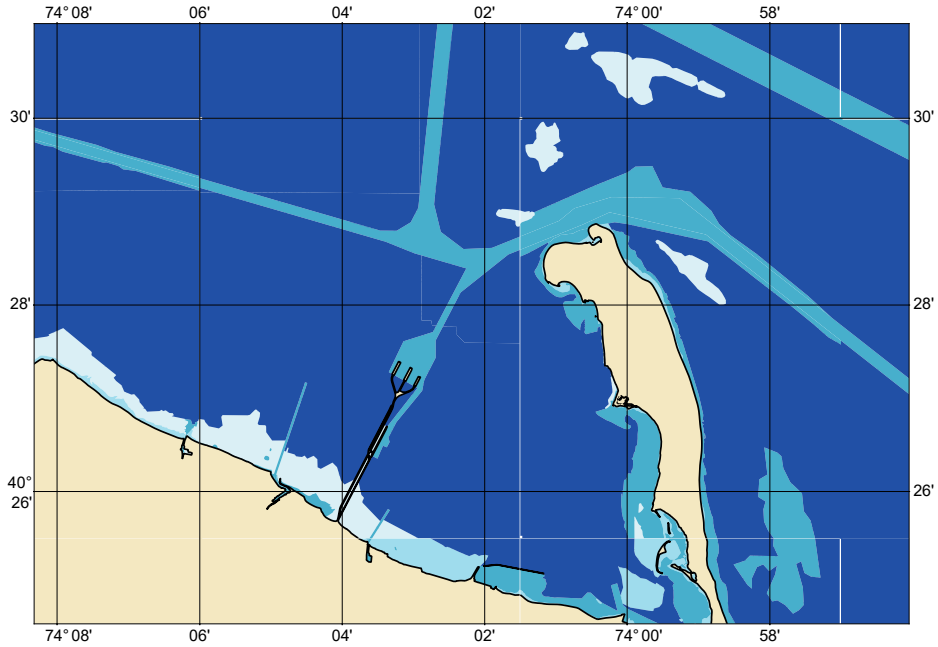


### Zone of Confidence (ZOC) Diagram



#### ZOC CATEGORIES

ZOC	COLOR	POSITION ACCURACY	DEPTH ACCURACY	SEAFLOOR COVERAGE
A1		$\pm 5\text{ m} + 5\% \text{ depth}$ $\pm 16.4\text{ ft} + 5\% \text{ depth}$	$= 0.50\text{ m} + 1\% \text{ d}$ $= 1.6\text{ ft} + 1\% \text{ d}$ $= 0.3\text{ fm} + 1\% \text{ d}$	All significant seafloor features detected.
A2		$\pm 20\text{ m}$ $\pm 65.6\text{ ft}$	$= 1.00\text{ m} + 2\% \text{ d}$ $= 3.3\text{ ft} + 2\% \text{ d}$ $= 0.6\text{ fm} + 2\% \text{ d}$	All significant seafloor features detected.
B		$\pm 50\text{ m}$ $\pm 164.0\text{ ft}$	$= 1.00\text{ m} + 2\% \text{ d}$ $= 3.3\text{ ft} + 2\% \text{ d}$ $= 0.6\text{ fm} + 2\% \text{ d}$	Uncharted features hazardous to surface navigation are not expected but may exist.
C		$\pm 500\text{ m}$ $\pm 1640.4\text{ ft}$	$= 2.00\text{ m} + 2\% \text{ d}$ $= 6.6\text{ ft} + 2\% \text{ d}$ $= 1.1\text{ fm} + 2\% \text{ d}$	Depth anomalies may be expected.
D		Worse than ZOC C	Worse than ZOC C	Large depth anomalies may be expected.
U		Unassessed - The quality of the bathymetric data has yet to be assessed.		

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NOAA CUSTOM CHART  
NOTES GEOSPATIAL DATABASE  
VERSION 2.0B - 29 MARCH 2024

CAUTION  
AUTOMATED CHART GENERATION

The records of the NOAA Custom Chart Notes Geospatial Database are current as of May 1st, 2023. Subsequent additions and refinements are to be expected. Please refer to all available navigational publications for complete information about the charted area.

## CAUTION CHART UPDATES

This NOAA Custom Chart contains up-to-date information only as of the time of creation, and will become outdated. Mariners are advised to visit [https://distribution.charts.noaa.gov/weekly\\_updates/](https://distribution.charts.noaa.gov/weekly_updates/) to check for weekly updates, and to render a new NOAA Custom Chart when information is updated. Notices to Mariners are not issued for corrections to this NOAA Custom Chart.

## 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 National Geospatial-Intelligence Agency.

## COMMENTS REQUESTED

NOAA encourages users to submit inquiries, discrepancies, or comments about this chart via NOAA's ASSIST tool at <https://nauticalcharts.noaa.gov/customer-service/assist/>.

This NOAA Custom Chart has been automatically rendered from NOAA Electronic Navigational Chart (NOAA ENC®) data. Mariners using this NOAA Custom Chart are advised that this is a static reproduction of the NOAA ENC®. This NOAA Custom Chart has not been individually quality checked or adjusted for optimal use for navigation. The portrayal may be at a different scale from that of the original NOAA ENC®. Mariners are advised to use caution when using this NOAA Custom Chart for navigation and are encouraged to use the latest NOAA ENC® to access the most up-to-date information. Mariners must also comply with all applicable regulatory requirements.

