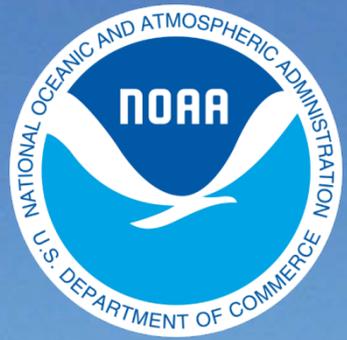


BookletChart™

Buffalo to Erie

NOAA Chart 14838

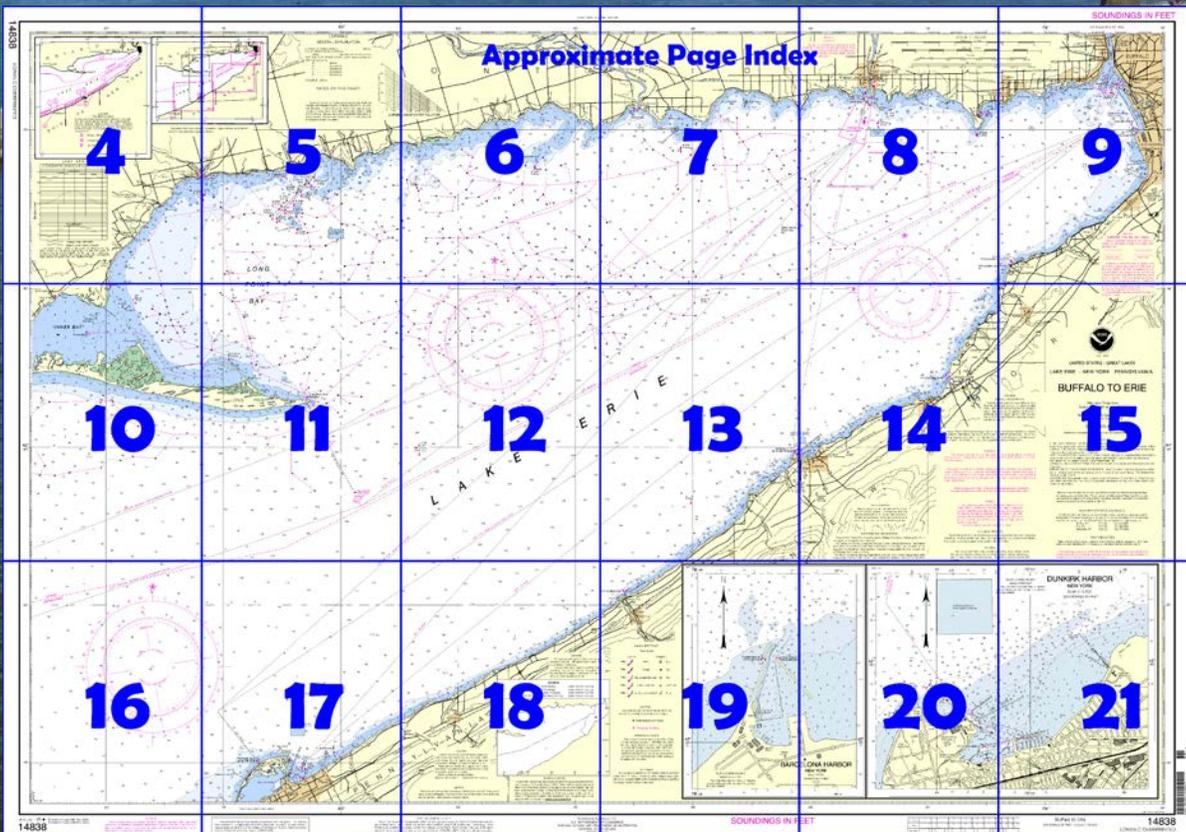


A reduced-scale NOAA nautical chart for small boaters

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.

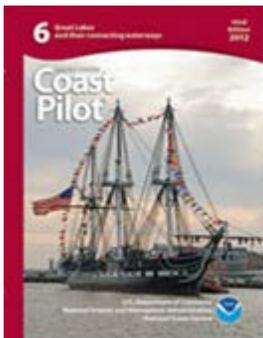
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

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/coastpilot_w.php?book=6.



(Selected Excerpts from Coast Pilot)

Niagara River above Niagara Falls.—At its east end, Lake Erie becomes comparatively narrow and has its outlet in the Niagara River. From the head of the river, it is about 20 miles to the falls and rapids of **American Falls** and **Horseshoe Falls**. About 5 miles below the head, the river is divided into two channels by **Strawberry Island** and **Grand Island**. **Tonawanda Channel** and **Niagara River Channel**, the U.S. channels, lead to the east of these islands,

and **Chippawa Channel**, the Canadian channel, leads to the west of these islands. At the lower end of Grand Island, the channels rejoin and lead for about 3.5 miles to the falls.

The **International boundary** between the United States and Canada

follows a general middle of the river course in the upper Niagara River from the head of the river downstream to the head of Grand Island where the river forks around the island. The boundary then follows Chippawa Channel and is generally less than 1,000 feet off the west shore of Grand Island until Chippawa Channel and Niagara River Channel join at the northwest end of Grand Island. The boundary again follows a general middle of the river course around the south side of **Goat Island** and over Niagara Falls.

Caution.—The canal generally has a slight current downstream. During rapidly rising or high water in Lake Erie, there is a strong crosscurrent at the south end of Bird Island Pier.

Buffalo Harbor is at the east end of Lake Erie, where the lake converges to an open and comparatively shallow bay about 8 miles across north and south and is subject to great storms from the southwest. The lake discharges into the Niagara River at the northeast corner of this bay. The city of **Buffalo, NY**, is along the E lakeshore and the east bank of the head of the **Niagara River**. **Buffalo River** meanders through the city from east to west and enters the lake near the head of the Niagara River. From **Stony Point** at the south end of Buffalo Harbor, the shoreline trends south for about 3.5 miles and is obstructed by shallow patches extending 1 mile offshore.

Dangers.—Numerous unmarked detached shoal spots with depths less than 30 feet are in the E end of Lake Erie, in the approaches to Buffalo Harbor and the Niagara River. **Waverly Shoal**, with a least depth of 10 feet, is 1.9 miles west-southwest of Buffalo Harbor Light. Depths of 18 feet extend about 0.4 mile North and 1 mile South from the shallowest part of the shoal.

Unmarked 20-foot shoals are 1.4 and 2.6 miles southwest of Buffalo Harbor Light.

An artificial reef is 1.9 miles south-southeast of Buffalo Harbor Light in about 42°50'41"N., 78°53'27"W.

Presque Isle (42°10.4'N., 80°04.8'W.) is a peninsula forming nearly landlocked Erie Harbor. The peninsula is connected to the mainland by a narrow neck at the west end and broadens as it curves around to the northeast and east. The entrance to Erie Harbor is on the south side of the east end of the peninsula.

Erie Harbor, about 78 miles southwest of Buffalo, is in **Presque Isle Bay**, enclosed from the lake by Presque Isle. The bay opens to the east and is about 4.5 miles long and 1.5 miles wide. Erie Harbor, serving the city of **Erie, PA**, is in the southeast part of the bay.

Anchorage.—Good anchorage is in the center of Presque Isle Bay in depths of 12 to 22 feet, mud bottom. Local regulations prohibit vessels from anchoring in any channel or mooring to channel markers and buoys. Vessels over 100 feet long or over 50 tons are prohibited from anchoring within 500 feet of the city water intake or sewer pipelines. The city water intake extends northwest across Presque Isle Bay and is marked by buoys.

Dangers.—An unmarked submerged pier, covered 1 to 2 feet, extends about 2,000 feet from shore 0.8 mile southsoutheast of Erie Harbor Pierhead Light.

Harbor Regulations.—Harbor Regulations are established by the Erie-Western Pennsylvania Port Authority and enforced by the harbormaster. A speed limit of 3 mph (2.6 knots) is enforced in the East and West Canal Basins and within 300 feet of the shoreline, and 5 mph (4.4 knots) elsewhere in the harbor. Copies of the regulations may be obtained from the Port Authority Office, 17 W. Dobins Landing, Erie, PA 16501, telephone 814-455-7557.

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

Submerged well head

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 0.214" northward and 0.844" eastward to agree with this chart.

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

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

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.

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

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

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.

NOTE C

CAUTION

Cables for an Ice Boom are permanently attached to anchors on the lake bottom. They are submerged and not buried. Floating steel pontoons are attached to these cables between December 15 and April 1.

SYMBOL REFERENCE

Floating Aids

Lighted		Unlighted	
Pillar	Red	Nun	Nun
Pillar	Green	Can	Can
Pillar	Horizontally Banded	Can	Can
Pillar	Vertically Striped	Spherical	Spherical
Pillar	Vertically Striped Ball	Pillar	Pillar

LAKE ERIE FISH NETTING AREAS

Various types of nets are employed in Lake Erie of which gill nets, impounding nets and trap nets may create a hazard to mariners. These are marked by buoys or stakes. This diagram shows the areas most intensively fished and the principal type of nets employed. However, fishing gear may be encountered at any location.

- Principal Gill Netting Areas
- Impounding Net Areas
- Trap Net Areas

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 Buffalo, New York.

Refer to charted regulation section numbers.

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.

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

NOTE D

Mariners are warned that numerous uncharted stakes and fishing structures, some submerged, may exist in the area of this chart. Such structures are not charted unless known to be permanent.

Gas pipelines and wells contain natural gas under pressure and damage to these installations would create an immediate fire hazard. Vessels anchoring in Lake Erie should do so with caution after noting the underwater, and therefore concealed, positions of all oil and gas wells, pipelines, submerged cables and other installations.

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

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.

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.

NOAA WEATHER RADIO BROADCASTS

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

Buffalo, NY	KEB-98	162.550 MHz
Erie, PA	KEC-58	162.400 MHz
Meadville, PA	KZZ-32	162.475 MHz

This chart was developed within the framework of international specifications in cooperation with the Canadian Hydrographic Service. Production was assisted by computer and machine engraving techniques.

Vessel Traffic Services calling-in point; arrow indicates direction of vessel movement. Mandatory calling-in points are identified numerically. Voluntary calling-in points are identified alphabetically. For additional information see U.S. Coast Pilot 6 and the U.S. and Canadian Notice to Mariners.

