BookletChart™

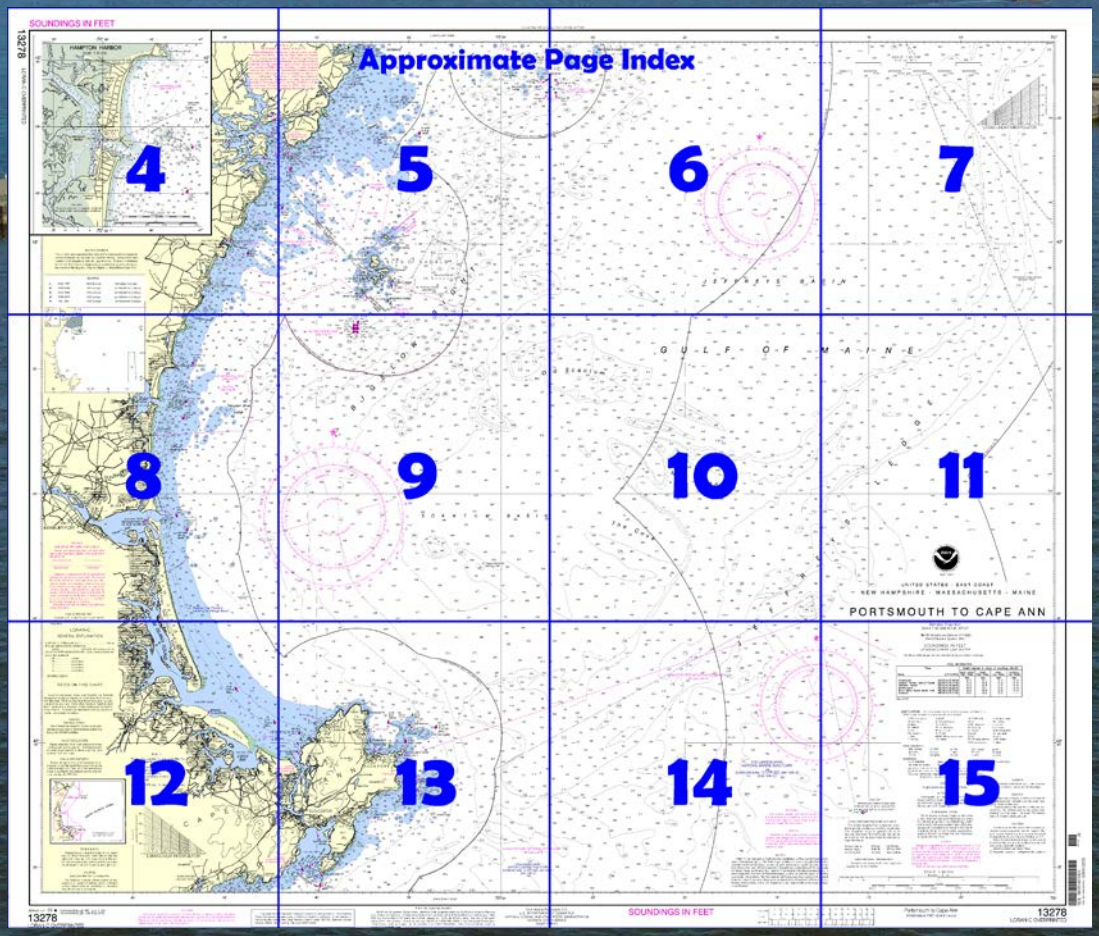
Portsmouth to Cape Ann

NOAA Chart 13278

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=13278.

(Selected Excerpts from Coast Pilot)
From Cape Elizabeth the coast of Maine continues southwestward for about 37 miles to the Piscataqua River and the deepwater port of Portsmouth, NH. The few harbors along this part of Maine are suited mostly to fishing vessels, yachts, and small pleasure craft. This is a summer-resort area, and many of the buildings are large and prominent. Two tall water tanks, one westward of Wood Island Light and one at Cape Porpoise Harbor, are the most prominent objects between Portland and Portsmouth.
Extending south-southwestward from Portsmouth Harbor is the 13–mile coast of New Hampshire; the Isles of Shoals are 6 miles southeast of the harbor. Southward and eastward from the New Hampshire line the extreme northern part of the Massachusetts coast extends about 23 miles to Cape Ann Light. The Merrimack River approach to Newburyport, MA is about 3 miles south of the New Hampshire boundary.
No-Discharge Zones.–The State of New Hampshire, with the approval of the Environmental Protection Agency, has established a No-Discharge Zone (NDZ) covering all coastal waters of New Hampshire, extending about 3 miles offshore (see chart 13278).
The State of Massachusetts, with the approval of the Environmental Protection Agency, has established a No-Discharge Zone (NDZ) in all coastal waters of Massachusetts described in this volume, extending about 3 miles offshore (see charts 13278 and 13267).
Within the NDZs, discharge of sewage, whether treated or untreated, from all vessels is prohibited. Outside the NDZs, discharge of sewage is regulated by **40 CFR 140** (see chapter 2).
From **Fox Hill Point** (42°57.9'N., 70°46.2'W.) to Merrimack River entrance, there are about 9 miles of sandy beaches, several rocky headlands, and offlying reefs and ledges up to 1 mile from shore. A large house with three chimneys on Fox Hill Point is very prominent. Summer resorts line the beaches, and hotels and prominent summer homes are on the headlands. Salt marshes between the beaches and the coastal ridge about 2 to 2.5 miles westward are drained by small rivers, most of which flow into the inlet at Hampton Harbor.
Little Boars Head is a yellow bluff 7 miles southwestward of Whaleback Light. A summer resort of the same name extends over 0.5 mile north-eastward from the bluff; a large mansion on the head is conspicuous. A ledge, awash at low water, is about 0.4 mile eastward of the head. A buoy, about 1 mile east-southeastward of the head, marks the ledge and the broken and foul ground off it.
Great Boars Head (42°55.1'N., 70°47.7'W.) is a bluff point making out 0.3 mile between North Beach and Hampton Beach, and 9.5 miles southwestward of Whaleback Light. The summer resort of **Hampton Beach** extends southward from the point.
Hampton Harbor, about 10 miles southwestward of Portsmouth Harbor and 1.5 miles southward of Great Boars Head, is an inlet formed by the confluence of **Hampton River** and **Blackwater River** and other rivers, sloughs, and creeks that drain the extensive area of salt marsh to the westward of Hampton, Seabrook, and Salisbury Beaches.
The harbor is principally an anchorage for numerous pleasure craft and a considerable number of party and charter hire fishing boats which operate from the harbor from late spring to early fall. There is also some year-round fishing activity.
The entrance to the inlet is between two rock jetties. The outer part of the south jetty is submerged. A daybeacon is on the north jetty, and a daybeacon is off the end of the south jetty.
Anchorages.–Anchorages are available in the basins or in the narrow channels of the Hampton and Blackwater Rivers and other rivers and creeks northward and southward of the inlet.
Dangers.–Extensive rocky ledges obstruct the approaches to the entrance to the inlet. **Hampton Shoal Ledge,** covered 19 feet, about 2.8 miles eastward of the entrance, is unmarked.
About 0.5 mile off the entrance is an extensive area of drying and covered rocky ledges consisting of **Old Cellar Rock, Inner Sunk Rocks, Outer Sunk Rocks,** and other rocks between Inner and Outer Sunk Rocks; a buoy is northeastward of the area.

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

RCC Boston	Commander 1st CG District Boston, MA	(617) 223-8555

Table of Selected Chart Notes

CAUTION

Mariners are warned to stay clear of the protective riprap surrounding navigational light structures shown thus: 

HEIGHTS

Heights in feet above Mean High Water.

CAUTION

Positions of buoys in Hampton Harbor are frequently shifted with changing conditions.

Mercator Projection
Scale 1:80,000 at Lat. 42°52'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

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.

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
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
Entrances to Inlets

The channels are subject to continual changes. Entrance buoys are not charted because they are frequently shifted in position.

NOTE C

The following activities are prohibited within the Stellwagen Bank Marine Sanctuary:

- Certain discharging or dumping
- Industrial exploring or developing
- Drilling and dredging
- Removing historical artifacts
- Lightering

Refer to 15 CFR 922 for details of Sanctuary regulations.

