

BookletChart™

Duluth – Superior Harbor

NOAA Chart 14975

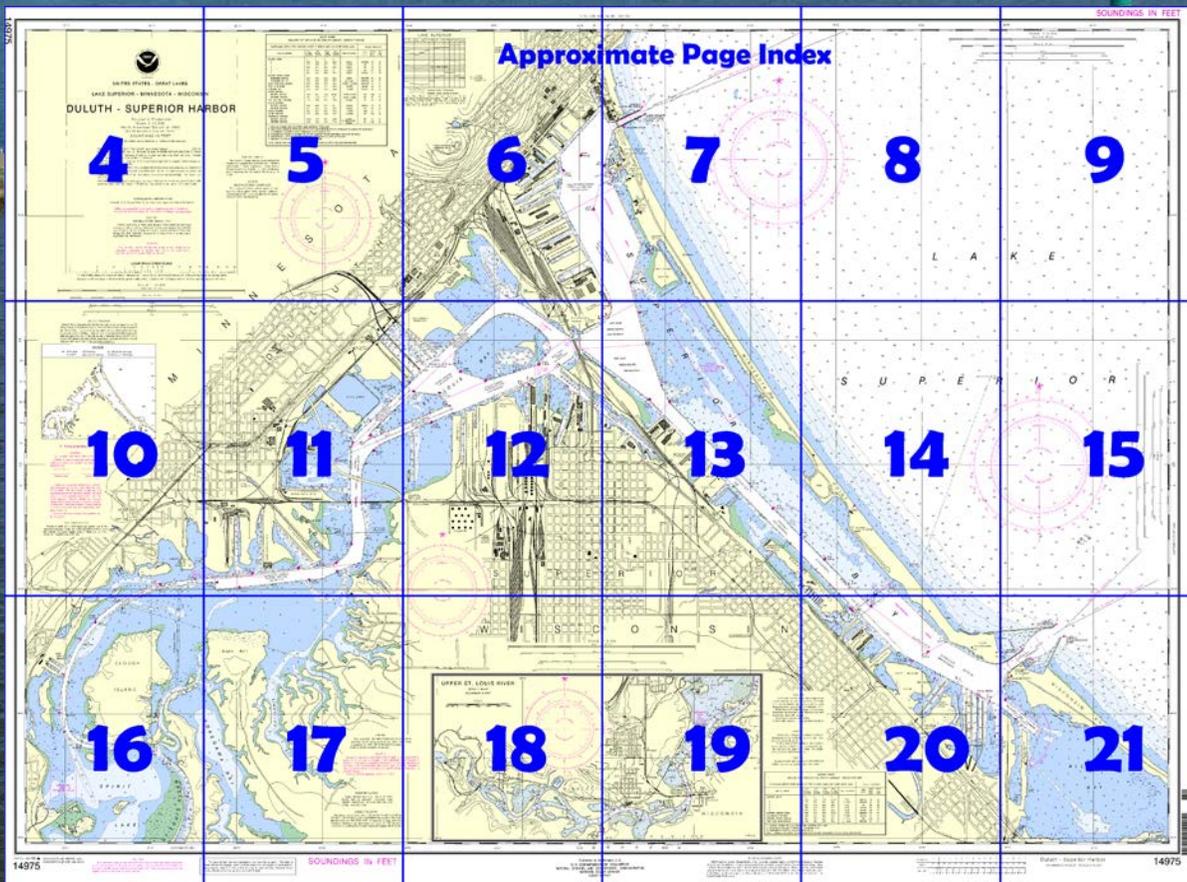


A reduced-scale NOAA nautical chart for small boaters

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.

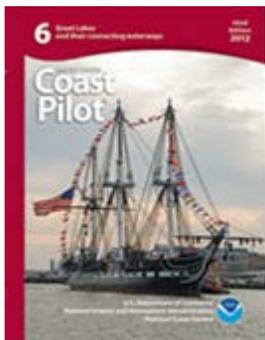
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

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=14975>



(Selected Excerpts from Coast Pilot).
Duluth-Superior Harbor is at the W end of Lake Superior. The harbor has been developed along Superior Bay and the lower part of the St. Louis River, which forms part of the **State boundary** between Wisconsin and Minnesota. It is one of the most important harbors on the Great Lakes because of its range of facilities and the magnitude of its commerce. The cities **Superior, Wis.,** and **Minn.,** front the S and N sides of the harbor, respectively.

Superior Entry South Breakwater Light (46°42.6'N., 92°00.4'W.), 70 feet above the water, is shown from a white cylindrical tower on a white

building on the outer end of the breakwater on the S side of the S harbor entrance. A fog signal is at the light.

Duluth Harbor South Breakwater Inner Light (46°46.7'N., 92°05.5'W.), 68 feet above the water, is shown from a black cylindrical tower with a white lantern room on the S side of the N harbor entrance.

Superior Bay, about 6.5 miles long and 0.5 to 1 mile wide, is a natural shallow basin separated from Lake Superior by **Minnesota Point**, a low, narrow strip of sand and gravel. The bay is entered from Lake Superior through **Duluth Entry** at the N end of Minnesota Point and through **Superior Entry** at the S end of the point. Between the entrances, the lakeside of Minnesota Point has deep water within 0.4 mile. A submerged breakwater extends 1,000 feet S from shore in the small bight on the N side of Duluth Entry. A buoy marks the outer end of the ruins. Several cribs are on the W side of the bight.

Allouez Bay is a very shallow bay that extends SE from Superior Bay S of Superior Entry and is enclosed on the E by **Wisconsin Point**.

Nemadji River flows from **Moosecamp Lake**, about 40 miles above Superior, and empties into the W side of Superior Bay opposite Superior Entry. In 1982, a depth of 4½ feet was available for 5 miles above the mouth, thence in 1976, 2 feet above that point.

St. Louis River flows into the W side of Superior Bay near its N end through a narrow gap between **Rices Point** on the N and **Connors Point** on the S. **St. Louis Bay** is a widening in the river that extends from these points to **Grassy Point**, 3 miles SW. **Howards Bay** is a narrow inlet that leads SE from St. Louis Bay for 1 mile on the W side of Connors Point. Above Grassy Point, the river again widens, covers a large shallow area, and is divided by points and islands into a number of irregularly shaped bays and inlets. **Clough Island**, the largest in this area, encloses the N side of **Spirit Lake**, a section of the river mostly isolated by islands. **Minnesota Channel**, the dredged channel through this area, follows the Minnesota shore for 2 miles W from Grassy Point, thence turns S between Clough Island and the mainland, and thence turns E on the S side of Clough Island to the head of the dredged channel. Above Clough Island, the natural channel of the St. Louis River is navigable for varying drafts to just above **du Lac**, about 8 miles above Clough Island. The river is practically a level pool at ordinary stages to the foot of the rapids just above Fond du Lac. The channel in this reach is well marked by buoys, and vessels of suitable draft should have no difficulty navigating it. A wreck, covered about 2½ feet, is on the E side of the river at **Oliver**, about 3.8 miles above Clough Island.

Coast Guard

Duluth Coast Guard Station is on the W side of Minnesota Point, 0.5 mile S of Duluth Ship Canal. A Coast Guard **Marine Safety Office** is in Duluth. (See appendix for address.) Harbor regulations

Two companies in the harbor have docking facilities for making repairs to deep-draft vessels, and three other companies have shops and make repairs to vessels at their berths. Fraser Shipyard, Inc., at the head of **Caution.**—A sunken wreck is 0.9 mile ENE of the entrance to Duluth Ship Canal.

The area immediately ESE of Duluth Harbor Basin Traffic Lighted Buoy is subject to shoaling.

Local magnetic disturbance.—Differences from normal variation of 001°E to 005°E have been observed in the lake about 10 miles from Duluth.

Harbor regulations.—A **speed limit** of 8 mph (7 knots) is enforced in Duluth-Superior Harbor.

**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

Ⓢ 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.

Polyconic Projection

Scale 1:15,000

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET

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.

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence 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)

CAUTION

SUBMARINE PIPELINES AND CABLES

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



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

BASCULE BRIDGE CLEARANCES

For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

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.

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.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83) and is considered equivalent to the World Geodetic System 1984 (WGS 1984) for practical plotting purposes. Positions referred to the North American Datum of 1927 must be moved 0.214' southward and 0.688' westward to agree with this chart.

CAUTION

POTABLE WATER INTAKE (PWI)

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 for details.

Sailing courses and limits indicated in magenta are recommended by the Lake Carriers Association and the Canadian Shipowners Association.

SOURCE DIAGRAM

The 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 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.

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

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.

SAILING DIRECTIONS. Bearings of sailing courses are true and distances given thereon are in statute miles between points of departure.

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.

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).