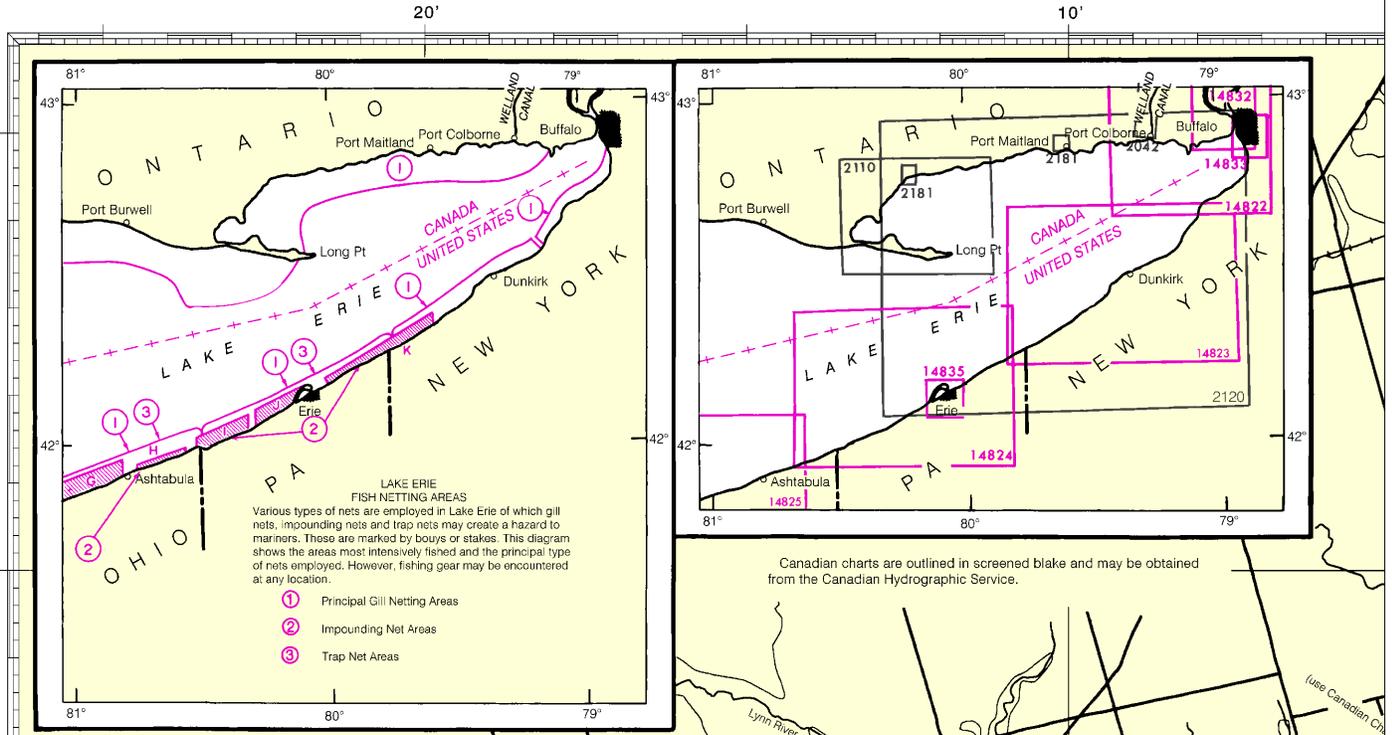
AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation. See Canadian List of Lights, Buoys and Fog Signals for information not included in the U.S. Coast Guard Light List.

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.

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

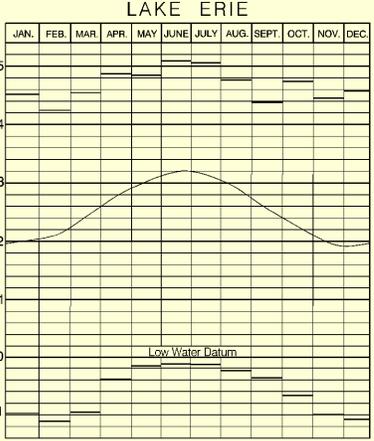
PLANE OF REFERENCE OF THIS CHART (Low Water Datum) 569.2 ft.
 Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985)



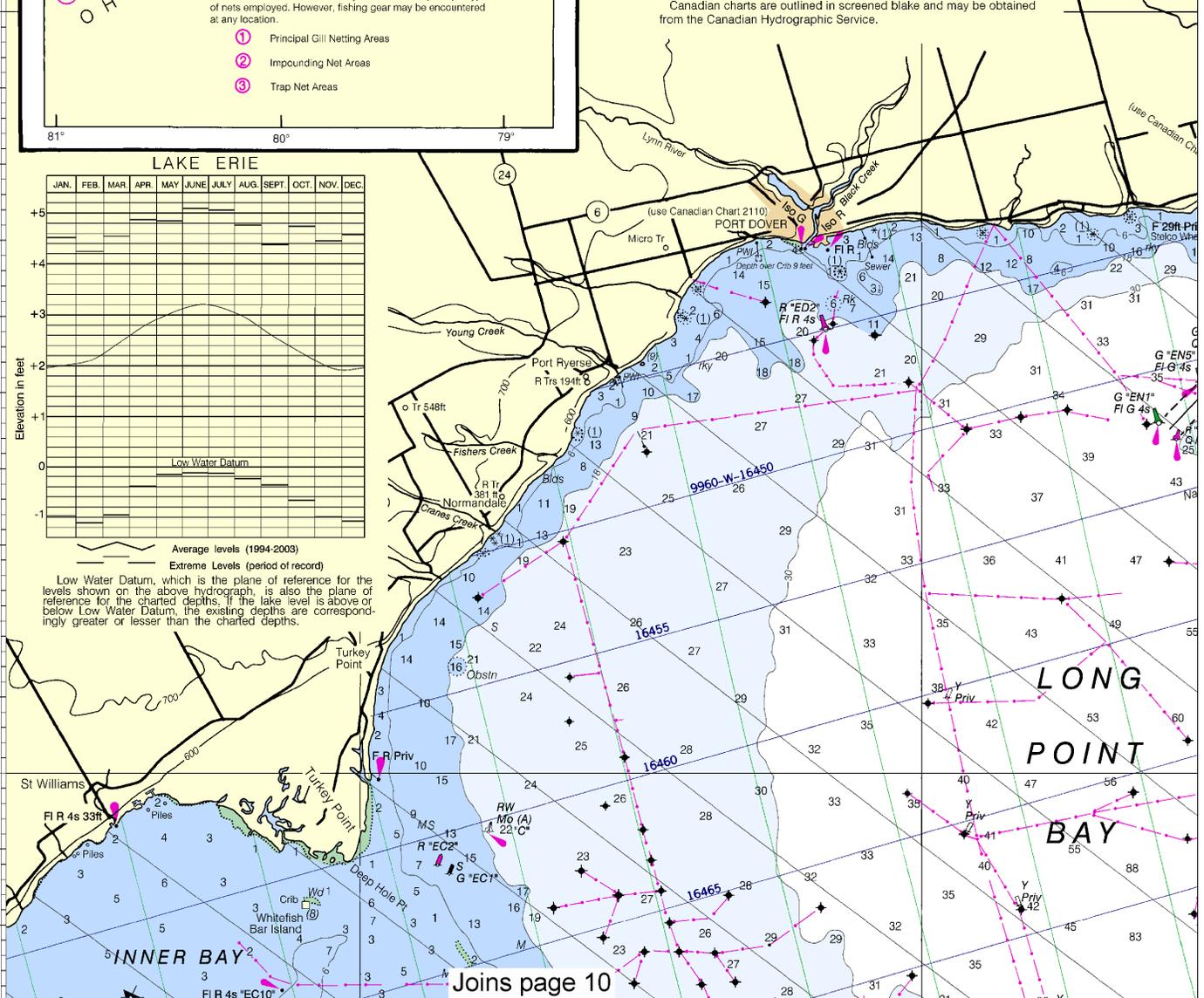
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 Various types of nets are employed in Lake Erie of which gill nets, impounding nets and trap nets may create a hazard to mariners. These are marked by bouys or stakes. This diagram shows the areas most intensively fished and the principal type of nets employed. However, fishing gear may be encountered at any location.

- ① Principal Gill Netting Areas
- ② Impounding Net Areas
- ③ Trap Net Areas

Canadian charts are outlined in screened black and may be obtained from the Canadian Hydrographic Service.



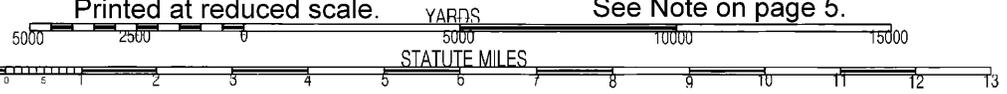
LAKE ERIE
 Average levels (1994-2003)
 Extreme Levels (period of record)
 Low Water Datum, which is the plane of reference for the levels shown on the above hydrograph, is also the plane of reference for the charted depths. If the lake level is above or below Low Water Datum, the existing depths are correspondingly greater or lesser than the charted depths.



Joins page 10

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.



See Note on page 5.