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.

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.

NOTE B

Trawlers or other vessels should exercise caution while dragging the ocean floor within a 6.7 mile radius of Isles of Shoals Light since it is known that JATO racks and associated debris exist in the area.

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 0.332" northward and 1.817" eastward to agree with this chart.

CAUTION

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

RACING BUOYS

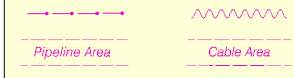
Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other private buoys are not all listed in the U.S. Coast Guard Light List.

FISHING AND HUNTING STRUCTURES

Uncharted fish and wildlife harvesting devices and structures such as fish traps, pound nets, crab traps, and duck blinds, some submerged, may exist in the area of this chart, particularly in the near shore area. Mariners should proceed with caution.

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.

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.

Portland, ME	KDO-95	162.550 MHz
Boston, MA	KHB-35	162.475 MHz
Concord, NH	WXJ-40	162.400 MHz
Essex Marine, MA	WNG-574	162.425 MHz
Stratham, NH	KZZ-40	162.450 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.

AIDS TO NAVIGATION

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

NOTE Z
NO-DISCHARGE ZONE, 40 CFR 140

All New Hampshire coastal waters are designated as a No-Discharge Zone (NDZ). Under the Clean Water Act, Section 312, all vessels operating within a No-Discharge Zone are completely prohibited from discharging any sewage, treated or untreated, into the waters. 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/

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-W

RATES ON THIS CHART

9960-W 9960-X 9960-Y

Loran-C correction tables published by the National Geospatial-Intelligence 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.

IP

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 1. 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, 1st Coast Guard District in Boston, MA or at the Office of the District Engineer, Corps of Engineers in Concord, MA.

Refer to charted regulation section numbers.

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.

NOTE X

Within the 12-nautical mile Territorial Sea, established by Presidential Proclamation, some Federal laws apply. The Three Nautical Mile Line, previously identified as the outer limit of the territorial sea, is retained as it continues to depict the jurisdictional limit of the other laws. The 9-nautical mile Natural Resource Boundary off the Gulf coast of Florida, Texas, and Puerto Rico, and the Three Nautical Mile Line elsewhere remain in most cases the inner limit of Federal fisheries jurisdiction and the outer limit of the jurisdiction of the states. The 24-nautical mile Contiguous Zone and the 200-nautical mile Exclusive Economic Zone were established by Presidential Proclamation. Unless fixed by treaty or the U.S. Supreme Court, these maritime limits are subject to modification.

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

(1) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.
COLREGS: International Regulations for Preventing Collisions at Sea, 1972.
Demarcation lines are shown thus: — — — —

TIDAL INFORMATION

PLACE		Height referred to datum of soundings (MLLW)		
NAME	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water
		feet	feet	feet
Portsmouth	(43°05'N/70°45'W)	8.5	8.1	0.3
Gosport Harbor, Isles of Shoals	(42°59'N/70°37'W)	9.2	8.8	0.3
Hampton Harbor	(42°54'N/70°49'W)	9.0	8.6	0.3
Newburyport	(42°49'N/70°52'W)	8.5	8.1	0.3
Plum Island Sound (south end)	(42°43'N/70°47'W)	9.3	8.9	0.3
Rockport	(42°40'N/70°37'W)	9.5	9.0	0.3

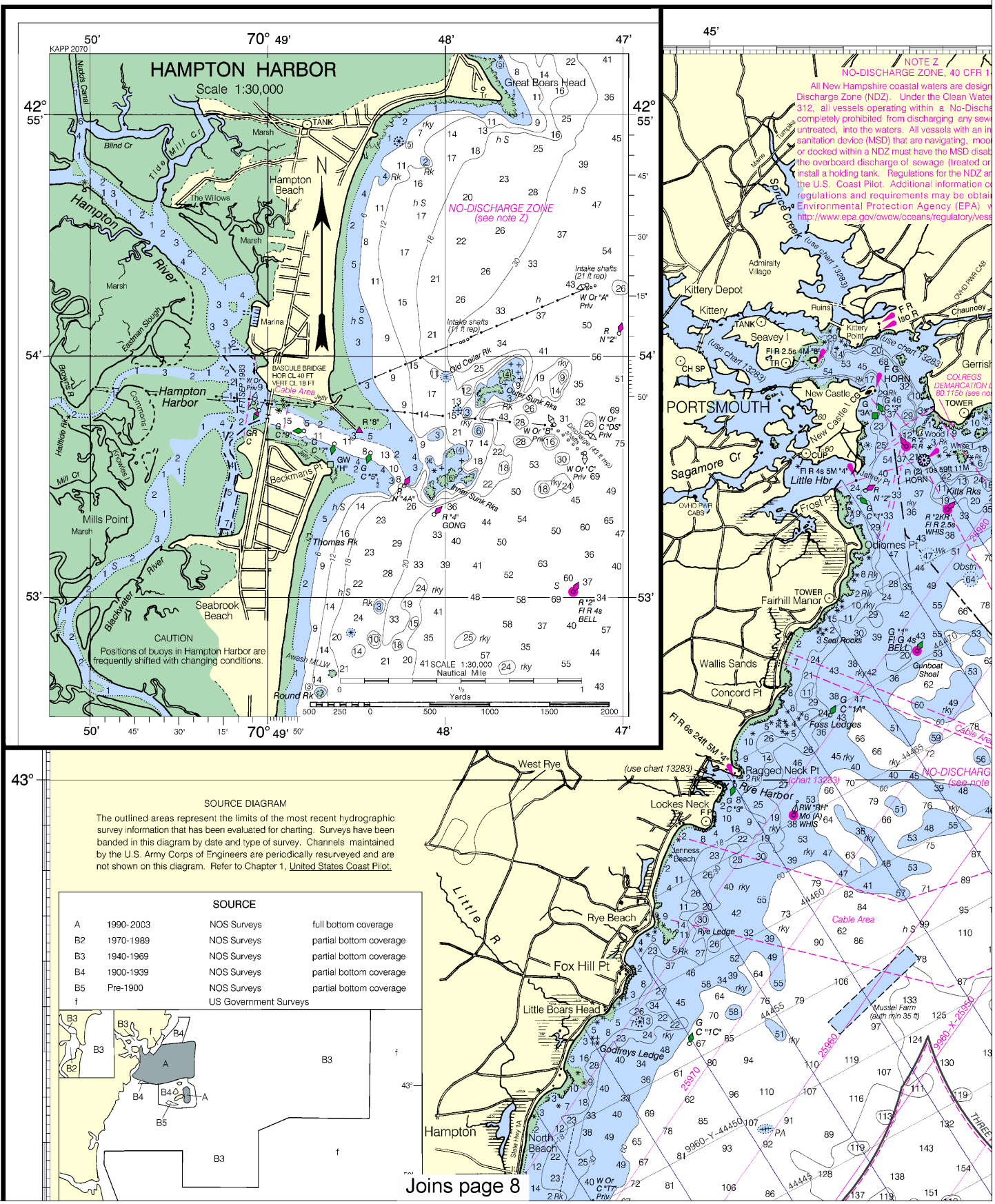
Dashes (- - -) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from http://tidesandcurrents.noaa.gov.

(Sep 2009)

SOUNDINGS IN FEET

13278

LORAN-C OVERPRINTED



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.

SOURCE			
A	1990-2003	NOS Surveys	full bottom coverage
B2	1970-1989	NOS Surveys	partial bottom coverage
B3	1940-1969	NOS Surveys	partial bottom coverage
B4	1900-1939	NOS Surveys	partial bottom coverage
B5	Pre-1900	NOS Surveys	partial bottom coverage
f		US Government Surveys	

4

Note: Chart grid lines are aligned with true north.

