THE NATION'S CHARTMAKER SINCE 1807

ATLANTIC COAST

CAPE SABLE TO CAPE HATTERAS

For offshore navigation only
Detail within the 10 fathom curve is not shown on this chart except on off lying shoals and where the 10 fathom curve extends beyond the limits of the 1:80,000 scale series of charts.
Use the 1:80,000 scale series charts and Canadian charts for near shore navigation within the 10 fathom curve.

Mercator Projection
Scale 1:1,200,000 at Lat. 40°00'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER IN U.S. TERRITORY
AT LOWEST NORMAL TIDES IN CANADIAN TERRITORY

HEIGHTS
Heights in feet above Mean High Water.

AUTHORITIES
Compiled principally from larger scale charts issued by the National Ocean Service, Coast Survey; supplemented by information from charts of the National Geospatial-Intelligence Agency and Canada, and additional data from the U.S. Coast Guard.

For Symbols and Abbreviations see Chart No. 1

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

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

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

CAUTION
SUBMARINE PIPELINES AND CABLES
Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

Pipeline Area — Cable Area

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.

HURRICANES AND TROPICAL STORMS
Hurricanes, tropical storms and other major storms may cause considerable damage to marine structures, aids to navigation and moored vessels, resulting in submerged debris in unknown locations.
Charted soundings, channel depths and shoreline may not reflect actual conditions following these storms. Fixed aids to navigation may have been damaged or destroyed. Buoys may have been moved from their charted positions, damaged, sunk, extinguished or otherwise made inoperative. Mariners should not rely upon the position or operation of an aid to navigation. Wrecks and submerged obstructions may have been displaced from charted locations. Pipelines may have become uncovered or moved.
Mariners are urged to exercise extreme caution and are requested to report aids to navigation discrepancies and hazards to navigation to the nearest United States Coast Guard unit.

MAGNETIC VARIATION
Magnetic variation compass roses are for 2016 derived from 2016 World Magnetic Model and accompanying secular change. Annual change is decreasing at a rate of 0°06'W. It is additive and the variation is decreasing. If annual change is opposite in direction to variation it is subtractive and the variation is increasing.

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HORIZONTAL DATUM
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), World Geodetic System 1984 (WGS 84) or one equivalent to the World Geodetic System of 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 do not require conversion to NAD 83 for plotting on 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).

AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.
See National Geospatial Intelligence Agency List of Lights and List of Buoys for information not included in the U.S. Coast Guard Light List.

NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilots 1, 2, 3 and 4. 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, First Coast Guard District in Boston, Mass.; or the 5th Coast Guard District in Portsmouth, VA or at the Offices of the District Engineer, Corps of Engineers in Concord, Mass., New York, NY., Philadelphia, PA., Norfolk, VA., or Wilmington NC.
Refer to charted regulation section numbers.

NOTE C
AREA TO BE AVOIDED
All vessels carrying cargoes of oil or hazardous materials and all other vessels of more than 1,600 gross tons should avoid the area (MSC IMO 36 (61)).

NOTE D
Travelers 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 this area.

NOTE E
Anchoring, fishing, or diving within the boundary of the Wetland National Marine Sanctuary is permitted without a permit.
For information write:

Monitor National Marine Sanctuary
NOAA
Building 1519
Fort Eustis, Virginia, 23604-5544

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.

CURRENT DIAGRAM
GEORGES BANK AND NANTUCKET SHOALS
Explanation

Directions and velocities of tidal currents at eighteen stations are shown by arrows. The length of the arrow from the center of the circle represents the average velocity on a scale of one inch equals three knots. The figures at the arrow heads are the hours after the time of maximum flood at Pollock Rip Channel, the daily predicted times of which are given in the National Ocean Service Atlantic Coast Current Tables. The velocities plotted should be increased by 20 percent when the moon is full or new and decreased by 20 percent when the moon is in first or third quarters. For effect of wind and tidal currents, see Current Tables, Atlantic Coast.

SCALE OF VELOCITIES
KNOTS

NOTE I
AREA TO BE AVOIDED
In order to significantly reduce the risk of ship strikes to the highly endangered North Atlantic Right Whale, ships of 300 gross tons and above should avoid the area between the period of April 1st through July 31st. Reference: IMO SN/Circ. 272.
The Area To Be Avoided (Roseway Basin Re Avoided (ATBA) is co-incise with the boundary of the Traffic Separation Scheme or the boundary of the Mandatory Ship Reporting Area, it has been offset slightly for clarity.