SUPERIOR HARBOR									
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO NOV 2011									
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT GREAT LAKES LOW WATER DATUM (LWD)						PROJECT DIMENSIONS			
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH (FEET)	LWD
SUPERIOR ENTRY	A	A	A	A					
1	23.1 B	31.6	32.6	30.4 C	8-10, 8-11	600-1100	.18	31	
2	29.2	31.3	32.5	30.9	8, 10-11	415-1100	.15	30	
3	29.8	30.6	31.3	27.8	10-11		.415	.08	29
4	28.2	30.5	29.8	26.3	10-11	415-430	.08	28	
5	24.1	29.4	30.1	26.6	10-11	430-840	.08	27	
SUPERIOR HARBOR BASIN	22.1 D	24.1	23.1	21.3	9, 10, 11-11	600-2000	1.21	27	
ALLOUEZ BAY CHANNEL	20.2	23.1	21.8	22.1	8, 10-11	400-900	.44	27	
SUPERIOR FRONT CHANNEL	25.1	27.1	26.4	24.5	10, 11-11	600	2.32	27	
EAST GATE BASIN (SOUTH)	26.7	27.0	27.8	27.2	10, 11-11	600-3200	.57	27	
A. CHANNEL DIVIDED INTO QUARTERS WHEN ENTERING FROM LAKE. B. SHOALING TO 15.2 FEET AT 46°42'32.8"N 92°00'26.7"W C. SHOALING TO 20.6 FEET AT 46°42'40.6"N 92°00'35.6"W D. SHOALING TO 6.0 FEET AT 46°42'16.9"N 92°01'38.5"W NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION									

DULUTH HARBOR									
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO NOV 2011									
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT GREAT LAKES LOW WATER DATUM (LWD)						PROJECT DIMENSIONS			
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH (FEET)	LWD
DULUTH ENTRY	A	A	A	A					
1	25.6	31.6	31.8	29.9	8-2011	245-1000	.13	32	
2	28.2	34.0	33.5	31.3	8-2011	245	.08	31	
3	29.4	32.1	32.0	32.7	9-2011	245	.07	30	
4	31.7	31.4	31.1	32.8	8-2011	245	.07	29	
5	23.3	31.0	32.0	28.1	8-2011	245-480	.07	28	
DULUTH HARBOR BASIN									
NORTHERN SECTION	25.1	27.4	28.2	24.9	8-2011	1100-2700	.84	28	
SOUTHERN SECTION	24.3	25.4	27.2	22.3	8, 10-2011	1200-2700	.91	27	
EAST GATE BASIN (NORTH)	26.4	24.5	25.8	22.3	10, 11-2011	1500-3300	.33	27	
WEST GATE BASIN	24.6	28.3	27.7	25.2	11-2011	400-850	.66	27	
HOWARDS BAY	23.6	24.8	25.5	21.5	7, 11-2011	100-750	.99	27	
NORTH CHANNEL									
EASTERN SECTION	22.4	23.1	22.8	B10.1	8, 9, 11-2011	400	1.66	27	
WESTERN SECTION	18.6	20.3	20.7	19.2	8, 11-2011	400	.59	21	
21ST AVE WEST CHANNEL									
SOUTH CHANNEL									
EASTERN SECTION	20.2	22.3	23.1	25.6	9, 11-2011	400-800	.74	27	
WESTERN SECTION	22.3	22.4	23.0	21.6	8, 10-2011	400	.83	23	
CROSS CHANNEL	22.8	27.6	27.2	C20.8	8, 11-2011	1300	.33	27	
UPPER CHANNEL	19.3	23.0	20.9	D18.6	8-2011	500	1.00	23	
MINNESOTA CHANNEL									
EASTERN SECTION	18.0	21.4	22.0	12.3	8, 10-2011	600	.95	23	
WESTERN SECTION	E13.4	14.6	10.6	F10.3	8-2006; 10-2011	200	2.39	20	
A. CHANNEL DIVIDED INTO QUARTERS WHEN ENTERING FROM LAKE. B. SHOALING TO 4.0 FT IN THE OUTSIDE HALF OF THE QUARTER FROM 46°45'02.7"N - 92°06'10.1"W TO 46°45'05.6"N - 92°06'15.9"W C. SHOALING TO 6.0 FT AT 46°44'43.5"N - 92°07'17.8"W D. SHOALING TO 6.2 FT AT 46°43'54.6"N - 92°08'39.9"W E. SHOALING TO 5.5 FT IN THE OUTSIDE HALF OF THE QUARTER F. SHOALING TO 5.7 FT IN THE OUTSIDE HALF OF THE QUARTER NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION.									

14975

92° 12'

92° 11'

92° 10'

46° 47'

46° 46'



THE NATION'S CHARTMAKER SINCE 1807

UNITED STATES - GREAT LAKES

LAKE SUPERIOR - MINNESOTA - WISCONSIN

DULUTH - SUPERIOR 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.

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 a 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, and U. S. Coast Guard.

SUPPLEMENTAL INFORMATION

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

Sailing courses and limits indicated in magenta are recommended by the Lake Carriers Association and the Canadian Shipowners Association.

CAUTION

POTABLE WATER INTAKE (PWI)

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 for details.

CAUTION

BASCULE BRIDGE CLEARANCES

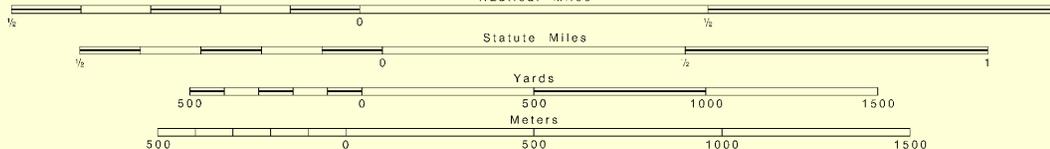
For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

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.

SCALE 1:15,000
Nautical Miles



SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Survey information continues on **Joins page 10**

CONTROL
N
DULUTH EN
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WEST GATE
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EASTERN
WESTERN
CROSS CH
UPPER CH
MINNESOTA
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WESTERN
A. CHANNE
B. SHOALIN
C. SHOALIN
D. SHOALIN
E. SHOALIN
F. SHOALIN
NOTE - CON

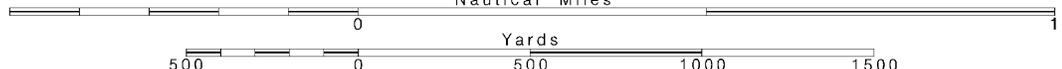
4

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:15,000
Nautical Miles

See Note on page 5.



92° 09'

92° 08'

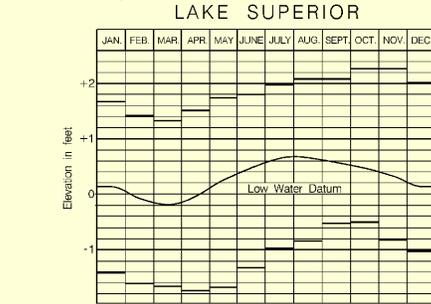
92° 07'

DULUTH HARBOR
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO NOV 2011

ROLLING DEPTHS FROM SEAWARD IN FEET AT GREAT LAKES LOW WATER DATUM (LWD)						PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH LWD (FEET)
ENTRY	A	A	A	A	8-2011	245-1000	.13	32
	25.6	31.6	31.8	29.9				
	28.2	34.0	33.5	31.3	8-2011	245	.08	31
	29.4	32.1	32.0	32.7	8-2011	245	.07	30
	31.7	31.4	31.1	32.8	8-2011	245	.07	29
	23.3	31.0	32.0	28.1	8-2011	245-490	.07	28
HARBOR BASIN								
ERN SECTION	25.1	27.4	28.2	24.9	8-2011	1100-2700	.64	28
ERN SECTION	24.3	25.4	27.2	22.3	8, 10-2011	1200-2700	.91	27
TE BASIN (NORTH)	26.4	24.5	25.8	22.3	10, 11-2011	1500-3300	.33	27
ATE BASIN	24.6	28.3	27.7	25.2	11-2011	400-850	.66	27
S BAY	23.6	24.8	25.5	21.5	7, 11-2011	100-750	.99	27
CHANNEL								
ERN SECTION	22.4	23.1	22.8	B10.1	8, 9, 11-2011	400	1.66	27
ERN SECTION	18.6	20.3	20.7	19.2	8, 11-2011	400	.59	21
E WEST CHANNEL	7.0	11.7	19.9	19.7	8-2011	200	.33	20
CHANNEL								
ERN SECTION	20.2	22.3	23.1	25.6	9, 11-2011	400-800	.74	27
ERN SECTION	22.3	22.4	23.0	21.6	8, 10-2011	400	.83	23
CHANNEL	22.8	27.6	27.2	C20.8	8, 11-2011	1300	.33	27
CHANNEL	19.3	23.0	20.9	D18.6	8-2011	500	1.00	23
TA CHANNEL								
ERN SECTION	18.0	21.4	22.0	12.3	8, 10-2011	600	.95	23
ERN SECTION	E13.4	14.6	10.6	F10.3	8-2009; 10-2011	200	2.39	20

NEL DIVIDED INTO QUARTERS WHEN ENTERING FROM LAKE.
 LING TO 4.0 FT IN THE OUTSIDE HALF OF THE QUARTER FROM 46°45'02.7"N - 92°06'10.1"W TO 46°45'05.6"N - 92°06'15.9"W
 LING TO 6.0 FT AT 46°44'43.6"N - 92°07'17.8"W
 LING TO 8.2 FT AT 46°43'54.6"N - 92°08'39.8"W
 LING TO 5.3 FT IN THE OUTSIDE HALF OF THE QUARTER
 LING TO 5.7 FT IN THE OUTSIDE HALF OF THE QUARTER.

