UNITED STATES Coast Pilot®

5

Gulf of Mexico, Puerto Rico and Virgin Islands

2024 (52nd) Edition

This edition cancels the 51st Edition and includes all previously published corrections.

Weekly updates to this edition are available at:
nauticalcharts.noaa.gov/publications/coast-pilot/index.html

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Coast Pilot 5 – Chapter Index
Chapter 4 – Key to Tampa Bay
Chapter 5 – Tampa Bay to Apalachee Bay
Chapter 6 – Apalachee Bay to Mobile Bay
Chapter 7 – Mobile Bay to Mississippi River
Chapter 8 – Mississippi River
Chapter 9 – Mississippi River to Sabine Pass
Chapter 10 – Sabine Pass to San Luis Pass
Chapter 11 – San Luis Pass to the Rio Grande
Chapter 12 – Intracoastal Waterway (not shown)
Chapter 13 – Puerto Rico
Chapter 14 – Virgin Islands
GULF OF MEXICO
TEXAS
ALABAMA
GEORGIA
FLORIDA
CUBA
MEXICO
Houston
Galveston
Lake Charles
New Orleans
Mobile
Pensacola
Tampa
St. Petersburg
Fort Myers
Key West
Dry Tortugas
Corpus Christi
Brownsville
San Juan
Ponce
PUERTO RICO
VIRGIN ISLANDS
ST. CROIX
98°W
96°W
94°W
92°W
90°W
88°W
86°W
84°W
82°W
80°W
32°N
30°N
28°N
26°N
24°N
22°N
68°W
67°W
66°W
65°W
19°N
18°N

Preface

The United States Coast Pilot is published by the National Ocean Service (NOS), National Oceanic and Atmospheric Administration (NOAA), pursuant to the Act of 6 August 1947 (33 U.S.C. 883a and b), and the Act of 22 October 1968 (44 U.S.C. 1310).

The Coast Pilot supplements the navigational information shown on NOAA nautical charts. The publication is continually updated and maintained from inspections conducted by NOAA survey vessels and field parties, corrections published in Notices to Mariners, information from other Federal agencies, State and local governments, maritime and pilots' associations, port authorities, and concerned mariners.

NOAA's Office of Coast Survey encourages public feedback regarding its suite of nautical charting products and services through **ASSIST**, Coast Survey's stakeholder engagement and feedback tool. This allows customers to submit questions or comments or to report an error with NOAA's nautical charts and products.
Customers can access **ASSIST** at *www.nauticalcharts.noaa.gov/customer-service/assist/*
Those who prefer to communicate by telephone can contact Coast Survey at 1–888–990–6622.

Coast Pilot corrections are no longer published in the NGA Notice to Mariners effective 01 January 2021. Additional information regarding the NGA policy change can be referenced at *msi.nga.mil/NTM* in the Notice to Mariners 52/20 Hydrogram and Marine Information sections.

Coast Pilot Updates

Check for weekly critical updates for this edition at *nauticalcharts.noaa.gov/publications/coast-pilot/index.html*
(See **33 CFR 164.33 Charts and Publications**, chapter 2, for regulations.)

Customers may print the specifically affected paragraphs to revise this book, or download an updated file (PDF) of the entire volume.

A *Weekly Record of Updates* is provided directly preceding the index.

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General Information

(1)

UNITED STATES COAST PILOT®

(2) The United States Coast Pilot, published by the National Oceanic and Atmospheric Administration (NOAA), is a series of ten nautical books (volumes) that encompasses a wide variety of information important to navigators of U.S. coastal/intracoastal waters and the waters of the Great Lakes. The Coast Pilot is intended to be used as a supplement to NOAA nautical charts. Much of the content cannot be shown graphically on the charts and is not readily available elsewhere. Topics which are covered include environmental factors of weather, climate, ice conditions, tides, water levels, currents, prominent coastal features and landmarks. Specific information on vertical clearances, wharf descriptions, small-craft facilities, hazards, dredged channels and depths are also provided. Navigation services and regulations are also identified including pilotage, towing, anchorages, routes and traffic separation schemes, environmental protection, and other Federal laws.

(3) New editions of each volume are issued annually. Fully updated files are posted weekly on the Internet, and are also available through NOAA Certified Chart Agents at *www.nauticalcharts.noaa.gov*.

(4) **Amendments** to this publication are available at *nauticalcharts.noaa.gov/publications/coast-pilot/index.html.*

(5)

Using the Coast Pilot

(6) **Chapter 1** contains definitions of general and standard terms used throughout the volume, discussions of NOAA charting products and services, descriptions of maritime services by various U.S. Government agencies, Notices to Mariners and other information pertinent to safe navigation.

(7) **Chapter 2** contains selected extracts from the Code of Federal Regulations (CFR) that affect mariners.

(8) **Chapter 3** contains general information that is peculiar to the region covered by a particular Coast Pilot volume. For example, practical information regarding offshore currents and dangers, coastal aids to navigation, prominent landmarks and the general character of the coast and depths helpful in approaching the region.

(9) In **Chapter 4 and the remaining numbered chapters**, the detailed description of the region begins. A map precedes each chapter and outlines the nautical charts used in the area to be discussed. In these chapters, as much as possible, the coastal description is in geographic sequence, north to south on the east coast, east to west on the gulf coast, clockwise around each of the Great Lakes and south to north on the west coast and Alaskan coast. Features are described as they appear on the largest scale chart, with that chart number prominently shown in blue.

(10) **Appendix A** contains contact information regarding the various products, services and agencies detailed throughout the volume.

(11) **Navigation Rules**— preceding Appendix A, contains the International (72 COLREGS) and Inland Navigation Rules, technical Annexes, and associated Federal rules and regulations.

(12) The **Weekly Record of Updates** is intended as a log for critical updates applied to this volume.

(13) The **Index** contains geographic names mentioned throughout a Coast Pilot volume. These names are boldfaced and indexed along with the number of the largest scale chart on which the entire feature appears. Asterisks preceding a chart number in the index of Coast Pilot 5 indicate charts published by the National Geospatial-Intelligence Agency, and in the index of Coast Pilot 6, charts published by the Canadian Hydrographic Service.

(14)

Bearings

(15) Bearings and courses are in degrees true and are measured clockwise from **000°** (north) to **359°**. The bearings of an aid to navigation (e.g., directional light, light sector, range) are given as viewed from the bridge of a vessel toward the light.

(16)

Bridges and Cables

(17) Vertical clearances of bridges and overhead cables are in feet above mean high water unless otherwise stated; clearances in Coast Pilot 6 are in feet above Low Water Datum unless otherwise stated. When the water level is above Low Water Datum, the bridge and overhead cable clearances given in the Coast Pilot and shown on the charts should be reduced accordingly. Clearances of drawbridges are for the closed position, although the open clearances are also given for vertical-lift bridges. Whenever a bridge span over a channel does not open fully to an unlimited clearance position, a minimum clearance for the sections over the channel is given; the same applies to swing and pontoon bridges with openings less than 50 feet horizontally. Clearances given in the Coast Pilot are those approved for nautical charting and are supplied by the U.S. Coast Guard (bridges) and U.S. Army Corps of Engineers (cables). See charts for horizontal clearances

of bridges, as these are generally given in the Coast Pilot only when they are less than 50 feet (15 meters). Tables listing structures across waterways, found in some Coast Pilots, show both horizontal and vertical clearances. Submarine cables are rarely mentioned.

(18)

Cable ferries

(19) Cable ferries are guided by cables fastened to shore and sometimes propelled by a cable rig attached to the shore. Generally, the cables are suspended during crossings and dropped to the bottom when the ferries dock. Where specific operating procedures are known they are mentioned in the text. Since operating procedures vary, mariners are advised to exercise extreme caution and seek local knowledge. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(20)

Courses

(21) These are true and are given in degrees clockwise from **000°** (north) to **359°**. The courses given are the courses to be made good.

(22)

Currents

(23) Stated current velocities are the averages at strength. Velocities are in knots, which are nautical miles per hour. Directions are the true directions to which the currents set (see chapter 3, this book).

(24)

Depths

(25) Depth is the vertical distance from the chart datum to the bottom and is expressed in the same units (feet, meters or fathoms) as those soundings found on the chart. (See Chart Datum, this chapter, for further detail.) The **controlling depth** is the least known depth of a channel. This depth is determined by periodic hydrographic surveys and restricts use of the channel to drafts less than that depth. The **centerline controlling depth** applies only to the channel centerline or close proximity; lesser depths may exist in the remainder of the channel. The **midchannel controlling depth** is the controlling depth of only the middle half of the channel. **Federal project depth** is the original design dredging depth of a channel planned by the U.S. Army Corps of Engineers (USACE) and may be deeper than current conditions. For this reason, project depth must not be confused with controlling depth. **Depths alongside** wharves usually have been reported by owners and/or operators of the waterfront facilities and have not been verified by Government surveys. Since these depths may be subject to change, local authorities should be consulted for the latest controlling depths.

(26) For all maintained channels with controlling depths detailed on charts in tabular form, the Coast Pilot usually states only the project depths. For all other channels which may be depicted on charts with depth legends, notes or soundings, the Coast Pilot will list where to find the most recent information on the latest known surveys. Depths may vary considerably between maintenance dredging.

(27)

Under-keel clearances

(28) It is becoming increasingly evident that economic pressures are causing mariners to navigate through waters of barely adequate depth, with under-keel clearances being finely assessed from the charted depths, predicted tide levels and depths recorded by echo sounders.

(29) It cannot be too strongly emphasized that even charts based on modern surveys may not show all sea-bed obstructions or the shoalest depths, and actual tide levels may be appreciably lower than those predicted.

(30) In many ships an appreciable correction must be applied to shoal soundings recorded by echo sounders due to the horizontal distance between the transducers. This separation correction, which is the amount by which recorded depths therefore exceed true depths, increases with decreasing depths to a maximum equal to half the distance apart of the transducers; at this maximum the transducers are aground. Ships whose transducers are more than 6 feet (1.8 meters) apart should construct a table of true and recorded depths using the Traverse Tables. (Refer to the topic on echo soundings elsewhere in chapter 1.)

(31) Other appreciable corrections, which must be applied to many ships, are for settlement and squat. These corrections depend on the depth of water below the keel, the hull form and the speed of the ship.

(32) Settlement causes the water level around the ship to be lower than would otherwise be the case. It will always cause echo soundings to be less than they would otherwise be. Settlement is appreciable when the depth is less than seven times the draft of the ship and increases as the depth decreases and the speed increases.

(33) Squat denotes a change in trim of a ship underway, relative to her trim when stopped. It usually causes the stern of a vessel to sit deeper in the water. However, it is reported that in the case of mammoth ships, squat causes the bow to sit deeper. Depending on the location of the echo sounding transducers, this may cause the recorded depth to be greater or less than it ought to be. **Caution and common sense are continuing requirements for safe navigation.**

(34)

Distances

(35) These are in nautical miles unless otherwise stated. A nautical mile is one minute of latitude, or approximately 2,000 yards, and is about 1.15 statute miles.

(36) Coast Pilot 6 is in statute miles unless otherwise stated. A statute mile is 5,280 feet or about 0.87 nautical mile.

(37)

Geographic Coordinates

(38) Geographic coordinates listed in the Coast Pilot are referred to North American Datum of 1983 (NAD 83) unless otherwise noted for certain CFR extracts in chapter 2.

(39)

Heights

(40) These are in feet (meters) above the tidal datum used for that purpose on the charts, usually mean high water. However, the heights of the decks of piers and wharves are given in feet (meters) above the chart datum for depths.

(41) Coast Pilot 6 is in feet (meters) above the chart datum used for that purpose on the charts, usually Low Water Datum.

(42)

Light and Sound Signal Characteristics

(43) These are not described in the Coast Pilot. Also, light sectors and visible ranges are generally not fully described. This information can be found in U.S. Coast Guard Light Lists.