80°

50'

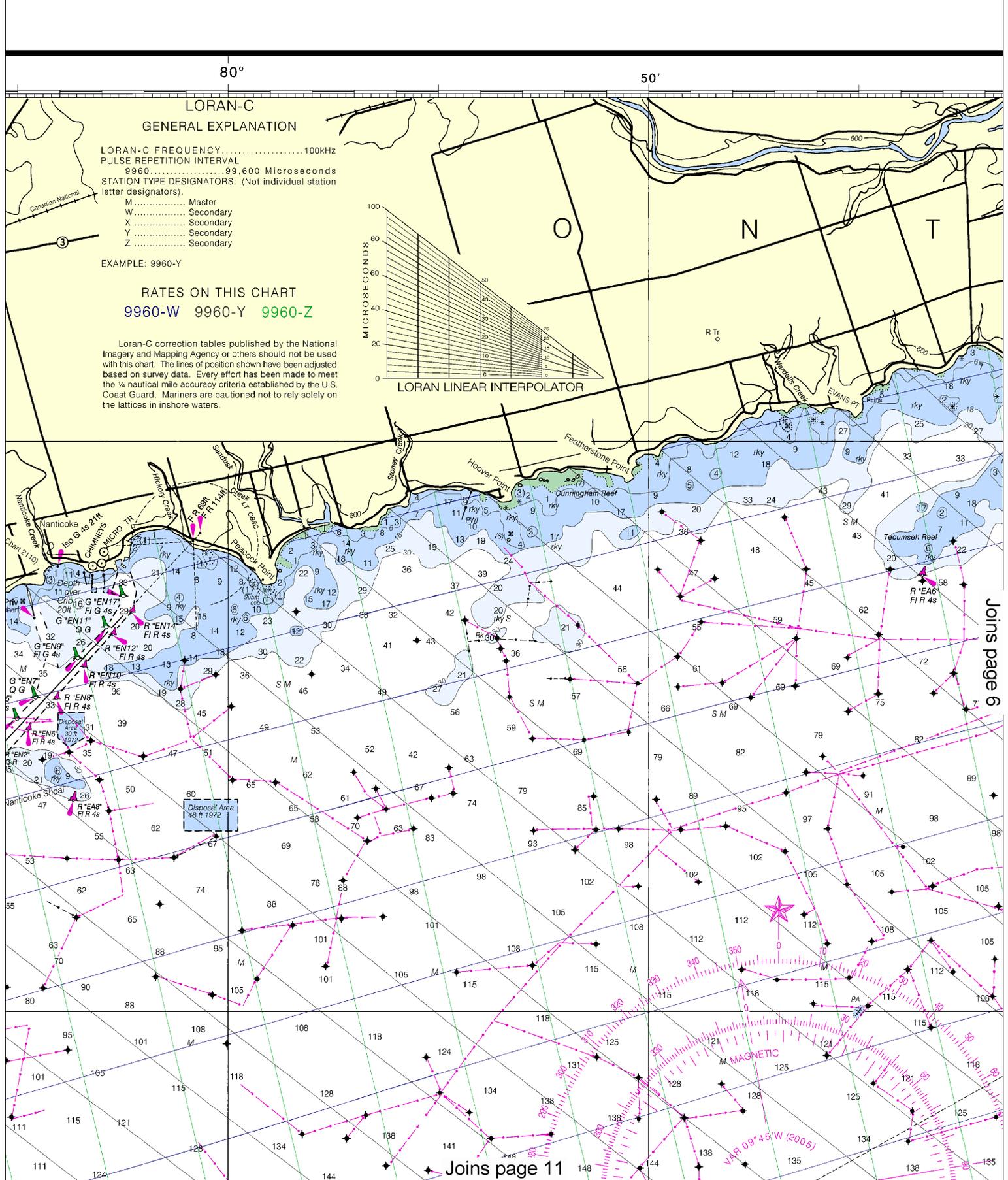
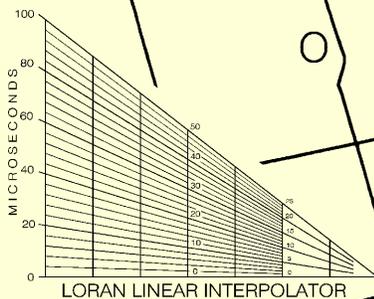
LORAN-C GENERAL EXPLANATION

LORAN-C FREQUENCY 100kHz
 PULSE REPETITION INTERVAL
 9960 99,600 Microseconds
 STATION TYPE DESIGNATORS: (Not individual station
 letter designators).
 M Master
 W Secondary
 X Secondary
 Y Secondary
 Z Secondary

EXAMPLE: 9960-Y

RATES ON THIS CHART
 9960-W 9960-Y 9960-Z

Loran-C correction tables published by the National
 Imagery and Mapping Agency or others should not be used
 with this chart. The lines of position shown have been adjusted
 based on survey data. Every effort has been made to meet
 the ¼ nautical mile accuracy criteria established by the U.S.
 Coast Guard. Mariners are cautioned not to rely solely on
 the lattices in inshore waters.



Joins page 6

Joins page 11

This BookletChart was reduced to 75% of the original chart scale.
 The new scale is 1:160000. Barscales have also been reduced and
 are accurate when used to measure distances in this BookletChart.



80°

50'

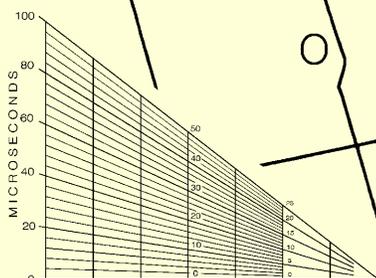
40'

LORAN-C GENERAL EXPLANATION

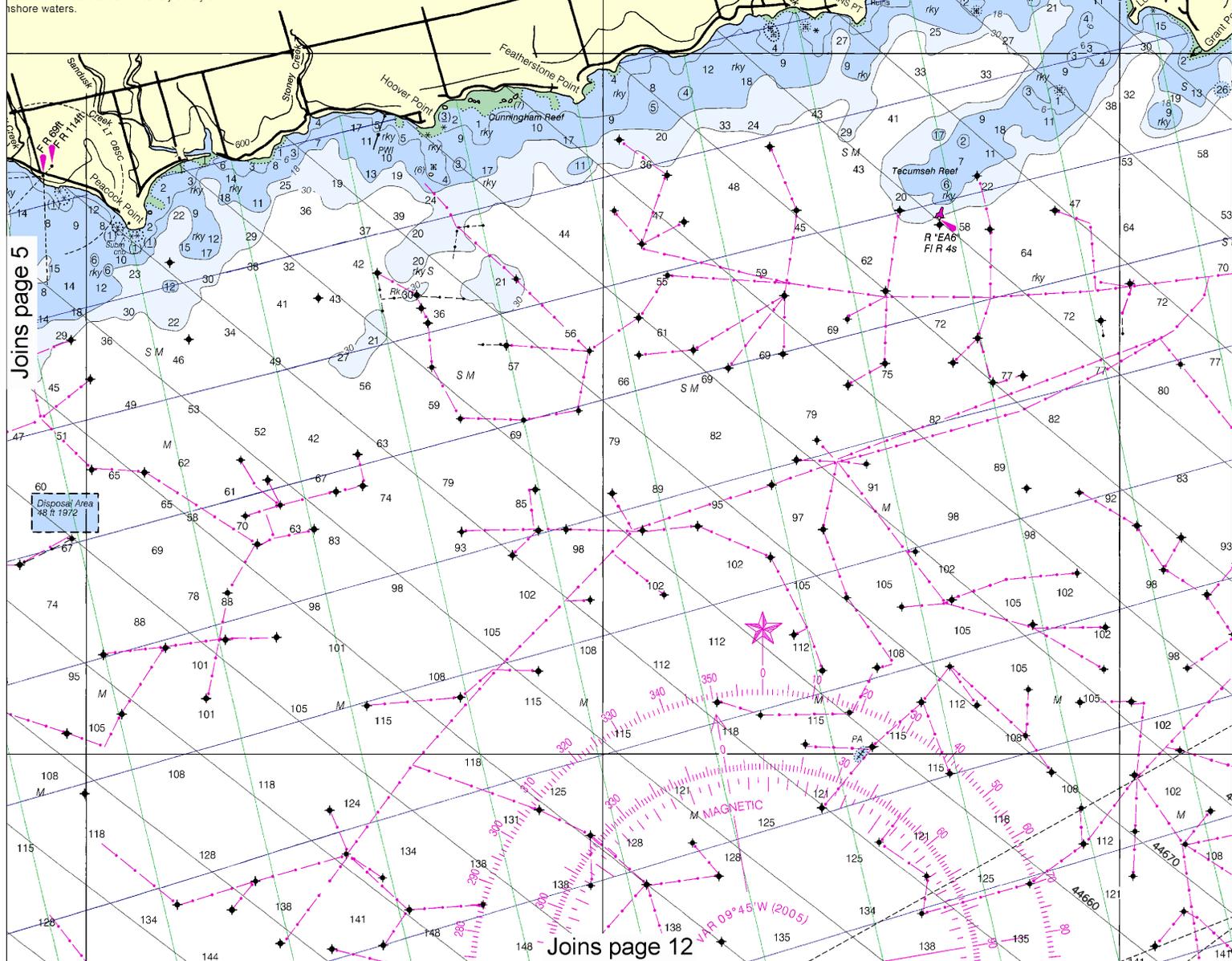
FREQUENCY.....100kHz
 PULSATION INTERVAL.....99,600 Microseconds
 DESIGNATORS: (Not individual station letters)
 Master
 Secondary
 Secondary
 Secondary
 Secondary

NOTES ON THIS CHART
 W 9960-Y 9960-Z

Correction tables published by the National Hydrographic Agency or others should not be used. The lines of position shown have been adjusted by data. Every effort has been made to meet the accuracy criteria established by the U.S. Navy. Mariners are cautioned not to rely solely on LORAN in offshore waters.



