

BookletChart™



Keweenaw Bay

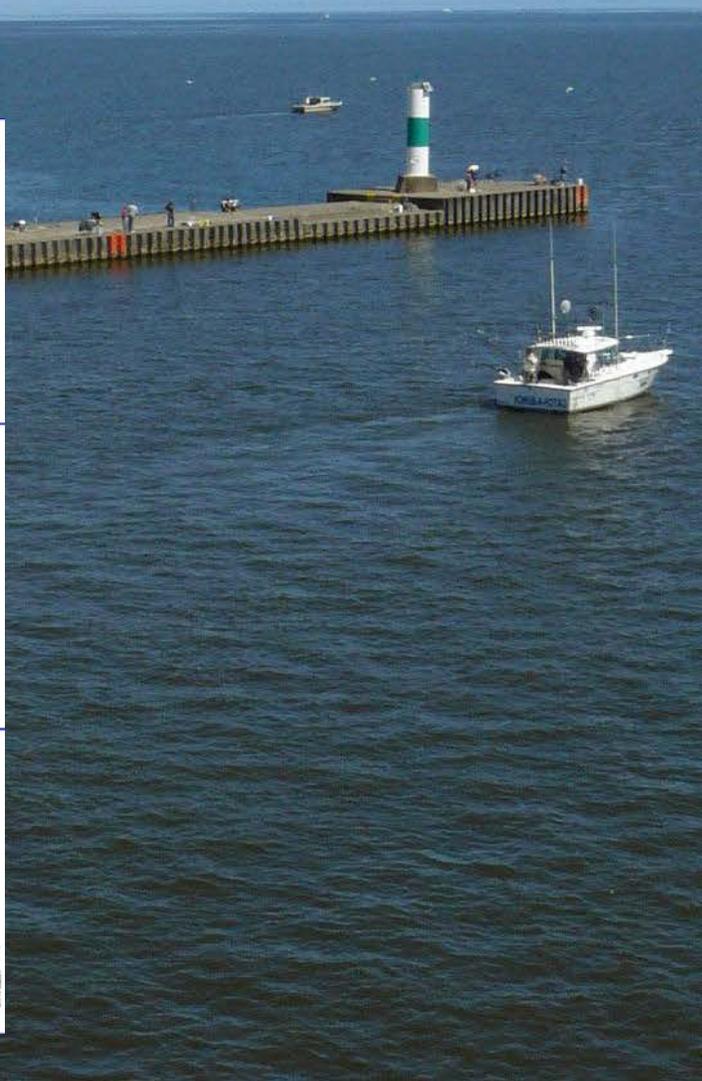
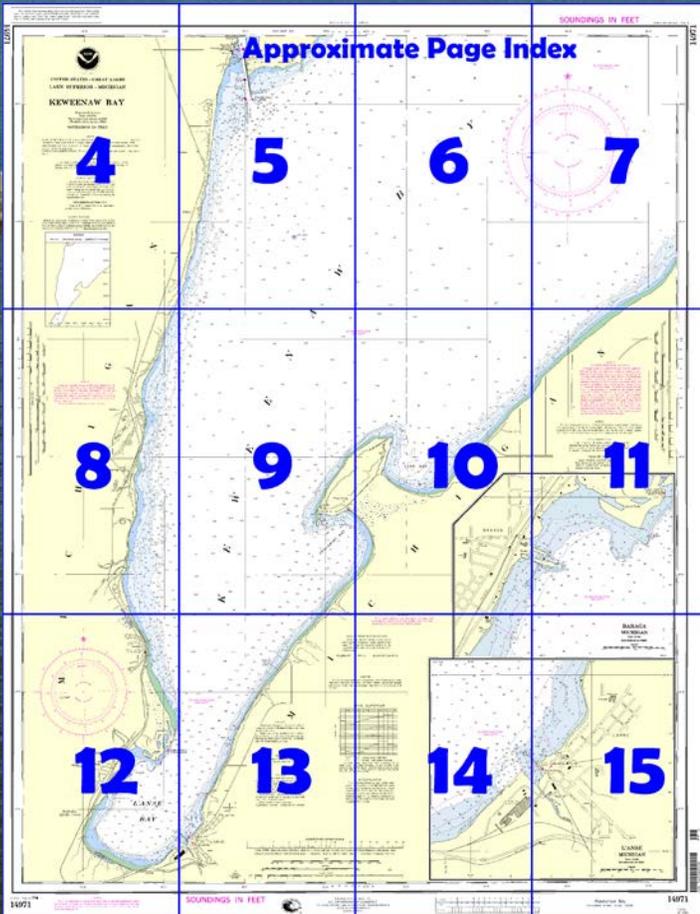
NOAA Chart 14971

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.

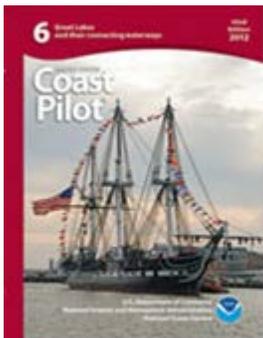
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

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=14971>.