(44)

Obstructions

(45) Wrecks and other obstructions are mentioned only if they are relatively permanent and in or near normal traffic routes.

(46)

Radio Navigational Aids

(47) For detailed information on Radio Navigation Aids see the **United States Coast Guard Light Lists** and the National Geospatial-Intelligence Agency's **Radio Navigational Aids, Publication 117**.

(48)

Ranges

(49) These are not fully described. "**A 339°** Range" means that the rear structure bears **339°** from the front structure. (See United States Coast Guard Light Lists.)

(50)

Reported information

(51) Information received by NOAA from various sources concerning depths, dangers, currents, facilities, and other topics, which has not been verified by Government surveys or inspections, is often included in the Coast Pilot; such **unverified information** is qualified as "reported" and should be regarded with caution.

(52)

Tides

(53) Tidal information, including real-time water levels, tide predictions and tidal current predictions are available at *tidesandcurrents.noaa.gov*.

(54)

Time

(55) Unless otherwise stated, all times are given in local standard time in the 24-hour system. (Noon is 1200, 2:00 p.m. is 1400 and midnight is 0000.)

(56)

Winds

(57) Directions are the true directions from which the winds blow; however, sometimes (rarely) compass points are used. Unless otherwise indicated, speeds are given in knots, which are nautical miles per hour.

(58)

NAUTICAL CHARTS

(59) NOAA produces and maintains a suite of over 1,000 nautical charts that cover the U.S. coastal waters, the Great Lakes and U.S. territories. These charts provide a graphic representation of water depths, the shoreline, prominent topographic and man-made features, aids to navigation and other navigational information useful to the mariner. NOAA's charts are available in a variety of digital formats designed to meet the specific requirements of all mariners. Paper copies may also be obtained through one of NOAA's Print-on-Demand partners.

(60)

Paper Print on Demand Nautical Charts

(61) The content of Print-On-Demand (POD) charts is updated weekly by NOAA with the most current U.S. Coast Guard Local Notice to Mariners and other critical safety information. POD charts are printed under the authority of NOAA and shipped through partnerships between NOAA and commercial providers. POD information and a list of participating POD chart agents can be found at *nauticalcharts.noaa.gov/publications/print-agents.html#paper-charts-mobile*.

(62)

Portable Document Format (PDF) Nautical Charts

(63) Almost all of NOAA's nautical charts may be downloaded for free as Portable Document Format (PDF) files at *nauticalcharts.noaa.gov/charts/noaa-raster-charts.html#full-size-nautical-charts*. The PDF nautical charts are exact replicas of the images used to produce POD and Raster Navigational Charts (RNC). As such, they also have all the latest updates based on U.S. Coast Guard Local Notices to Mariners, National Geospatial-Intelligence Agency Notices to Mariners and other critical safety information.

(64) Most PDF charts can be printed at the proper scale from any plotter accommodating a 36-inch paper width. When printed properly, PDF charts and POD charts are very similar, but PDF charts have not yet been approved to meet Federal regulations for paper chart carriage requirements as POD charts have.

(65)

BookletCharts

(66) The NOAA BookletChart™ is a product that can be printed by the users for free. They are made to help recreational boaters locate themselves on the water. BookletCharts are reduced in scale and divided into pages for convenience but otherwise contain all the information of the full-scale nautical charts and are updated weekly. For more information visit *nauticalcharts.noaa.gov/charts/noaa-raster-charts.html#booklet-charts*.

(67)

Raster Navigational Charts (NOAA RNC®)

(68) NOAA Raster Navigational Charts (NOAA RNC®) are geo-referenced digital images of NOAA's entire suite of paper charts. NOAA RNCs are official data that can be used in many types of electronic charting systems (ECS), including Raster Chart Display Systems (RCDS) and some Electronic Chart Display and Information Systems (ECDIS). Current regulations support the use of RNCs as a primary means of navigation when ENCs are not available, but they require an accompanying minimal set of up-to-date paper charts. They can integrate position information from the Global Positioning System (GPS) and other navigational sensors, such as radar and automatic identification systems (AIS) to show a vessel's track, waypoints, and planned routes. NOAA RNCs and their weekly updates are available free of charge at *nauticalcharts.noaa.gov/charts/noaa-raster-charts.html*.

(69)

Electronic Navigational Charts (NOAA ENC®)

(70) NOAA Electronic Navigational Charts (NOAA ENC®) are databases of charted objects and their attributes with standardized content, structure and format. They comply with International Hydrographic Organization (IHO) specifications stated in IHO Publication S-57. They may be used as an alternative to paper charts required on SOLAS class vessels.

(71) ENCs are intended for use in electronic charting systems (ECS) as well as Electronic Chart Display and Information Systems (ECDIS). ECDIS are programmable to show as much or as little data as the user requires. They can integrate position information from the Global Positioning System (GPS) and other navigational sensors, such as radar and automatic identification systems (AIS) to show a vessel's track, waypoints and planned routes. Using this information ECDIS can use ENCs to give warning of impending danger in relation to the vessel's position and movement. NOAA ENCs and their updates are available free of charge at *nauticalcharts.noaa.gov/charts/noaa-enc.html*.

(72)

Nautical Chart—New Editions and Corrections

(73) New editions of paper Print-on-Demand (POD) charts are available on the Monday after NOAA clears a new edition for release. Once the authorized POD chart is available, it meets federal chart carriage requirements, and should be put into service immediately. It should be updated from the *last correction and cleared through* dates shown in the lower left corner of the chart.

(74) The chart date is of vital importance to the navigator. When charted information becomes obsolete, further use of the chart for navigation is dangerous. Natural and artificial changes, many of them critical, are occurring constantly; therefore it is important that navigators use up-to-date charts. Nautical charts and publications are available for purchase from authorized POD agents and their sales outlets.

(75) NOAA's "Nautical Chart Update" website allows mariners to update their nautical charts from one database that includes information from NOAA, NGA U.S. Notice to Mariners, U.S. Coast Guard Local Notices to Mariners and the Canadian Coast Guard Notices to Mariners at: *nauticalcharts.noaa.gov/charts/chart-updates.html*.

(76)

Nautical Chart Numbering System

(77) This chart numbering system, adopted by NOAA and National Geospatial-Intelligence Agency (NGA), provides for a uniform method of identifying charts published by both agencies. Nautical charts published by NGA and by the Canadian Hydrographic Service are identified in the Coast Pilot by an asterisk preceding the chart number.

(78)

Chart Scale

(79) The scale of a chart is the ratio of a given distance on the chart to the actual distance that it represents on the earth. For example, one unit of measurement on a 1:10,000 scale chart is equal to 10,000 of the same unit on the earth's surface. Large scale charts show greater detail of a relatively small area. Small scale charts show less detail but cover a larger area. Certain hydrographic information may be omitted on smaller scale charts. **Mariners should always obtain the largest scale coverage for near shore navigation**.

(80) The scales of nautical charts range from 1:2,500 to about 1:5,000,000. Graphic scales are generally shown on charts with scales of 1:80,000 or larger, and numerical scales are given on smaller scale charts. NOAA charts are classified according to scale as follows:

(81) **Sailing charts**, scales 1:600,000 and smaller, are for use in fixing the mariner's position approaching the coast from the open ocean or for sailing between distant coastwise ports. On such charts the shoreline and topography are generalized and only offshore soundings, principal lights, outer buoys and landmarks visible at considerable distances are shown.

(82) **General charts**, scales 1:150,000 to 1:600,000, are for coastwise navigation outside of outlying reefs and shoals.

(83) **Coast charts**, scales 1:50,000 to 1:150,000, are for inshore navigation leading to bays and harbors of considerable width and for navigating large inland waterways.

(84) **Harbor charts**, scales larger than 1:50,000, are for harbors, anchorage areas and the smaller waterways.

(85) **Special charts**, at various scales, cover the Intracoastal waterway and miscellaneous small-craft areas.

(86)

Chart Projections

(87) The **Mercator projection** used on most nautical charts has straight-line meridians and parallels that

intersect at right angles. On any particular chart the distances between meridians are equal throughout, but distances between parallels increase progressively from the equator toward the poles so that a straight line between any two points is a rhumb line. This unique property of the Mercator projection is one of the main reasons why it is preferred by the mariner.

(88) The **Polyconic projection** is used on most U.S. nautical charts of the Great Lakes. On this projection, parallels of latitude appear as non-concentric circles, and meridians appear as curved lines converging toward the pole and concave to the central meridian. The scale is correct along any parallel and along the central meridian of the projection. Along other meridians the scale increases with increased difference of longitude from the central meridian.

(89)

Chart Datum, Tidal Waters

(90) Chart Datum is the particular tidal level to which soundings and depth curves on a nautical chart or bathymetric map are referred. The tidal datum of **Mean Lower Low Water** is used on all NOAA charts, except for charts in the Great Lakes and non-tidal inland waterways. For information on **Chart Datum, Great Lakes System**, see Coast Pilot 6, chapter 3.

(91)

Horizontal Datum

(92) Nautical charts are constructed based on one of a number of horizontal datums which are adopted to best represent individual regions around the world. Note that the terms horizontal datum, horizontal geodetic datum, and horizontal control datum are synonymous.

(93) The exact placement of lines of latitude and longitude on a nautical chart is dependent on the referenced horizontal datum. Charts of the United States are currently referenced primarily to the North American Datum of 1983 (NAD 83), and the World Geodetic System 1984 (WGS 84). WGS 84 is equivalent to the NAD 83 for charting purposes.

(94) NAD 83 and WGS 84 have replaced the North American Datum of 1927 and other regional datums as the primary horizontal datum to which NOAA charts are referenced. Since some geographic positions may still be referenced to the older datums, NOAA has included notes on charts which show the amount to shift those positions in latitude and longitude to fit the chart's NAD 83 or WGS 84 projection.

(95) It should be noted that the physical shift between positions on older datums and NAD 83/WGS 84 was significant. Mariners should always be certain the positions they are plotting on a nautical chart are on the same datum as the chart.

(96)

Chart Accuracy

(97) The value of a nautical chart depends upon the accuracy of the surveys on which it is based. The chart reflects what was found by field surveys and what has been reported to NOAA. It also represents general conditions at the time of surveys or reports and does not necessarily portray present conditions. Significant changes may have taken place since the date of the last survey or report.

(98) Each sounding represents an actual measure of depth and location at the time the survey was made, and each bottom characteristic represents a sampling of the surface layer of the sea bottom at the time of the sampling. Areas where sand and mud prevail, especially the entrances and approaches to bays and rivers exposed to strong tidal current and heavy seas, are subject to continual change.

(99) In coral regions and where rocks and boulders abound, it is always possible that surveys may have failed to find every obstruction. Thus, when navigating such waters, customary routes and channels should be followed, and areas where irregular and sudden changes in depth indicate conditions associated with pinnacle rocks, coral heads, or boulders should be avoided.

(100) Information charted as "reported" should be treated with caution when navigating the area, because the actual conditions have not been verified by government surveys.

(101)

Source Diagrams and Zone of Confidence Diagrams

(102) The age and accuracy of hydrographic survey data that support nautical charts can vary. Depth information on nautical charts, paper or digital, is based on data from the latest available hydrographic survey, which in many cases may be quite old. Diagrams are provided on nautical charts to assist mariners in assessing hydrographic survey data and the associated level of risk to navigate in a particular area. There are currently two types of diagrams shown on NOAA paper and raster navigational charts (RNCs) of 1:500,000 scale and larger—**Zone of Confidence (ZOC) Diagrams** and **Source Diagrams**. ZOC information (designated CATZOC) is also found on electronic navigational charts (ENCs). This provides consistency in the display of source data between ENCs and newer paper charts.

