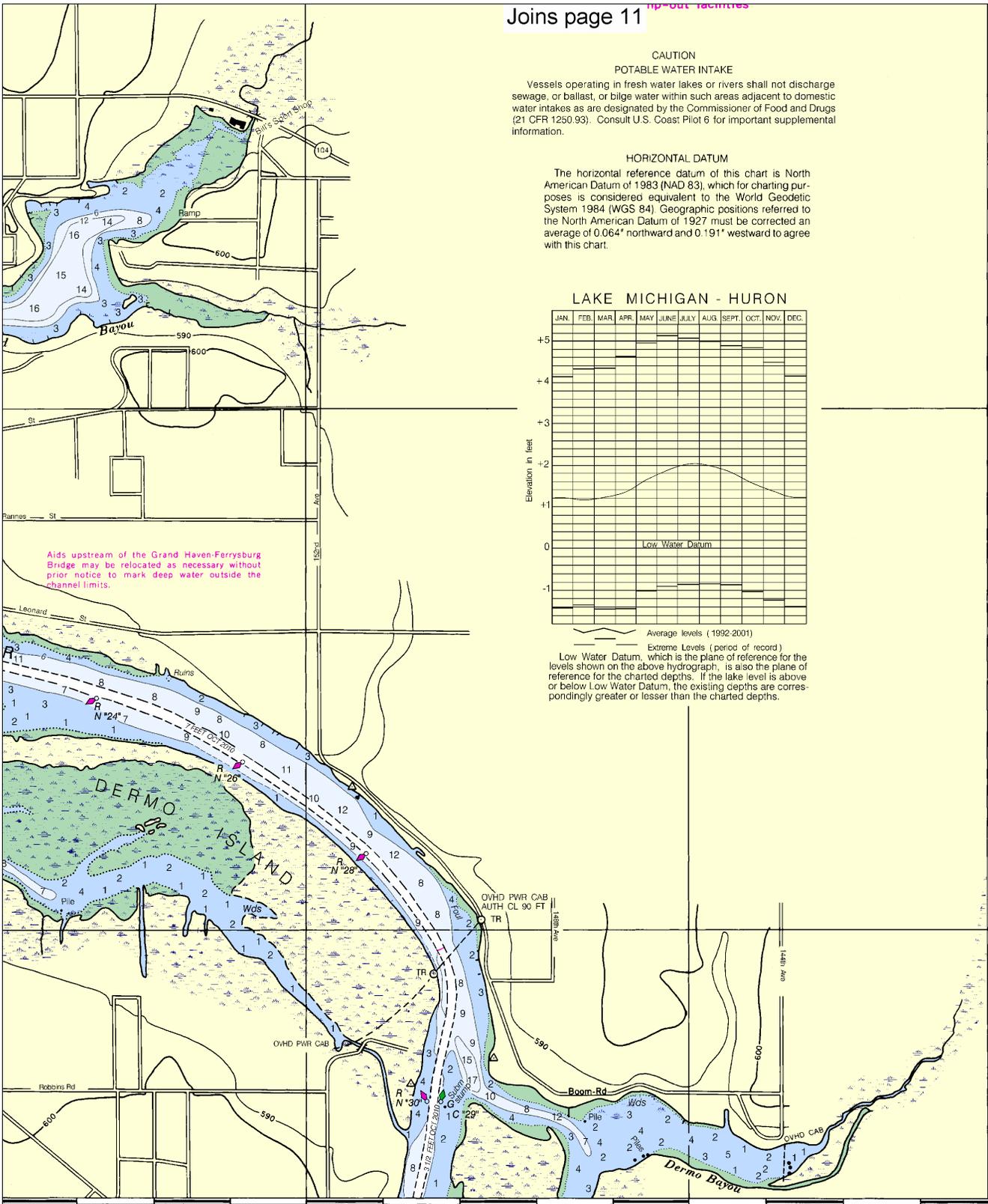
HORIZONTAL DATUM

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 0.064" northward and 0.191" westward to agree with this chart.

LAKE MICHIGAN - HURON



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.



86°10' CONTINUED ON CHART 14931

86°09'

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

Grand Haven
SOUNDINGS IN FEET - SCALE 1:15,000

14933





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!



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>
- Online chart viewer — <http://www.nauticalcharts.noaa.gov/mcd/NOAChartViewer.html>
- Report a chart discrepancy — <http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx>
- Chart and chart related inquiries and comments — <http://ocsddata.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 Hurricane 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.