LORAN LINEAR INTERPOLATOR



Joins page 5

Joins page 12



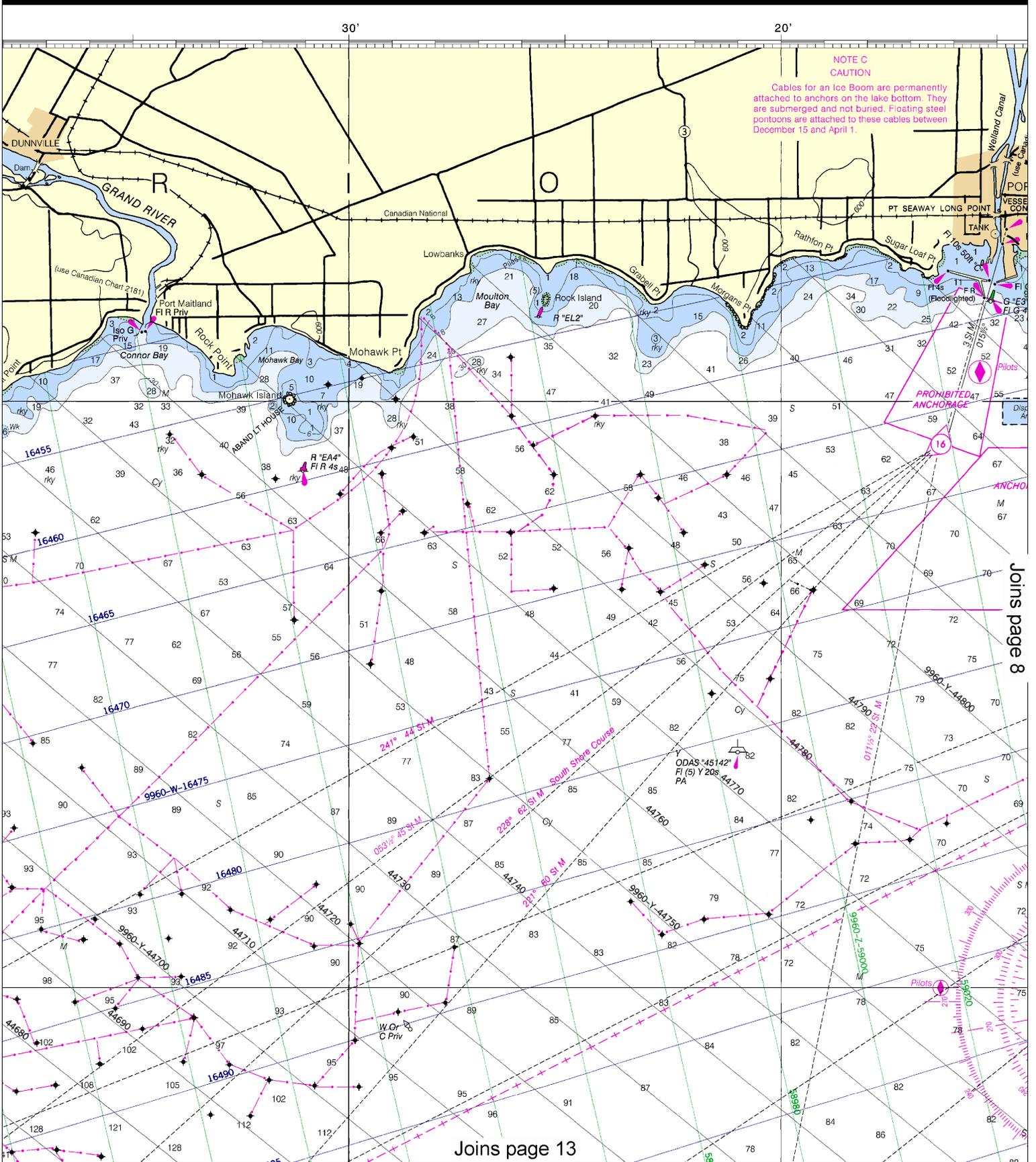
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

YARDS

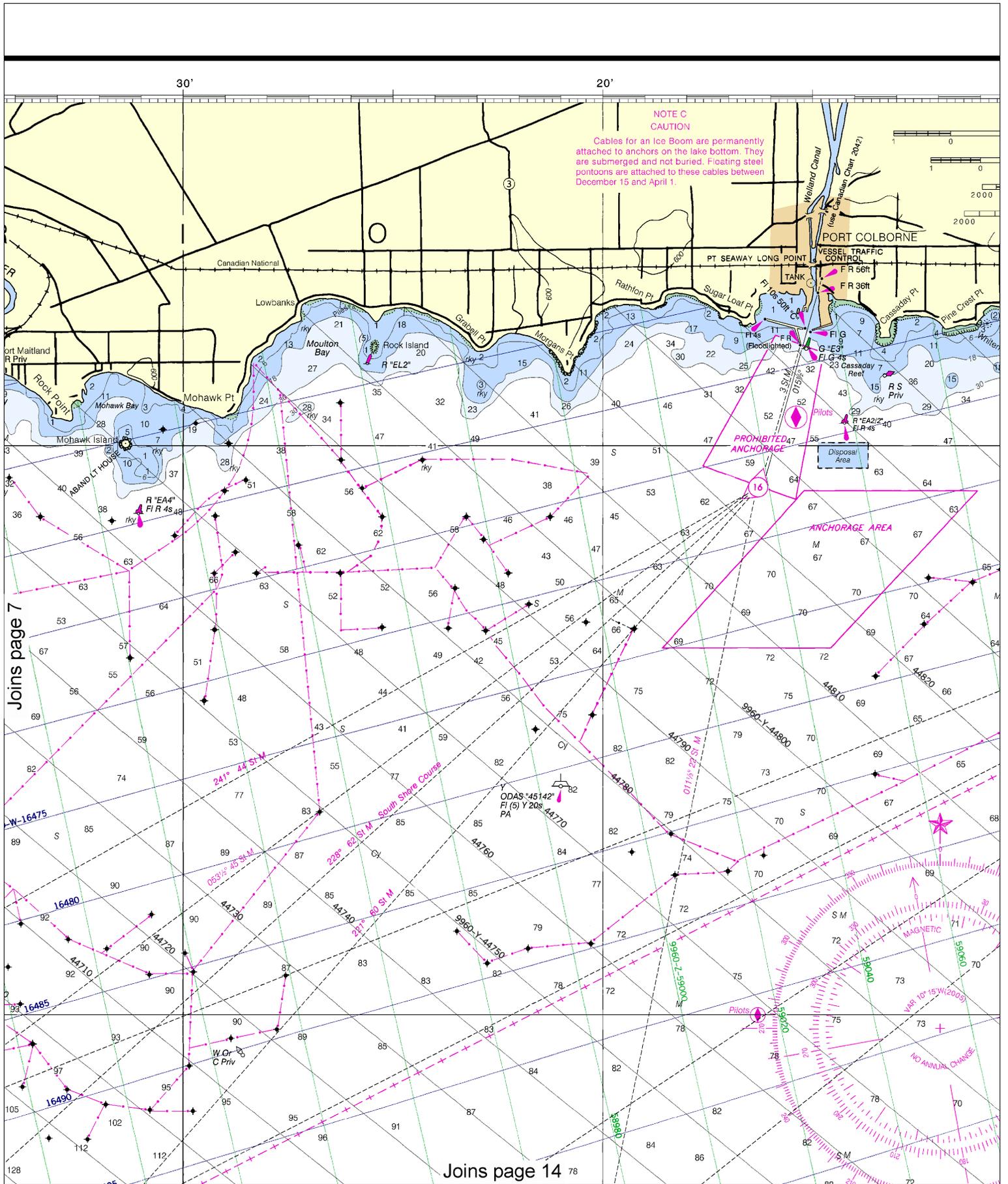
See Note on page 5.





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 7

Joins page 14

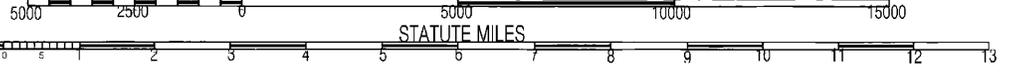


Note: Chart grid lines are aligned with true north.

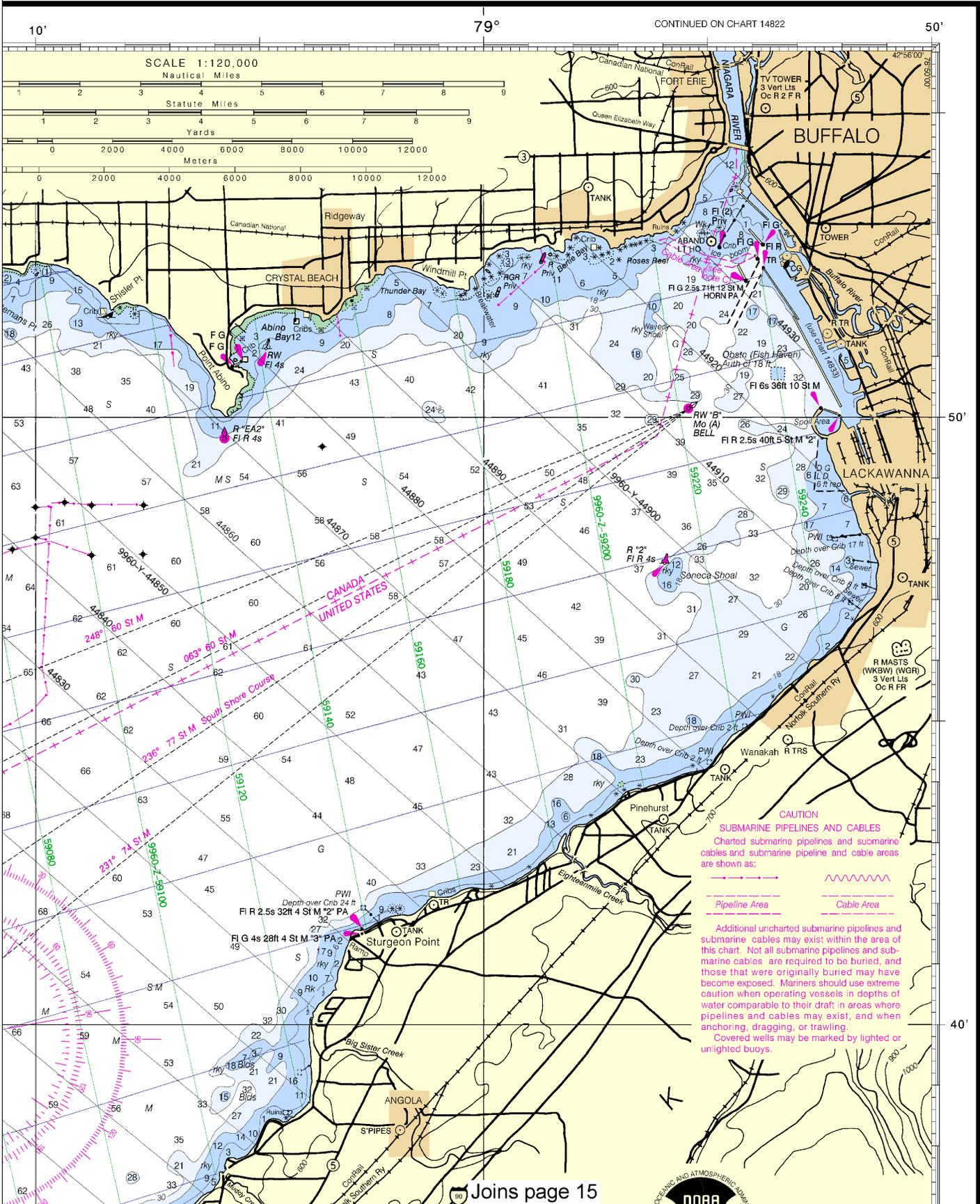
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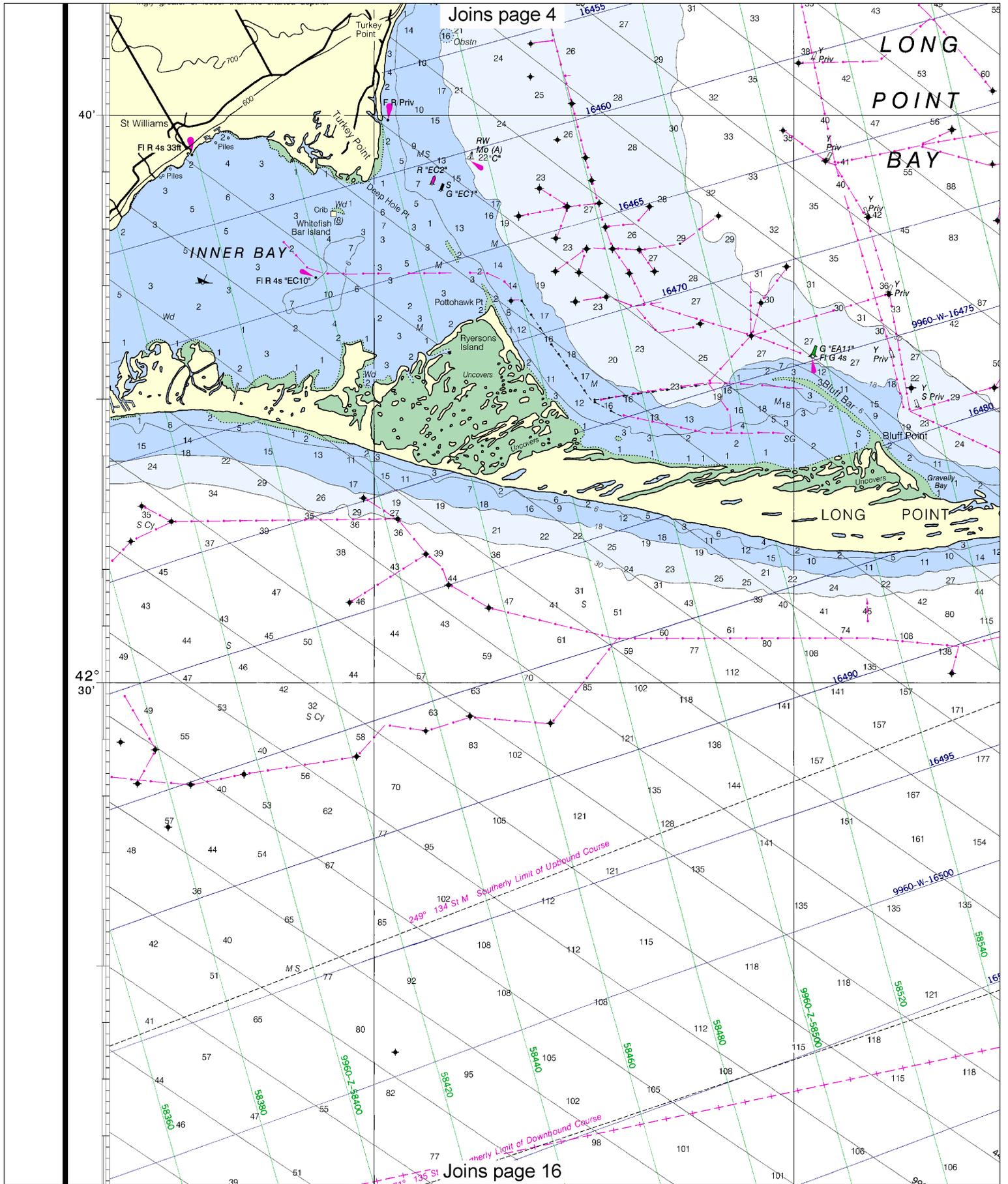
YARDS