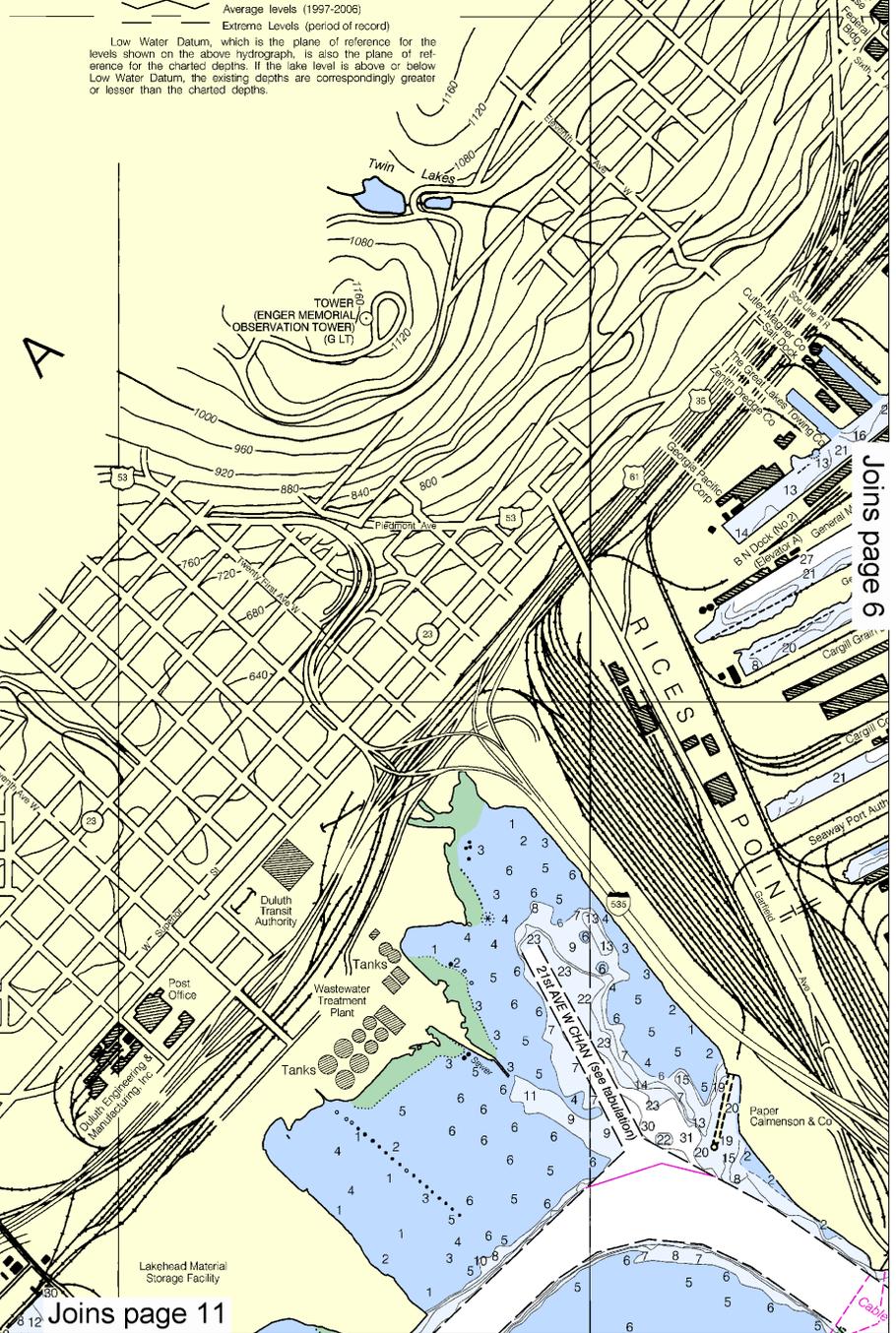
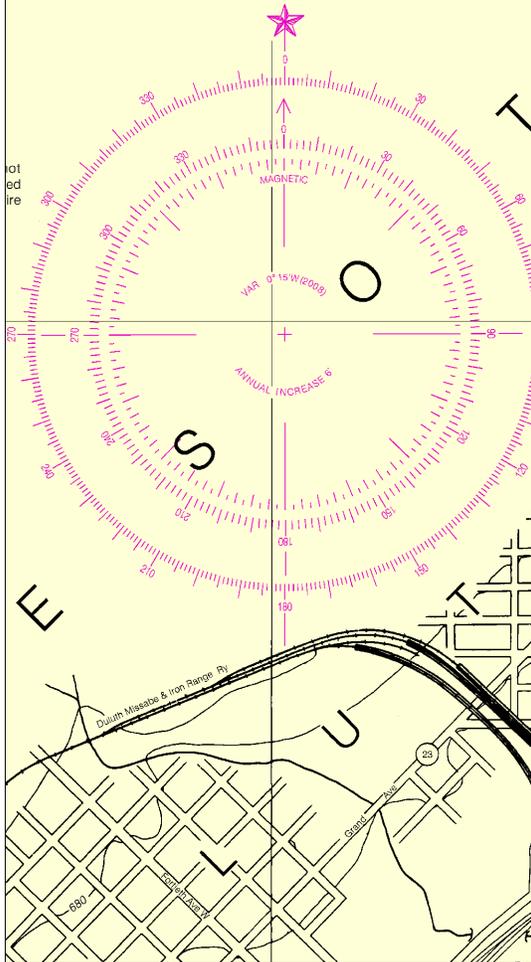
CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION.



Average levels (1997-2006)
 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 less than the charted depths.

TV MASTS (4 VERT LTS)
 (2 Oc R 2 F R)
 (6 VERT LTS)
 (3 Oc R 3 F R)

TV MAST (8 VERT LTS)
 (3 Oc R 3 F R)



Joins page 11

Joins page 6

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.



92° 08'

92° 07'

92° 06'

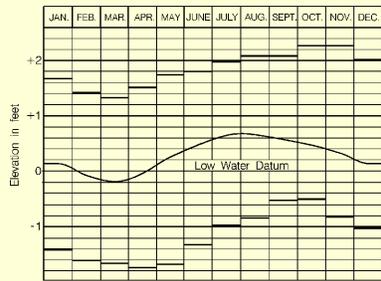
BCOR
ENGINEERS - SURVEYS TO NOV 2011

LOW WATER DATUM (LWD)		PROJECT DIMENSIONS		
RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH LWD (FEET)
A				
29.9	8-2011	245-1000	.13	32
31.3	8-2011	245	.08	31
32.7	8-2011	245	.07	30
32.8	8-2011	245	.07	29
28.1	8-2011	245-480	.07	28
24.9	8-2011	1100-2700	.64	28
22.3	8, 10-2011	1200-2700	.91	27
22.3	10, 11-2011	1500-3300	.33	27
25.2	11-2011	400-850	.66	27
21.5	7, 11-2011	100-750	.99	27
B10.1	8, 9, 11-2011	400	1.66	27
19.2	8, 11-2011	400	.59	21
19.7	8-2011	200	.33	20
25.6	9, 11-2011	400-800	.74	27
21.6	8, 10-2011	400	.83	23
C20.8	8, 11-2011	1300	.33	27
D18.6	8-2011	500	1.00	23
12.3	8, 10-2011	600	.95	23
F10.3	8-2008; 10-2011	200	2.39	20

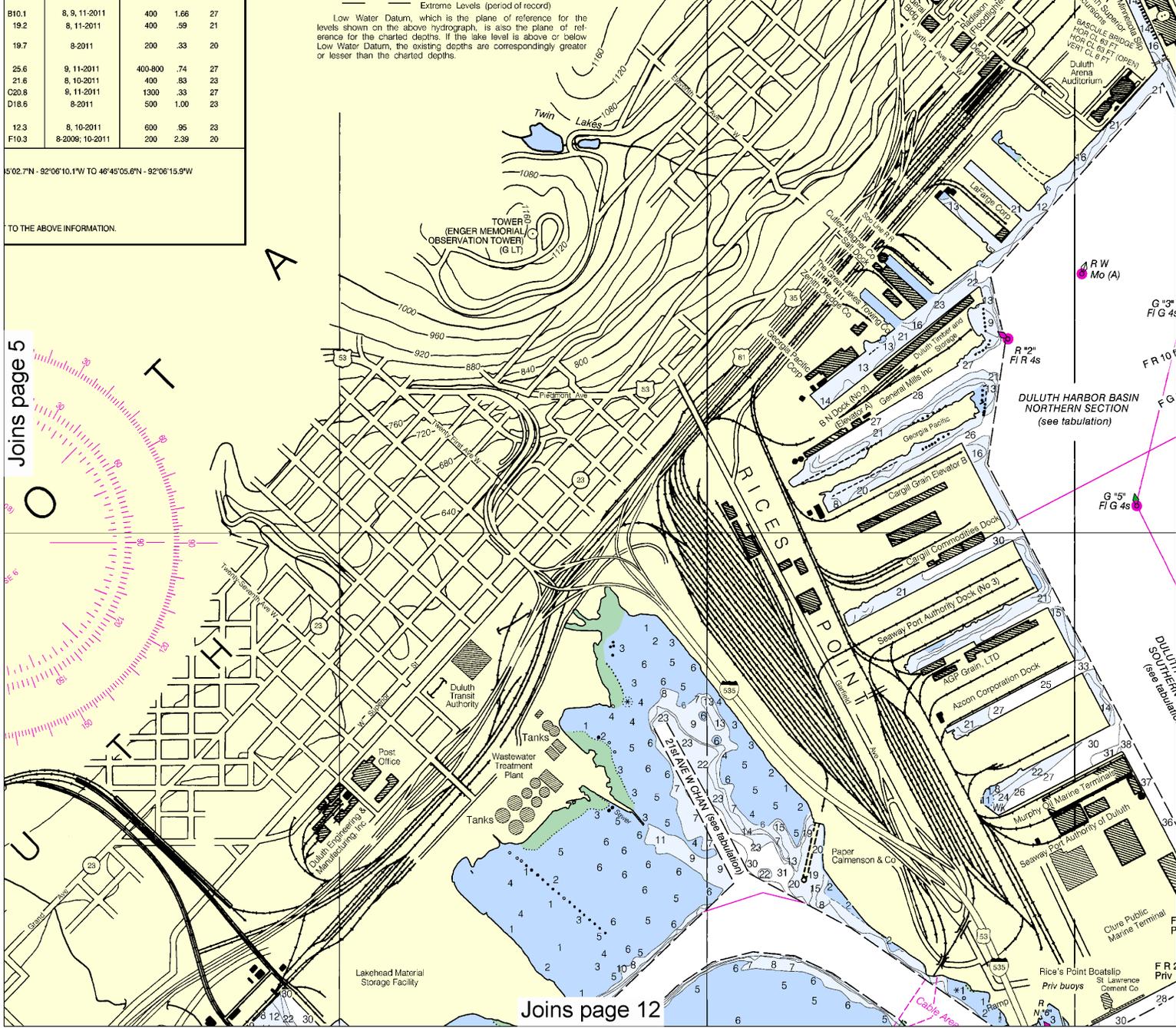
5'02.7"N - 92°06'10.1"W TO 46°45'05.6"N - 92°06'15.9"W

TO THE ABOVE INFORMATION.

LAKE SUPERIOR



Average levels (1997-2006)
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.



