12221

LORAN-C OVERPRINTED

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.

Nautical Miles 0 1 2 3 4 5 6
Yards 0 1000 2000 3000 4000 5000 6000

NOTE B
Regulations for ocean dumping sites are contained in 40 CFR, Parts 220-229. Additional information concerning the regulations and requirements for use of the sites may be obtained from the Environmental Protection Agency (EPA). See U.S. Coast Pilots appendix for addresses of EPA offices.

SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilots 3 and 4 for important supplemental information.

HYDROGRAPHY
The most recent basic hydrographic survey used in the compilation of hydrography in the general area of Nautilus Shoal was accomplished by the NOAA Ship Peirce, commanded by Commander Carl W. Fisher in 1977.

Formerly C&GS 1222, 1st Ed., Mar. 1913 ☐ 1952-784

NOTE X
TERRITORIAL SEA AND CONTIGUOUS ZONE
The lines delimiting the territorial sea and contiguous zone represent an interdepartmental committee's interpretation of legal principles as applied to geographical information. The lines are subject to revision when required by correction of the geographic information shown or by reinterpretation of the legal principles involved. Where differences occur between adjacent or overlapping charts, the lines shown on the most recent chart issue take precedence.

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.

SOUNDINGS IN FEET

Nautical Chart Catalog No. 1, Panels D, E

76°25′ 20′ 15′ 10′ 05′ 76° 55′ 50′ 45′ 40′ 35′ 75°30′
37°20′ 15′ 10′ 05′ 55′ 50′ 36°

(CONTINUED ON CHART 12238) (LOXNS CHART 12225) (LOXNS CHART 12210) (CONTINUED ON CHART 12263)

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-X

RATES ON THIS CHART
9960-W 9960-X 9960-Y 9960-Z
The Loran-C lines of position overprinted on this chart have been prepared for use with ground wave signals and are presently compensated only for theoretical propagation delays which have not yet been verified by observed data. Mariners are cautioned not to rely solely on the lattices in inshore waters. Sky wave corrections are not provided.

LORAN LINEAR INTERPOLATOR
MICROSECONDS 100 90 80 70 60 50 40 30 20 10

NOTE B
YORK SPIT CHANNEL
Depths in channel based on
Surveys of Nov-Dec 1978, June 1979 and June 1981
Left outside quarter ..... 40.3 ft.
Left inside quarter ..... 40.9 ft.
Right inside quarter ..... 41.3 ft.
Right outside quarter ..... 41.5 ft.
The use of this channel should be restricted to vessels drawing 35 feet or less. Vessels of over Chesapeake Bay, and no vessel or other widebeam shall cross the channel or any of its jetties other than at its entrance or in the direction of its axis. any vessel having to anchor in the channel must follow the course traced for its entire length.

CAUTION
Mariners are warned to stay clear of the jetties to avoid rocks surrounding navigational light structures marked thus ⊕.

NOTE E
Chesapeake Bay Bridge & Tunnel
(Privately maintained lights)
Trestles A and B—In each trestle section the fixed navigation openings for small craft consists of a group of 3 spans. A fixed green light marks centerline of each span and fixed red lights mark outermost bridge support piling on each side of the openings. North Channel & Fisherman Inlet Bridges—A fixed red light marks each midchannel, with fixed red lights marking channel limits. Fixed red obstruction lights mark each pier in Trestles C and D.

LYNNHAVEN INLET
Lynnhaven Inlet is subject to continual change.

HEIGHTS
Heights in feet above Mean High Water.

NOTE F
CAUTION
The Chesapeake Bay Bridge Tunnel complex has on several occasions suffered damage from vessels due to adverse weather conditions. Currents in excess of three knots can be expected in the area. Mariners transiting this area are urged to be particularly alert in regards to the weather situation. The National Weather Service provides 24 hour weather broadcasts on WXM-57 162.55 MHz. Bridge operator also transmits weather information at 0100, 0700, 1300, and 1900 local time on 2539 and 2450 kHz. Transmitting schedules are subject to change, see Notice to Mariners. Maneuvering in close proximity of the bridge-tunnel complex is discouraged.

NOTE G
TRAFFIC SEPARATION SCHEME
The RECOMMENDED route for entering and departing from Chesapeake Bay is marked by a limited purple line centered on a line of bearings buoys which separates the courses of inbound and outbound vessels. Vessels should leave all buoys on their port hand. The pilotage area is marked by a broken purple line. The two anchorage regulated areas may consist of vessels operating between Thimble Shoal and Chesapeake Channels and one of the established traffic lanes. Mariners are advised to exercise extreme care in navigating within this area.
The traffic separation scheme has been designed to aid in the prevention of collisions at the approaches to Chesapeake Bay but is not intended in any way to supersede or alter the applicable Rules of the Road.

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 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.

For Symbols and Abbreviations see Chart No. 1.
COLREGS: International Regulations for Preventing Collisions at Sea, 1972.
Demarcation lines are shown thus: ——— ——

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

CAUTION
FISH TRAP AREAS AND STRUCTURES
Mariners are warned that numerous unlighted 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 and these limits are shown thus: ———
Where definite limits have not been prescribed the location of fishing structures is restricted only by the regulations.

NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 3 and 4, or weekly Notice to Mariners which include new or revised regulations. Information concerning the regulations may be obtained at the Office of the District Engineer, Corps of Engineers in Norfolk, Virginia.
Anchorage regulations may be obtained at the Office of the Commander, 5th Coast Guard District in Portsmouth, Virginia.
Refer to section numbers shown with area designation.