(Selected Excerpts from Coast Pilot)

Keweenaw Bay extends about 22 miles southwest on the northwest side of Point Abbaye and is enclosed on the W by the inner end of the east side of Keweenaw Peninsula. The bay is 12 miles wide at the entrance and has a minimum width of 1.1 miles abreast Sand Point, about 2.3 miles from the head of the bay. The east shore of the bay has deep water within 0.4 mile and the west shore within 0.7 mile.

A headland, 1 mile wide at the inner end and 2 miles wide at the outer end, extends 1.7 miles northwest from shore about 13 miles southwest of Point Abbaye. **Sand Bay** is the bight on the northeast side of the headland, and **Pequaming Bay** is the bight

on the southwest side. **Sand Point**, marked by a light, is a projection from the west side of the bay about 2.3 miles from the head. A 1-foot shoal, marked on the southeast side by a buoy, extends 1,000 feet South from Sand Point. **L'Anse Bay** is the part of Keweenaw Bay above Sand Point. **Portage River** (see also chart 14972) flows into the west side of Keweenaw Bay about 13.5 miles west of Point Abbaye.

Pequaming, MI, is a village on the northwest side of Pequaming Bay, about 15 miles southwest of Point Abbaye. Dock ruins extend about 1,200 feet South from the headland that forms the west side of the bay. A wharf in poor condition parallels the dock ruins with a slip between. In 1966, depths in the slip were 17 feet at the outer end decreasing to 7 feet at the inner end, and depths were 19 feet along the outer 500 feet of the east side of the wharf. The mooring facilities on the east side of the wharf are dilapidated. northeast of the wharf, submerged dock ruins extend South from the north shore of the bay. A small island at the outer end of the ruins is the only part visible. A line of submerged cribs, in depths of 8 to 14 feet, extends E from the island to the east shore of the bay. No facilities are maintained at the village. There is excellent protection, but caution must be exercised when approaching or landing at the dock ruins.

L'Anse, MI, is a village at the mouth of **Falls River** on the southeast side of L'Anse Bay. A silver water tank on the south side of the river mouth and a stack on the north side of the river mouth are prominent.

Caution.—Submerged ruins and a sunken wreck extend 500 feet northwest from the north side of the river mouth. A buoy marks the outer end of the ruins.

Wharf.—The wharf of the Celotex Corp. extends 800 feet northwest from the south side of the river mouth, thence 3,000 feet southwest along the shore. The N face has depths of 19 feet, decreasing to 12 feet 300 feet from the outer end. The W face has depths of 19 to 22 feet along the NE 900 feet. Vessels should approach the wharf on a line parallel with the northeast face to avoid a 17-foot shoal about 650 feet west-northwest of the N corner of the wharf.

Small-craft facilities.—The municipal marina is on the north side of the river mouth. In 1972, the controlling depth was 4 feet in the approach and marina basin. Water is available at the marina and gasoline and most supplies are available nearby in town. L'Anse has a hospital.

Baraga, MI, is a village on the northwest side of L'Anse Bay. The silver tank on high ground west of the village is prominent. Two jetties extend E from shore at the village. The S jetty, 1,200 feet long, has submerged ruins extending 200 feet from its outer end and 900 feet off the south side. About 200 feet N, the second jetty, wooded over, extends 700 feet from shore to depths of about 18 feet. Lime is occasionally received at the village.

Small-craft facilities.— In 1972, the slip between the jetties had depths of 17 to 7 feet. A Michigan State Waterways Commission dock provides transient berths, sewage pump-out, and a launching ramp.

Keweenaw Bay, MI, is a village on the west side of Keweenaw Bay opposite Pequaming. An abandoned coal dock in ruins extends E from shore. Rock bluffs just north of the dock are prominent.

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

RCC Cleveland

Commander

9th CG District
Cleveland, OH

(216) 902-6117

Table of Selected Chart Notes

[Empty box]

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.

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 0.256' southward and 0.449' westward to agree with this chart.

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)

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
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.

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.

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 for details.

NOAA VHF-FM WEATHER BROADCASTS
The National Weather Service station listed below provides continuous marine weather broadcasts. The range of reception is variable, but for most stations is usually 20 to 40 miles from the antenna site.

Houghton, MI	WXK-73	162.40 MHz (Chan WX-2)
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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).

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.

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/.

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.

SOURCE DIAGRAM
Most of the hydrography identified by the letter "I" 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.

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

NOTE B
The channel legend reflects the Corps of Engineers project depth. The Corps of Engineers publishes the controlling depth periodically in the U.S. Coast Guard Local Notice to Mariners. For further information on channel depths, direct inquiries to the Office of the District Engineer, Corps of Engineers, Detroit, Michigan.

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).

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

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.