Joins page 5

Joins page 12

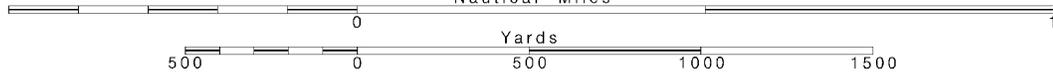


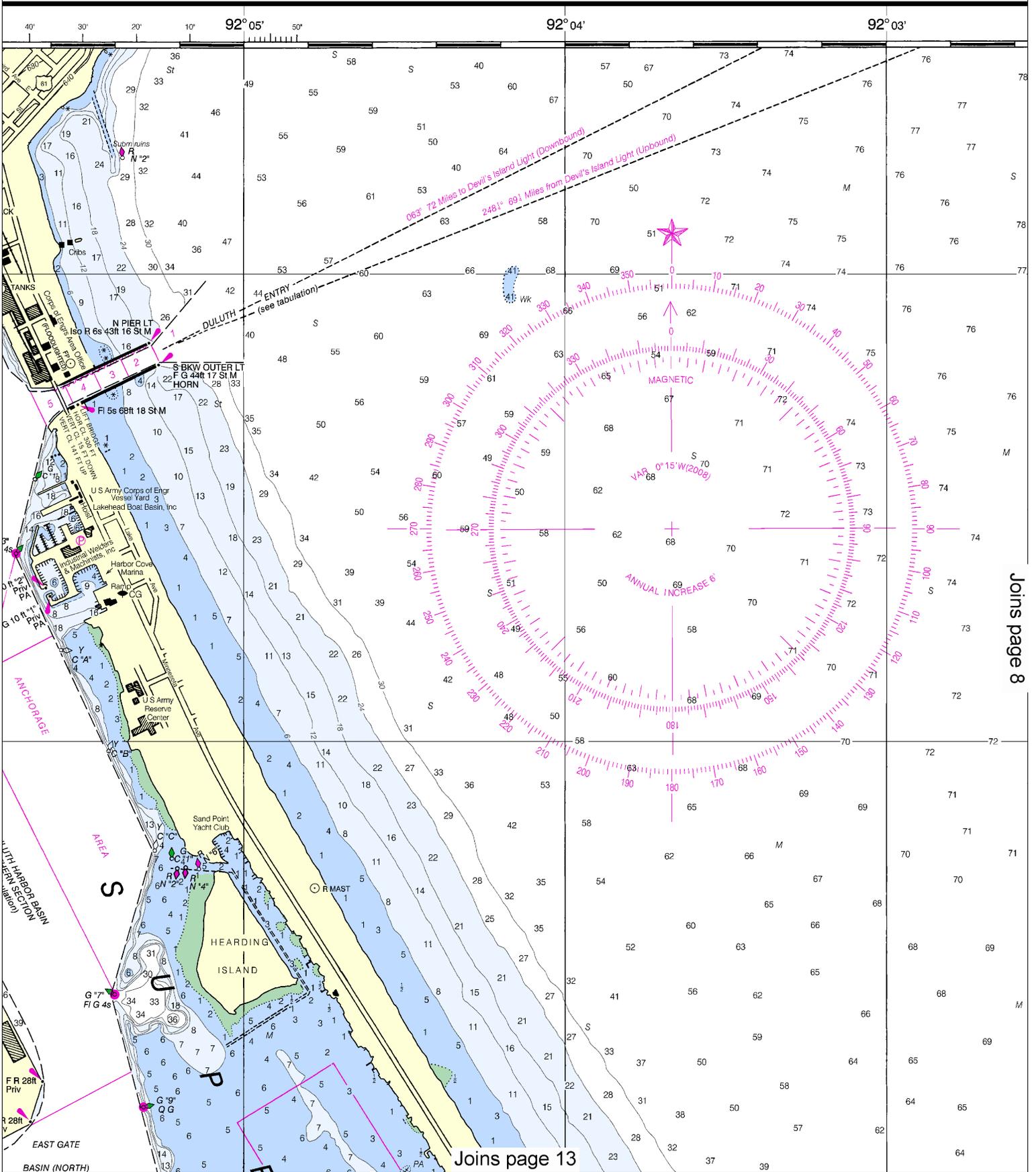
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:15,000
Nautical Miles

See Note on page 5.

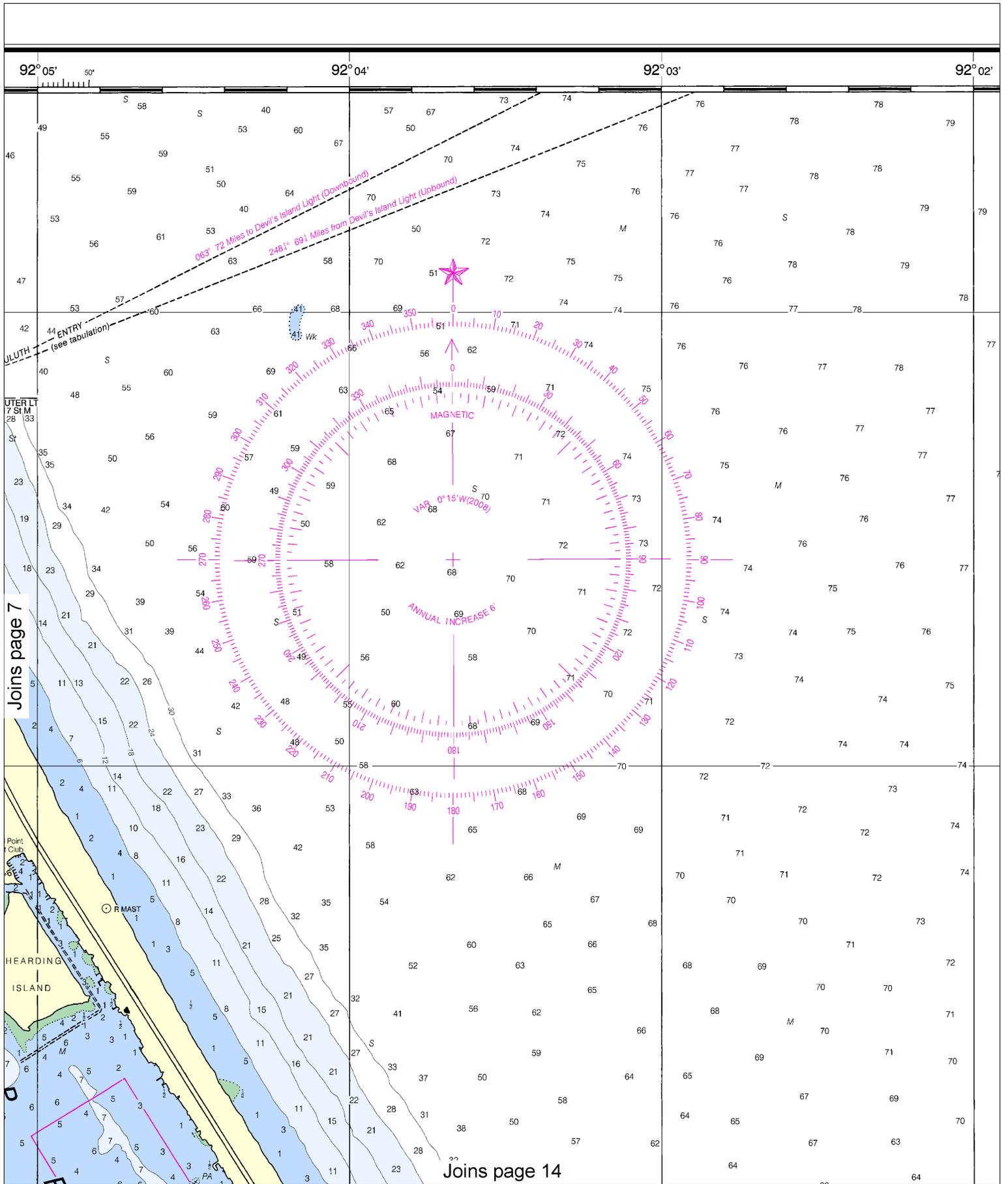




Joins page 8

Joins page 13





Joins page 7

Joins page 14

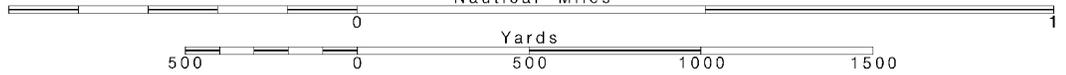


Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:15,000
Nautical Miles

See Note on page 5.



SOUNDINGS IN FEET

92°01'

92°00'

