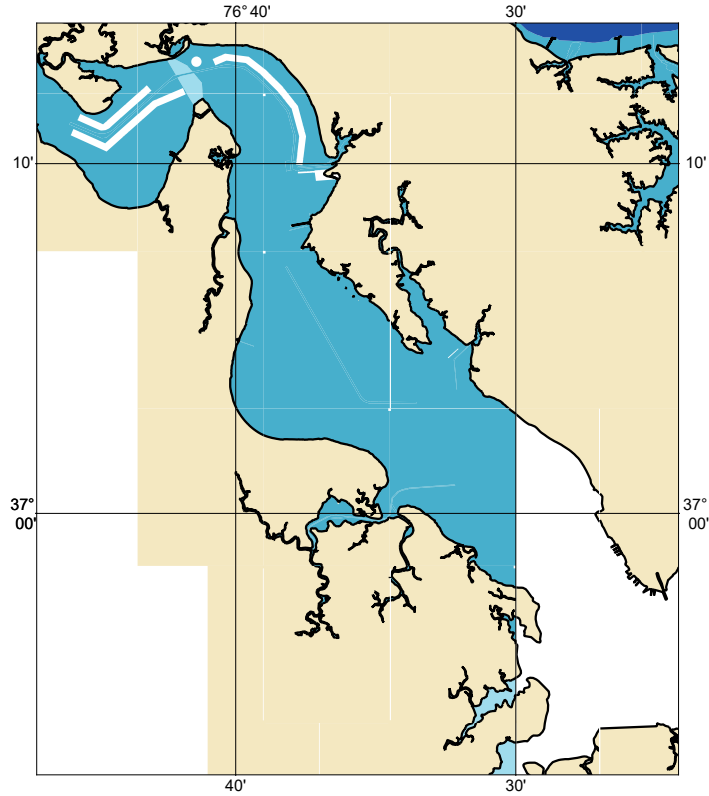

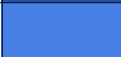






### Zone of Confidence (ZOC) Diagram



ZOC CATEGORIES

ZOC	COLOR	POSITION ACCURACY	DEPTH ACCURACY	SEAFLOOR COVERAGE
A1		± 5 m + 5% depth ± 16.4 ft + 5% depth	= 0.50 m +1% d = 1.6 ft +1% d = 0.3 fm +1% d	All significant seafloor features detected.
A2		± 20 m ± 65.6 ft	= 1.00 m +2% d = 3.3 ft +2% d = 0.6 fm +2% d	All significant seafloor features detected.
B		± 50 m ± 164.0 ft	= 1.00 m +2% d = 3.3 ft +2% d = 0.6 fm +2% d	Uncharted features hazardous to surface navigation are not expected but may exist.
C		± 500 m ± 1640.4 ft	= 2.00 m +2% d = 6.6 ft +2% d = 1.1 fm +2% 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 3.0B - 20 FEBRUARY 2025

The records of the NOAA Custom Chart Notes Geospatial Database are current as of February 20, 2025. 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This NOAA Custom Chart contains up-to-date information only as of the time of creation, and will become outdated.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/navigation-updates/> to check for critical and routine updates, and to render a new NOAA Custom Chart when the ENC data used to make the chart 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/>.

## CAUTION AUTOMATED CHART GENERATION

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 3 for important supplemental information.

## VERTICAL DATUM

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

## 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 3. 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, 5th Coast Guard District in Portsmouth, VA or at the Office of the District Engineer, Corps of Engineers in Norfolk, VA.

Refer to charted regulation section numbers.

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## 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.

### CAUTION FISH TRAP AREAS

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

### 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.

## OYSTER AQUACULTURE

Oyster bed aquaculture leases may exist within the limits of this chart. Mariners are cautioned that numerous markers may exist and watermen may be active in the area. Caution should be exercised when navigating in or near these areas, not to anchor or ground, in order to avoid damage to the beds. Depths may be shallower than the soundings shown. For more information, contact the local department of natural resources.

### CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

### 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.

### CAUTION TUNNEL AREAS

Area is open to unrestricted surface navigation but all vessels are to use extreme caution not to anchor within Tunnel Areas crossing waterways in Hampton Roads.

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## CAUTION FISH TRAPS AND STRUCTURES

Mariners are warned that numerous uncharted duck blinds and fishing structures, some submerged, may exist in the fish trap areas. Such structures are not charted unless known to be permanent. Regulations to assure clear passage to and through dredged and natural channels, and to established landings, are prescribed by the Corps of Engineers in the Code of Federal Regulations. Definite limits of fish trap areas have been established in some areas. Where definite limits have not been prescribed, the location of fishing structures is restricted only by the regulations.

## EMERGENCY RESTRICTED AREA

For the latest information regarding the regulations of any emergency restricted area, contact the Army Corps of Engineers, Norfolk District, Regulatory Branch at (757) 201-7653/7652.

## MARINE ADMINISTRATION JAMES RIVER RESERVE FLEET 33 CFR 162.270

No vessels or other watercraft, except those owned or controlled by the United States Government, shall cruise or anchor between Reserve Fleet units within 152.4 meters/500 feet of the end vessels in each Reserve Fleet unit, or within 152.4 meters/500 feet of the extreme units of the fleet, unless specific permission to do so has first been granted in each case by the enforcing agency.

## CAUTION

USACE conducts hydrographic surveys to monitor navigation conditions. These surveys are not intended to detect underwater features. Uncharted features hazardous to surface navigation are not expected but may exist in federal channels. For more information visit <https://navigation.usace.army.mil/Survey/Hydro>.

## CAUTION

Improved channels 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.

## 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.  
Norfolk, VA KHB-37 162.550 MHz