14971



UNITED STATES - GREAT LAKES
LAKE SUPERIOR - MICHIGAN
KEWEENAW BAY

Polyconic Projection
Scale 1:30,000
North American Datum of 1983
(World Geodetic System 1984)
SOUNDINGS IN FEET

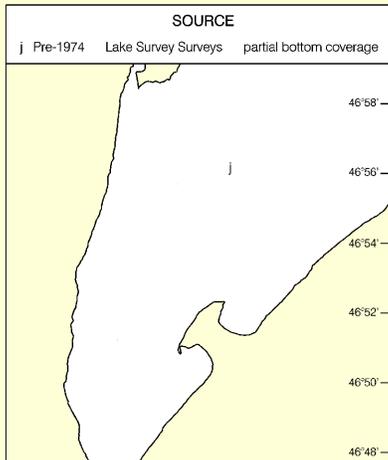
NOTES
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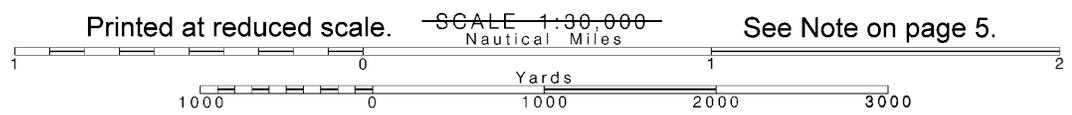
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SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 6 for important supplemental information.

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 8

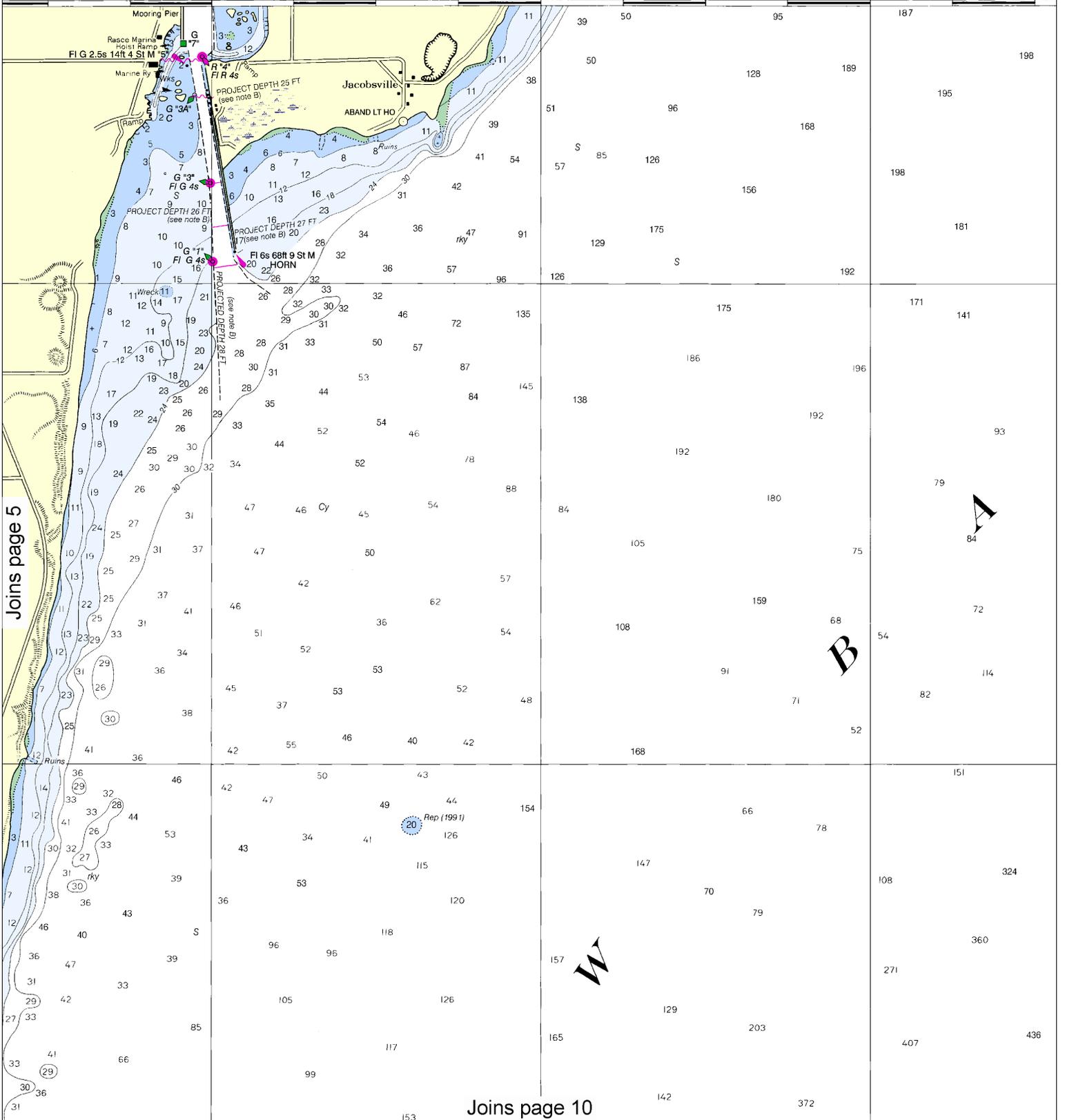


See Note on page 5.