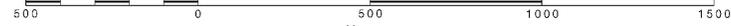
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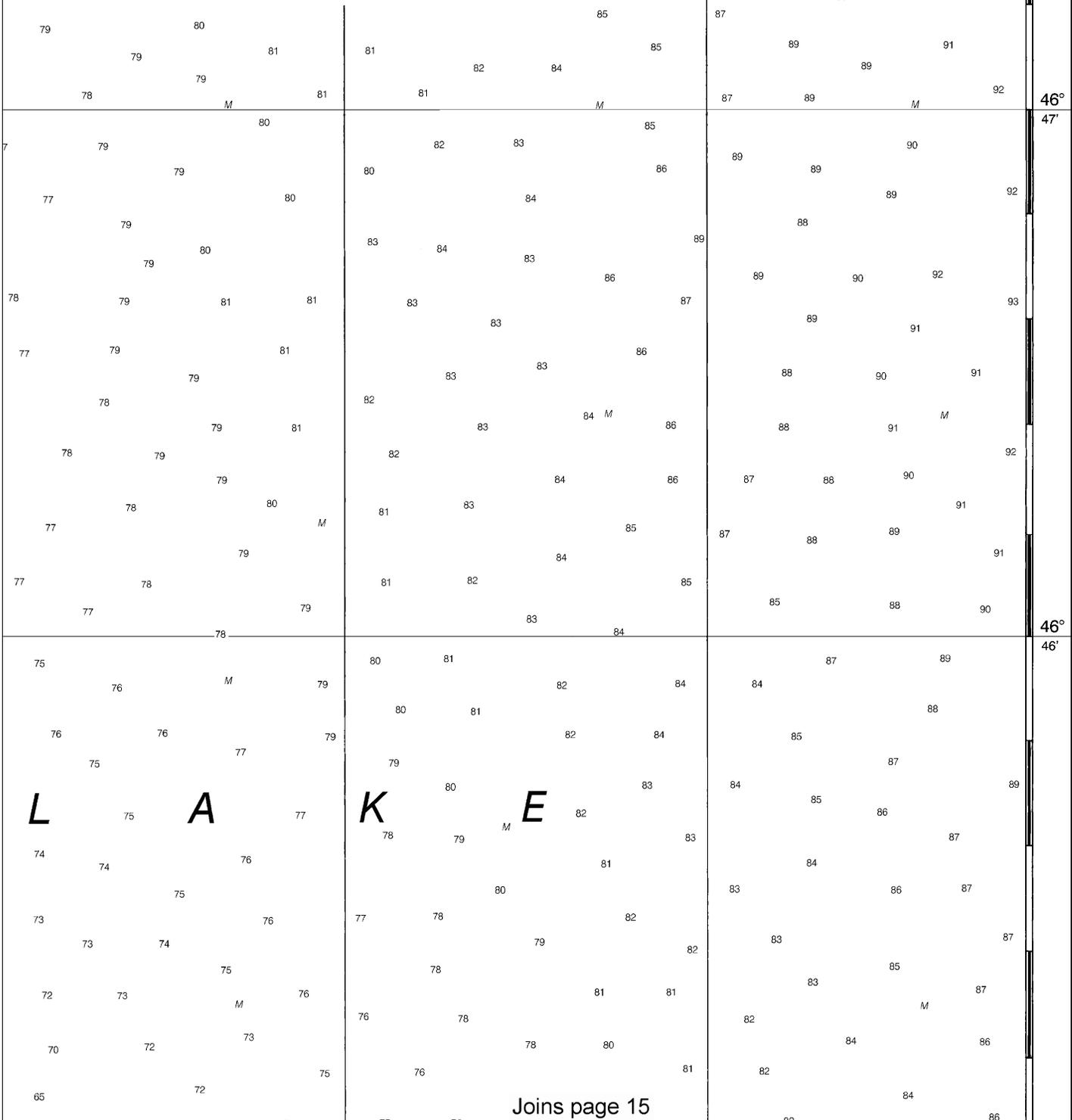
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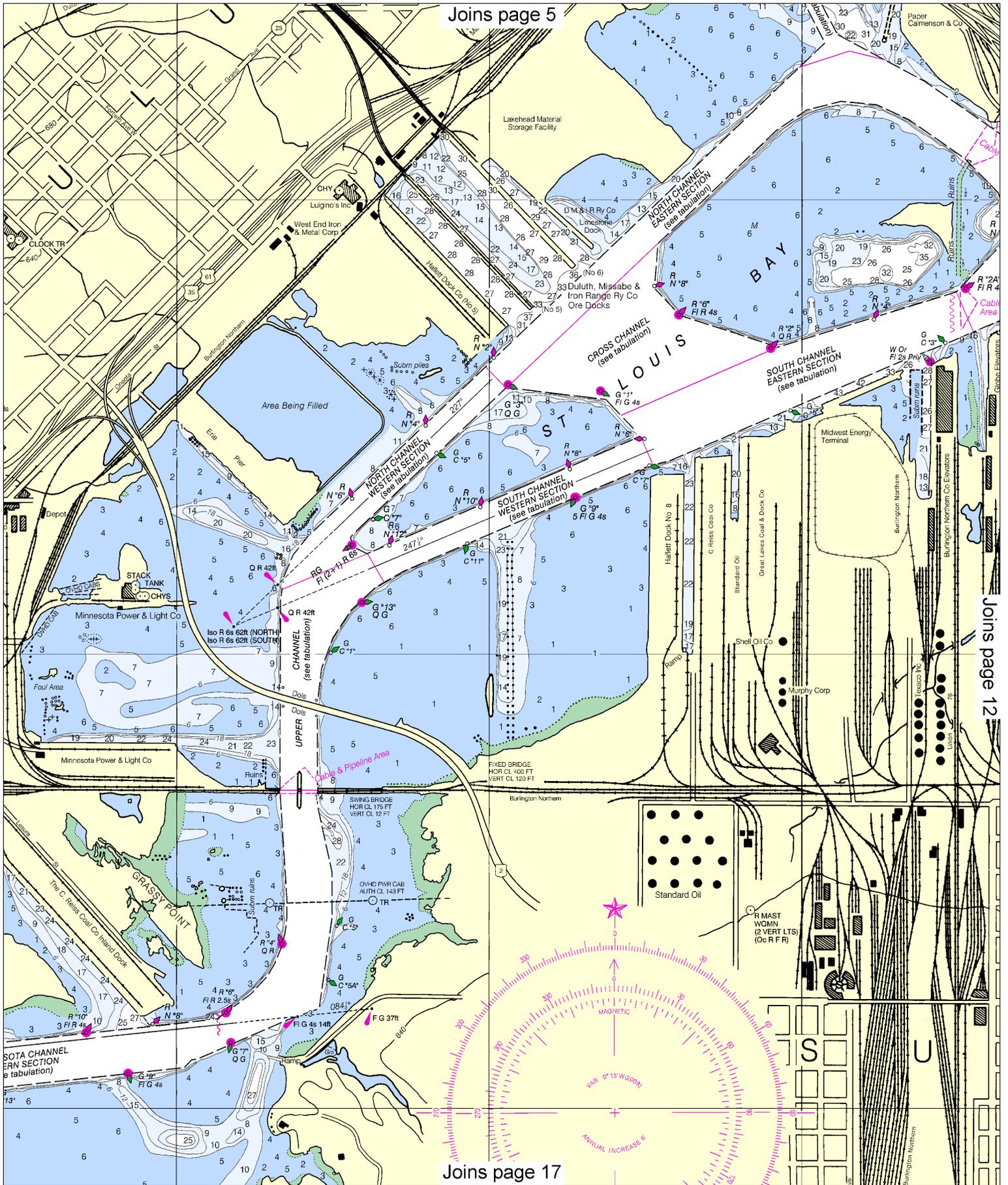
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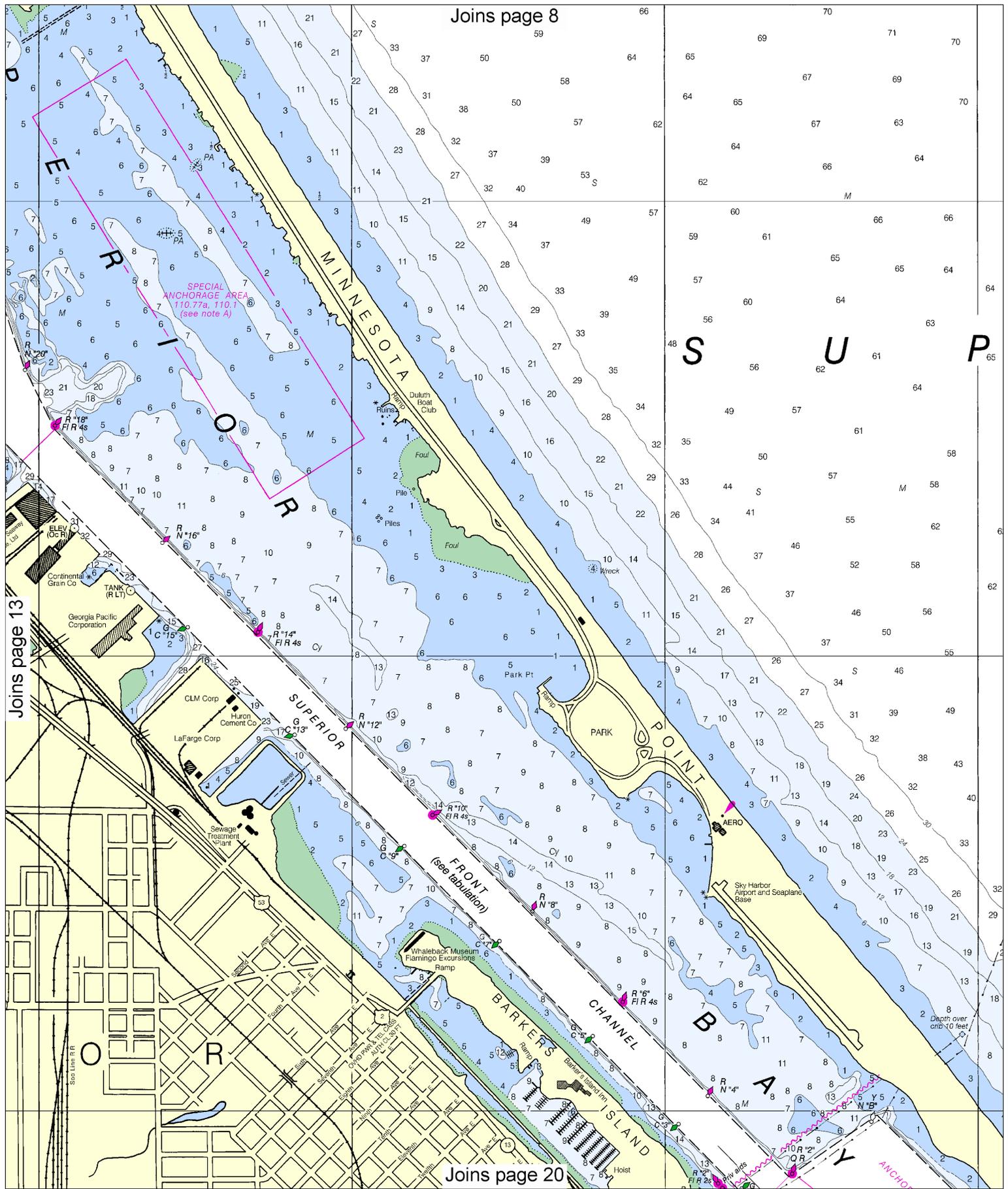