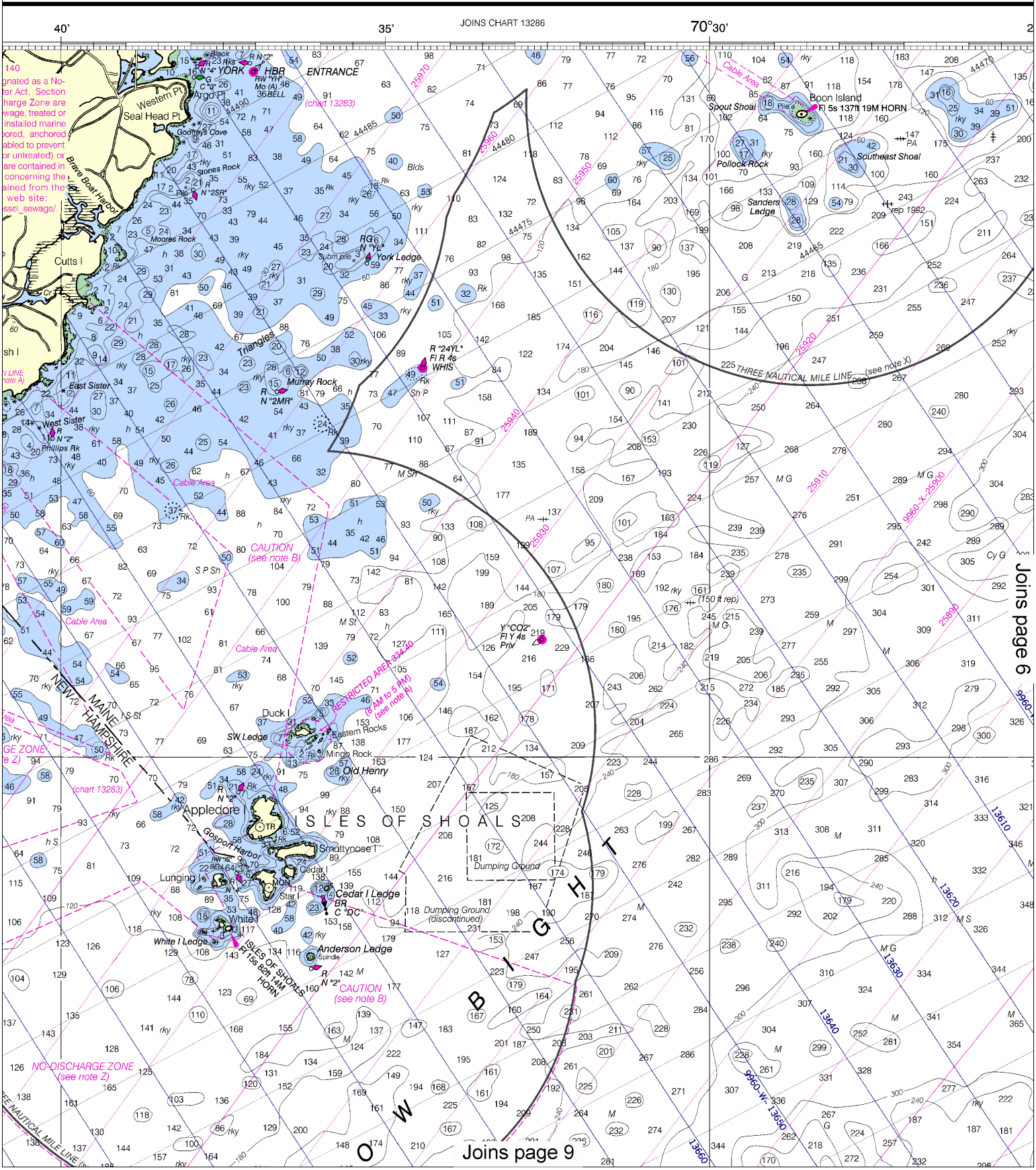
Printed at reduced scale. ~~SCALE 1:80,000~~

Nautical Miles: 1 0 1 2 3 4 5 6 7

Yards: 1000 0 2000 4000 6000 8000 10000

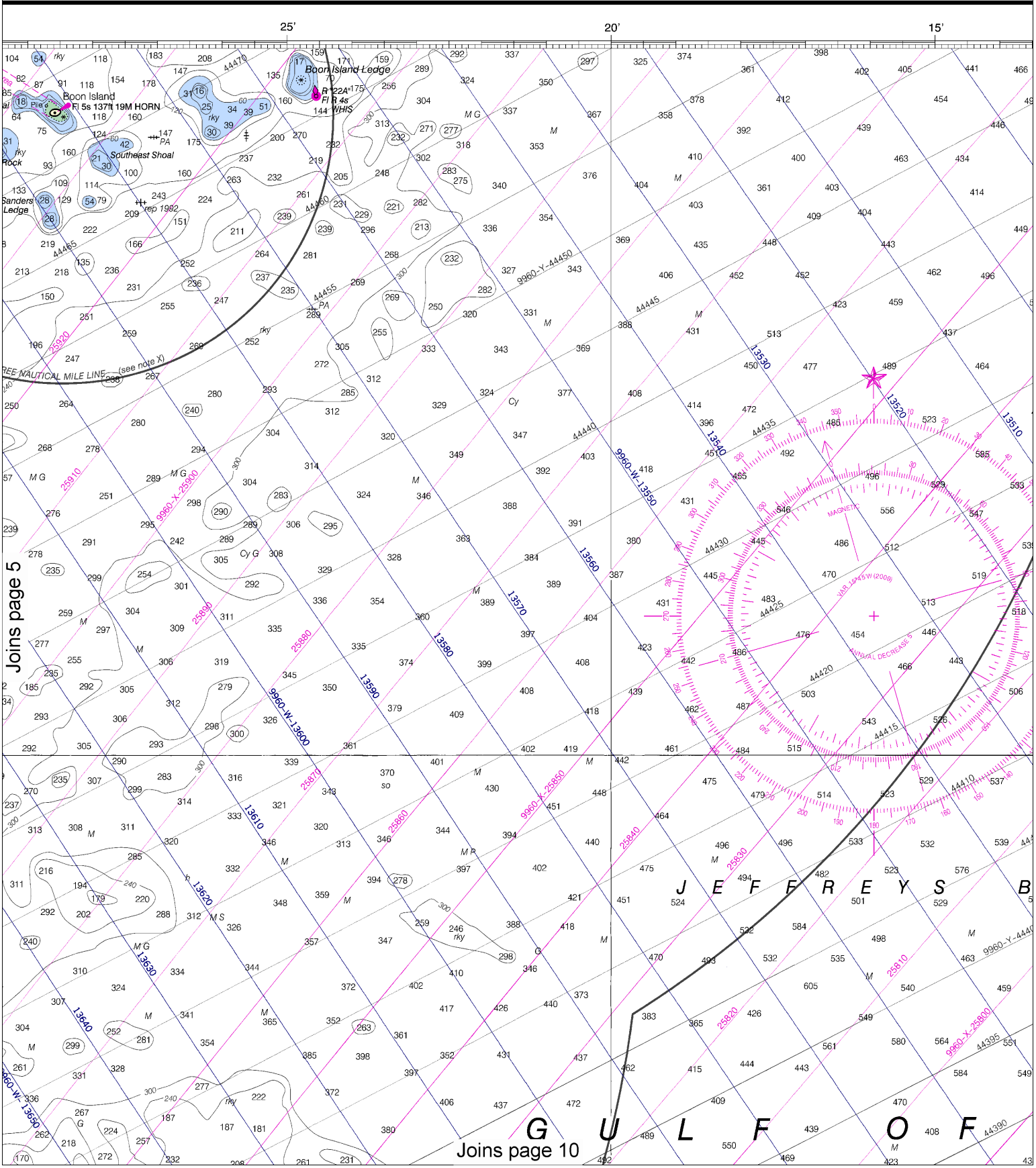
See Note on page 5.

Formerly C&GS 1206, 1st Ed., June 1915 C-1915-158 KAPP 2069



This BookletChart was reduced to 75% of the original chart scale.
The new scale is 1:106667. Barscales have also been reduced and
are accurate when used to measure distances in this BookletChart.