(103) Both types of diagrams consist of a graphic representation of the extents of hydrographic surveys within the chart and accompanying table of related survey quality categories. CATZOC information on an ENC, unlike the diagrams on a paper chart or RNC, is displayed over the ENC data using symbols rather than letters. These symbols are displayed on a separate layer, which can be viewed when planning a route, then switched off until needed again at another time.

(104) On **ZOC Diagrams**, the quality of the hydrographic data is assessed according to six categories; five quality categories for assessed data (A1, A2, B, C and D) and a sixth category (U) for data that has not yet been assessed. On the ENC, the categories are shown using a rating system of stars—the higher the quality, the greater the number of stars. Assessment of hydrographic data quality and classification into zones of confidence is based on a combination of: survey date, position accuracy, depth

(106)

Zone of Confidence Diagrams

ZOC CATEGORIES				
ZOC	DATE	POSITION ACCURACY	DEPTH ACCURACY	SEAFLOOR COVERAGE
A1	2008–2016	± 16.4 ft	= 1.6 feet + 1% depth	All significant seafloor features detected
A2	—	± 65.6 ft	= 3.3 feet + 2% depth	All significant seafloor features detected
B	2005	± 164.0 ft	= 3.3 feet + 2% depth	Uncharted features hazardous to surface navigation are not expected but may exist
C	—	± 1640.4 ft	= 6.6 feet + 2% depth	Depth anomalies may be expected
D	—	Worse than ZOC C	Worse than ZOC C	Large depth anomolies may be expected
U	Unassessed – The quality of the bathymetric data has yet to be assessed.			

accuracy and sea floor coverage (the survey's ability to detect objects on the seafloor.)

(105) **Source Diagrams** provide the mariner with additional information about the density and adequacy of the sounding data depicted on the chart. The adequacy with which sounding data reflects the configuration of the bottom depends on the following factors: survey technology employed (sounding and navigation equipment), survey specifications in effect (prescribed survey line spacing and sounding interval) and type of bottom (e.g., rocky with existence of submerged pinnacles, flat sandy, coastal deposits subject to frequent episodes of deposition and erosion). Source diagrams will be replaced with ZOC diagrams as new editions are created.

(108)

Chart Symbols, Abbreviations and Terms

(109) The standard symbols and abbreviations approved for use on nautical charts produced by the U.S. Government are described in **U.S. Chart No. 1: Symbols, Abbreviations and Terms used on Paper and Electronic Navigational Charts.** This reference, jointly maintained by the National Geospatial-Intelligence Agency (NGA) and NOAA, is available at *nauticalcharts.noaa.gov/publications/us-chart-1.html.*

(110) The publication **Chart 1: Symbols, Abbreviations and Terms** published by the Canadian Hydrographic Service, is available online at *charts.gc.ca/publications/chart1-carte1/index-eng.asp.*

(111) Some symbols and abbreviations used on foreign charts, including reproductions of foreign charts made by NGA, are different than those used on U.S. charts. It is recommended that mariners who use foreign charts also obtain the symbol sheet or Chart No. 1 produced by the appropriate foreign agency.

(112) Mariners are warned that the buoyage systems, shapes and colors used by other countries often have a different significance than the U.S. system.

(113)

Areas with Blue Tint

(114) A blue tint is shown in water areas on many charts to accentuate shoals and other areas considered dangerous for navigation when using that particular chart. Since the danger curve varies with the intended purpose of a chart a careful inspection should be made to determine the contour depth of the blue tint areas.

(115)

Bridge and Cable Clearances

(116) For bascule bridges whose spans do not open to a full vertical position, unlimited overhead clearance is not available for the entire charted horizontal clearance when the bridge is open, due to the inclination of the drawspans over the channel.

(117) Charted in black text, vertical clearances of overhead cables are for the lowest wires at mean high water as authorized and permitted by the U.S. Army Corps of Engineers (USACE). Reported clearances received from sources other than the USACE are labeled as such. When

(107)

Source Diagrams

Referring to the accompanying sample Source Diagram to the right and the previous discussion of survey methods over time, transiting from Point X to Point Y, along the track indicated by the dotted line, would have the following information available about the relative quality of the depth information shown on the chart.

Point X lies in an area surveyed by NOAA between 1900-1939. The sounding data in this area would have been collected by leadline. Depths between sounding points can only be inferred, and undetected features might exist between the sounding points in areas of irregular relief — caution should be exercised.

The transit then crosses an area surveyed by NOAA between 1940-1969. The sounding data in this area would have been collected by continuous recording single beam echo sounder. It is possible that features could have been missed between sounding lines, although echo sounders record all depths along a sounding line with varying beam widths.

The transit ends in an area charted from miscellaneous surveys. These surveys may be too numerous to depict or may vary in age, reliability, origin or technology used. No inferences about the fitness of the data can be made in this area from the diagram.

Referring again to the accompanying sample Source Diagram, and the previous discussion of survey methods over time, a mariner could choose to transit from Point X to Point Y, along the track shown with a dashed line.

The transit starts again in an area surveyed by NOAA between 1900-1939. The sounding data in this area would have been collected by leadline. Depths between sounding points can only be inferred, and undetected features might still exist between the sounding points in areas of irregular relief — caution should be exercised.

The transit then crosses an area surveyed by NOAA between 1990–present, with partial bottom coverage. The data is collected in metric units and acquired by continuous recording single beam echo sounder. It is possible that features could have been missed between the sounding lines, although echo sounders record all depths along a sounding line with varying beam widths.

The transit then crosses into an area surveyed by NOAA etween 1990–present, having full bottom coverage. This area of the charted diagram is shaded with a blue screen to draw attention to the fact that full bottom coverage has been achieved. The data in this area would have been collected in metric units and acquired by side scan sonar or multibeam sonar technology. Undetected features in this area, at the time of the survey, would be unlikely.

The transit ends in an area charted from miscellaneous surveys. These surveys may be too numerous to depict or may vary in age, reliability, origin or technology used. No inferences about the fitness of the data can be made in this area from the diagram. By choosing to transit along the track shown by the dashed line, the mariner would elect to take advantage of survey information that is more recent and collected with modern technology.

provided, safe vertical clearances are shown in magenta text and indicate the highest points of a ship that can pass under an overhead power cable without risk of electrical discharge from the cable to the ship or without making contact with a bridge. **Vessels with masts, stacks, booms or antennas should allow sufficient clearance under power cables to avoid arcing.**

(118)

Submarine Cables and Submerged Pipelines

(119) **Submarine cables** and **submerged pipelines** cross many waterways used by both large and small vessels, but all of them may not be charted. For inshore areas, they usually are buried beneath the seabed, but for offshore areas they may lie on the ocean floor. Warning signs are often posted to warn mariners of their existence.

(120) The installation of submarine cables or pipelines in U.S. waters or the Continental Shelf of the United States is under the jurisdiction of one or more Federal agencies, depending on the nature of the installation. They are shown on the charts when the necessary information is reported to NOAA and they have been recommended for charting by the responsible agency. The chart symbols for submarine cable and pipeline areas are usually shown for inshore areas, whereas chart symbols for submarine cable and pipeline routes may be shown for offshore areas. Submarine cables and pipelines are not described in the Coast Pilots.

(121) In view of the serious consequences resulting from damage to submarine cables and pipelines, vessel operators should take special care when anchoring, fishing or engaging in underwater operations near areas where these cables or pipelines may exist or have been reported to exist. Mariners are also warned that the areas where cables and pipelines were originally buried may have changed and they may be exposed; extreme caution should be used when operating vessels in depths of water comparable to the vessel's draft.

(122) Certain cables carry high voltage, while many pipelines carry natural gas under high pressure or petroleum products. Electrocution, fire or explosion with injury, loss of life or a serious pollution incident could occur if they are broached.

(123) Vessels fouling a submarine cable or pipeline should attempt to clear without undue strain. Anchors or gear that cannot be cleared should be slipped, but no attempt should be made to cut a cable or a pipeline.

(124)

Artificial Obstructions to Navigation

(125) **Disposal areas** are designated by the U.S. Army Corps of Engineers for depositing dredged material where there is sufficient depth not to cause shoaling or create a danger to surface navigation. The areas are charted without blue tint, and soundings and depth curves are retained.

(126) **Disposal sites** are areas established by Federal regulation (**40 CFR 220** through **228**) in which dumping of dredged and fill material and other nonbuoyant objects is allowed with the issuance of a permit. Dumping of dredged and fill material is supervised by the U.S. Army Corps of Engineers and all other dumping by the Environmental Protection Agency (EPA). (See U.S. Army Corps of Engineers and Environmental Protection Agency, this chapter, and Appendix A for office addresses.)

(127) **Dumping grounds** are also areas that were established by Federal regulation (**33 CFR 205**). However, these regulations have been revoked and the use of the areas discontinued. These areas will continue to be shown on nautical charts until such time as they are no longer considered to be a danger to navigation.

(128) Disposal Sites and Dumping Grounds are rarely mentioned in the Coast Pilot, but are shown on nautical charts. **Mariners are advised to exercise caution in the vicinity of all dumping areas.**

(129) **Spoil areas** are for the purpose of depositing dredged material, usually near and parallel to dredged channels. Spoil areas are usually charted from survey drawings from U.S. Army Corps of Engineers after-dredging surveys, though they may originate from private or other Government agency surveys. On nautical charts, spoil areas are tinted blue, labeled and have all soundings and depth curves omitted from within their boundaries. Spoil areas present a hazard to navigation and even the smallest craft should avoid crossing them.

(130) **Fish havens** are artificial shelters constructed of various materials including rocks, rubble, derelict barges/oil rigs and specially designed precast structures. This material is placed on the sea floor to simulate natural reefs and attract fish. Fish havens are often located near fishing ports or major coastal inlets and are usually considered hazards to shipping. Before such a reef may be built, the U.S Army Corps of Engineers must issue a permit specifying the location and depth over the reef. Constructed of rigid material and projecting above the bottom, they can impede surface navigation and therefore represent an important feature for charting. Fish havens may be periodically altered by the addition of new material, thereby possibly increasing the hazard. They are outlined and labeled on charts and show the minimum authorized depth when known. Fish havens are tinted blue if they have a minimum authorized depth of 11 fathoms or less. If the minimum authorized depth is unknown and they are in depths greater than 11 fathoms, they are considered a danger to navigation. Navigators should be cautious about passing over fish havens or anchoring in their vicinity.

(131) **Fishtrap areas** are areas established by the U.S. Army Corps of Engineers, or State or local authority, in which traps may be built and maintained according to established regulations. The fish stakes that may exist in these areas are obstructions to navigation and may be dangerous. The limits of fishtrap areas and a cautionary note are usually charted. Navigators should avoid these areas.

(132)

Local Magnetic Disturbances

(133) If measured values of magnetic variation differ from the expected (charted) values by several degrees, a magnetic disturbance note will be printed on the chart. The note will indicate the location and magnitude of the disturbance, but the indicated magnitude should not be considered as the largest possible value that may be encountered. Large disturbances are more frequently detected in the shallow waters near land masses than on the deep sea. Generally, the effect of a local magnetic disturbance diminishes rapidly with distance, but in some locations there are multiple sources of disturbances and the effects may be distributed for many miles.

(134)

Compass Roses

(135) Each compass rose shows the date, magnetic variation and the annual change in variation. Prior to the new edition of a nautical chart, the compass roses are reviewed. Corrections for annual change and other revisions may be made as a result of newer and more accurate information. On some general and sailing charts, the magnetic variation is shown by isogonic lines in addition to the compass roses.

(136)

Echo Soundings

(137) The echo sounder on a ship may indicate small variations from charted soundings; this may be due to the fact that various corrections (instrument corrections, settlement and squat, draft and velocity corrections) are made to echo soundings in surveying which are not normally made in ordinary navigation, or to observational errors in reading the echo sounder. Instrument errors vary between different equipment and must be determined by calibration aboard ship. Most types of echo sounders are factory calibrated for a velocity of sound in water of 800 fathoms per second, but the actual velocity may differ from the calibrated velocity by as much as 5 percent, depending upon the temperature and salinity of the waters in which the vessel is operating; the highest velocities are found in warm, highly saline water and the lowest in icy freshwater. Velocity corrections for these variations are determined and applied to echo soundings during hydrographic surveys. All echo soundings must be corrected for the vessel's draft, unless the draft observation has been set on the echo sounder.