Note: Chart grid lines are aligned with true north.

4

88°26' JOINS CHART 14972 88°24' 50' 40' 30' 20' 10' 88°23' 50' 88°22'



Joins page 5

Joins page 10

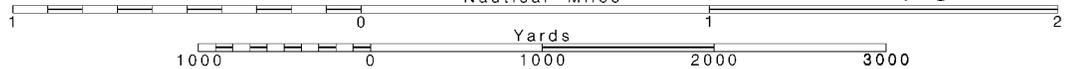
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Note: Chart grid lines are aligned with true north.

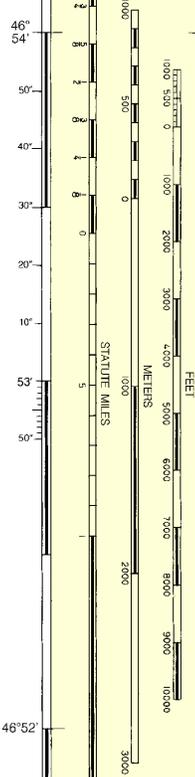
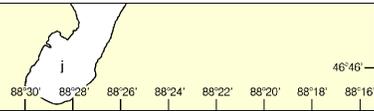
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SCALE 1:30,000 Nautical Miles

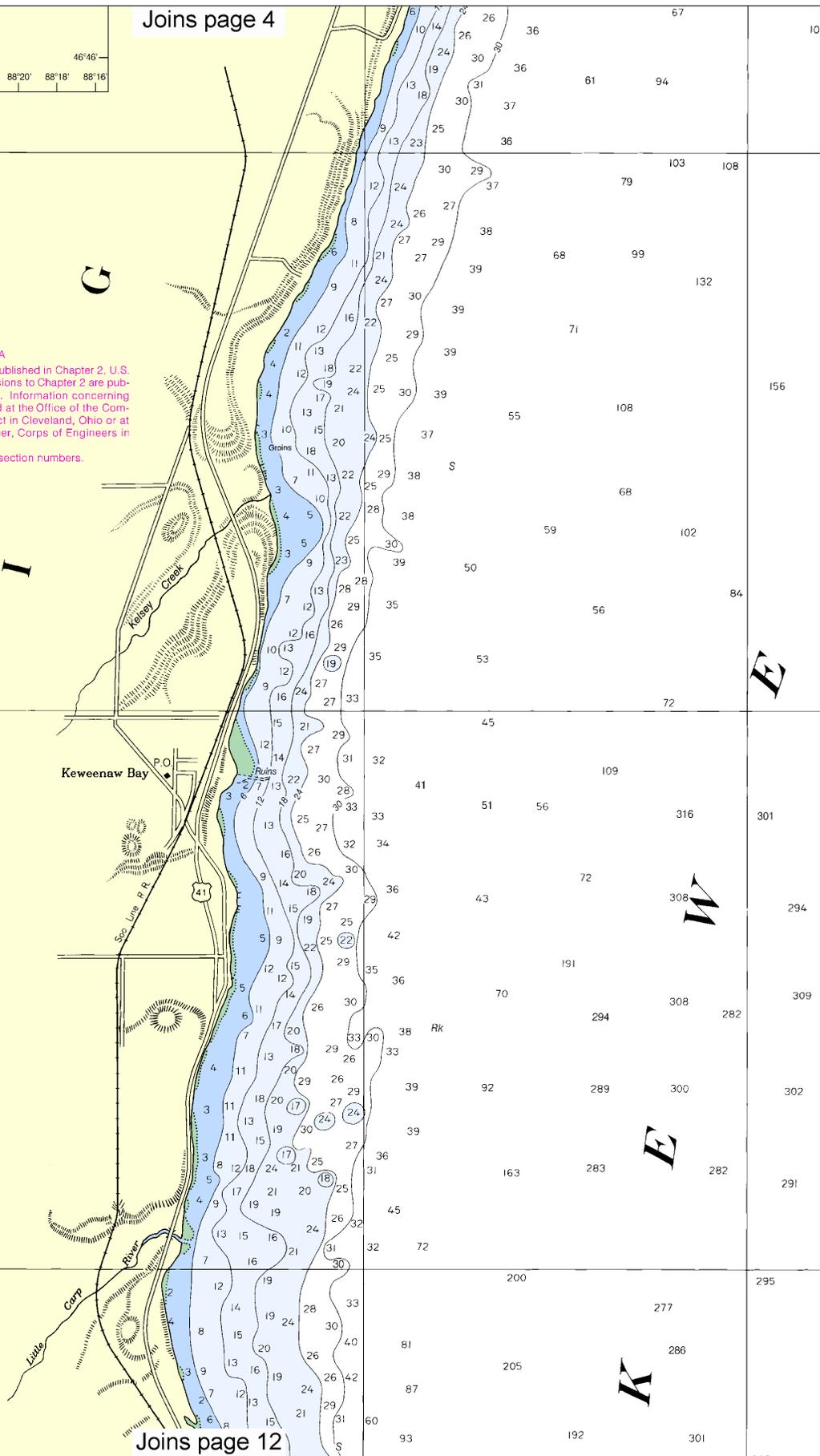
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Joins page 4