Formerly C&GS 1206, 1st Ed., June 1915 C-1915-158 KAPP 2069



6

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:80,000~~

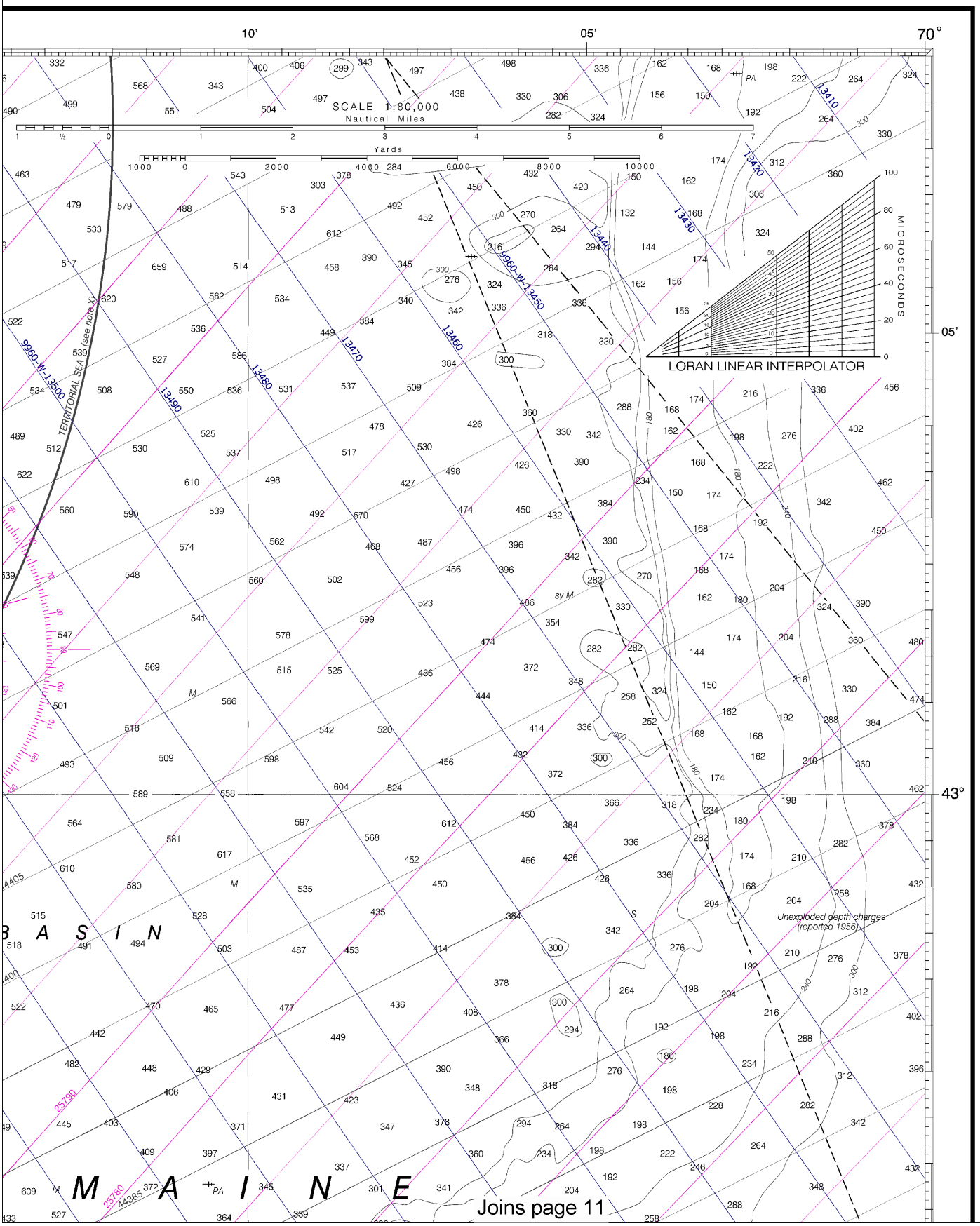
Nautical Miles

1 0 1 2 3 4 5 6 7

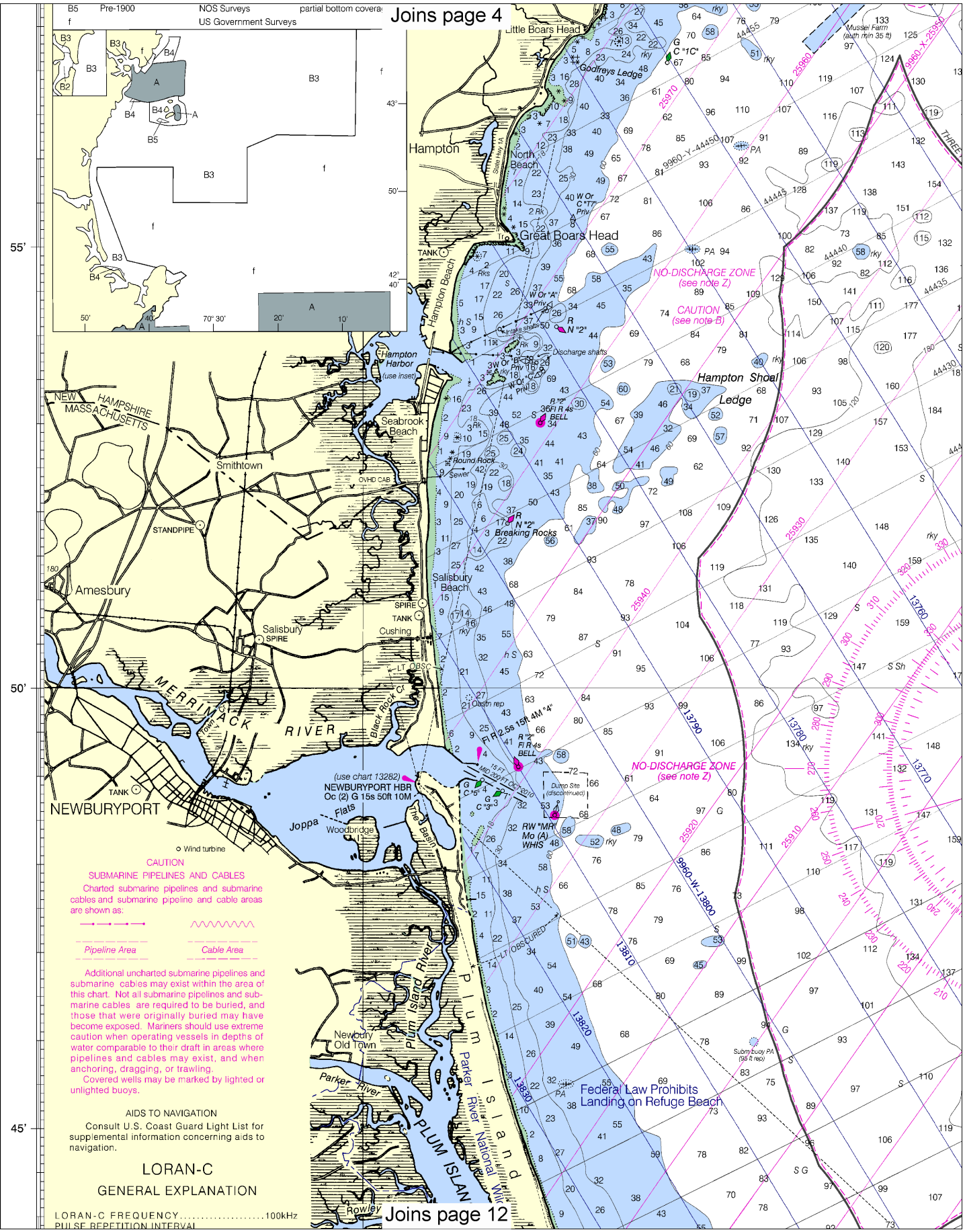
Yards

1000 0 2000 4000 6000 8000 10000

See Note on page 5.



This BookletChart has been updated through: Coast Guard Local Notice To Mariners: 4812 11/27/2012,
NGA Weekly Notice to Mariners: 4912 12/8/2012,
Canadian Coast Guard Notice to Mariners: 1012 10/26/2012.