See Note on page 5.



SOUNDINGS IN FEET





10

Note: Chart grid lines are aligned with true north.

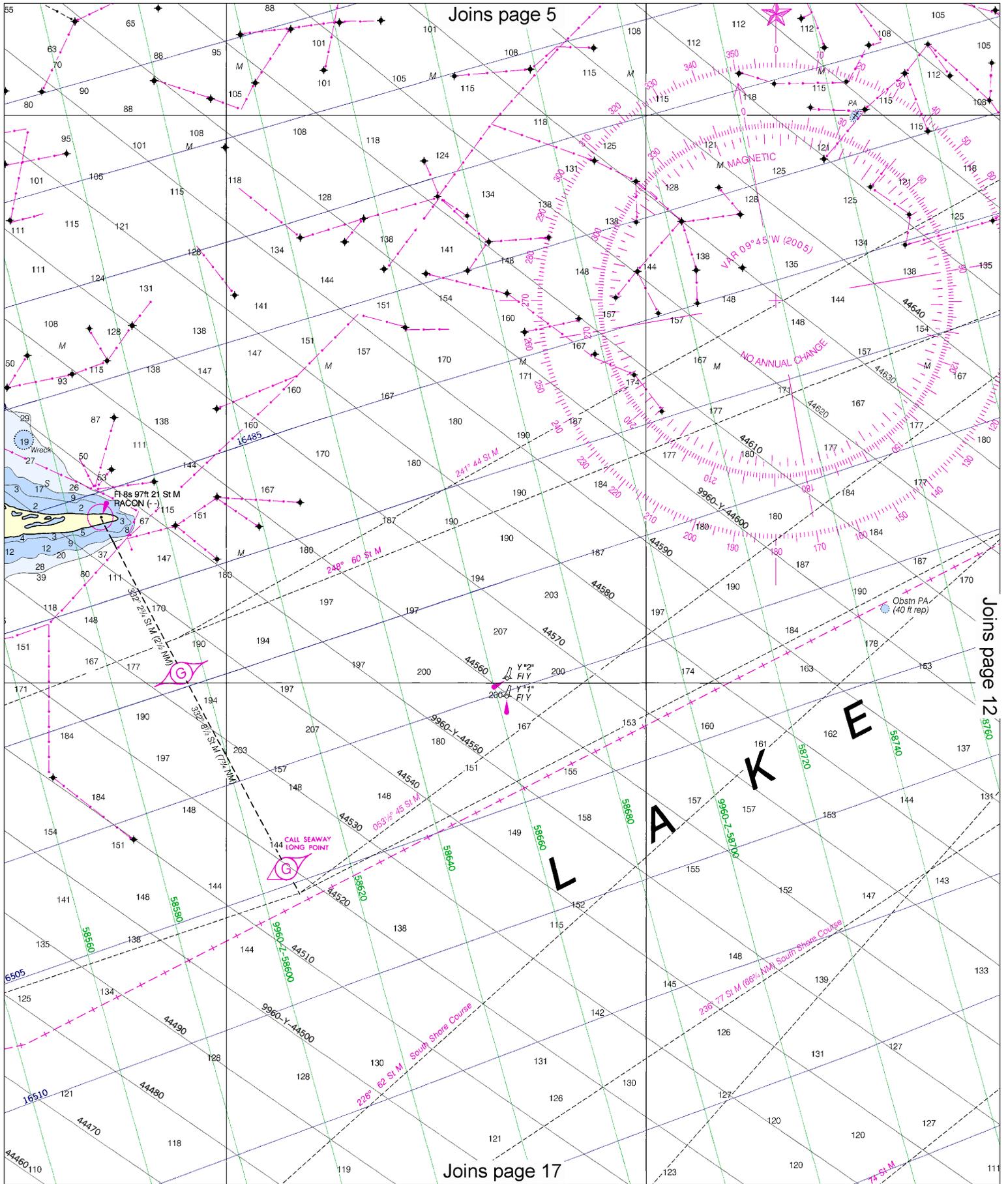
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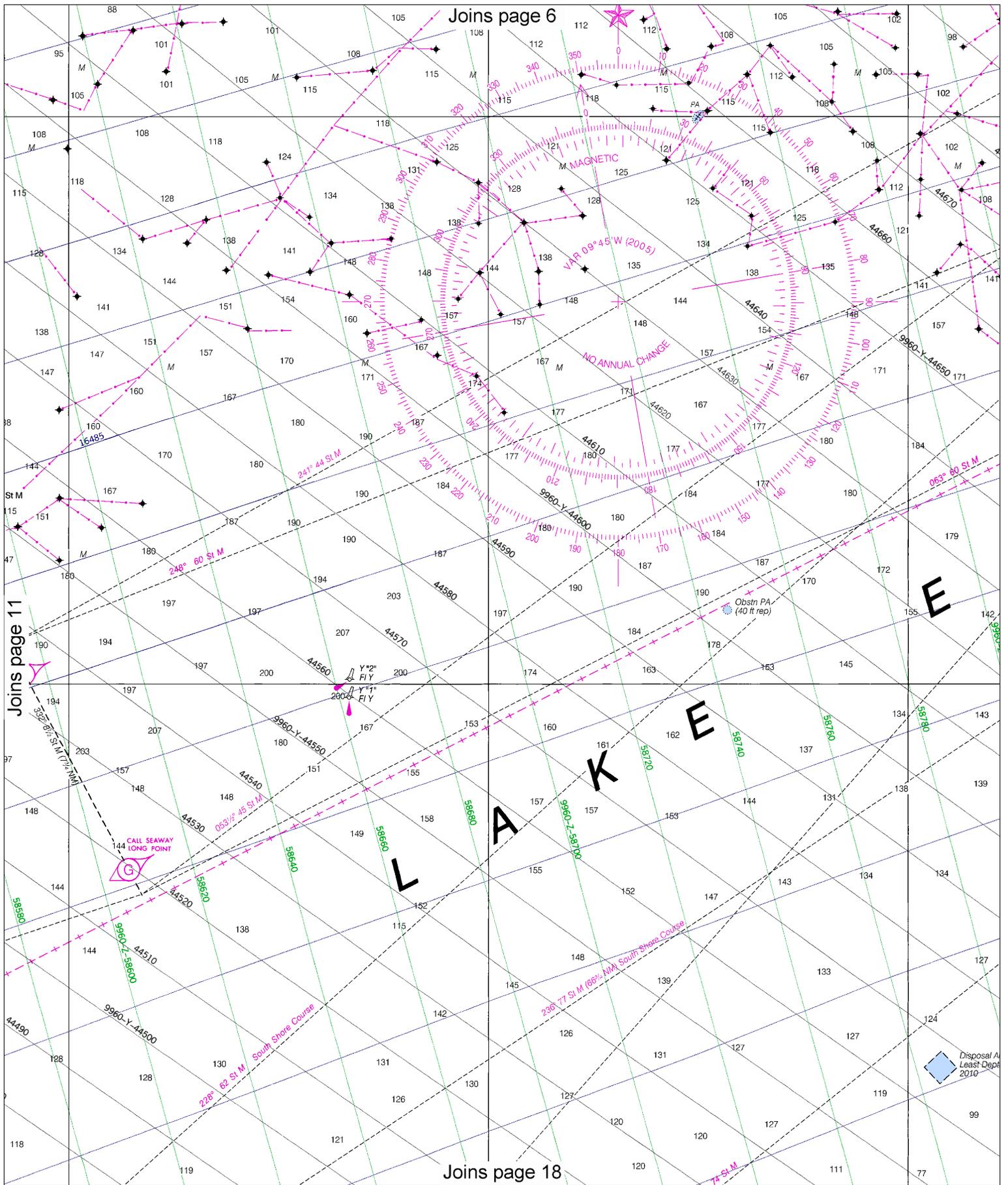
YARDS

See Note on page 5.