(138) Observational errors include misinterpreting false echoes from schools of fish, seaweed, etc., but the most serious error that commonly occurs is where the depth is greater than the scale range of the instrument; a 400–fathom scale indicates 15 fathoms when the depth is 415 fathoms. Caution in navigation should be exercised when wide variations from charted depths are observed.

(139)

NOTICES TO MARINERS

(140) **Notices to Mariners** are published to advise operators of marine information affecting the safety of navigation. The notices include changes in aids to navigation, depths in channels, bridge and overhead cable clearances, reported dangers and other useful marine information. They should be used routinely for updating the latest editions of nautical charts and related publications.

(141) **Local Notices to Mariners** are issued by each Coast Guard District Commander for the waters under their jurisdiction. (See Appendix A for Coast Guard district(s) covered by this volume.) These notices are usually published weekly and are available at *navcen.uscg.gov*.

(142) **U.S. Notice to Mariners**, published weekly by the National Geospatial-Intelligence Agency, are prepared jointly with NOAA and the Coast Guard. These notices contain selected items from the Local Notices to Mariners and other reported marine information required by oceangoing vessels operating in both foreign and domestic waters. Special items covering a variety of subjects and generally not discussed in the Coast Pilot or shown on nautical charts are published annually in Notice to Mariners No. 1. These items are important to the mariner and should be read for future reference. These notices are available at *msi.nga.mil/NGAPortal/MSI.portal*.

(143) **Broadcast Notices to Mariners** are made by the Coast Guard to report deficiencies and important changes in aids to navigation. (See Navigational Warnings, Information and Weather, this chapter.)

(144) The **Special Notice to Mariners** is an annual publication containing important information for mariners on a variety of subjects which supplements information not usually found on charts and in navigational publications. It includes excerpts from various Federal laws and regulations regarding marine pollution reporting, aids to navigation and Vessel Traffic Service (VTS) procedures. There are tips for trip planning, updates to the Rules of the Road and information on local hazards. Also included are points of contact, phone numbers and email addresses for various subject matter experts to assist the mariner in locating further information.

(145) Vessels operating within the limits of the Coast Guard districts can obtain information affecting NOAA charts and related publications from the Local Notices to Mariners. Small craft using the Intracoastal Waterway and other waterways and small harbors within the United States that are not normally used by oceangoing vessels will require the Local Notices to Mariners to keep charts and related publications up to date.

(146)

AIDS TO NAVIGATION

(147)

U.S. Aids to Navigation System

(148) The navigable waters of the United States are marked to assist navigation using the U.S. Aids to Navigation System, a system consistent with the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) Maritime Buoyage System. The **IALA Maritime Buoyage System** is followed by most of the world's maritime nations and will improve maritime safety by encouraging conformity in buoyage systems worldwide. IALA buoyage is divided into two regions made up of Region A and Region B. All navigable waters of the United States follow IALA Region B, except U.S. possessions west of the International Date Line and south of 10° north latitude, which follow IALA Region A. Lateral aids to navigation in Region A vary from those located within Region B. Nonlateral aids to navigation are the same as those used in Region B. Appropriate nautical charts and publications should be consulted to determine whether the Region A or Region B marking schemes are in effect for a given area.

(149) As standard protocol, the U.S. Coast Guard reported assigned positions of aids to navigation uses the North American Datum of 1983 (NAD 83). Due to the development of new navigational systems and the retirement of old systems, the World Geodetic System 1984 (WGS 84) has become the preferred standard. In 2020, the U.S. Coast Guard Chief of the Office of Navigation Systems (CG-NAV) announced that all geographic coordinates for aids to navigation assigned positions will be reported using WGS 84.

(150)

Reporting Defects in Aids to Navigation

(151) Promptly notify the nearest Coast Guard District Commander if an aid to navigation is observed to be missing, sunk, capsized, out of position, damaged, extinguished or showing improper characteristics.

(152) **Aids to navigation** in United States waters of the Great Lakes and their connecting waters, except for the St. Lawrence River, are maintained by the U.S. Coast Guard. Local jurisdiction for the region is assigned to the Commander, Ninth Coast Guard District. The Lake Champlain region and the Hudson River are under the jurisdiction of the Commander, First Coast Guard District. (See Appendix A for the addresses.)

(153) It is unlawful to establish or maintain any aid similar to those maintained by the U.S. Coast Guard without first obtaining permission from the Coast Guard District Commander. The licensed officer in command of a vessel which collides with any aid must report the fact promptly to the nearest U.S. Coast Guard Sector.

(154)

Lights

(155) The range of visibility of lights as given in the U.S. Coast Guard Light Lists and as shown on the charts is the **nominal range**, which is the maximum distance at which a light may be seen in clear weather (meteorological visibility of 10 nautical miles) expressed in nautical miles. The Light Lists give the nominal ranges for all U.S. Coast Guard lighted aids except range and directional lights.

(156) **Luminous range** is the maximum distance at which a light may be seen under the existing visibility conditions. By use of the diagram in the Light Lists, luminous range may be determined from the known nominal range, and the existing visibility conditions. Neither the nominal nor the luminous ranges do not take into account elevation, observer's height of eye, or the curvature of the earth.

(157) **Geographic range** is a function of only the curvature of the earth and is determined solely from the heights above sea level of the light and the observer's eye; therefore, to determine the actual geographic range for a height of eye, the geographic range must be corrected by a distance corresponding to the height difference, the distance correction being determined from a table of "distances of visibility for various heights above sea level", found in the United States Coast Guard Light List.

(158) The maximum distances at which lights can be seen may at times be increased by abnormal atmospheric refraction and may be greatly decreased by unfavorable weather conditions such as fog, rain, haze or smoke. All except the most powerful lights are easily obscured by such conditions. In some conditions of the atmosphere white lights may have a reddish hue. During weather conditions which tend to reduce visibility, colored lights are more quickly lost to sight than white lights. Navigational lights should be used with caution because of the following conditions that may exist.

(159) A light may be extinguished and the fact not reported to the Coast Guard for correction, or a light may be located in an isolated area where it will take time to correct.

(160) In regions where ice conditions prevail the lantern panes of unattended lights may become covered with ice or snow, which will greatly reduce the visibility and may also cause colored lights to appear white.

(161) Brilliant shore lights used for advertising and other purposes, particularly those in densely populated areas, make it difficult to identify a navigational light.

(162) At short distances flashing lights may show a faint continuous light between flashes.

(163) The distance of an observer from a light cannot be estimated by its apparent intensity. The characteristics of lights in an area should always be checked in order that powerful lights visible in the distance not be mistaken for nearby lights showing similar characteristics at low intensity such as those on lighted buoys.

(164) The apparent characteristic of a complex light may change with the distance of the observer, due to color and intensity variations among the different lights of the

group. The characteristic as charted and shown in the Light List may not be recognized until nearer the light.

(165) Motion of a vessel in a heavy sea may cause a light to alternately appear and disappear, and thus give a false characteristic.

(166) Where lights have different colored sectors, be guided by the correct bearing of the light; do not rely on being able to accurately observe the point at which the color changes. On either side of the line of demarcation of colored sectors there is always a small arc of uncertain color.

(167) On some bearings from the light, the range of visibility of the light may be reduced by obstructions. In such cases, the obstructed arc might differ with height of eye and distance. When a light is cut off by adjoining land and the arc of visibility is given, the bearing on which the light disappears may vary with the distance of the vessel from which observed and with the height of eye. When the light is cut off by a sloping hill or point of land, the light may be seen over a wider arc by a ship far off than by one closer.

(168) Arcs of circles drawn on charts around a light are not intended to give information as to the distance at which it can be seen, but solely to indicate, in the case of lights which do not show equally in all directions, the bearings between which the variation of visibility or obscuration of the light occurs.

(169) Lights of equal candlepower but of different colors may be seen at different distances. This fact should be considered not only in predicting the distance at which a light can be seen, but also in identifying it.

(170) Lights should not be passed close aboard, because in many cases riprap mounds are maintained to protect the structure against ice damage and scouring action.

(171) Many prominent towers, tanks, smokestacks, buildings and other similar structures, charted as landmarks, display flashing and/or fixed red aircraft obstruction lights. Lights shown from landmarks are charted only when they have distinctive characteristics to enable the mariner to positively identify the location of the charted structure.

(172)

Articulated Lights

(173) An articulated light is a vertical pipe structure supported by a submerged buoyancy chamber and attached by a universal coupling to a weighted sinker on the seafloor. The light, allowed to move about by the universal coupling, is not as precise as a fixed aid. However, it has a much smaller watch circle than a conventional buoy, because the buoyancy chamber tends to force the pipe back to a vertical position when it heels over under the effects of wind, wave or current.

(174) Articulated lights are primarily designed to mark narrow channels with greater precision than conventional buoys.

(175)

Daybeacons

(176) Daybeacons are unlighted aids affixed to stationary structures. They are marked with dayboards for daytime identification. The dayboards aid navigation by presenting one of several standard shapes and colors which have navigational significance. Dayboards are sometimes referred to as daymarks.

(177) Daybeacons are found on-shore and in shallow water. They are frequently used to mark channel edges.

(178)

Articulated Daybeacons

(179) Articulated daybeacons are similar to articulated lights, described above, except they are unlighted.

(180)

Buoys

(181) The aids to navigation depicted on charts comprise a system consisting of fixed and floating aids with varying degrees of reliability. Therefore, prudent mariners will not rely solely on any single aid to navigation, particularly a floating aid.

(182) The approximate position of a buoy is represented by the dot or circle associated with the buoy symbol. The approximate position is used because of practical limitations in positioning and maintaining buoys and their sinkers in precise geographical locations. These limitations include, but are not limited to, inherent imprecisions in position fixing methods, prevailing atmospheric and sea conditions, the slope of and the material making up the seabed, the fact that buoys are moored to sinkers by varying lengths of chain and the fact that buoy body and/or sinker positions are not under continuous surveillance, but are normally checked only during periodic maintenance visits which often occur more than a year apart. The position of the buoy body can be expected to shift inside and outside of the charting symbol due to the forces of nature. The mariner is also cautioned that buoys are liable to be carried away, shifted, capsized, sunk, etc. Lighted buoys may be extinguished or sound signals may not function as a result of ice, running ice or other natural causes, collisions or other accidents.

(183) For the foregoing reasons, a prudent mariner must not rely completely upon the charted position or operation of floating aids to navigation but will also utilize bearings from fixed objects and aids to navigation on shore. Further, a vessel attempting to pass close aboard always risks collision with a yawing buoy or with the obstruction the buoy marks.

(184) Buoys may not always properly mark shoals or other obstructions due to shifting of the shoals or of the buoys. Buoys marking wrecks or other obstructions are usually placed on the seaward or channelward side and not directly over a wreck. Since buoys may be located some distance from a wreck they are intended to mark, and since sunken wrecks are not always static, extreme caution should be exercised when operating in the vicinity of such buoys.

(185)

Automatic Identification System (AIS) Aids to Navigation

(186) AIS is an automatic communication and identification system intended to improve the safety of navigation by assisting the efficient operation of a Vessel Traffic Services (VTS), ship reporting, ship-to-ship and ship-to-shore operations. AIS is increasingly being used as an aid to navigation. An AIS-equipped aid to navigation may provide a positive identification of the aid. It may also have the capability to transmit an accurate position and provide additional information such as actual tide height and/or weather information.