Meters



Joins page 15





Joins page 8

Joins page 13

Joins page 20

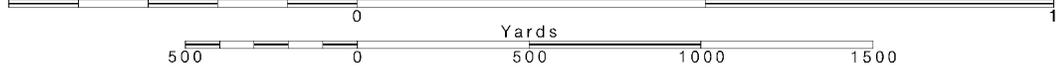
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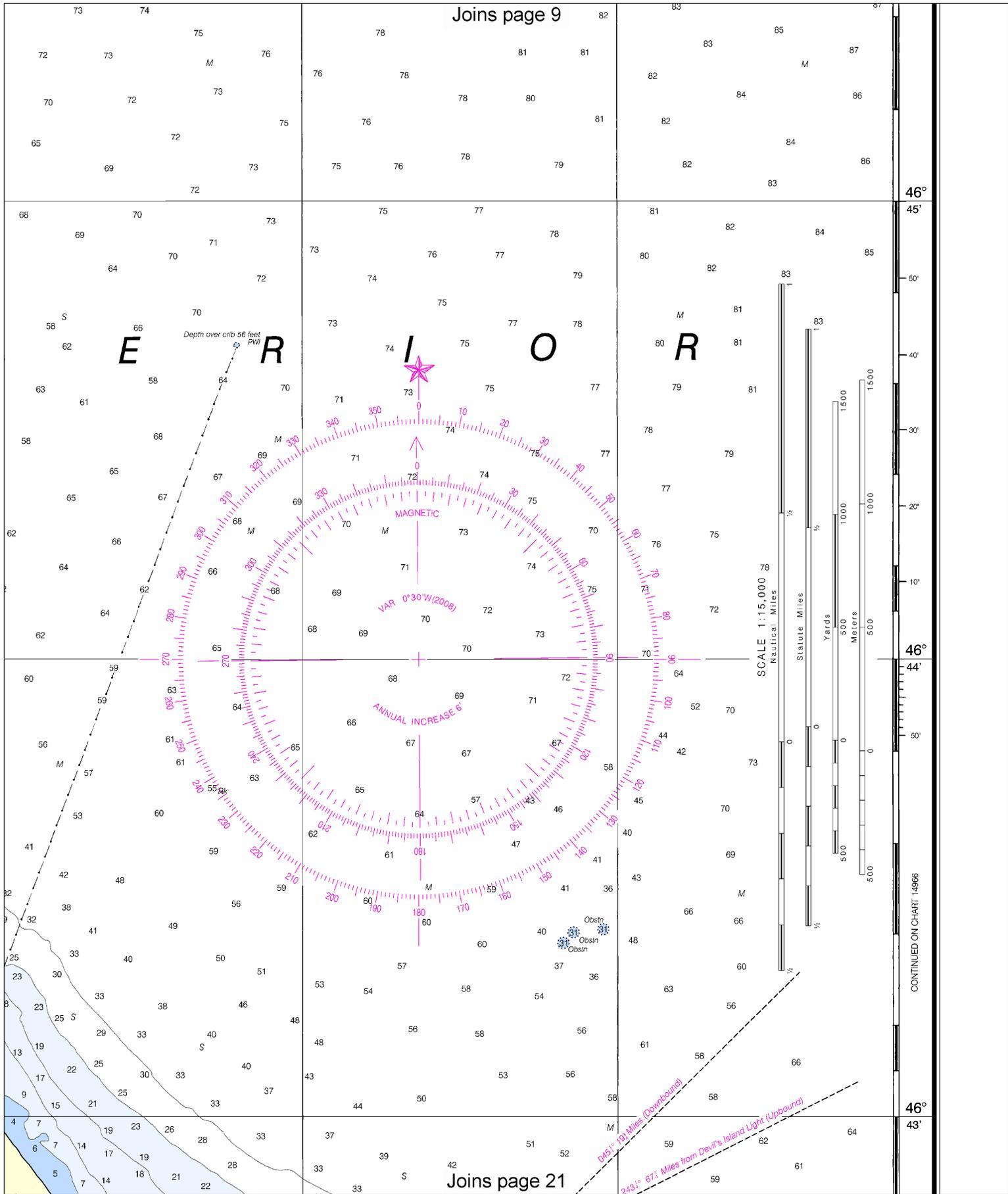
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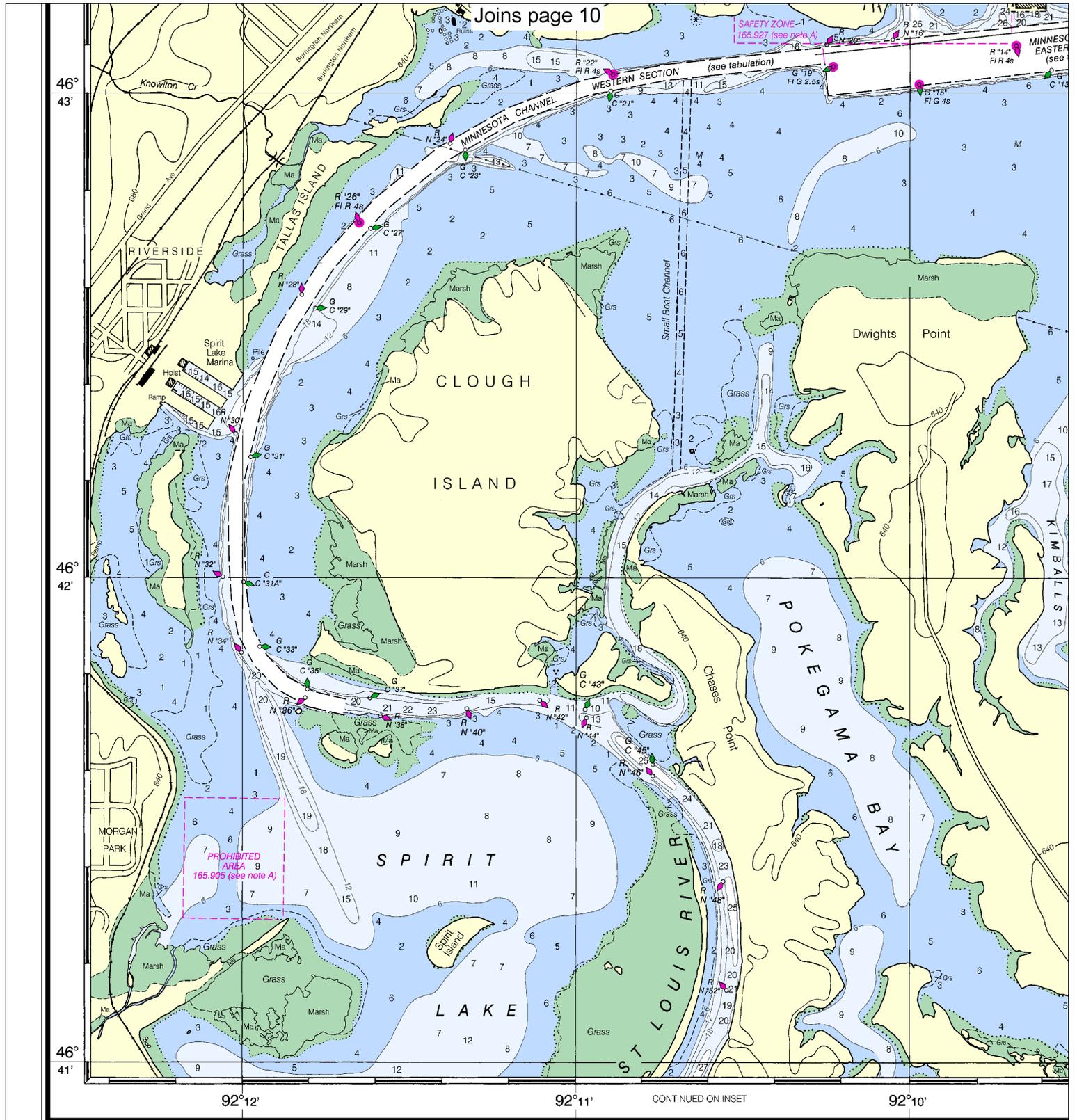
Printed at reduced scale.

SCALE 1:15,000
Nautical Miles

See Note on page 5.







35th Ed., Dec./07 ■ Corrected through NM Dec. 15/07
 Corrected through LNM Dec. 4/07

14975

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 nauticcharts.noaa.gov.

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

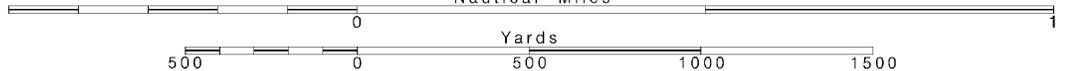
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Note: Chart grid lines are aligned with true north.

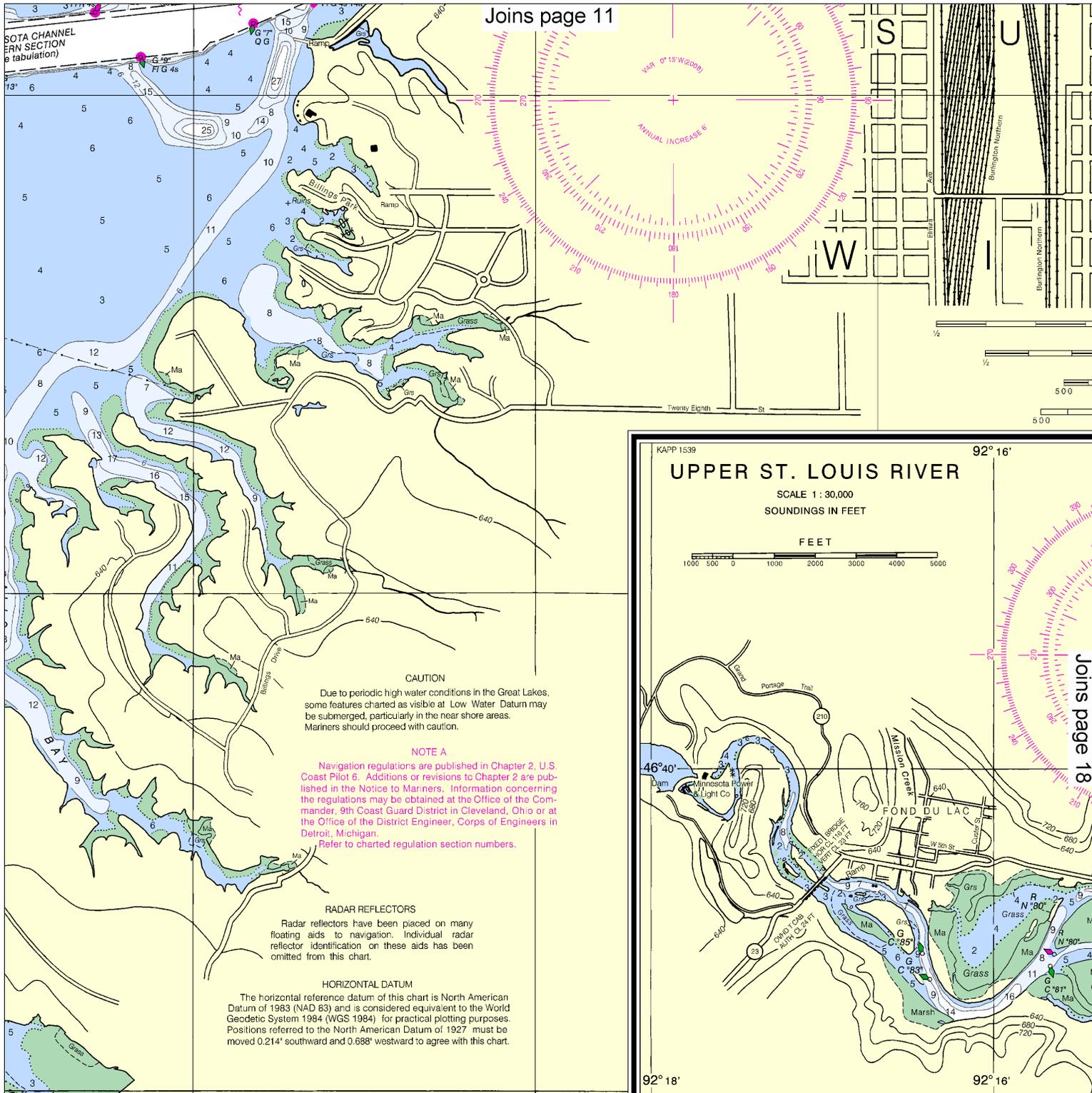
Printed at reduced scale.