STATUTE MILES







12

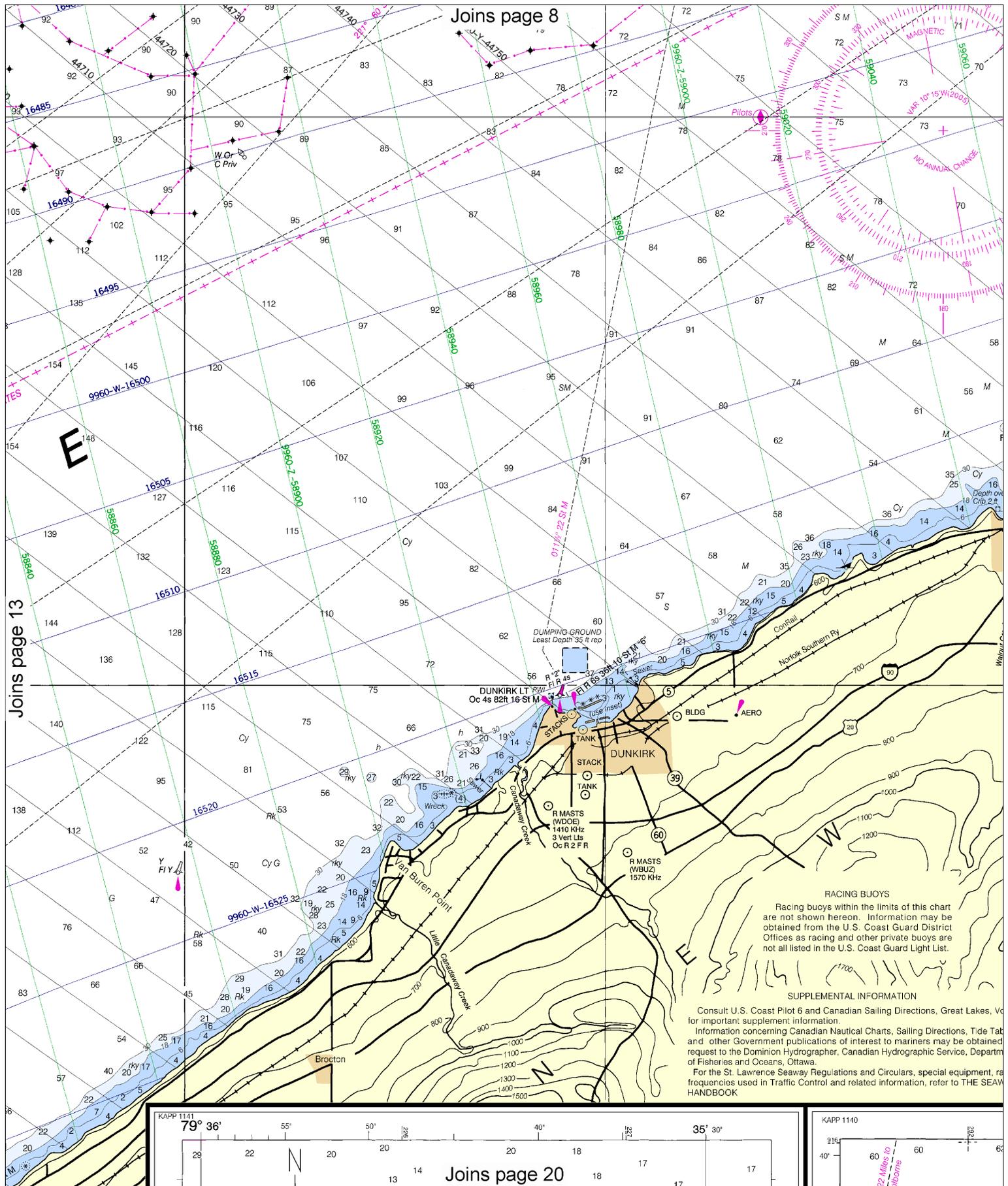
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

YARDS

See Note on page 5.





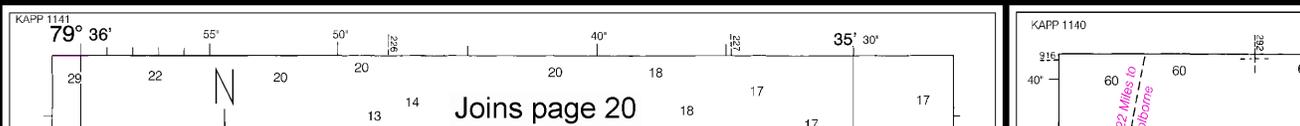
Joins page 8

Joins page 13

Joins page 20

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.

SUPPLEMENTAL INFORMATION
 Consult U.S. Coast Pilot 6 and Canadian Sailing Directions, Great Lakes, Vol. 1 for important supplemental information.
 Information concerning Canadian Nautical Charts, Sailing Directions, Tide Tables and other Government publications of interest to mariners may be obtained request to the Dominion Hydrographer, Canadian Hydrographic Service, Department of Fisheries and Oceans, Ottawa.
 For the St. Lawrence Seaway Regulations and Circulars, special equipment, radio frequencies used in Traffic Control and related information, refer to THE SEAWAY HANDBOOK

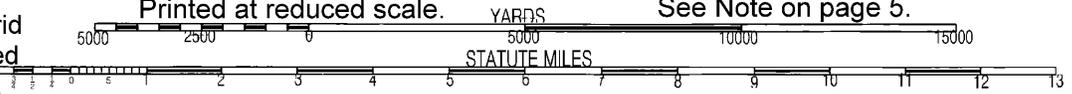


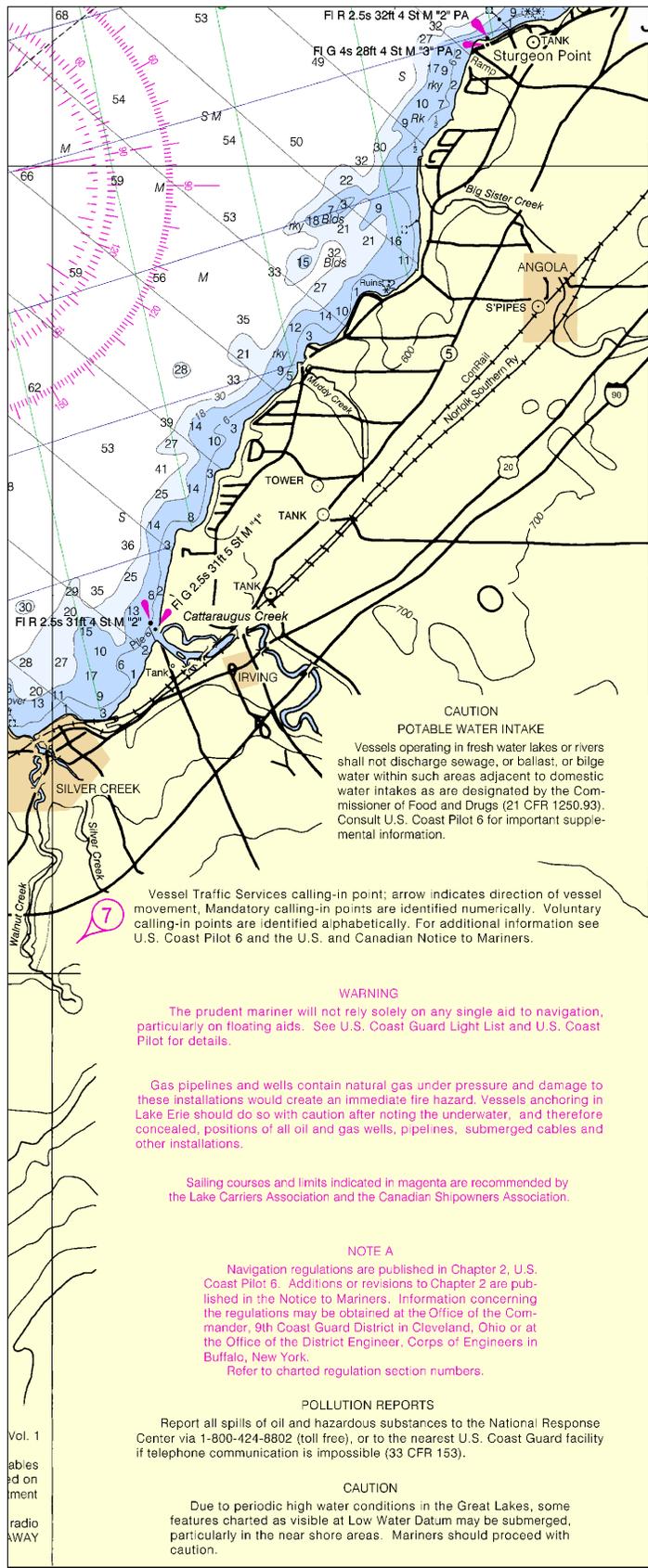
14

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

See Note on page 5.





Joins page 9

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.



UNITED STATES - GREAT LAKES
LAKE ERIE - NEW YORK PENNSYLVANIA

BUFFALO TO ERIE

Mercator Projection
Scale 1:120,000 at Lat 42° 32'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET

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

NOTES

PLANE OF REFERENCE OF THIS CHART (Low Water Datum) 569.2 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. See Canadian List of Lights, Buoys and Fog Signals for information not included in the U.S. Coast Guard Light List.
SYMBOLS AND ABBREVIATIONS. For complete list of symbols and abbreviations see Chart No. 1.
BRIDGE AND OVERHEAD CABLE CLEARANCES. When the water surface is above Low Water Datum, bridge and overhead clearances are reduced correspondingly. For clearances see U.S. Coast Pilot 6.
AUTHORITIES. Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, U.S. Coast Guard, and Canadian authorities.