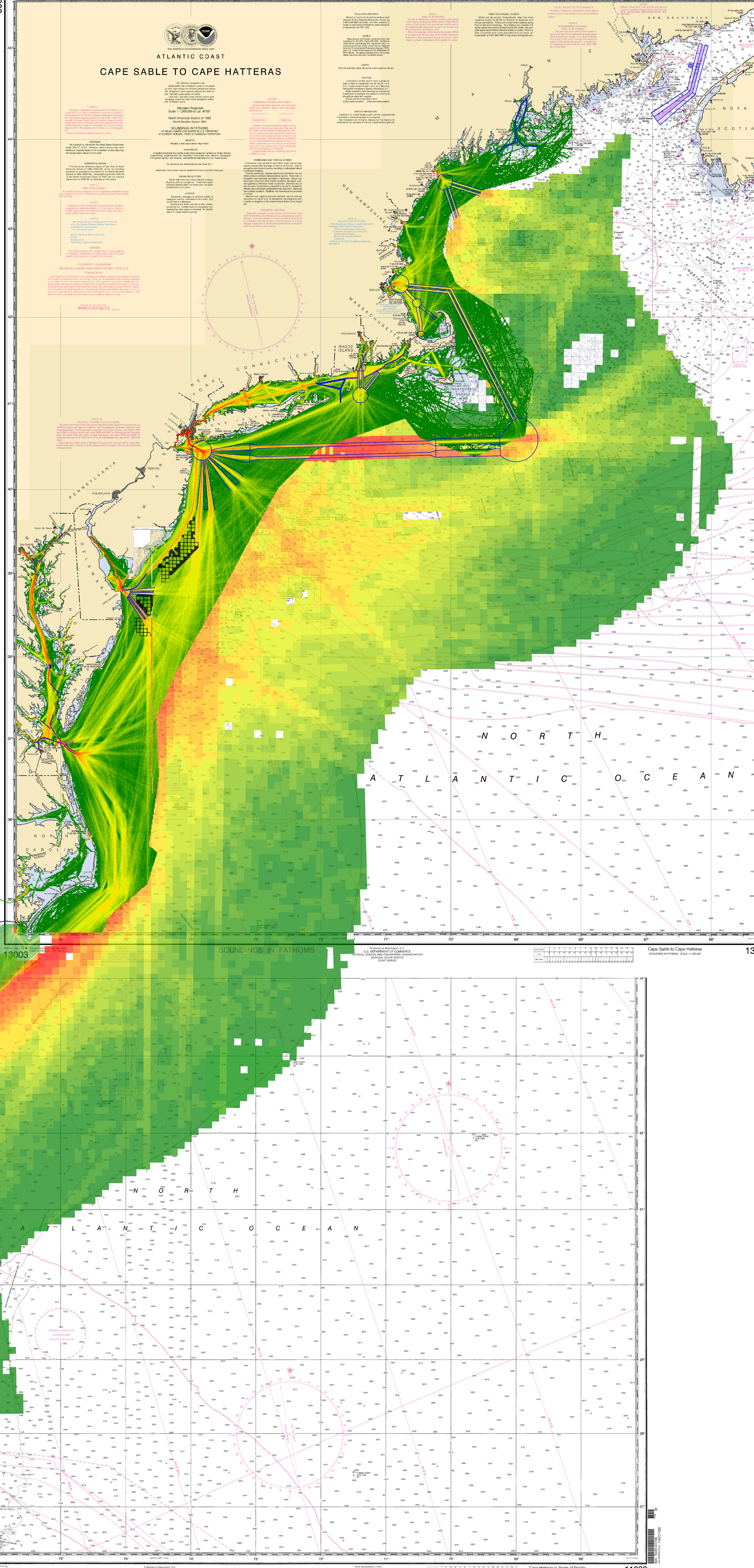
NOTE G
(Promulgated since 15 CFR 922)
The following activities are prohibited within Stellwagen Bank Marine Sanctuary:
Certain discharging or dumping
Industrial exploring or dredging
Drilling and dredging
Removing historical artifacts
Taking
Refer to 15 CFR 922 for details of Sanctuary regulations.

