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 7 8 9 10 11 12 13 14 15 16
Yards 0 1000 2000 3000 4000 5000 6000

NOTE S
Regulations for ocean dumping sites are contained in 40 CFR, Parts 220-229. Anchorage is not recommended in the regulated areas required to turn off their ranging fire (supplied from the Environmental Protection Agency, (EPA). See U.S. Coast Pilots appendix for addresses of EPA offices.

SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 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 CAS Bo Pierce, commanded by Commander Carl W. Fisher in 1977.

Formerly C&GS 1222, 1st. Ed., Mar. 1913 Gr-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

12221
LORAN-A/C OVERPRINTED

(CONTINUED ON CHART 12238) (CONTINUED ON CHART 12261) (CONTINUED ON CHART 12243)

(CONTINUED ON CHART 12238) (JOINS CHART 12225) (JOINS CHART 12210) (JOINS CHART 12243)

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

LORAN-C
GENERAL EXPLANATION
LORAN-C FREQUENCY 100KHz
PULSE REPETITION INTERVAL
9960 ..... 99,600 Microseconds
STATION TYPE DESIGNATORS: (Not individual station identifications)
M ..... Master
W ..... Secondary
X ..... Secondary
Y ..... Secondary
Z ..... Secondary
EXAMPLE: 9960-X

RATES ON THIS CHART
9960-W 9960-X 9960-Y
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 entirely on the lattices in inshore waters. Sky wave corrections are not provided.

LORAN LINEAR INTERPOLATOR

NOTE B
YORK SPIT CHANNEL
Depths enclosing from seaward
Surveys of Nov-Dec 1978
Left outside quarter ..... 42.2 ft.
Left inside quarter ..... 43.7 ft.
Right inside quarter ..... 42.4 ft.
Right outside quarter ..... 42.8 ft.
Vessels using this channel shall be restricted to meeting and other watercraft passing up or down Chesapeake Bay. Vessels meeting or other watercraft shall cross the channel or enter it at any point other than at its ends and in the direction of its axis. Any vessel having entered the channel shall follow the course thereof for its entire length.

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

LORAN-A SOUTH BAY
GENERAL EXPLANATION
FREQUENCY CHANNEL (preceding H) ..... 1900 kHz
BASIC PULSE RECURRENCE FREQUENCY (H Hight) ..... 33.3 pulses per second
SPECIFIC RECURRENCE RATES assigned for station identification (following H)
EXAMPLE: 3H4

RATES ON THIS CHART
3H4 3H5
CAUTION
Sky waves should not be used in determining lines of position on this chart.

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

COLREGS DEMARCATION LINE
See 80.505a (see note A)

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

LOCAL MAGNETIC DISTURBANCE

NOTE F
CAUTION
The Chesapeake Bay Bridge Tunnel complex has experienced and suffered damage from vessels caught in 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 broadcasting on 162.55 MHz. The Local Marine Operator also transmits storm information at 0100, 0700, 1300, and 1900 local time on 2338 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 tinted purple line centered on a line of fairway buoys which separates the courses of inbound and outbound vessels. Vessels should leave all buoys on their left hand. The passage area is marked by a tinted purple band. Traffic within the precautionary area, the Thimble Shoal Channel, the Newport News 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.

HEIGHTS
Heights in feet above Mean High Water.

LYNNHAVEN INLET
Lynnhaven Inlet is subject to continual change.

TIDAL INFORMATION
Height referred to datum of soundings (MLW)

Place	Mean High Water feet	Mean Tide Level feet	Mean Low Water feet	Entrance Low Water feet
Great Machipongo Inlet	3.9	1.9	0.0	+2.5
Cape Charles	3.0	1.5	0.0	+2.5
Old Point Comfort	2.5	1.2	0.0	+1.5
Tue Marshes Light	2.2	1.1	0.0	+1.0
Wolf Trap Light	1.6	0.8	0.0	+1.0

(277)

TRIBLE SHOAL CHANNEL DEPTH
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS-REPORTS TO MARCH, 1978

NAME OF CHANNEL	CONTROLLING DEPTHS FOR SEAWARD (IN FEET AT MEAN LOW WATER (MLW)) LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	PROJECT DIMENSIONS WIDTH (FEET)	LENGTH (MILES)	DEPTH MLW (FEET)
TRIBLE SHOAL CHANNEL A	45.0	45.0	45.0	45.0	10-77	1000	9.0	45
NORTH AUXILIARY CHANNEL	32.0	32.0	31.5	32.0	10-77	450	9.0	32
SOUTH AUXILIARY CHANNEL	29.7	29.2	30.8	32.0	10-77	450	9.0	32

1. THE CHANNEL IS RESTRICTED TO SKILLED VESSELS AND TOWS DRAWING LESS THAN 20 FEET. THERE IS NO RESTRICTION TO PASSENGER SHIPS.
NOTE:CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION
PRODUCED BY COMPUTER ASSISTED METHODS

POLLUTION REPORTS
Report all spills 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).

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.

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.

NOTE D
DANGER AREA
Area 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 dan-

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 station listed below provides 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

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 No. 117.
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 locations when advised:
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°18.6')
Oyster (37°17.2'-75°55.5')
Little Creek Va. (36°55.0'-76°10.5')

NOTE C
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 (formerly the Coast and Geodetic Survey) with additional data from the Corps of Engineers and U.S. Coast Guard.

FISH TRAP AREAS 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 and those limits are shown thus:
Where definite limits have not been prescribed the location of fishing structures is restricted only by the regulations.

LOCAL MAGNETIC DISTURBANCE
Differences of as much as 6° from the normal variation have been observed 7 to 17 nautical miles offshore from Cape Henry to Cornfield 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

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
For LORAN-C rates 9930-W, Y and Z see reverse side

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

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

FATHOMS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
FEET 6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96 102
METERS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

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

12221
LORAN-A/C OVERPRINTED

(JOINS CHART 12221) (Inner neatline 80.95cm. N.S. x 107.44cm. E.W.)

NMA STOCK NO. 12ACO12221

4th Ed. Apr. 28/79
12221
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