8

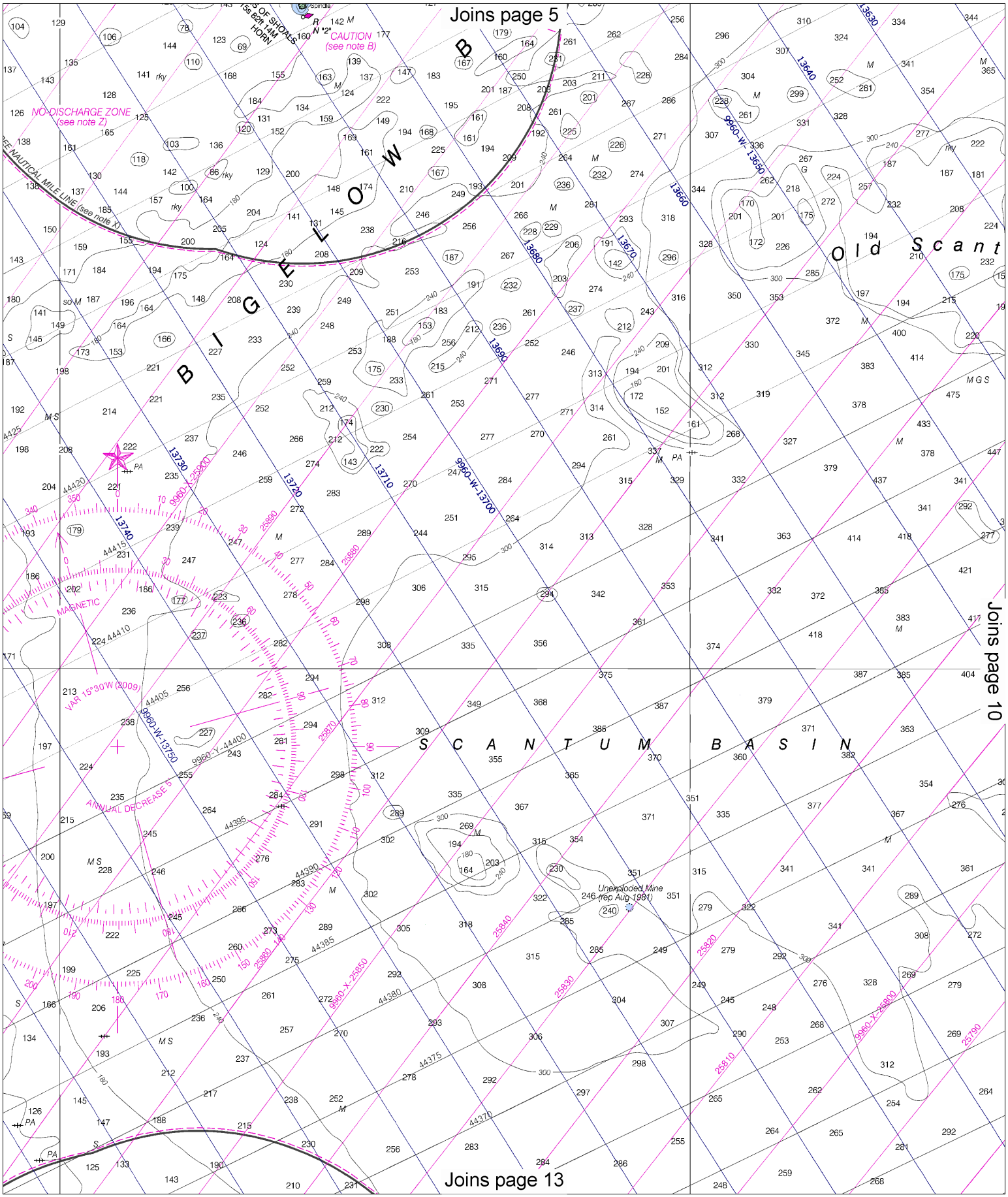
Note: Chart grid lines are aligned with true north.

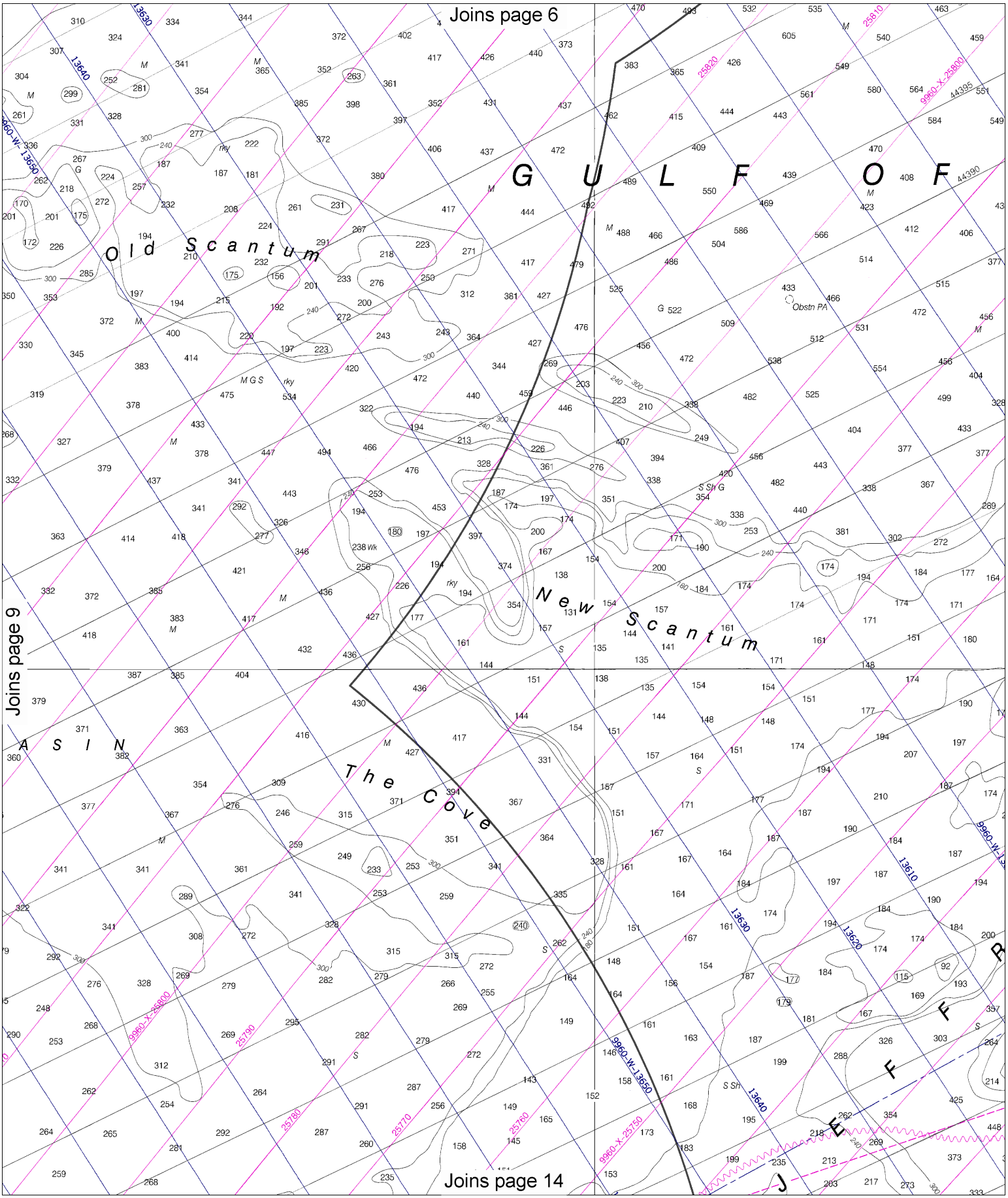
Printed at reduced scale. ~~SCALE 1:80,000~~

Nautical Miles: 1 0 1 2 3 4 5 6 7

Yards: 1000 0 2000 4000 6000 8000 10000

See Note on page 5.


Joins page 5
Joins page 10
Joins page 13
BIG BELOW
Old Scant
SCANTUM BASIN
NO-DISCHARGE ZONE (see note Z)
CAUTION (see note B)
ONE NAUTICAL MILE LINE (see note X)
MAGNETIC
ANNUAL DECREASE 5
Unexploded Mine 246 (rep Aug 1981)
9960-W-13700
9960-W-13650
9960-W-13750
9960-Y-44400
9960-X-25850
9960-X-25800
13630
13640
13660
13670
13690
13730
13720
13710
13740



Note: Chart grid lines are aligned with true north.