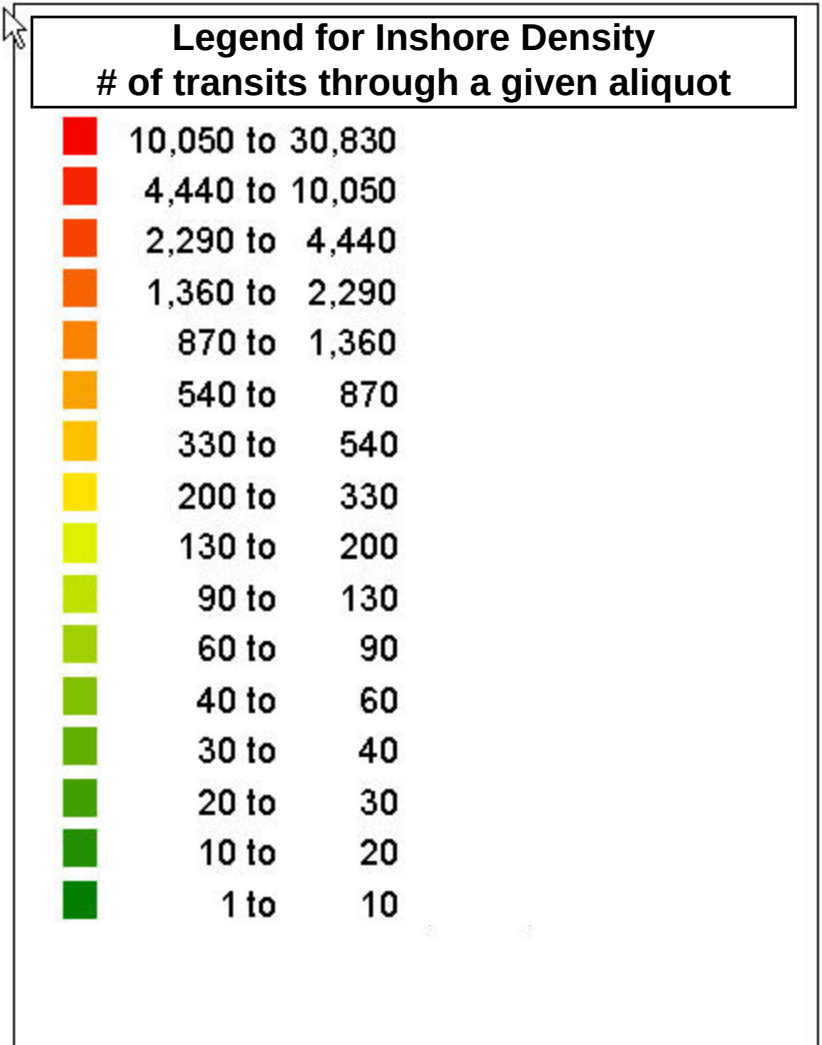
PRINT-ON-DEMAND CHARTS
NOAA and its partner, OceanGraFix, offer this chart updated weekly by NOAA for Notices to Mariners and official corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 2-8 weeks before that release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at http://celebrate.ewd.noaa.gov/ldm/chmpu/my_area.ex or OceanGraFix at 1-877-663-HNR1 or http://www.oceangrafix.com

LOCAL MAGNETIC DISTURBANCE
An area of magnetic disturbances exists about 4 miles south of Southwest Head, Grand Manan Island.

NOTE H
RECOMMENDED SEASONAL AREA TO BE AVOIDED
This area has been established in order to reduce the risk of ship strikes of the endangered North Atlantic right whale. It is recommended that ships of 300 gross tonnage and upwards sailing in transit during the period of 1 June through 31 December should avoid the area. (MSC IMO SN./CIRC.283)

FIRING PRACTICE AND EXERCISE AREAS
Limits of Canadian Firing Practice and Exercise Areas. See Canadian Notice to Mariners No. 35 of each year.