(187) The AIS message may represent an aid to navigation that physically exists (physical AIS Aid to Navigation) or the message, transmitted from a remote location, may represent an aid to navigation that does not physically exist (virtual AIS Aid to Navigation). A virtual aid to navigation is a digital information object promulgated by an authorized service provider that can be presented on navigational systems.

(188) Physical AIS aids to navigation are charted with the symbol for the physical aid (such as a buoy or light) with a magenta circle surrounding the symbol and labeled AIS. Virtual aids to navigation are charted with a small central dot with a topmark symbol indicating the purpose of the aid, surrounded by a magenta circle and labeled V-AIS. Temporary AIS aids to navigation and stations remotely transmitting an AIS signal are not charted. See U.S. Chart No. 1, Section S, for additional information and examples.

(189)

Examples of Charted AIS Aids to Navigation

Physical AIS Aid to Navigation — Virtual AIS Aid to Navigation

(190)

Bridge Lights and Clearance Gages

(191) The Coast Guard regulates marine obstruction lights and clearance gages on bridges across navigable waters. Where installed, clearance gages are generally vertical numerical scales, reading from top to bottom, and show the actual vertical clearance between the existing water level and the lowest point of the bridge over the channel; the gages are normally on the right-hand pier or abutment of the bridge, on both the upstream and downstream sides.

(192) Bridge lights are fixed red or green and are privately maintained; they are generally not charted or described in the text of the Coast Pilot. All bridge piers (and their protective fenders) and abutments that are in or adjacent to a navigation channel are marked on all channel sides by red lights. On each channel span of a fixed bridge, there is a range of two green lights marking the center of the channel and a red light marking both edges of the channel, except that when the margins of the channel are confined by bridge piers, the red lights on the span are omitted, since the pier lights then mark the channel edges. For multiplespan fixed bridges, the main-channel span may also be marked by three white lights in a vertical line above the green range lights.

(193) On all types of drawbridges, one or more red lights are shown from the drawspan (higher than the pier lights) when the span is closed; when the span is open, the higher red lights are obscured and one or two green lights are shown from the drawspan, higher than the pier lights. The number and location of the red and green lights depend upon the type of drawbridge.

(194) Bridges and their lighting, construction and maintenance are set forth in **33 CFR 114**, **115**, **116**, and **118** (not carried in this Coast Pilot). Aircraft obstruction lights prescribed by the Federal Aviation Administration may operate at certain bridges.

(195)

Sound Signals

(196) Caution should be exercised in the use of sound signals for navigation purposes. They should be considered solely as warning devices.

(197) Sound travels through the air in a variable manner, even without the effects of wind, and, therefore the hearing of sound signals cannot be implicitly relied upon.

(198) Experience indicates that distances must not be judged only by the intensity of the sound; that occasionally there may be areas close to a sound signal in which it is not heard; and that fog may exist not far from a station, yet not be seen from it, so the signal may not be operating. It is not always possible to start a sound signal immediately when fog is observed.

(199)

Channel Markers

(200) Lights, daybeacons, and buoys along dredged channels do not always mark the bottom edges. Due to local conditions, aids may be located inside or outside the channel limits shown by dashed lines on a chart. The Light List tabulates the offset distances for these aids in many instances.

(201) Aids may be moved, discontinued or replaced by other types to facilitate dredging operations. Mariners should exercise caution when navigating areas where dredges with auxiliary equipment are working.

(202) Temporary changes in aids are not included on the charts.

(203)

Light Lists

(204) The Coast Guard Light Lists are a means for communicating aids to navigation information to the maritime public. They are updated weekly and available for download on the United States Coast Guard Navigation Center's website at *www.navcen.uscg.gov*. Mariners should refer to these lists for detailed

information regarding the characteristics and visibility of lights, and the description of light structures, buoys, sound signals and electronic aids.

(205)

ELECTRONIC POSITIONING SYSTEMS

(206) **Global Positioning System (GPS)** permits land, sea, and airborne users to determine their three-dimensional position, velocity and time 24 hours a day, in all weather, anywhere in the world. The basic system is defined as a constellation of satellites, the navigation payloads which produce the GPS signals, ground stations, data links and associated command and control facilities, that are operated and maintained by the Department of Defense. Please report GPS problems or anomalies at *navcen.uscg.gov* or contact the USCG Navigation Information Service at 703–313–5900.

(207)

LORAN-C

(208) LORAN, an acronym for LOng RAnge Navigation, was an electronic aid to navigation consisting of shore-based radio transmitters. In accordance with the Department of Homeland Security Appropriations Act, the U.S. Coast Guard terminated the transmission of all LORAN-C signals as of August 2010, rendering them unusable and permanently discontinued. For more details, visit *navcen.uscg.gov*. The Coast Guard strongly urges mariners accustomed to using LORAN-C for navigation to shift to a GPS navigation system and become familiar with its operation. NOAA is removing LORAN-C lines of position from all of its charts as new editions are published.

(209)

SEARCH AND RESCUE

(210)

Coast Guard Search and Rescue

(211) The Coast Guard conducts and/or coordinates search and rescue operations for surface vessels or aircraft that are in distress or overdue. Search and rescue vessels and aircraft have special markings, including a wide slash of red-orange and a small slash of blue on the forward portion of the hull or fuselage. Other parts of aircraft, normally painted white, may have other areas painted red to facilitate observation. The cooperation of vessel operators with Coast Guard helicopters, fixed-wing aircraft, and vessels may mean the difference between life and death for some seaman or aviator; such cooperation is greatly facilitated by the prior knowledge on the part of vessel operators of the operational requirements of Coast Guard equipment and personnel, of the international distress signals and procedures and of good seamanship.

(212)

Search and Rescue Great Lakes

(213) The United States Coast Guard has established a toll-free search and rescue telephone number for the Great Lakes. The number is intended for use when the telephone number of the nearest Coast Guard station is unknown or when that station cannot be contacted. The toll-free number should not be used without first attempting to contact the nearest Coast Guard station. In all Great Lakes States the telephone number is 800-321-4400. This number is to be used for public reports of distress incidents, suspicious sightings, pollution or other maritime concerns.

(214)

Radiotelephone Distress Message

(215) Distress calls indicate a vessel or aircraft is threatened by grave and imminent danger and requests immediate assistance. They have absolute priority over all other transmissions. All stations which hear a distress call must immediately cease any transmission capable of interfering with the distress traffic and continue to listen on the frequency used for the emission of the distress call. This call should not be addressed to a particular station, and acknowledgment of receipt should not be given before the distress message which follows it is sent.

(216) Distress calls are made on VHF-FM channel 16 (MAYDAY). For less serious situations than warrant the distress procedure, the radiotelephone urgency signal consisting of three repetitions of the word PAN-PAN (pronounced PAWN-PAWN), or the safety signal SECURITE (pronounced SECURITAY) spoken three times, are used as appropriate. For complete information on emergency radio procedures, see **47 CFR 80** or **Radio Navigational Aids, Pub. 117**.

(217)

Global Maritime Distress and Safety System (GMDSS)

(218) This international system, developed by the International Maritime Organization (IMO), is based on a combination of satellite and terrestrial radio services and has changed international distress communications from being primarily ship-to-ship based to primarily ship-to-shore (Rescue Coordination Center) based. Prior to the GMDSS, the number and types of radio safety equipment required to be carried by vessels depended upon the tonnage. Under GMDSS, the number and type of radio safety equipment vessels are required to carry depend on the areas in which they travel; GMDSS sea areas are defined by governments. All GMDSS-regulated ships must carry a satellite Emergency Position Indicating Radio Beacon (EPIRB), a NAVTEX receiver (if they travel in any areas served by NAVTEX), an Inmarsat-C SafetyNET receiver (if they travel in any areas not served by NAVTEX), a DSC-equipped VHF radiotelephone, two or more VHF handhelds and a search and rescue radar transponder (SART).

(219)

Automated Mutual Assistance Vessel Rescue System (AMVER)

(220) AMVER is a worldwide voluntary ship reporting system operated by the United States Coast Guard to

promote safety of life and property at sea. AMVER's mission is to quickly provide search and rescue (SAR) authorities, on demand, accurate information on the positions and characteristics of vessels near a reported distress. Any merchant vessel anywhere on the globe, on a voyage of greater than 24 hours duration, is welcome in the AMVER system and family. International participation is voluntary regardless of the vessel's flag of registry, the nationality of the owner or company or ports of call.

(221) According to U.S. Maritime Administration (MARAD) regulations, U.S. flag merchant vessels of 1,000 gross tons or more operating in foreign commerce and foreign flag vessels of 1,000 gross tons or more for which an Interim War Risk Insurance Binder has been issued under the provisions of Title XII, Merchant Marine Act, 1936, must report and regularly update their voyages and positions to AMVER in accordance with instructions set forth in the AMVER Ship Reporting System Manual. For more information contact AMVER Maritime Relations U.S. Coast Guard, 1 South Street Battery Park Building, New York, NY 10004; Phone: 212–668–7764, Fax: 212-668-7684, Telex: 127594-AMVER NYK, or go to *amver.com*.

(222)

COSPAS-SARSAT

(223) COSPAS: Space System for Search of Distress Vessels - SARSAT: Search and Rescue Satellite-Aided Tracking. COSPAS-SARSAT is an international satellite system designed to provide distress alert and location data to assist search and rescue operations using satellites and ground facilities to detect and locate the signals of distress beacons operating on 406 MHz. For more information on the Cospas-Sarsat System go to *cospas-sarsat.int*.

(224)

Digital Selective Calling (DSC)

(225) The U.S. Coast Guard offers VHF and MF/HF radiotelephone service to mariners as part of the Global Maritime Distress and Safety System. This service, called digital selective calling (DSC), allows mariners to instantly send an automatically formatted distress alert to the Coast Guard or other rescue authority anywhere in the world. Digital selective calling also allows mariners to initiate or receive distress, urgency, safety and routine radiotelephone calls to or from any similarly equipped vessel or shore station, without requiring either party to be near a radio loudspeaker. Each ship or shore station equipped with a DSC terminal has a unique Maritime Mobile Station Identity (MMSI). This is a nine-digit number that specifically identifies a ship, coast station, or group of stations. The DSC system alerts an operator when a distress call is received. It will provide the operator with a pre-formatted message that can include the distressed vessel's nine-digit MMSI, location, nature of distress, desired mode of communication and preferred working frequency.

(226)

Emergency Position Indicating Radiobeacons (EPIRB)

(227) EPIRBs emit a radio signal that can be used to locate mariners in distress. SARSAT satellites can locate the position of a 406 MHz EPIRB which greatly increases a mariner's chances of survival. While orbiting the earth, the satellites continuously monitor EPIRB frequencies. When SARSAT receives an EPIRB signal, it determines the beacon's position that is ultimately relayed to the nearest Coast Guard Rescue Coordination Center where rescue units are dispatched to the scene.

(228) Mariners should ensure that their EPIRB is in working condition and stowed properly at all times to avoid non-distress emissions. Mariners are required to register their 406 MHz EPIRBs for improved search and rescue response and keep the registration current at all times. Registration can be accomplished online at *beaconregistration.noaa.gov*.

(229)

EPIRB Types

Type	Frequency	Description
Cat I	406 MHz	Float-free, automatically activated EPIRB. Detectable by satellite anywhere in the world. Recognized by the Global Maritime and Distress Safety System (GMDSS).
Cat II	406 MHz	Similar to Category I, except is manually activated. Some models are also water activated.

(230)

Medical Advice

(231) Ships at sea with no medical personnel embarked and experiencing a medical emergency onboard can receive medical advice via radiotelex, radiotelephony or Inmarsat. Messages are generally addressed RADIOMEDICAL followed by the name of the coast station to which the message is sent. The priority of the message should depend on the severity of the ailment. In extreme emergency, the urgency signal (PAN-PAN) should precede the address. Messages are sent using distress and safety frequencies.