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Nautical Miles: 1 0 1 2 3 4 5 6 7

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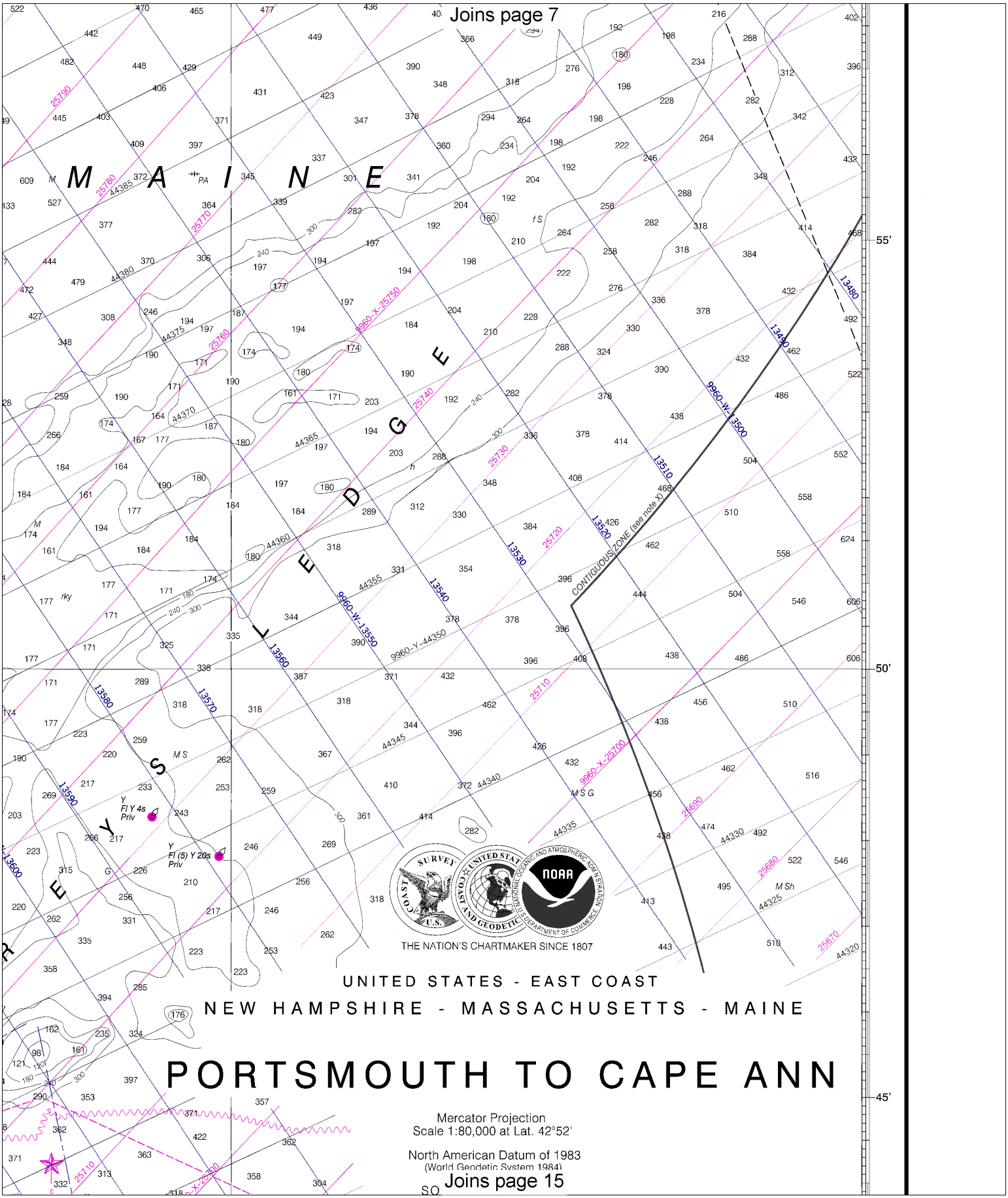
Joins page 7
MAINE
LEDGE
SEY
CONTIGUOUS ZONE (see note X)
55'
50'
45'
THE NATION'S CHARTMAKER SINCE 1807
UNITED STATES - EAST COAST
NEW HAMPSHIRE - MASSACHUSETTS - MAINE
PORTSMOUTH TO CAPE ANN
Mercator Projection
Scale 1:80,000 at Lat. 42°52'
North American Datum of 1983
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Joins page 15

Joins page 8

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.

AIDS TO NAVIGATION

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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-W

RATES ON THIS CHART

9960-W 9960-X 9960-Y

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Entrances to Inlets

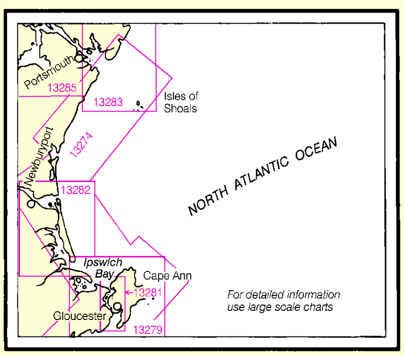
The channels are subject to continual changes. Entrance buoys are not charted because they are frequently shifted in position.

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.

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).



RACING BUOYS

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NOTE C

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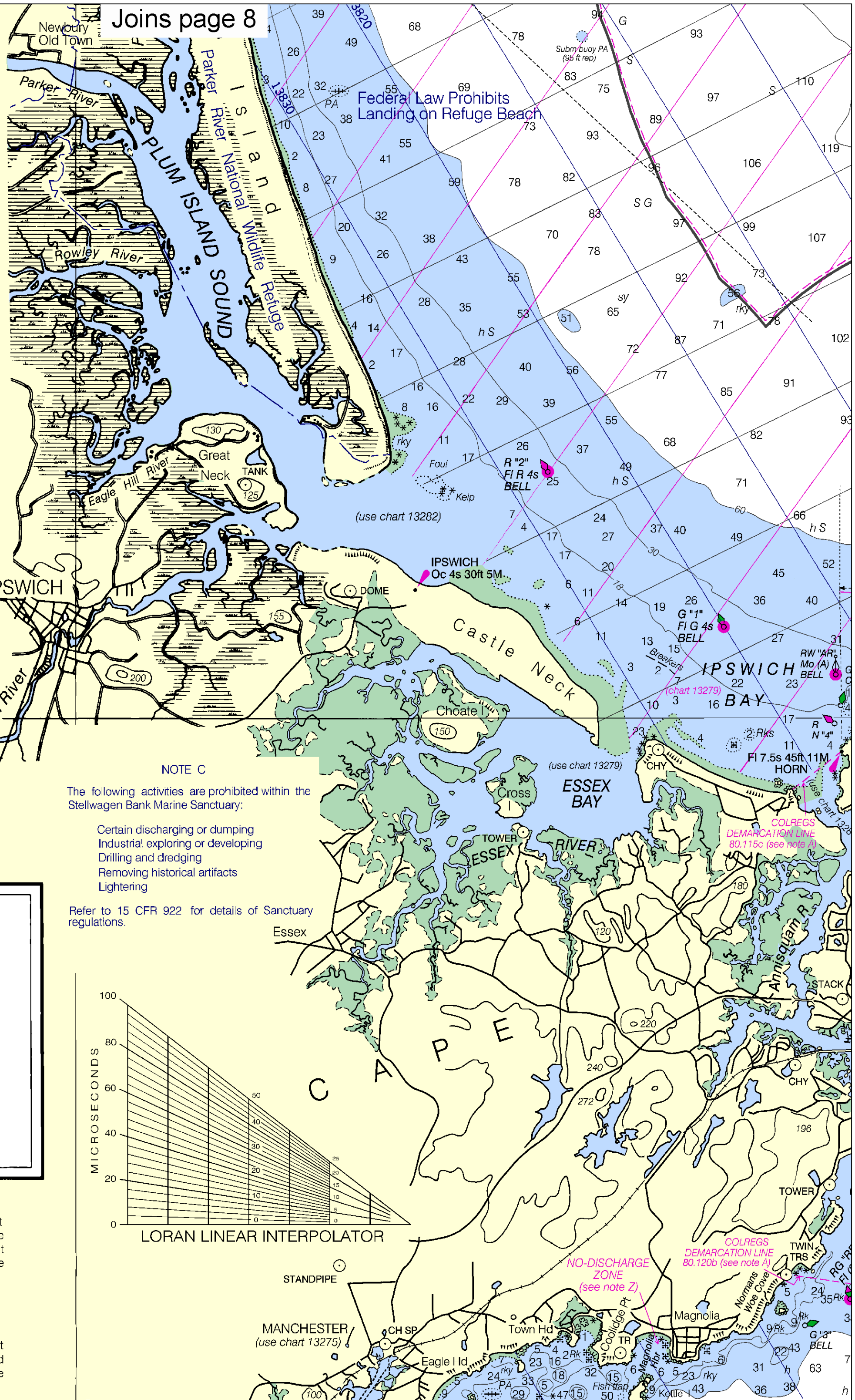