SCALE 1:15,000
 Nautical Miles

See Note on page 5.

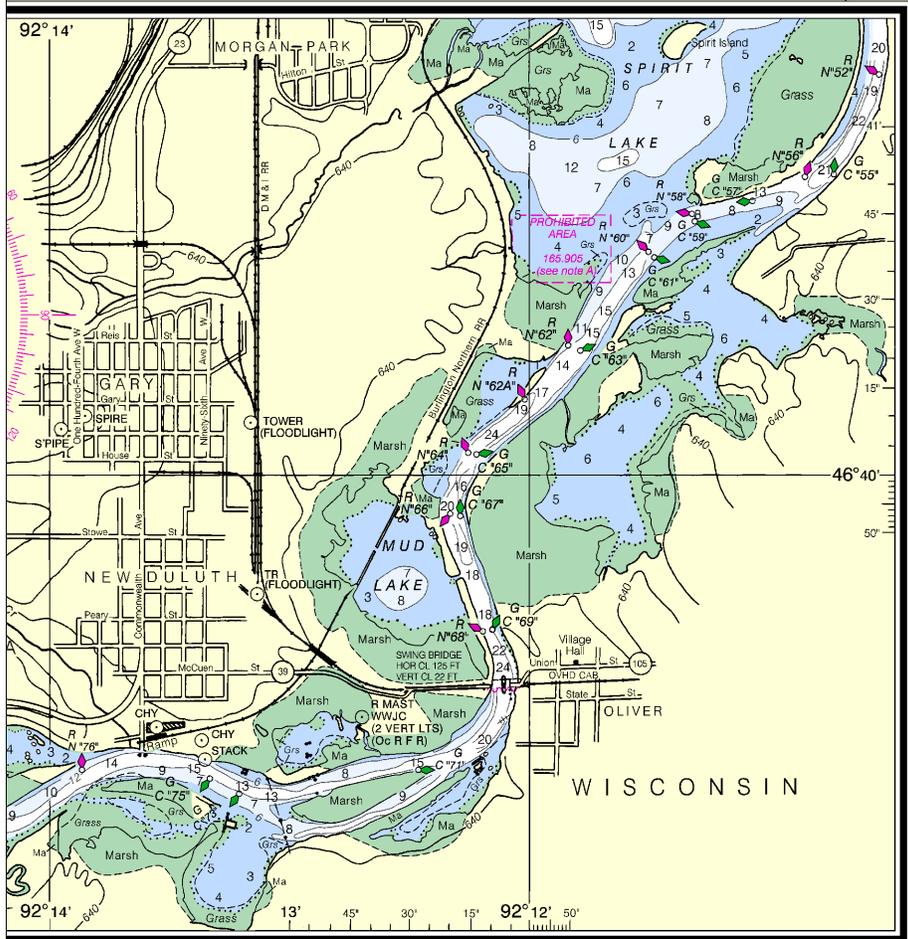
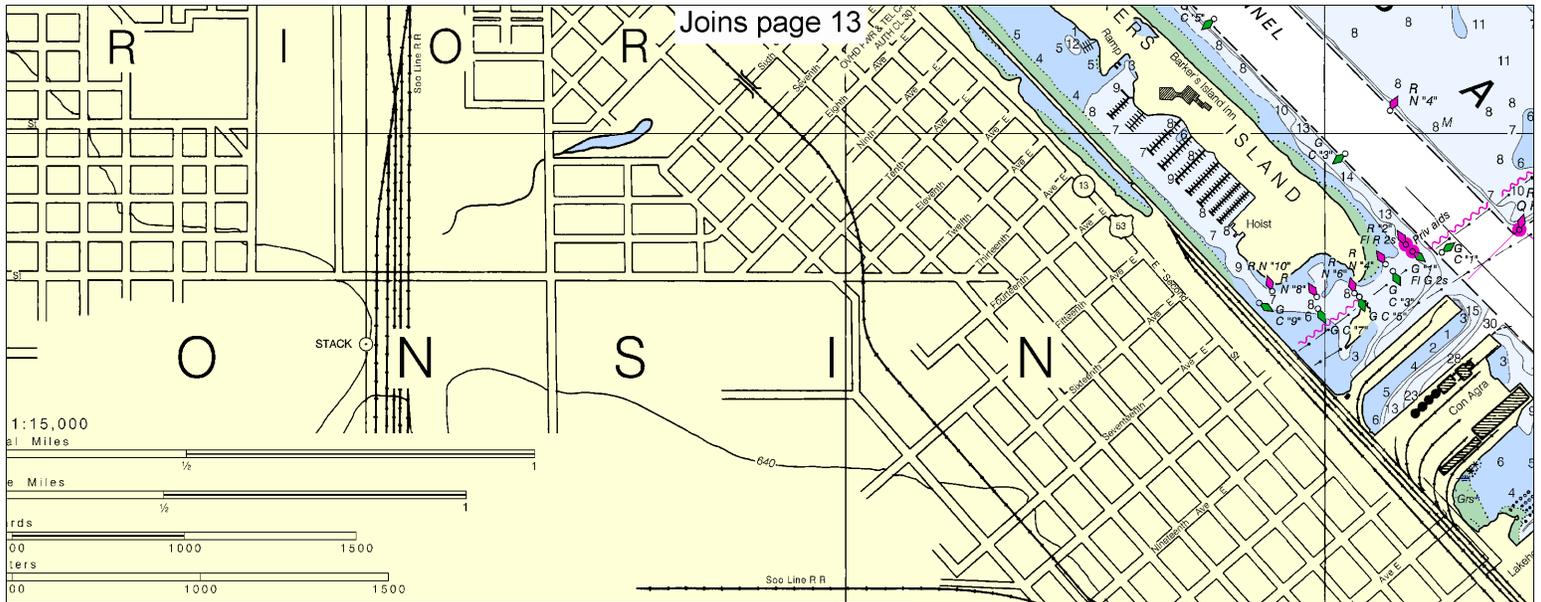


Joins page 11



SOUNDINGS IN FEET

on. The National comments for National Ocean



CAUTION
 Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence 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)

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

SUPERIOR HARBOR
 TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO NOV 2011

NAME OF CHANNEL	CONTROLLING DEPTHS FROM SEAWARD IN FEET AT GREAT LAKES LOW WATER DATUM (LWD)				DATE OF SURVEY	WIDTH (FEET)	LENGTH (MILES)
	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER			
SUPERIOR ENTRY	A	A	A	A	8-10; 8-11	600-1100	.18
1	23.1 B	31.6	32.6	30.4 C	8-10-11	415-1100	.15
2	29.2	31.3	32.5	30.9	10-11	415	.08
3	29.8	30.6	31.3	27.8	10-11	415-430	.08
4	28.2	30.5	29.8	28.3	10-11	430-840	.08
5	24.1	29.4	30.1	28.6	10-11	600-2000	1.21
SUPERIOR HARBOR BASIN	22.1 D	24.1	23.1	21.3	9, 10, 11-11	400-900	.44
ALLOUEZ BAY CHANNEL	20.2	23.1	21.8	22.1	8, 10-11	400-900	1.21
SUPERIOR FRONT CHANNEL	25.1	27.1	26.4	24.5	10, 11-11	600	2.32
EAST GATE BASIN (SOUTH)	26.7	27.0	27.8	27.2	10, 11-11	600-3200	.57