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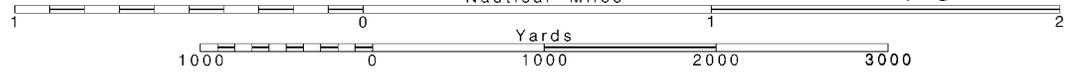


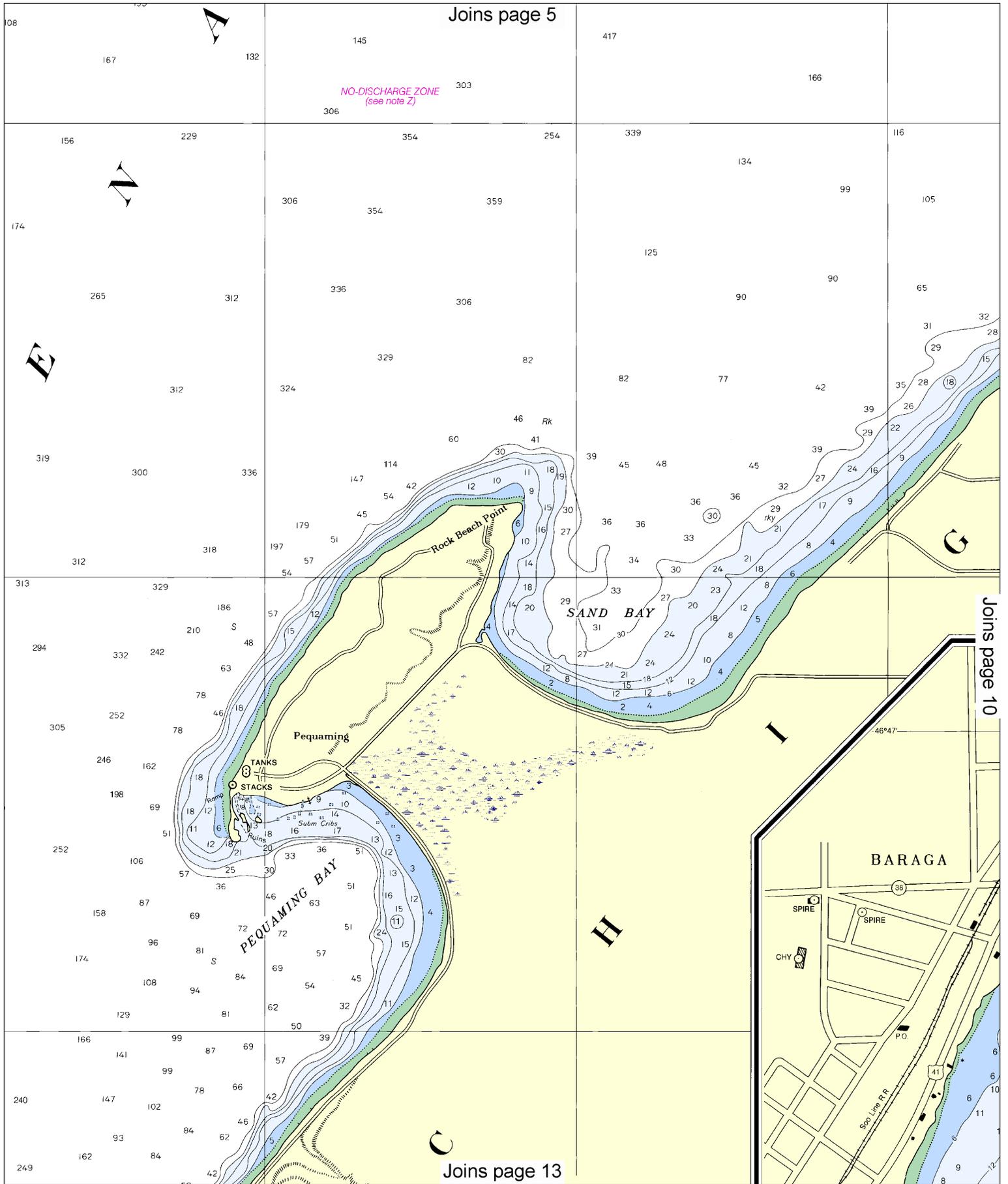
Note: Chart grid lines are aligned with true north.