27th Ed., Oct. / 09 ■ Corrected through NM Oct. 3/09
Corrected through LNM Sep. 29/09

13278

LORAN-C OVERPRINTED

CAUTION

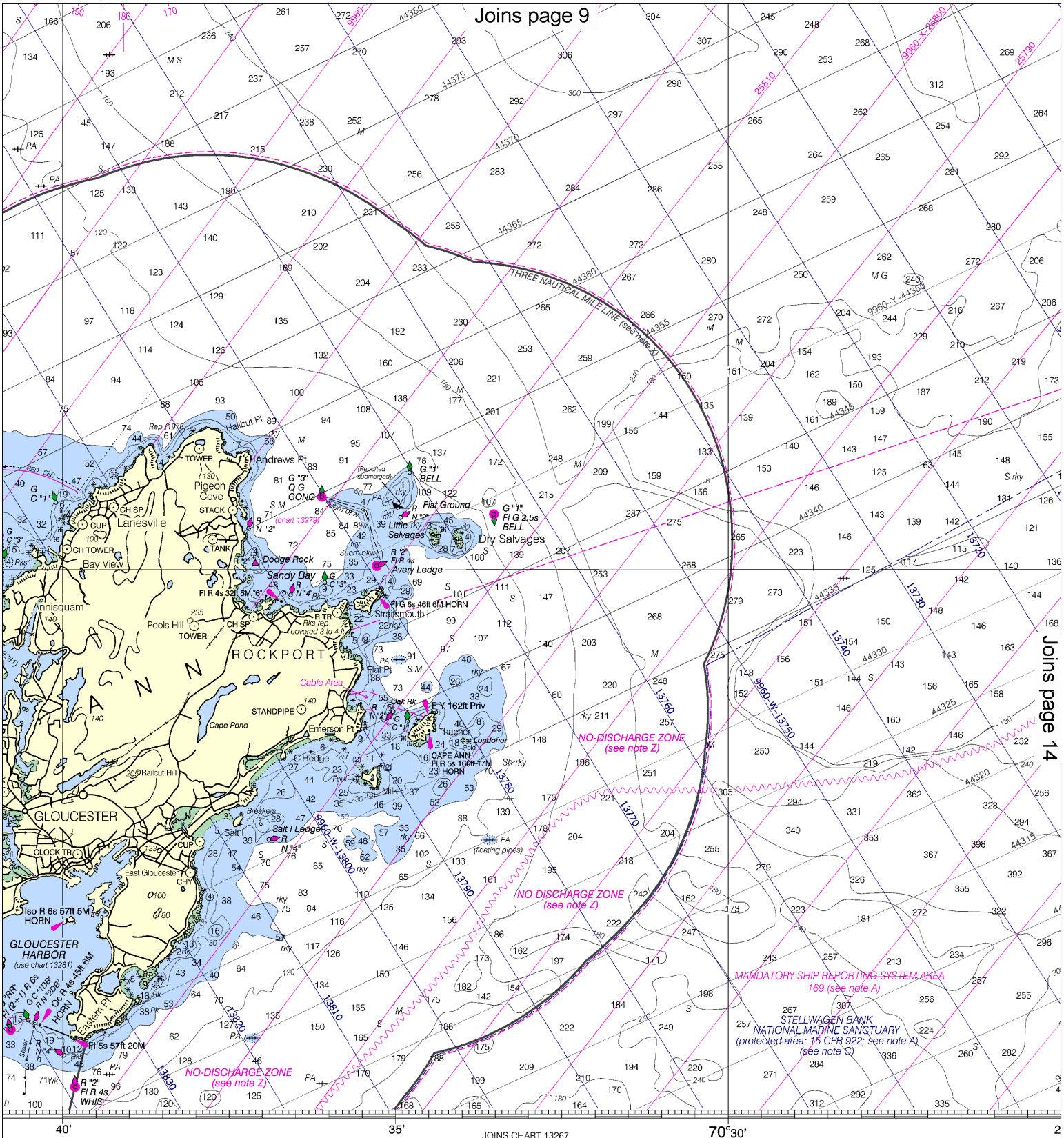
This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice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

This nautical chart has been designed... Ocean Service encourages users to subm... improving this chart to the Chief, Marine... Service, NOAA, Silver Spring, Maryland ...

Printed at reduced scale. ~~SCALE 1:80,000~~ See Note on page 5.

Nautical Miles: 1 0 1 2 3 4 5 6 7
Yards: 1000 0 2000 4000 6000 8000 10000

Note: Chart grid lines are aligned with true north.