Mariners are advised that oil and gas drilling towers are temporarily established in various parts of Lake Erie. These towers exhibit a Quick Flashing White Light and each is equipped with an automatic fog signal sounding one blast of 2 seconds duration followed by 18 seconds of silence.

NOAA WEATHER RADIO BROADCASTS

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

Buffalo, NY	KEB-98	162.550 MHz
Erie, PA	KEC-58	162.400 MHz
Meadville, PA	KZZ-32	162.475 MHz

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.

This chart was developed within the framework of international specifications in cooperation with the Canadian Hydrographic Service. Production was assisted by computer and machine engraving techniques.

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.

Vessel Traffic Services calling-in point; arrow indicates direction of vessel movement. Mandatory calling-in points are identified numerically. Voluntary calling-in points are identified alphabetically. For additional information see U.S. Coast Pilot 6 and the U.S. and Canadian Notice to Mariners.

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.

Gas pipelines and wells contain natural gas under pressure and damage to these installations would create an immediate fire hazard. Vessels anchoring in Lake Erie should do so with caution after noting the underwater, and therefore concealed, positions of all oil and gas wells, pipelines, submerged cables and other installations.

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

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 Buffalo, New York. Refer to charted regulation section numbers.

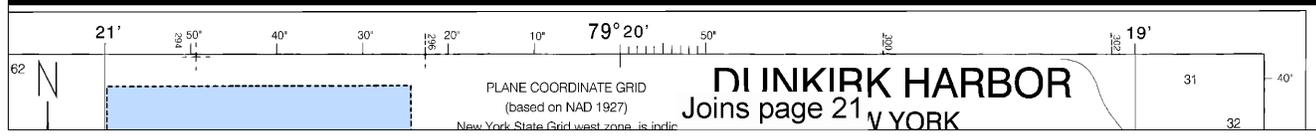
POLLUTION REPORTS

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

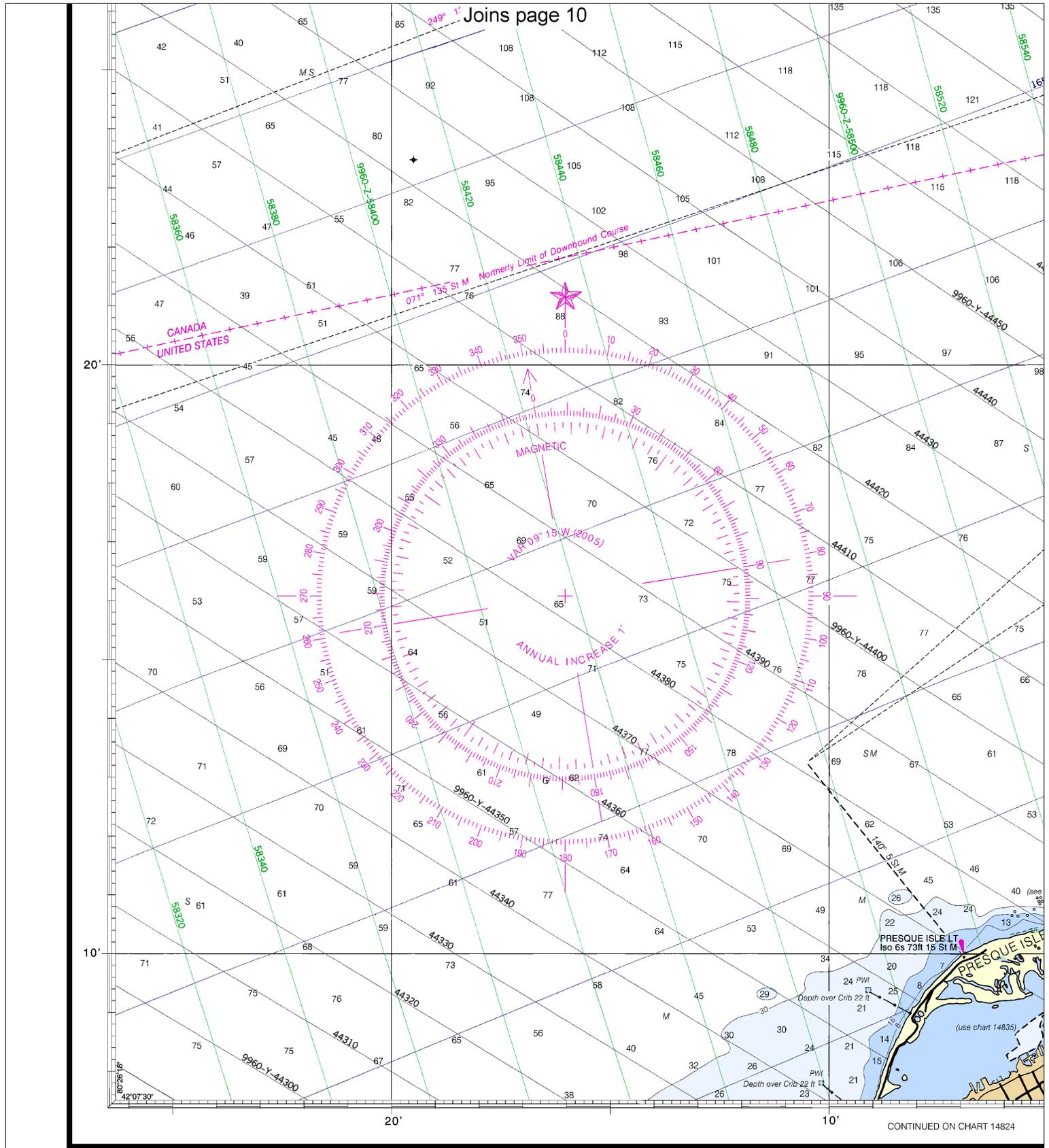
Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged, particularly in the near shore areas. Mariners should proceed with caution.

Vol. 1
ables
nd on
ment
radio
WAY



DUNKIRK HARBOR
Joins page 21
NEW YORK

40'
30'



Joins page 10

CANADA
UNITED STATES

071° 135 St M

MAGNETIC
VAR 09° 15' W (2005)
ANNUAL INCREASE 1"

PRESQUE ISLE LT
Iso 6s 73ft 15 St M

CONTINUED ON CHART 14824

4th Ed., Apr. / 05 ■ Corrected through NM Apr. 02/05
Corrected through LNM Mar. 22/05

14838
LORAN-C OVERPRINTED

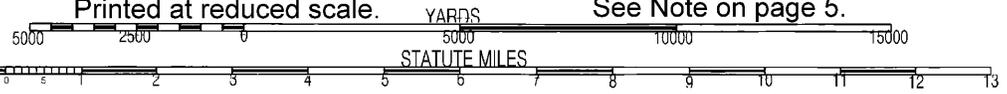
CAUTION
This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

This nautical chart has been designed to promote safe navigation. The U.S. Coast Guard and the U.S. Navy encourage users to submit corrections, and the U.S. Coast Guard encourages users to submit corrections, adding improving this chart to the Chief, Marine Chart Division (Nautical Service, NOAA, Silver Spring, Maryland 20910-3282).

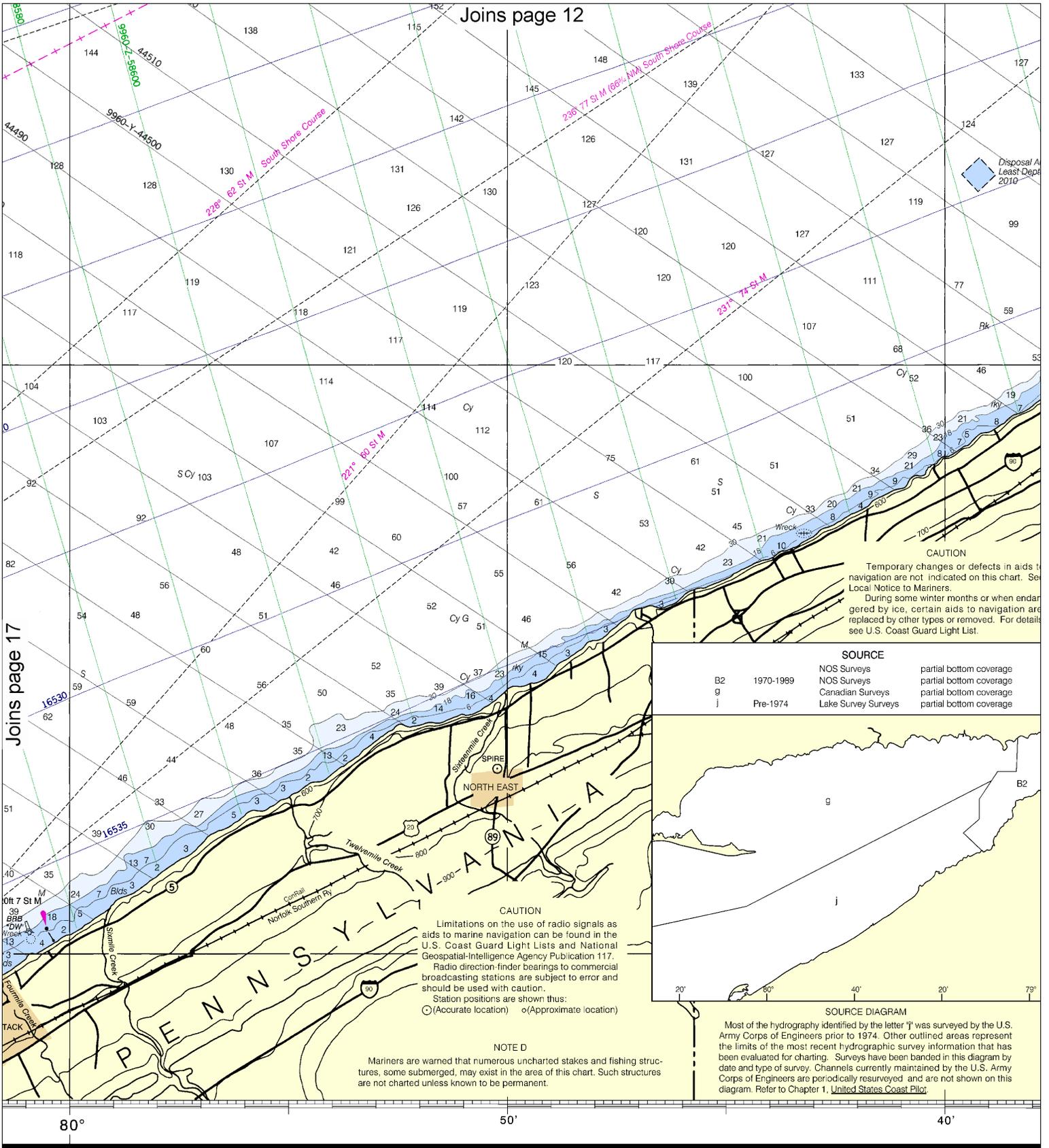
16

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.