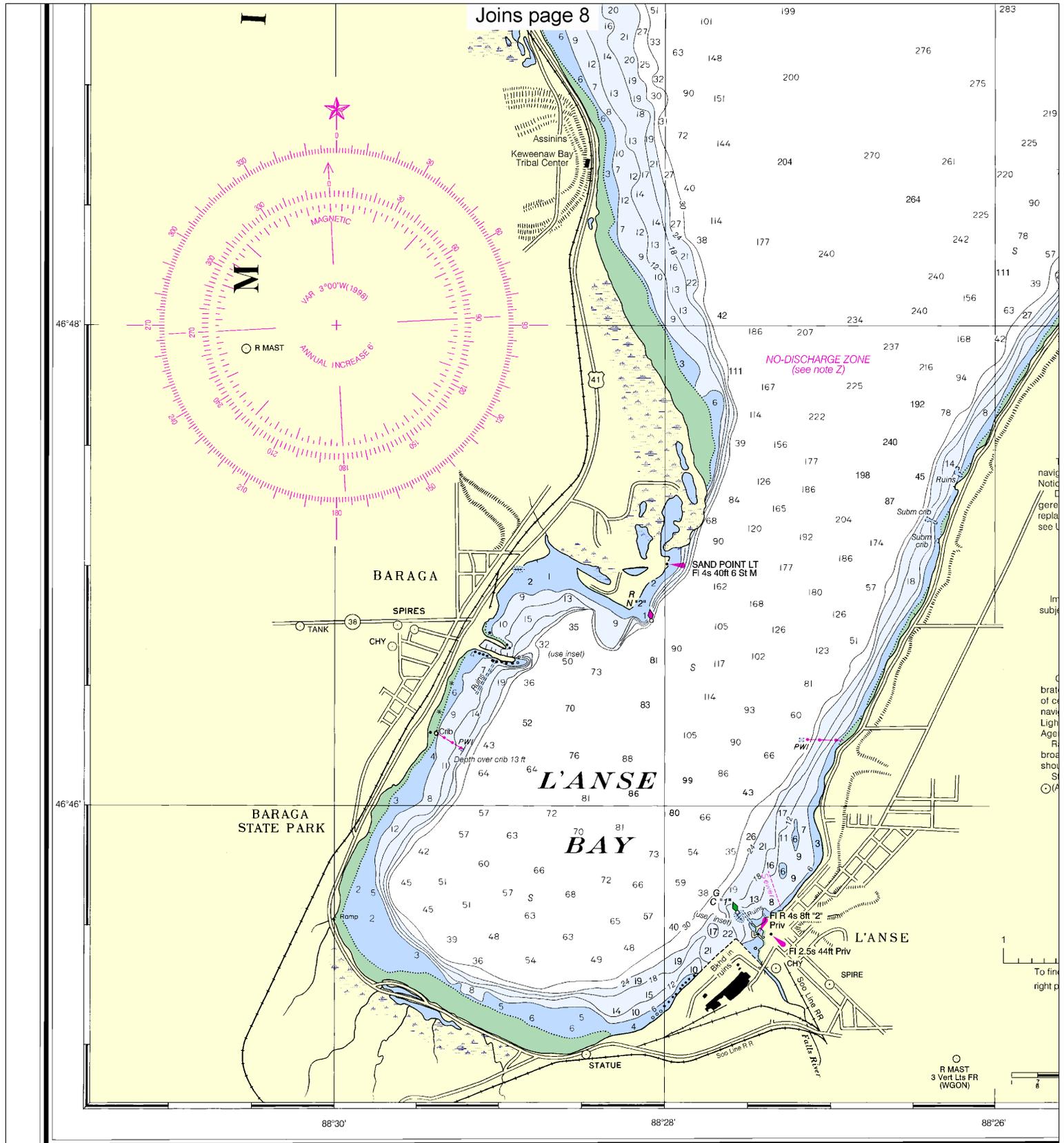
Printed at reduced scale.

SCALE 1:30,000
 Nautical Miles

See Note on page 5.







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NO-DISCHARGE ZONE
(see note Z)

L'ANSE BAY

BARAGA STATE PARK

BARAGA

21st Ed., Aug. 15/98

14971

CAUTION

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

SOUNDINGS IN FEET

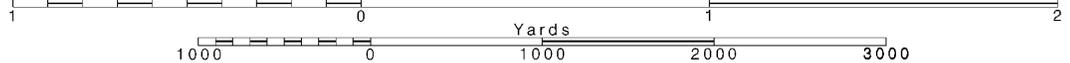
12

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:30,000
Nautical Miles

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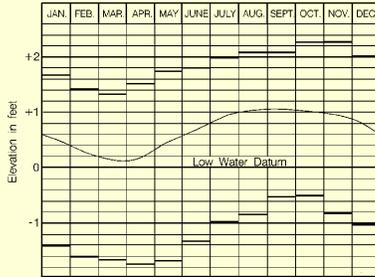
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Houghton, MI WXX-73 162.40 MHz (Chan WX-2)

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.