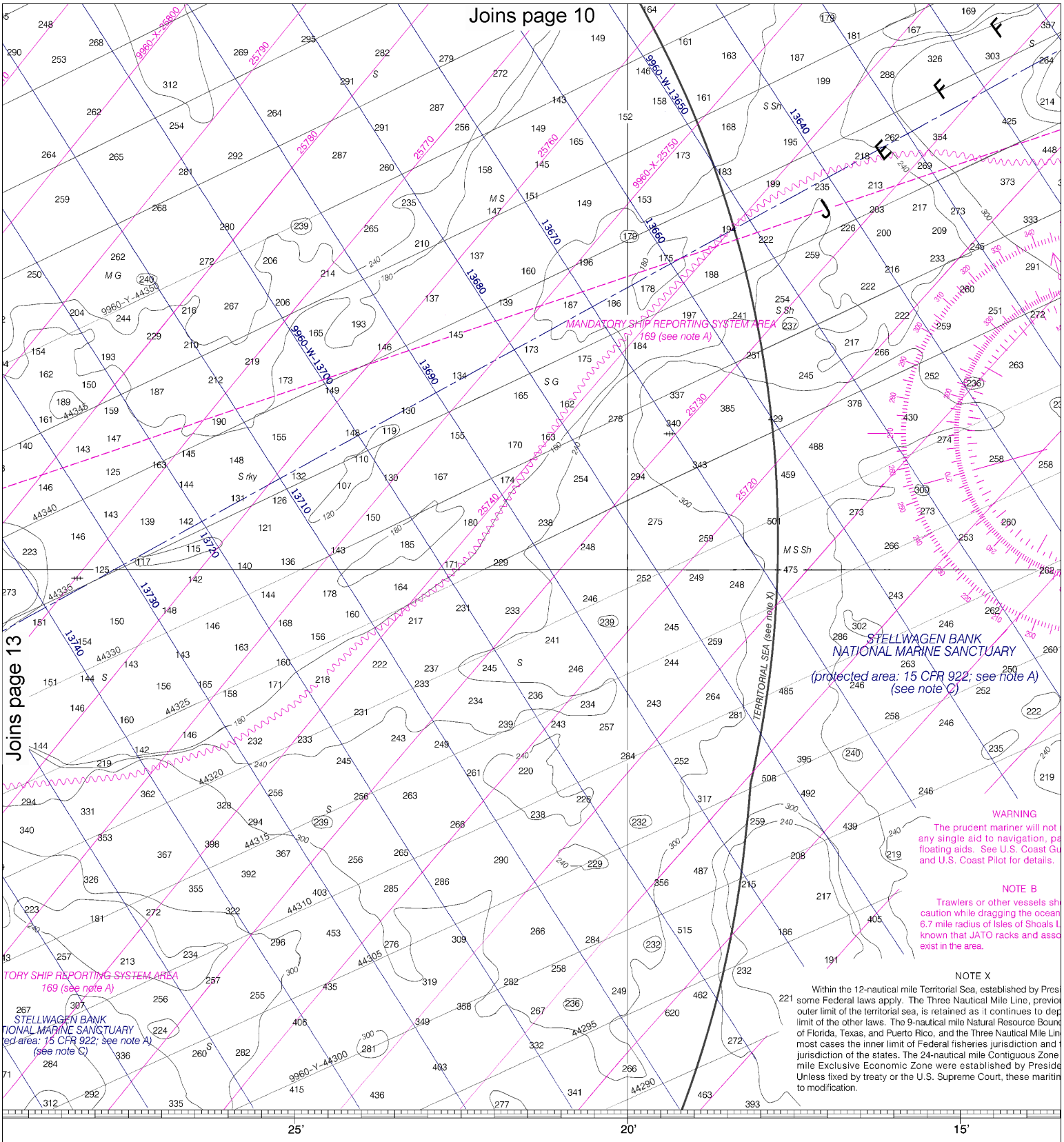


PRINT-ON-DEMAND CHARTS

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.

ed to promote safe navigation. The National
mit corrections, additions, or comments for
e Chart Division (N/CS2), National Ocean
d 20910-3282.

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



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

SOUNDINGS IN FEET

FATHOMS	1 2 3 4 5
FEET	6 12 18 24 30 3
METERS	1 2 3 4 5 6 7 8 9 10 1

Note: Chart grid lines are aligned with true north.

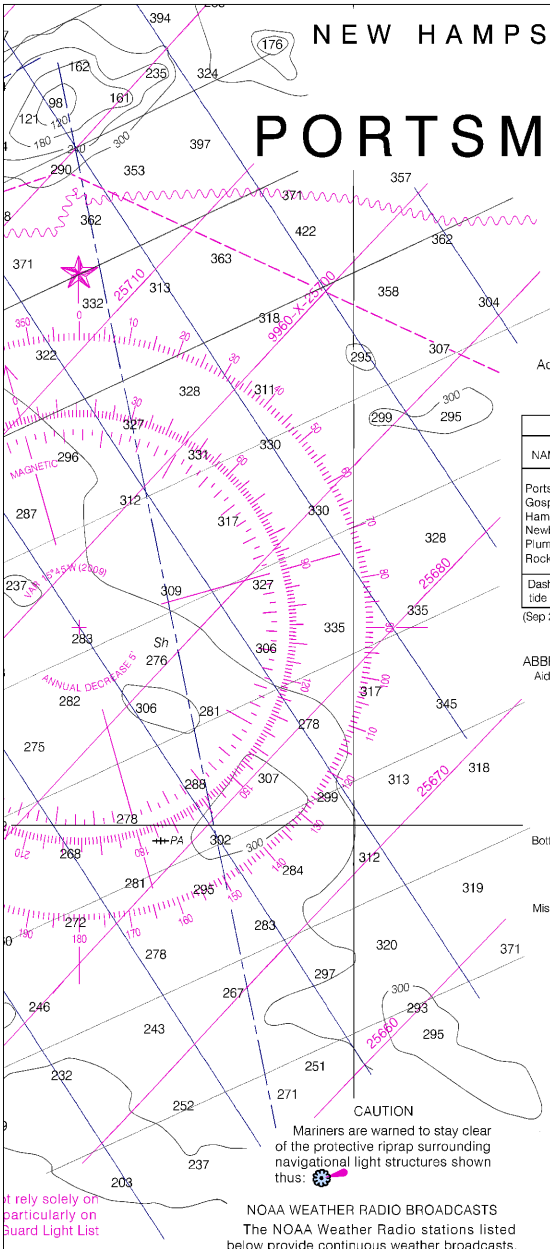
Printed at reduced scale. ~~SCALE 1:80,000~~

Nautical Miles
1 0 1 2 3 4 5 6 7

Yards
1000 0 2000 4000 6000 8000 10000

See Note on page 5.

PORTSMOUTH TO CAPE ANN



Mercator Projection
Scale 1:80,000 at Lat. 42°52'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

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

TIDAL INFORMATION

PLACE		Height referred to datum of soundings (MLLW)		
NAME	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water
		feet	feet	feet
Portsmouth	(43°05'N/70°45'W)	8.5	8.1	0.3
Gosport Harbor, Isles of Shoals	(42°59'N/70°37'W)	9.2	8.8	0.3
Hampton Harbor	(42°54'N/70°49'W)	9.0	8.6	0.3
Newburyport	(42°49'N/70°52'W)	8.5	8.1	0.3
Plum Island Sound (south end)	(42°43'N/70°47'W)	9.3	8.9	0.3
Rockport	(42°40'N/70°37'W)	9.5	9.0	0.3

Dashes (- -) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from http://tidesandcurrents.noaa.gov.

(Sep 2009)

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical
Al alternating
B black
Bn beacon
C can
DIA diaphone
F fixed
Fl flashing
G green
IQ interrupted quick
Iso isophase
LT HO lighthouse
M nautical mile
m minutes
MICRO TR microwave tower
Mkr marker
Mo morse code
N nun
OBSC obscured
Oc occulting
Or orange
Q quick
R red
Ra Ref radar reflector
R Bn radiobeacon
R TR radio tower
Rot rotating
s seconds
SEC sector
St M statute miles
VQ very quick
W white
WHIS whistle
Y yellow

Bottom characteristics:

Blds boulders
bk broken
Cy clay
Co coral
G gravel
Grs grass
gy gray
h hard
M mud
Oys oysters
Rk rock
S sand
so soft
Sh shells
sy sticky

Miscellaneous:

AUTH authorized
ED existence doubtful
Obstn obstruction
PA position approximate
PD position doubtful
Rep reported
Subm submerged

(21) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.
COLREGS: International Regulations for Preventing Collisions at Sea, 1972.
Demarcation lines are shown thus: — — —

HEIGHTS
Heights in feet above Mean High Water.

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.

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 0.332" northward and 1.817" eastward to agree with this chart.

NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 1. 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, 1st Coast Guard District in Boston, MA or at the Office of the District Engineer, Corps of Engineers in Concord, MA.
Refer to charted regulation section numbers.

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 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.

FISHING AND HUNTING STRUCTURES
Uncharted fish and wildlife harvesting devices and structures such as fish traps, pound nets, crab traps, and duck blinds, some submerged, may exist in the area of this chart, particularly in the near shore area. Mariners should proceed with caution.

CAUTION
Mariners are warned to stay clear of the protective riprap surrounding navigational light structures shown thus:

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.

Portland, ME	KDO-95	162.550 MHz
Boston, MA	KHB-35	162.475 MHz
Concord, NH	WXJ-40	162.400 MHz
Essex Marine, MA	WNG-574	162.425 MHz
Stratham, NH	KZZ-40	162.450 MHz

SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 1 for important supplemental information.

SCALE 1:80,000

Nautical Miles: 1 ½ 0 1 2 3 4 5 6 7

Yards: 1000 0 2000 4000 6000 8000 10000

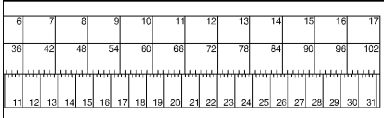
45' 42° 40' 35'

10' 05' 70°

786.3 X 934.8 nm

ED NO. 27

NSN 7642014010423 NGA REFERENCE NO. 13AHA13278



Portsmouth to Cape Ann
SOUNDINGS IN FEET - SCALE 1:80,000

13278
LORAN-C OVERPRINTED

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

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

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

Distress Call Procedures

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

HAVE ALL PERSONS PUT ON LIFE JACKETS!

All Hazards NOAA Weather Radio NOAA's National Weather Service

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

Quick References

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

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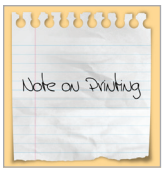

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NOAA's Office of Coast Survey The Nation's Chartmaker