## HEIGHTS

Heights of fixed aids to navigation and vertical clearances of overhead obstructions will be shown in feet if the units are set to feet or fathoms. If units are set to meters, heights will be shown in meters. Land elevation values are shown in meters only.

## WATER LEVELS, CURRENTS, AND TIDES

Real-time water levels, tide predictions, and tidal current predictions are available on the internet from NOAA's Center for Operational Oceanographic Products and Services (CO-OPS) at [https://tidesandcurrents.noaa.gov/water\\_level\\_info.html](https://tidesandcurrents.noaa.gov/water_level_info.html) and [https://tidesandcurrents.noaa.gov/currents\\_info.html](https://tidesandcurrents.noaa.gov/currents_info.html).

## ABBREVIATIONS

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

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## POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

## 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.

## SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 2 for important supplemental information.

Refer to charted regulation section numbers.

## VERTICAL DATUM

Overhead clearances are referred to Mean High Water (MHW).

## COLREGS DEMARCATION LINE

The Inland Navigational Rules Act of 1980 is in effect for vessels transiting this area. The seaward boundaries of this area are the COLREGS demarcation lines. In the area seaward of the COLREGS demarcation lines, vessels are governed by COLREGS: International Regulations for Preventing Collisions at Sea, 1972. The COLREGS demarcation line is defined in COLREGS 33 CFR 80.165.

## AIDS TO NAVIGATION

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

## 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.

## ADDITIONAL INFORMATION

Additional information can be obtained at [www.nauticalcharts.noaa.gov](http://www.nauticalcharts.noaa.gov)

## SOUNDING DATUM

Soundings referred to Mean Lower Low Water (MLLW).

## NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 2. Additions or revisions to Chapter 2 are published in the Notices 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 New York, NY.

Refer to charted regulation section numbers.

## PRECAUTIONARY AREA

Traffic within the Precautionary Area may consist of vessels making the transition between operating in Ambrose or Sandy Hook Channels and one of the traffic lanes. Mariners are advised to exercise extreme care in navigating within this area.

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## VESSEL TRAFFIC SERVICES

The U.S. Coast Guard operates a mandatory Vessel Traffic Services (VTS) system in the New York Bay and surrounding areas. Vessel operating procedures and designated radiotelephone frequencies are published in 33 CFR 161, the U.S. Coast Pilot, and/or the VTS User's Manual. Mariners should consult these sources for applicable rules and reporting requirements. Although mandatory VTS participation is limited to the navigable waters of the United States, certain vessels are encouraged or may be required, as a condition of port entry, to report beyond this area to facilitate vessel traffic management within the VTS area.

### 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 LIMITATIONS ON THE USE OF RADIO SIGNALS

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.

## RECOMMENDED VESSEL TRACKS

Recommended vessel tracks for coastwise tug and barge vessels approaching from or leaving toward the south and transiting to New York Harbor via Ambrose Channel. While not mandatory, tug and barge vessels are requested to follow the designated tracks. See U.S. Coast Pilot 2, Chapter 11.

## INTRACOASTAL WATERWAY AIDS

The U.S. Aids to Navigation System is designed for use with nautical charts, and the exact meaning of an aid to navigation may not be clear unless the appropriate chart is consulted. Aids to navigation marking the Intracoastal Waterway exhibit unique yellow symbols to distinguish them from aids marking other waterways. When following the Intracoastal Waterway southward from Manasquan Inlet to Cape May, NJ, aids with yellow triangles should be kept on the starboard side of the vessel and aids with yellow squares should be kept on the port side of the vessel. A horizontal yellow band provides no lateral information, but simply identifies aids to navigation as marking the Intracoastal Waterway. All lights and lighted buoys marking the Intracoastal Waterway show a flash every four seconds, unless otherwise specified. The aids marking tributary channels, in general, are maintained by the state of New Jersey.

### CAUTION

Improved channels are subject to shoaling, particularly at the edges.

### CAUTION FISH TRAP AREAS

Uncharted stakes, piles and, fishing structures, some submerged, may exist within this area.

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## CAUTION SUBMERGED CABLES AND PIPELINES

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

Mariners are warned to stay clear of the protective riprap surrounding navigational light structures.

## BORROW AREA

Depths deeper than charted may exist in the borrow areas in Lower Bay.

## NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio station listed below provides 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.

New York, NY KWO-35 162.55MHz

## CAUTION

Sporadic shoal obstructions exist within Chapel Hill Channel, but are not charted. Consult the Corps of Engineers for location of obstructions.

## RESTRICTED AREA RIGHT WHALE SEASONAL MANAGEMENT AREA (50 CFR 224.105)

All vessels greater than or equal to 65 feet / 19.8 meters in length must slow to speeds of 10 knots or less in seasonal management areas.

## BORROW AREA

Depths deeper than charted may exist in the borrow area in Raritan Bay.

## LOCAL MAGNETIC DISTURBANCE

Differences of as much as 5° from the normal variation have been reported in the vicinity of 40°29.6'N, 74°04.2'W.