LAKE SUPERIOR



Average Levels (1998-1997)
 Extreme Levels (period of record)

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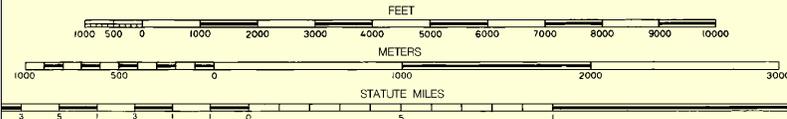
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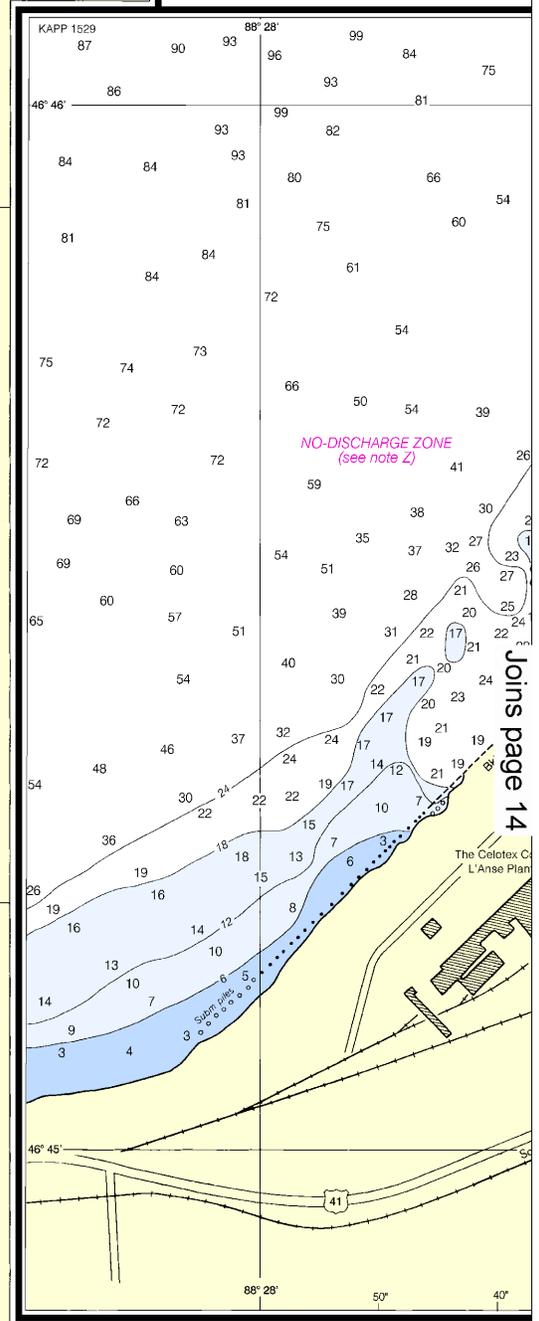
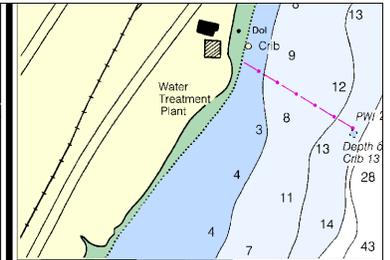
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LOGARITHMIC SPEED SCALE

For wind SPEED, place one point of dividers on distance run (in any unit) and the other on minutes run. Without changing divider spread, place the other 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.



88°24' 50' 40' 30' 20' 10' 88°23' 50' 88°22' 88°20'