(232)

Vessel Identification

(233) Coast Guard search and rescue aircraft and surface craft use radar to assist in locating disabled vessels. Wooden and fiberglass vessels are often poor radar targets. Operators of disabled craft that are the object of a search are requested to hoist, as high above the waterline as possible, a radar-reflecting device. If no special radar-reflecting device is aboard, an improvised device can be used. This should consist of metallic objects of irregular shape. The more irregular the shape, the better will be the radar-reflective quality. For quick identification at night, shine spotlights straight up. If aircraft are involved, once you are identified, turn lights away so as not to blind aircraft crew.

(241)

U.S. VHF Channels

Channel	Ship Frequency (MHz) Transmit	Receive	Channel Usage
01A	156.050	156.050	Port Operations and Commercial, VTS (Available only in New Orleans/Lower Mississippi area)
05A	156.250	156.250	Port Operations or VTS in the Houston, New Orleans and Seattle areas
06	156.300	156.300	Intership Safety
07A	156.350	156.350	Commercial
08	156.400	156.400	Commercial (Intership only)
09	156.450	156.450	Boater Calling; Commercial and Non-commercial
10	156.500	156.500	Commercial
11	156.550	156.550	Commercial; VTS in selected areas
12	156.600	156.600	Port Operations; VTS in selected areas
13	156.650	156.650	Intership Navigation Safety (bridge-to-bridge) Ships greater than 20m maintain a listening watch on this channel in US waters.
14	156.700	156.700	Port Operations; VTS in selected areas
15	–	156.750	Environmental (Receive only) Used by Class C EPIRBs
16	156.800	156.800	International Distress, Safety and Calling. Ships required to carry radio, USCG, and most coast stations maintain a listening watch on this channel.
17	156.850	156.850	State and local government maritime control
18A	156.900	156.900	Commercial
19A	156.950	156.950	Commercial
20	157.000	161.600	Port Operations (duplex)
20A	157.000	157.000	Port Operations
21A	157.050	157.050	U.S. Coast Guard only
22A	157.100	157.100	Coast Guard Liaison and Maritime Safety Information Broadcasts (Broadcasts announced on channel 16)
23A	157.150	157.150	U.S. Coast Guard only
24	157.200	161.800	Public Correspondence (Marine Operator)
25	157.250	161.850	Public Correspondence (Marine Operator)
26	157.300	161.900	Public Correspondence (Marine Operator)
27	157.350	161.950	Public Correspondence (Marine Operator)
28	157.400	162.000	Public Correspondence (Marine Operator)
63A	156.175	156.175	Port Operations and Commercial, VTS (Available only in New Orleans/Lower Mississippi area)
65A	156.275	156.275	Port Operations
66A	156.325	156.325	Port Operations
67	156.375	156.375	Commercial. Used for bridge-to-bridge communications in lower Mississippi River (Intership only.)
68	156.425	156.425	Non-Commercial
69	156.475	156.475	Non-Commercial
70	156.525	156.525	Digital Selective Calling (voice communications not allowed)
71	156.575	156.575	Non-Commercial
72	156.625	156.625	Non-Commercial (Intership only)
73	156.675	156.675	Port Operations
74	156.725	156.725	Port Operations
77	156.875	156.875	Port Operations (Intership only)
78A	156.925	156.925	Non-Commercial
79A	156.975	156.975	Commercial (Non-commercial in Great Lakes only)
80A	157.025	157.025	Commercial (Non-commercial in Great Lakes only)
81A	157.075	157.075	U.S. Government only (environmental protection operations)
82A	157.125	157.125	U.S. Government only
83A	157.175	157.175	U.S. Coast Guard only
84	157.225	161.825	Public Correspondence (Marine Operator)
85	157.275	161.875	Public Correspondence (Marine Operator)
86	157.325	161.925	Public Correspondence (Marine Operator)
87	157.375	157.375	Public Correspondence (Marine Operator)
88A	157.425	157.425	Commercial (Intership only)
AIS 1	161.975	161.975	Automatic Identification System (AIS)
AIS 2	162.025	162.025	Automatic Identification System (AIS)

Boaters should normally use channels listed as Non-Commercial. Channel 16 is used for calling other stations or for distress alerting. Channel 13 should be used to contact a ship when there is danger of collision. All ships of length 20m or greater are required to guard VHF-FM channel 13, in addition to VHF-FM channel 16, when operating within U.S. territorial waters.

Note that the letter “A” indicates simplex use of the ship station transmit side of an international duplex channel, and that operations are different than international operations on that channel. Some VHF transceivers are equipped with an *International - U.S.* switch for that purpose. “A” channels are generally only used in the United States, and use is normally not recognized or allowed outside the U.S. The letter “B” indicates simplex use of the coast station transmit side of an international duplex channel. The U.S. does not currently use “B” channels for simplex communications in this band.

(247)

(234)

Float Plan

(235) Small craft operators should prepare a float plan before starting a trip and leave it ashore with a yacht club, marina, friend or relative. It is advisable to regularly use a checking-in procedure by radio or telephone for each point specified in the float plan. A float plan is vital for determining if a boat is overdue and will assist in locating a missing vessel in the event search and rescue operations become necessary.

(236)

NAVIGATIONAL WARNINGS, INFORMATION AND WEATHER

(237) Marine radio warnings and weather are disseminated by many sources and through several types of transmissions. For complete information on radio warnings and weather, see **Radio Navigational Aids, Pub. 117** and the National Weather Service (NWS) publication **Worldwide Marine Radiofacsimile Broadcast Schedules**.

(238) Radio navigational warning broadcasts are designed to provide the mariner with up-to-date marine information vital to safe navigation. There are three types of broadcasts: coastal and local, long range and worldwide.

(239) Coastal and local warnings are generally restricted to ports, harbors and coastal waters and involve items of local interest. Usually, local or short-range warnings are broadcast from a single coastal station, frequently by voice and also radiotelegraph, to assist small craft operators in the area. The information is often quite detailed. Foreign area broadcasts are frequently in English as well as the native language. In the United States, short-range radio navigational warnings are broadcast by the U.S. Coast Guard Districts via NAVTEX and subordinate coastal radio stations.

(240) Long range warnings are intended primarily to assist mariners on the high seas by promulgating navigational safety information concerning port and harbor approaches, coastlines and major ocean areas. Long-range radio navigational warnings are usually broadcast by means of radiotelegraphy and in many instances by radio-teletypewriter. A NAVAREA system of navigational warning areas has been developed providing worldwide coverage using standard format and procedures. The U.S. participates as Area Coordinator for both NAVAREA IV (Western North Atlantic) and NAVAREA XII (Eastern North Pacific).

(258)

Standard Abbreviations Used in Broadcasts

Aids to Navigation

AERO RBN — Aeronautical Radiobeacon
ART DBN — Articulated Daybeacon
ART LT — Articulated Light
DESTR — Destroyed
DISCONTD — Discontinued
ESTAB — Established
ELB — Exposed Location Buoy
FOG SIG — Fog Signal Station
LNB — Large Navigation Buoy
LT — Light
LLNR — Light List Number
LBB — Lighted Bell Buoy
LB — Lighted Buoy
LGB — Lighted Gong Buoy
LHB — Lighted Horn Buoy
LWB — Lighted Whistle Buoy
ODAS — Ocean Data Acquisition System
PRIV MAINTD — Privately Maintained
RACON — Radar Beacon
RA REF — Radar Reflector
TRUB — Temporarily Replaced by Unlighted Buoy
TRLB — Temporarily Replaced by Lighted Buoy
WHIS — Whistle

Light Characteristics

AL — Alternating
CHAR — Characteristic
FL(2+1) — Composite Group-Flashing
OC(2+1) — Composite Group-Occulting
Q — Continuous Quick-Flashing
FFL — Fixed and Flashing
F — Fixed
FL(3) — Group-Flashing
OC(2) — Group-Occulting
IQ — Interrupted Quick-Flashing
ISO — Isophase
MO(A) — Morse Code
OC — Occulting
FL — Single-Flashing

Colors (Color refers to light characteristics of Aids to Navigation only)

B — Black
BU — Blue
G — Green
OR — Orange
R — Red
W — White
Y — Yellow

Organizations

CCGD(#) — Commander, Coast Guard District (#)
CG — Coast Guard
COE — Corps of Engineers
NGA — National Geospatial-Intelligence Agency
NOS — National Ocean Service
NWS — National Weather Service

Vessels

A/C — Aircraft
F/V — Fishing Vessel
LNG — Liquified Natural Gas Carrier
M/V — Motor Vessel*
P/C — Pleasure Craft
R/V — Research Vessel
S/V — Sailing Vessel

* M/V includes: Steam Ship, Container Vessel, Cargo Vessel, etc.

Compass Directions

N — North
S — South
E — East
W — West
NE — Northeast
NW — Northwest
SE — Southeast
SW — Southwest

Various

ANCH — Anchorage
ANCH PROHIB — Anchorage Prohibited
APPROX — Approximate
ATLC — Atlantic
AUTH — Authorized
AVG — Average
BRG — Bearing
BKW — Breakwater
BNM — Broadcast Notice to Mariners
CHAN — Channel
CFR — Code of Federal Regulations
CONT — Continue
DEG — Degrees (temp, geo-position)
DIA — Diameter
ED — Edition
EFF — Effect/Effective
ENTR — Entrance
EXPLOS ANCH — Explosive Anchorage
FM(S) — Fathoms
FT — Foot/Feet
HBR — Harbor
HT — Height
HZ — Hertz
HOR CL — Horizontal Clearance
HR — Hour
COLREGS — International Regulations for Preventing Collisions at Sea
KHZ — Kilohertz
KM — Kilometer
KT(S) — Knot(s)
LAT — Latitude
LNM — Local Notice to Mariners
LONG — Longitude
MAINTD — Maintained
MAX — Maximum
MHZ — Megahertz
MB — Millibar
MM — Millimeter
MIN — Minute (time, geo position)
MOD — Moderate
MT —Mountain, Mount
NM — Nautical Mile(s)
NTM — Notice to Mariners
OBSTR — Obstruction
OCCASION — Occasion/Occasionally
OPAREA — Operating Area
PAC — Pacific
PT(S) — Point(s)
POS — Position
PA —Position Approximate
PRES — Pressure
PRIV — Private/Privately
PROHIB — Prohibited
PUB — Publication
RGE — Range
REP — Reported
RESTR — Restricted
RK — Rock
ST — Saint
SEC — Second (time, geo position)
SIG STA — Signal Station
STA — Station
SM — Statute Mile(s)
S SIG STA — Storm Signal Station
TEMP — Temporary
TSTORM — Thunderstorm
THRU — Through
T — True
UNCOV — Uncovers
UTC — Universal Coordinate Time
UMIB — Urgent Marine Information Broadcast
VEL — Velocity
VERT CL — Vertical Clearance
VIS — Visibility
YD — Yard(s)
WARN — Warning
WX — Weather
WK — Wreck

(242) The United States also maintains worldwide coverage using the HYDROLANT/HYDROPAC Navigational Warning System outside of NAVAREAs IV and XII.

(243)

NAVTEX

(244) NAVTEX is a standard international method of broadcasting notices to mariners and marine weather forecasts using small, low cost receivers designed to be installed in the pilothouse of a vessel. NAVTEX receivers screen incoming messages, inhibiting those which had been previously received or are of a category not of interest to the user, and print the rest on adding machine-size paper. NAVTEX not only provides marine information previously available only to those knowledgeable in Morse code but also allows any mariner who cannot man a radio full time to receive safety information at any hour. All NAVTEX transmissions are made on 518 kHz. Mariners who do not have NAVTEX receivers but have Simplex Teletype Over Radio (SITOR) radio equipment can also receive these broadcasts by operating it in the Forward Error Correction (FEC) mode and tuning to 518 kHz.