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 privately maintained buoys are not all listed in the U.S. Coast Guard Light List.

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS REPORTED TO FEBRUARY 1982

NAME OF CHANNEL	CONTROLLING DEPTHS FROM SOUNDINGS IN FEET AT MEAN LOW WATER (MLW)					PROJECT DIMENSIONS	
	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH DEPTH (MILES) (FEET)
THIMBLE SHOAL CHANNEL, N	45.0	45.3	45.4	45.4	4-(2)-81	1000	45.0 45
NORTH AUXILIARY CHANNEL	32.3	32.0	31.0	30.2	4-8-81	450	6.9 32
SOUTH AUXILIARY CHANNEL	28.4	29.4	30.2	32.2	4-(2)-81	450	6.9 30

A. THE CHANNEL IS RESTRICTED TO EXCLUDE VESSELS AND TOWS DRAWING LESS THAN 25 FEET.. THERE IS NO RESTRICTION TO PASSENGER SHIPS.
NOTE-CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

PREPARED BY COMPUTER ASSISTED METHODS

POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 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.

NOAA VHF-FM WEATHER BROADCASTS
The National Weather Service stations listed below provide continuous marine weather broadcasts. The range of reception is variable, but for most stations is usually 20 to 40 miles from the antenna site.
Norfolk, Va. KHB-37 162.55 MHz
Heathville, Va. WXM-57 162.40 MHz
CAUTION
Only marine radiobeacons have been calibrated for surface use. Limitations on the use of certain other radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and Defense Mapping Agency Hydrographic/Topographic Center Publication 117 (A & S).
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)

STORM WARNINGS
The National Weather Service displays storm warnings at the following approximate locations:
Chesapeake Light (36°54.3′-75°42.8′)
Weather Service Building Cape Henry (36°55.6′-76°00.4′)
Fort Monroe (37°00.1′-76°18.9′)
Oyster (37°17.2′-75°59.8′)
Little Creek Va. (36°55.0′-76°10.6′)

Place	TIDAL INFORMATION — Height referred to datum of soundings (MLW)			
	Mean High Water	Mean Tide Level	Mean Low Water	Extreme Low Water
Great Machipongo Inlet	3.9	1.9	0.0	−2.5
Old Plantation Island	3.0	1.5	0.0	−2.5
Cape Charles Light	2.5	1.3	0.0	−3.0
Tue Marshes Light	2.2	1.1	0.0	−3.0
Wolf Trap Light	1.6	0.8	0.0	−3.0

NOTE D
DANGER AREA
Entry is open to unrestricted surface navigation but all vessels are cautioned neither to anchor, dredge, trawl, lay cables, bottom, nor conduct any other similar type of operation because of residual dangerous explosives.

LOCAL MAGNETIC DISTURBANCE
Differences of as much as 6° from the normal variation have been observed up to 17 nautical miles offshore from Cape Henry to Currituck Beach Light.

UNITED STATES — EAST COAST
VIRGINIA
CHESAPEAKE BAY ENTRANCE

Mercator Projection
Scale 1:80,000 at Lat. 37°05′
North American 1927 Datum
SOUNDINGS IN FEET
AT MEAN LOW WATER

SAND SHOAL INLET
The channel is subject to continual change. Entrance buoys are not charted because they are shifted frequently in position.

SHIP SHOAL INLET
Plus-or unexplained soundings and dots/shoals are not depicted in the navigable area.

RESTRICTED AREA
Anchoring, trawling, fishing, and crabbing are prohibited in this area. 207.158 (see note A)

PRECAUTIONARY AREA (see note A)

DANGER AREA (see note D)

DISPOSAL AREA
Depths from surveys of 1935-1940

DANGER AREA
FOUL GROUND
Depths from survey of 1940

DANGER AREA
FOUL GROUND
Depths from survey of 1940

REGULATED AREA
(See 207.164 note A)

REGULATED AREA
(See 207.164 note A)

RESTRICTED AREA
207.157 (see note A)

RESTRICTED AREA
207.157 (see note A)

CHESAPEAKE BAY OPENING
Vert. cl. 21 FT.

CHESAPEAKE BAY BRIDGE-TUNNEL
Vert. cl. 45 FT.

HAMPTON ROADS TUNNEL
APPROACH SPANS
Hor. cl. 45 FT.
Vert. cl. 19 FT.

Diner neatline 80 95cm. N 5. x 107 44cm. E W

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

This nautical chart has been designed to promote safe navigation. The National Ocean Survey encourages users to submit corrections, additions, or comments for improving this chart to the Director, National Ocean Survey, NOAA, Rockville, Maryland 20852.

FILE COPY

FATHOMS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
FEET 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
METERS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

(Chesapeake Bay Entrance)
SOUNDINGS IN FEET - SCALE 1:80,000

LITIGATION/COPY

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12221
LORAN-C OVERPRINTED

CAUTION
This chart has been corrected from the Notice to Mariners published weekly by the Defense Mapping Agency Hydrographic /Topographic Center and the Local Notice to Mariners issued periodically by each U.S. Coast Guard district to the print date shown in the lower left hand corner.

SOUNDINGS IN FEET

Nautical Miles 0 1 2 3 4 5 6
Yards 0 1000 2000 3000 4000 5000 6000

12221
LORAN-C OVERPRINTED