See Note on page 5.



PRINT-ON-DEMAND CHARTS

NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at 1-800-584-4683, <http://NauticalCharts.gov>, help@NauticalCharts.gov, or OceanGrafix at 1-877-56CHART, <http://OceanGrafix.com>, or help@OceanGrafix.com.

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COAST SURVEY

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

YARDS

See Note on page 5.





SYMBOL REFERENCE

Floating Aids

Lighted Pillar	Red Pillar	Unlighted Nun
Lighted Pillar	Green Pillar	Unlighted Can
Lighted Pillar	Horizontally Banded Pillar	Unlighted Can
Lighted Pillar	Vertically Striped Pillar	Unlighted Spherical
Lighted Pillar	Vertically Striped Bell Pillar	Unlighted Pillar

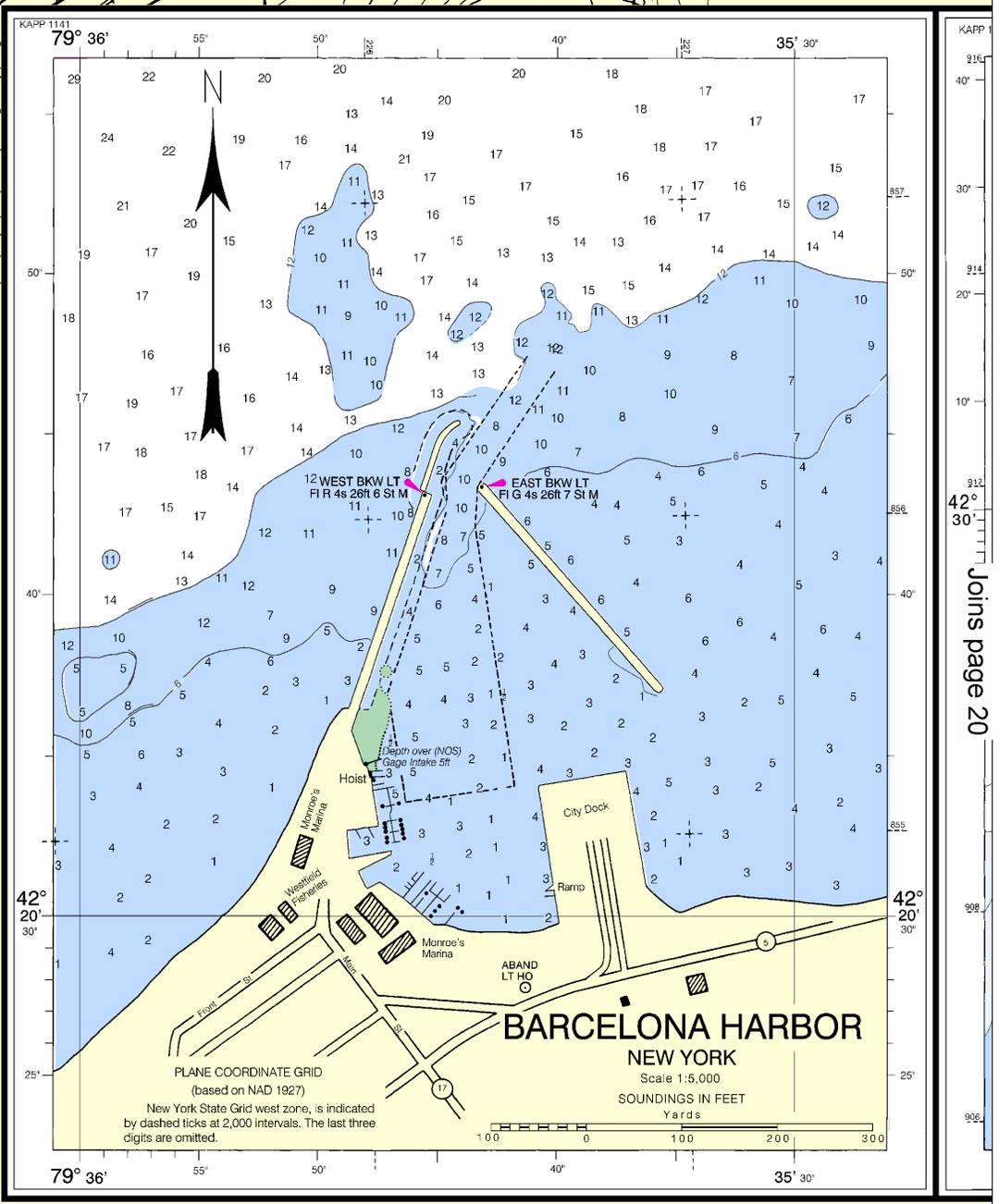
CAUTION
Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

◆ Submerged well head

⊕ Pump-out facilities

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 0.214' northward and 0.844' eastward to agree with this chart.

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

SOUNDINGS IN FEET

lished 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 Buffalo, New York. Refer to charted regulation section numbers.

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

Buffalo, NY	KFB-98	162 550 MHz
Erie, PA	KEC-58	162 400 MHz
Meadville, PA	KZZ-32	162 475 MHz

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).

RADAR REFLECTORS

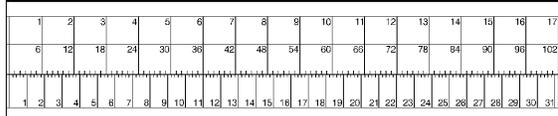
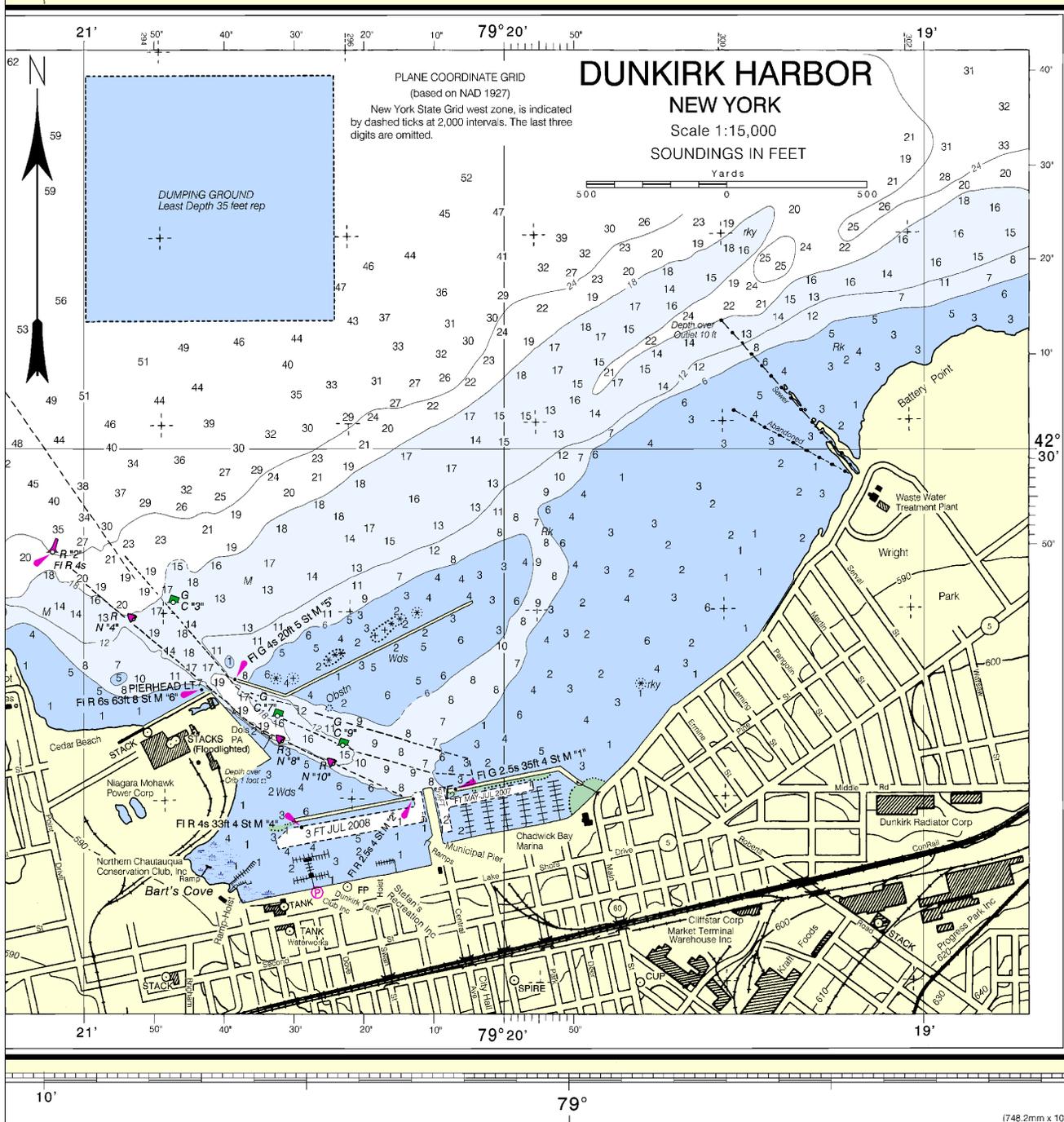
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

CAUTION

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

This chart was developed within the framework of international specifications in cooperation with the Canadian Hydrographic Service. Production was assisted by computer and machine engraving techniques.

Vol. 1
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radio
AWAY



Buffalo to Erie
SOUNDINGS IN FEET - SCALE 1:120,000

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ED. NO. 4

NSN 7642014597214
NGA REFERENCE NO. 14XC014838



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.