(245) Information broadcast over NAVTEX includes offshore weather forecasts, offshore marine advisory warnings, search and rescue information and navigational information that applies to waters from the line of demarcation (separating Inland Rules from COLREG Rule waters) to 200 miles offshore. Navigational information that affects the safety of navigation of deep draft (15 feet or more) vessels within the U.S. Inland Rules waters will also be included. Gulf Stream location is also included from Miami and Portsmouth. Coastal and high seas weather forecasts are not being broadcast over NAVTEX. The Safety of Life at Sea Convention, as amended in 1988, requires vessels regulated by that convention to carry NAVTEX receivers.

(246) See Appendix A, U.S. NAVTEX Transmitting Stations, for a list of NAVTEX broadcast stations and message content covered by this Coast Pilot.

(248)

Broadcast Notice to Mariners

(249) The U.S. Coast Guard broadcasts marine safety information on VHF-FM channel 22A (157.1 MHz). These safety broadcasts contain information such as notices to mariners, storm warnings, distress warnings and other pertinent information that is vital for safe navigation. Following a preliminary call on VHF-FM channel 16 (156.8 MHz), mariners are instructed to shift to VHF-FM channel 22A simplex (157.1 MHz). Operators of vessels who plan to transit U.S. waters and who do not have VHF radios tunable to U.S. channel 22A are urged to obtain the necessary equipment.

(250)

NOAA Weather Radio Broadcasts

(251) NOAA Weather Radio provides continuous broadcasts of the latest weather information directly from (NWS) offices. In addition to general weather information, marine weather is provided by stations along the sea coasts and the Great Lakes. During severe weather, NWS forecasters can interrupt the regular broadcasts and substitute special warning messages. The stations operate 24 hours daily, and messages are repeated every 4 to 6 minutes and are routinely revised every 1 to 3 hours or more frequently if necessary. The broadcasts are made on seven VHF-FM frequencies, 162.40 to 162.55 MHz. The 162.475 MHz frequency is only used in special cases where needed to avoid channel interference. They can usually be heard as far as 40 miles from the antenna site, sometimes more. The effective range depends on many factors, including the height of the broadcast antenna, terrain, quality of the receiver and the type of receiving antenna. As a general rule, listeners close to or perhaps beyond the 40 mile range should have a good quality receiver system to get reliable reception. (See Appendix A for a list of these stations in the area covered by this Coast Pilot.)

(252)

Commercial Maritime Coast Stations and Weather Nets

(253) Commercial maritime coast stations, which provide communications services, broadcast weather information to ships at sea as a public service, or make forecast information available on demand, either free or for a nominal fee. These transmissions are most commonly performed using HF SITOR and Pactor/E-Mail; however, several of these stations also offer services via Inmarsat satellite and other means.

(254) There are also a number of maritime weather *nets* operating on commercial marine VHF, MF and HF, where weather information is exchanged. These *nets* are extremely popular in areas of the world that have a large yachting population and where weather is dynamic, such as in the Caribbean, and typically incorporate volunteers ashore.

(255) Information on commercial maritime coast stations, including schedules and frequencies, is available in the **Radio Navigational Aids, Pub. 117**.

(256)

Standard Abbreviations for Broadcasts

(257) A listing of Standard Abbreviations for Textual Maritime Safety Broadcasts can be found in this chapter. These abbreviations were jointly approved by the U.S. Coast Guard, National Weather Service, National Geospatial-Intelligence Agency and the Radio Technical Commission for Maritime Services. In addition to appearing in radio broadcasts of the U.S. Coast Guard and National Weather Service, they appear in Notices to Mariners of the U.S. Coast Guard and National Geospatial-Intelligence Agency and in NAVTEX.

(259)

Voluntary Observing Ship Program (VOS)

(260) The Voluntary Observing Ship program is organized for the purpose of obtaining weather and oceanographic

observations from moving ships. An international program under World Meteorological Organization auspices, the VOS has over 5000 vessels participating from 23 countries. Any vessel willing to take and transmit observations in marine areas can join the program. Weather observations are essential to meteorologists preparing weather forecasts for coastal, offshore and high seas areas. For more information on the VOS, including a comprehensive observing handbook, visit *vos.noaa.gov*.

(261)

National Institute of Standards and Technology (NIST)

(262) The National Institute of Standards and Technology maintains the standards for time and frequency for most users in the United States. NIST provides a variety of services designed to deliver time and frequency signals to the people who need them. The signals are broadcast via several mediums, including high and low frequency radio, the Internet and telephone lines. Broadcasts of time and frequency signals are made by stations operating in the part of the radio spectrum that is properly known as high frequency (HF) but is commonly called shortwave. Station WWV is located just north of Fort Collins, Colorado, and station WWVH is located on the island of Kaua‘i, Hawaii. Both stations broadcast continuous time and frequency signals on 2.5, 5, 10 and 15 MHz; WWV also broadcasts on 20 MHz.

(263) **NIST Time and Frequency Services, Special Publication 432** gives a detailed description of the signals and services offered by NIST, how they work and how you can use them. The publication is available for download at *nist.gov/pml/div688/generalpubs.cfm*.

(264)

CAUTIONARY INFORMATION

(265)

Hurricanes and Tropical Storms

(266) 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. Fixed aids to navigation may have been damaged or destroyed. Buoys may have been moved from charted positions, damaged, sunk, extinguished or otherwise made inoperative. Mariners should not rely upon the position or operation of an aid to navigation. Charted soundings, channel depths and shoreline may not reflect actual conditions following these storms. 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 U.S. Coast Guard.

(267)

Destructive Waves

(268) Unusual sudden changes in water level can be caused by tsunamis or violent storms. These two types of destructive waves have become commonly known as **tidal waves,** a name which is technically incorrect as they are not the result of tide-producing forces.

(269) **Tsunamis** (seismic sea waves) are ocean waves generated by any rapid large-scale disturbance of the sea water. Most tsunamis are generated by earthquakes, but they may also be caused by volcanic eruptions, landslides, undersea slumps or meteor impacts.

(270) The waves radiate outward in all directions from the disturbance and can propagate across entire ocean basins. Tsunami waves are distinguished from ordinary ocean waves by their great length between peaks, often exceeding 100 miles in the deep ocean, and by the long interval of time between these peaks, ranging from five minutes to an hour. The speed at which tsunamis travel depends on the ocean depth. A tsunami can exceed 500 knots in the deep ocean but slows to 20 or 30 knots in the shallow water near land. In less than 24 hours, a tsunami can cross the entire Pacific Ocean.

(271) In the deep ocean, a tsunami is barely noticeable and will only cause a small and slow rising and falling of the sea surface as it passes. Only as it approaches land does a tsunami become a hazard. As the tsunami approaches land and shallow water, the waves slow down and become compressed, causing them to grow in height. In the best of cases, the tsunami comes onshore like a quickly rising tide and causes a gentle flooding of low-lying coastal areas. In the worst of cases, a bore will form.

(272) A bore is a wall of turbulent water that can exceed several yards in height and can rush onshore with great destructive power. Behind the bore is a deep and fast-moving flood that can pick up and sweep away almost anything in its path. Minutes later, the water will drain away as the trough of the tsunami wave arrives, sometimes exposing great patches of the sea floor, then the water will rush in again as before, causing additional damage. This destructive cycle may repeat many times before the hazard finally passes. Sometimes the first noticeable part of the wave is the trough, which causes a recession of the water from shore, and people who have gone out to investigate this unusual exposure of the beach have been engulfed by the oncoming crest. Such an unexplained withdrawal of the sea should be considered as nature’s warning of an approaching wave.

(273) Tsunamis do not have a season and do not occur regularly or frequently. Yet they pose a major threat to the coastal populations of the Pacific and other world oceans and seas. Nothing can be done to prevent them, but their adverse impact can be reduced with proper planning. The loss of life and property can be lessened if shipmasters and others acquaint themselves with the behavior of these waves so that intelligent action can be taken when they become imminent.

(274) NOAA oversees the U.S. Tsunami Program with its mission to provide a 24-hour detection and warning system and increase public awareness about the threat of tsunamis. The NOAA National Weather Service operates two tsunami warning centers The West Coast/Alaska Tsunami Warning Center in Palmer, Alaska, and the Richard H. Hagemeyer Pacific Tsunami Warning Center in 'Ewa Beach, Hawaii: *www.tsunami.gov*. These centers continuously monitor data from seismological and tidal stations, evaluate earthquakes that have the potential to generate tsunamis and disseminate tsunami information and warning bulletins to government authorities and the public.

(275) A tsunami warning is issued when a potential tsunami with significant inundation is imminent or expected. Warnings alert the public that widespread, dangerous coastal flooding accompanied by powerful currents is possible and may continue for several hours after arrival of the initial wave. Warnings also alert emergency management officials to take action for the entire tsunami hazard zone. When a tsunami warning has been issued, use a NOAA Weather Radio or stay tuned to a Coast Guard emergency frequency station or a local radio or television station for updated emergency information.

(276)

Storm Surge

(277) A considerable rise or fall in the level of the sea along a particular coast may result from strong winds and sharp change in barometric pressure. In cases where the water level is raised, higher waves can form with greater dept,h and the combination can be destructive to low regions, particularly at high stages of tide. Extreme low levels can result in depths which are considerably less than those shown on nautical charts. This type of wave occurs especially in coastal regions bordering on shallow waters which are subject to tropical storms.

(278) **Seiche** is a stationary vertical wave oscillation with a period varying from a few minutes to an hour or more but somewhat less than the tidal periods. It is usually attributed to external forces such as strong winds, changes in barometric pressure, swells or tsunamis disturbing the equilibrium of the water surface. Seiche is found both in enclosed bodies of water and superimposed upon the tides of the open ocean. When the external forces cause a short-period horizontal oscillation on the water, it is called **surge**.

(279) The combined effect of seiche and surge sometimes makes it difficult to maintain a ship in its position alongside a pier even though the water may appear to be completely undisturbed, and heavy mooring lines have been parted repeatedly under such conditions. Pilots advise taut lines to reduce the effect of the surge.

(280)

Immersion Hypothermia

(281) Immersion hypothermia is the loss of heat when a body is immersed in water. With few exceptions, humans die if their core temperature of approximately 99.7° F drops below 78.6° F. Cardiac arrest is the most common direct cause of death. During prolonged immersion, the main threat to life is cold or cold and drowning combined.

(282)

SURVIVAL TIME VERSUS WATER TEMPERATURE

Water Temperature (°F)	Exhaustion or Unconsciousness	Expected Time of Survival
32	15 minutes	15 to 45 minutes
32 to 41	15-30 minutes	30 to 90 minutes
41 to 50	30-60 minutes	1 to 3 hours
50 to 59	1-2 hours	1 to 6 hours
59 to 68	2-7 hours	2 to 40 hours
68 to 77	3-12 hours	3 hours to indefinite
77 and above	indefinite	indefinite

(283) The length of time that a human survives in water depends on the water temperature and to a lesser extent on the person's behavior and body type. The table shows approximate human survival time in the sea. Body type can cause deviations, as small people become hypothermic more rapidly than large people. The cooling rate can be slowed by the person's behavior and insulated gear. The Heat Escape Lessening Posture (HELP) was developed for those in the water alone and the huddle for small groups. Both require a PFD (personal flotation device), or life preserver. HELP involves holding the arms close to the body, keeping the thighs together, and raising the knees to protect the groin area. In the huddle, people face each other and keep their bodies as close together as possible. These positions improve survival time to approximately two times that of a swimmer and one and a half times that of a person in the passive position.

(284) Near-drowning victims in cold water (less than 70° F) are revivable for much longer periods than usual. Keys to a successful revival are immediate cardiopulmonary resuscitation (CPR) and administration of pure oxygen. Total re-warming is not necessary at first. The whole revival process may take hours and require medical help.