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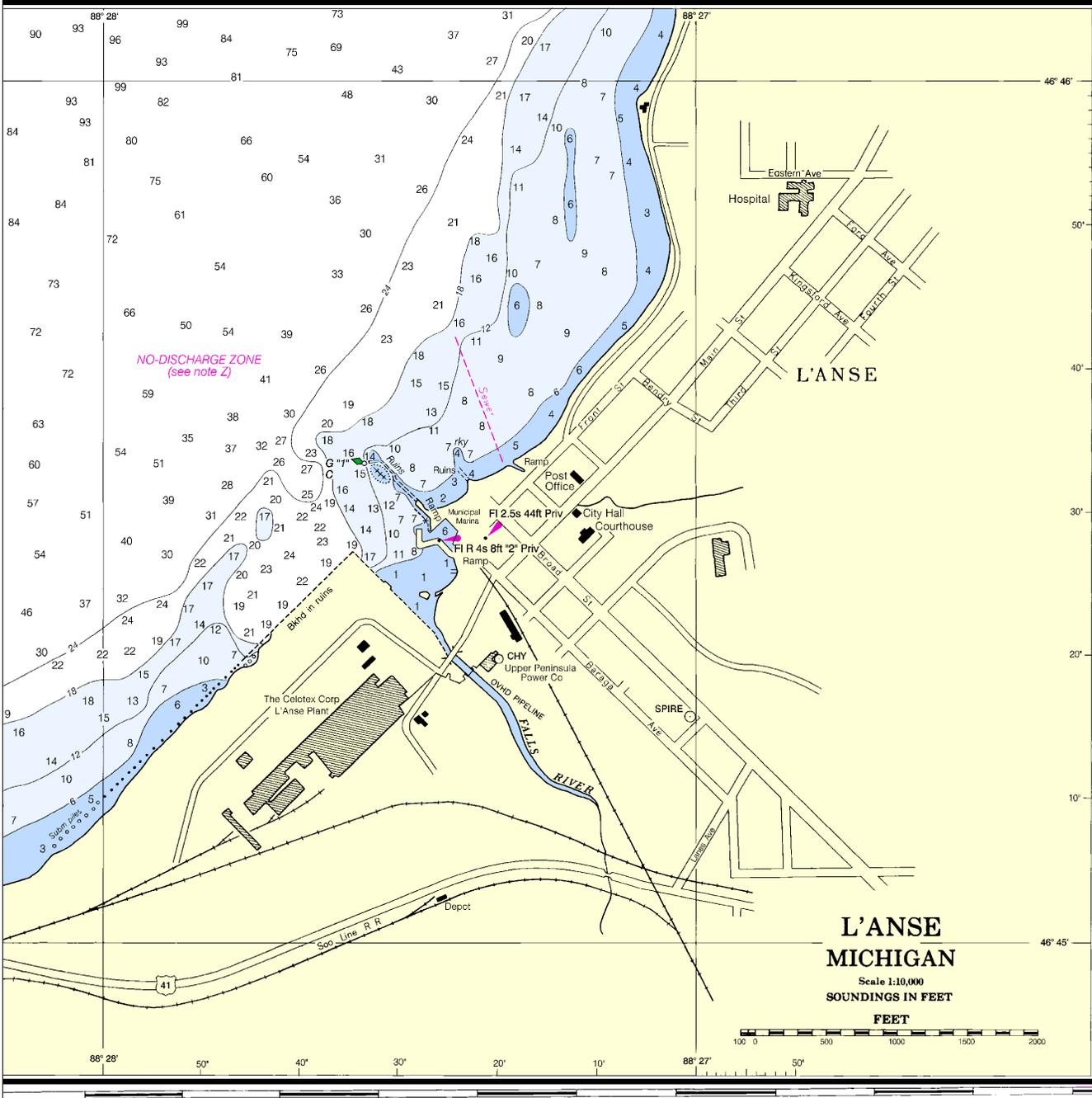
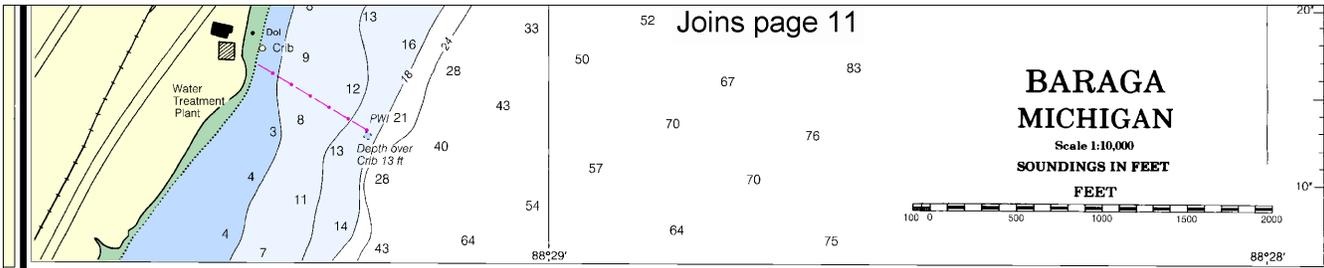
Published at Washington, D.C.
 U.S. DEPARTMENT OF COMMERCE
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 NATIONAL OCEAN SERVICE
 COAST SURVEY

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FEET	6	12	18	24	30	36	42	48	54	60	66	72
METERS	1	2	3	4	5	6	7	8	9	10	11	12

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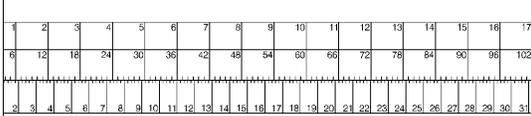
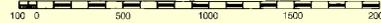
BARAGA MICHIGAN

Scale 1:10,000
SOUNDINGS IN FEET
FEET



L'ANSE MICHIGAN

Scale 1:10,000
SOUNDINGS IN FEET
FEET



Keweenaw Bay
SOUNDINGS IN FEET - SCALE 1:30,000

14971

14791
8/10/98





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>



For the latest news from Coast Survey, follow @nauticalcharts



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