NEW BRUNSWICK
CANADA
UNITED STATES
MAINE
NOVA SCOTIA
NEW HAMPSHIRE
MASSACHUSETTS
RHODE ISLAND
CONNECTICUT
NEW YORK
NEW JERSEY
PENNSYLVANIA
MARYLAND
DELAWARE
VIRGINIA
NORTH CAROLINA
SOUTH CAROLINA
GEORGIA
FLORIDA
Boston
PROVIDENCE
New Haven
New London
HARTFORD
BROOKLYN
TRENTON
PHILADELPHIA
Havre de Grace
BALTIMORE
Wilmington
Annapolis
Norfolk
Portsmouth
Cape Hatteras
Cape Lookout
Cape Fear
Georgetown
CHARLESTON
SAVANNAH
Brunswick
St Augustine
Daytona Beach
Cape Canaveral
Miami
Fort Lauderdale
West Palm Beach
Hobe Sound
Stuart
Jupiter
Delray Beach
Boynton Beach
Crescent Beach
Summer Haven
Flagler Beach
Crescent City
Ormond Beach
New Smyrna Beach
Titusville
Cocoa
Rockledge
Melbourne
Malabar
Sebastian
Vero Beach
Fort Pierce
Port St Lucie
Stuart
Hobe Sound
Jupiter
Lake Okeechobee
Okeechobee Canal
Intracoastal Waterway
Gulf Stream
Florida Current
Labrador Current
Northeast Channel
Great Bahama Bank
Tongue of the Ocean
Northwest Providence Channel
Northeast Providence Channel
Chicken Key
Gun Key
Berry Islands
Bimini Islands
Gulf of Maine
Georges Bank
Nantucket Shoals
Roseway Basin
Browns Bank
Scotian Shelf
Grand Manan Island
Campobello Island
Passamaquoddy Bay
Bay of Fundy
Saint John
Digby
Yarmouth
Shelburne
Lunenburg
Halifax
Liverpool
Canso
Sydney
Louisbourg
Cape Breton Island
Prince Edward Island
Charlottetown
Pictou
Northumberland Strait
Miramichi Bay
Chaleur Bay
Gaspé Peninsula
Gaspé
Percé
Anticosti Island
Cabot Strait
Gulf of St Lawrence
Strait of Canso
Bras d'Or Lake
Saint John River
Kennebec River
Penobscot River
Androscoggin River
Merrimack River
Connecticut River
Hudson River
Delaware River
Chesapeake Bay
Albemarle Sound
Pamlico Sound
Neuse River
Cape Fear River
Winyah Bay
Santee River
Savannah River
Altamaha Sound
St Johns River
Indian River
Lake Worth
Biscayne Bay
Florida Bay
Key West
Straits of Florida
Old Bahama Channel
Northwest Channel
Mayaguana Passage
Crooked Island Passage
Windward Passage
Mona Passage
Anegada Passage
Virgin Passage
Caicos Passage
Turks Island Passage
Navassa Island
Jamaica
Cuba
Haiti
Puerto Rico
Bermuda
Grand Turk
Great Inagua
Cockburn Town
Nassau
Freeport
Matthew Town
Port-au-Prince
Kingston
Montego Bay
Guantanamo Bay
Santiago de Cuba
Havana
Cienfuegos
Isle of Pines
Cape Sable
Cape Race
Cape Spencer
Cape Sable Island
Brier Island
Seal Island
Machias Seal Island
Grand Manan Channel
Roseway Basin
Baccaro Point
Cape Elizabeth
Cape Ann
Cape Cod
Nantucket Island
Martha's Vineyard
Block Island
Montauk Point
Fire Island
Sandy Hook
Barnegat Light
Cape May
Cape Henlopen
Assateague Island
Chincoteague
Wallops Island
Cape Hatteras
Cape Lookout
Cape Fear
Frying Pan Shoals
Diamond Shoals
Onslow Bay
Long Bay
Georgetown
Winyah Bay
Charleston
Port Royal Sound
Savannah
Tybee Island


Legend for Inshore Density
# of transits through a given aliquot
10,050 to 30,830
4,440 to 10,050
2,290 to 4,440
1,360 to 2,290
870 to 1,360
540 to 870
330 to 540
200 to 330
130 to 200
90 to 130
60 to 90
40 to 60
30 to 40
20 to 30
10 to 20
1 to 10

Legend for Offshore Density
# of transits through a given lease block

1,980	to 3,910
1,400	to 1,980
1,010	to 1,400
740	to 1,010
520	to 740
380	to 520
270	to 380
190	to 270
130	to 190
90	to 130
60	to 90
40	to 60
30	to 40
20	to 30
10	to 20
0	to 10