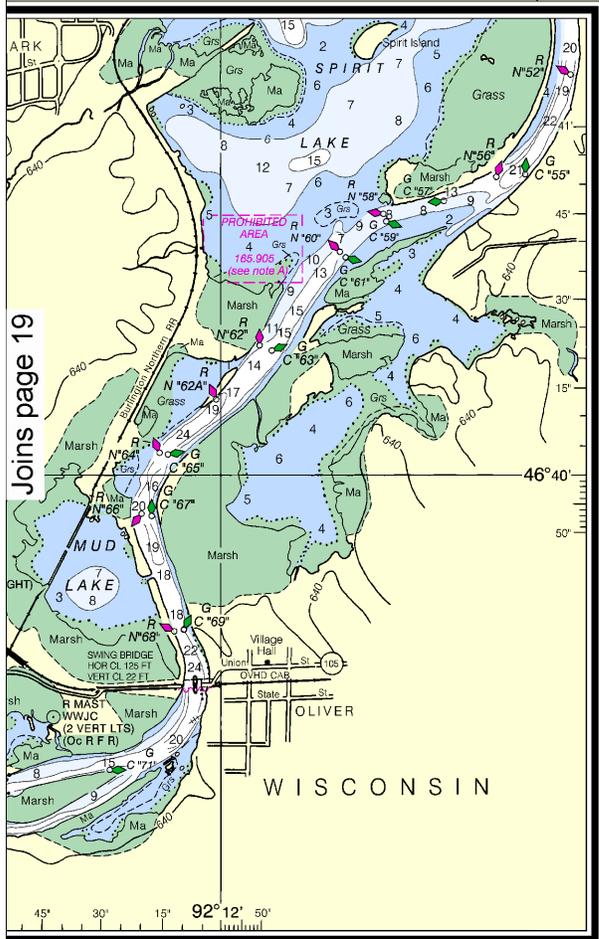
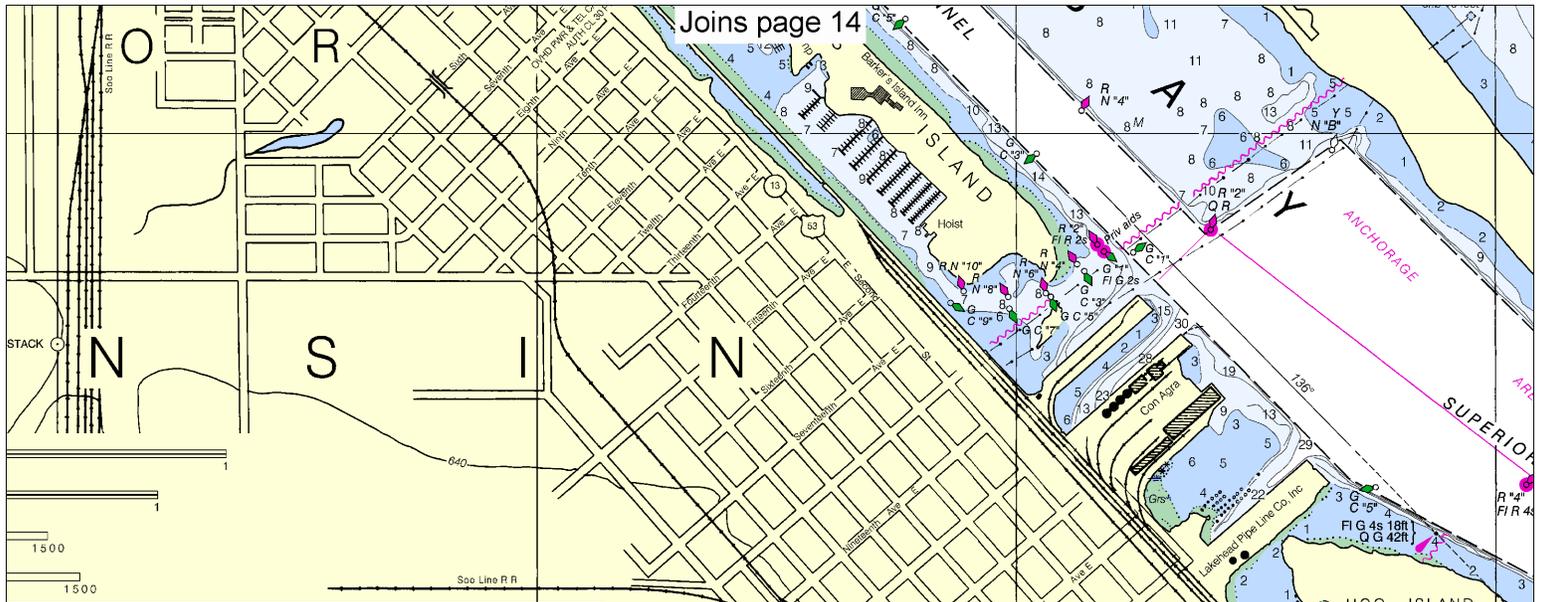
A. CHANNEL DIVIDED INTO QUARTERS WHEN ENTERING FROM LAKE.
 B. SHOALING TO 15.2 FEET AT 48°42'32.8"N 092°00'28.7"W
 C. SHOALING TO 30.6 FEET AT 48°42'40.6"N 092°00'35.6"W
 D. SHOALING TO 6.0 FEET AT 48°42'16.9"N 092°01'38.5"W

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION



Washington, D. C.
 DEPARTMENT OF COMMERCE
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 COAST AND GEODETIC SURVEY

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SUPERIOR HARBOR								
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO NOV 2011								
CONTROLLING DEPTHS FROM SEAWARD IN FEET AT GREAT LAKES LOW WATER DATUM (LWD)					PROJECT DIMENSIONS			
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH LWD (FEET)
SUPERIOR ENTRY	1	23.1 B	31.6	32.6	30.4 C	8-10, 8-11	600-1100	.18 31
	2	29.2	31.3	32.5	30.9	8, 10-11	415-1100	.15 30
	3	29.8	30.6	31.3	27.8	10-11	415-490	.08 28
	4	28.2	30.5	29.8	28.3	10-11	415-490	.08 28
	5	24.1	29.4	30.1	28.6	10-11	430-840	.08 27
SUPERIOR HARBOR BASIN	22.1 D	24.1	23.1	21.3	9, 10, 11-11	600-2000	1.21 27	
ALLOUEZ BAY CHANNEL	20.2	23.1	21.8	22.1	8, 10, 11	400-900	.44 27	
SUPERIOR FRONT CHANNEL	25.1	27.1	26.4	24.5	10, 11-11	600	2.32 27	
EAST GATE BASIN (SOUTH)	26.7	27.0	27.8	27.2	10, 11-11	600-3200	.57 27	

A. CHANNEL DIVIDED INTO QUARTERS WHEN ENTERING FROM LAKE.
 B. SHOALING TO 15.2 FEET AT 46°42'32.8"N 092°00'26.7"W
 C. SHOALING TO 20.6 FEET AT 46°42'40.8"N 092°00'35.8"W
 D. SHOALING TO 6.0 FEET AT 46°42'16.9"N 092°01'38.5"W

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

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FATHOMS
FEET
METERS

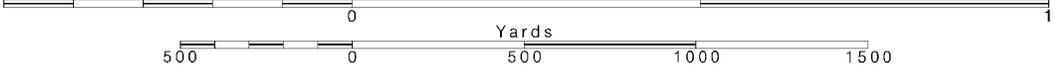


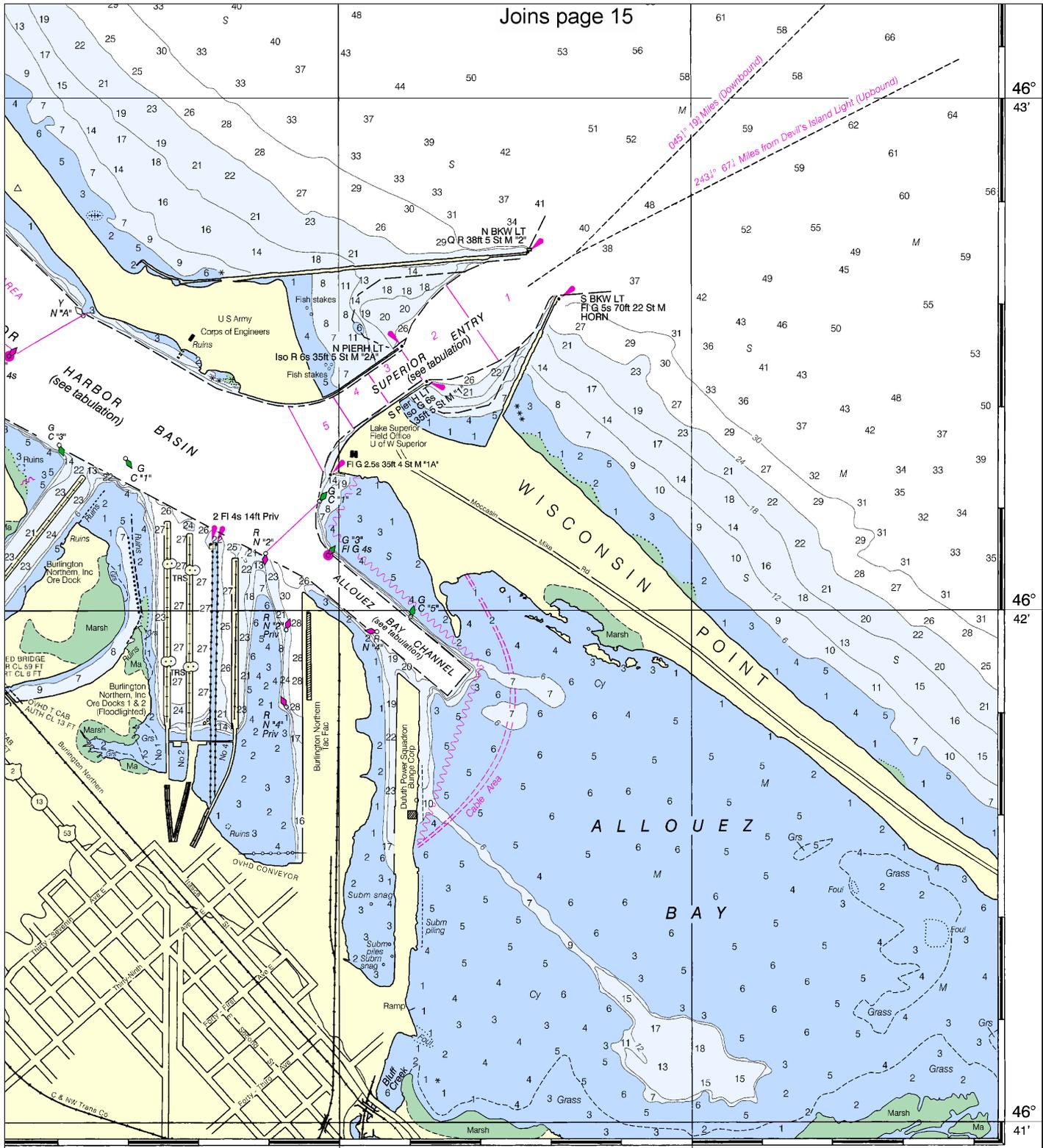
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:15,000
 Nautical Miles

See Note on page 5.

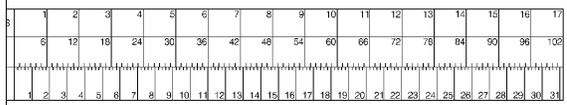




46°
43'
46°
42'
46°
41'

92°01'

92°00'



Duluth - Superior Harbor
SOUNDINGS IN FEET - SCALE 1:15,000

14975



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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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NOAA's Office of Coast Survey



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