(285)

Wind Chill and Frostbite

(286) When the body is warmer than its surroundings, it begins to lose heat. The rate of loss depends on barriers such as clothing and insulation, the speed of air movement and air temperature. Heat loss increases dramatically in moving air that is colder than skin temperature (91.4° F). Even a light wind increases heat loss, and a strong wind can lower the body temperature if the rate of loss is greater than the body's heat replacement rate.

(287) When skin temperature drops below 50° F, there is a marked constriction of blood vessels, leading to vascular stagnation, oxygen want and cellular damage. The first indication that something is wrong is a painful tingling. Swelling of varying extent follows, provided freezing has not occurred. Excruciating pain may be felt if the skin temperature is lowered rapidly, but freezing of localized portions of the skin may be painless when the rate of change is slow. Possible effects of cold include cold

allergy (welts), chilblains, which appear as reddened, warm, itching, swollen patches on the fingers and toes, and trench foot and immersion foot, which present essentially the same picture. Both result from exposure to cold and lack of circulation. Wetness can add to the problem as water and wind soften the tissues and accelerate heat loss.

(288) Frostbite usually begins when the skin temperature falls within the range of 14° to 4° F. Ice crystals form in the tissues and small blood vessels. The rate of heat loss determines the rate of freezing, which is accelerated by wind, wetness, extreme cold and poor blood circulation. Parts of the body susceptible to freezing are those with surfaces large in relation to their volume, such as toes, fingers, ears, nose, chin and cheeks.

(289) Injuries from the cold may, to a large extent, be prevented by maintaining natural warmth through the use of proper footgear and adequate, dry clothing, by avoiding cramped positions and constricting clothing and by active exercise of the hands, legs and feet.

(290)

MARINE POLLUTION

(291)

The Federal Water Pollution Control Act (Clean Water Act)

(292) The Federal Water Pollution Control Act (FWPCA) or Clean Water Act (CWA) was passed to restore and maintain the chemical, physical and biological integrity of the waters within the United States.

(293)

No-Discharge Zones

(294) Section 312 of the FWPCA gives the Environmental Protection Agency (EPA) and States the authority to designate certain areas as No-Discharge Zones (NDZ) for vessel sewage. Freshwater lakes, freshwater reservoirs or other freshwater impoundments whose entrances and exits prohibit traffic by regulated vessels (vessels with installed toilets) are, by regulation, NDZs. Rivers that do not support interstate navigation vessel traffic are also NDZs by regulation. Water bodies that can be designated as NDZs by States and EPA include the Great Lakes and their connecting waterways, freshwater lakes and impoundments accessible through locks and other flowing waters that support interstate navigation by vessels subject to regulation.

(295) Inside NDZ waters, discharge of any sewage, whether treated or untreated, is completely prohibited.

(296) Discharge of sewage in waters not designated as NDZs is regulated by the Marine Sanitation Device Standard (see **40 CFR 140** in chapter 2.)

(297) Additional information concerning the regulations may be obtained from *water.epa.gov*.

(298)

Oil Spill Reporting

(299) Reporting requirements for any oil discharge, noxious liquid substance or harmful substance occurring in waters under U.S. jurisdiction are found in **33 CFR 153**, subpart B (not in this Coast Pilot.) Any person in charge of a vessel or an onshore/offshore facility must, as soon as they have knowledge of any discharge of oil or a hazardous substance, immediately notify the National Response Center (NRC) at 800-424-8802 or NRC@uscg.mil.

(300)

Ocean Dumping

(301) The Marine Protection Research and Sanctuaries Act of 1972, as amended (33 USC 1401 et seq.), regulates the dumping of all material, except fish waste, into ocean waters. Radiological, chemical and biological warfare agents and other high level radioactive wastes are expressly banned from ocean disposal. The USACE issues permits for the disposal of dredged spoils; the EPA is authorized to issue permits for all other dumping activities. Surveillance and enforcement to prevent unlawful transportation of material for dumping or unlawful dumping under the Act has been assigned to the U.S. Coast Guard. The Act provides civil penalties of up to $50,000 and criminal penalties of up to $50,000 and/or one year imprisonment.

(302)

SELECT NAVIGATION RULES

(303)

Improper use of searchlights

(304) No person shall flash or cause to be flashed the rays of a searchlight or other blinding light onto the bridge or into the pilothouse of any vessel underway. The International Code Signal "PG2" may be made by a vessel inconvenienced by the glare of a searchlight in order to apprise the offending vessel of the fact.

(305)

Use of Radar

(306) Navigation Rules, International-Inland, Rule 7, states, in part, that every vessel shall use all available means appropriate to the prevailing circumstances and conditions to determine if risk of collision exists. If there is any doubt such risk shall be deemed to exist. Proper use shall be made of radar equipment if fitted and operational, including long-range scanning to obtain early warning of risk of collision and radar plotting or equivalent systematic observation of detected objects.

(306) <Deleted Paragraph>

(307) This rule places an additional responsibility on vessels that are equipped and manned to use radar to do so while underway during periods of reduced visibility without in any way relieving commanding officers of the responsibility of carrying out normal precautionary measures.

(308) Navigation Rules, International-Inland, Rules 6, 7, 8, and 19 apply to the use of radar.

(321)

Figure 1: Offshore extent of the maritime zones recognized under international law

(309)

Danger signal

(310) Navigation Rules, International-Inland, Rule 34(d), states that when vessels in sight of one another are approaching each other and from any cause either vessel fails to understand the intentions or actions of the other or is in doubt whether sufficient action is being taken by the other to avoid collision, the vessel in doubt shall immediately indicate such doubt by giving at least five short and rapid blasts on the whistle. Such signal may be supplemented by a light signal of at least five short and rapid flashes.

(311)

Narrow channels

(312) Navigation Rules, International-Inland, Rule 9(b) states that a vessel of less than 20 meters in length or a sailing vessel shall not impede the passage of a vessel that can safely navigate only within a narrow channel or fairway.

(313)

REGULATED WATERS

(314)

Traffic Separation Schemes (Traffic Lanes)

(315) To increase the safety of navigation, particularly in converging areas of high traffic density, routes incorporating traffic separation have been adopted by the IMO in certain areas of the world. In the interest of safe navigation, it is recommended that through traffic use these schemes, as far as circumstances permit, by day and by night and in all weather conditions. When approved or established, traffic separation scheme details are announced in Notice to Mariners and later depicted on appropriate charts and included in the U.S. Coast Pilot. See **33 CFR 167**, chapter 2, for regulations.

(316) The IMO is recognized as the only international body responsible for establishing and recommending measures on an international level concerning ships' routing. In deciding whether or not to adopt or amend a traffic separation scheme, IMO will consider whether the scheme complies with the design criteria for traffic separation schemes and with the established methods of routing. IMO also considers whether the aids to navigation proposed will enable mariners to determine their position with sufficient accuracy to navigate the scheme in accordance with Rule 10 of the International Regulations for Preventing Collisions at Sea (72 COLREGS).

(317) The IMO approved routing measures which affect shipping in or near U.S. waters are:

(318)

IMO-Approved Traffic Separation Routes
Portland, Maine (approaches to)
Boston, Massachusetts (approaches to)
Narragansett Bay, Rhode Island (approaches to)
Buzzards Bay, Massachusetts (approaches to)
New York, New York
Delaware Bay
Chesapeake Bay (approaches to)
Cape Fear River (approaches to)
Galveston Bay (approaches to)

Off San Francisco, California
Los Angeles/Long Beach, California (approaches to)
Strait of Juan de Fuca (approaches to and in)
Puget Sound (approaches to and in)
Haro Strait, Boundary Pass and the Strait of Georgia
Prince William Sound, Alaska

(319)

Maritime Zones

(320) The maritime zones recognized under international law include internal waters, territorial sea, contiguous zone, exclusive economic zone, continental shelf, the high seas and the Area (see Figure 1). The following zones are depicted on NOAA's nautical charts: internal waters, territorial sea, contiguous zone and exclusive economic zone. The limits of these zones are subject to modification as depicted on future charts; limits shown on the most recent chart edition take precedence.

(322)

Internal Waters

(323) Internal waters are the waters (harbors, bays and rivers) on the landward side of the baseline from which the breadth of the territorial sea is measured. The United States has full sovereignty over its internal waters and ports as if they were part of its land territory. NOAA's nautical charts depict the baseline from which the limits of the U.S. territorial sea, contiguous zone and exclusive economic zone are measured as well as the Three Nautical Mile Line and Natural Resources Boundary, as described below.

(324)

Territorial Sea

(325) The territorial sea of the United States extends beyond the land territory and internal waters and also includes the Commonwealth of Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, the Commonwealth of the Northern Mariana Islands and any other territory or possession over which the United States exercises sovereignty. (Presidential Proclamation No. 5928. December 27, 1988.) The United States exercises sovereignty over the territorial sea that extends to the airspace over the area and to the bed and subsoil. Under customary international law as reflected in the 1982 United Nations Convention on the Law of the Sea (UNCLOS), the territorial sea of the United States extends to 12 nautical miles (nm) from the baseline from which the breadth of the territorial sea is measured; determined in accordance with international law except as otherwise established in a maritime boundary treaty of the United States. While the United States may adopt certain laws and regulations, vessels of all countries navigating through the territorial sea enjoy the right of innocent passage; vessels and aircraft of all countries enjoy the right of transit passage through international straits.

(326)

Contiguous Zone

(327) The contiguous zone of the United States is a zone measured 24 nm from the territorial sea baseline and is contiguous to the territorial sea of the United States, including the Commonwealth of Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, the Commonwealth of the Northern Mariana Islands and any other territory or possession over which the United States exercises sovereignty. (Presidential Proclamation No. 7219. August 2, 1999.) Under customary law as reflected in UNCLOS, the U.S. may exercise the control necessary to prevent infringement of its customs, fiscal, immigration or sanitary laws and regulations within its territory or territorial sea and to punish infringement of these laws and regulations committed within its territory or territorial sea. The United States may also prescribe and enforce laws against foreign flagged vessels and nationals to protect the underwater cultural heritage to the outer boundary of the contiguous zone (24 nm).

(328)

Exclusive Economic Zone

(329) The exclusive economic zone of the United States extends no more than 200 nm from the territorial sea baseline and is adjacent to the 12 nm territorial sea of the United States, including the Commonwealth of Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, the Commonwealth of the Northern Mariana Islands and any other territory or possession over which the United States exercises sovereignty. (Presidential Proclamation No. 5030 of March 10, 1983 and Federal Register, volume 60 - number 163, August 23, 1995, "Exclusive Economic Zone and Maritime Boundaries: Notice of Limits") As such, the exclusive economic zone overlaps the 12 nm-24 nm contiguous zone.

(330) Within the EEZ, the U.S. has (a) sovereign rights for the purpose of exploring, exploiting, conserving and managing natural resources, whether living and nonliving, of the seabed and subsoil and the superjacent waters and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds; (b) jurisdiction as provided for in international and domestic laws with regard to the establishment and use of artificial islands, installations, and structures, marine scientific research, and the protection and preservation of the marine environment; and (c) other rights and duties provided for under international and domestic laws.

(331) Note: In certain U.S. fisheries laws, the term "exclusive economic zone" (EEZ) is used. While its outer limit is the same as the EEZ on NOAA charts, the inner limit generally extends landward to the seaward boundary of the coastal states of the U.S.

(332)

Three Nautical Mile Line

(333) The Three Nautical Mile Line, as measured from the territorial sea baseline and previously identified as the

outer limit of the U.S. territorial sea, is retained on charts because it continues to be used in certain Federal laws.

(334) Note: Since the "coast line," a term used in the Submerged Lands Act, and the baseline are determined using the same criteria under international law, the Three Nautical Mile Line is generally the same as the seaward boundary of states under the Submerged Lands Act. There are exceptions; therefore, the Three Nautical Mile Line does not necessarily depict the seaward limit of states under the Submerged Lands Act.

(335)

Natural Resources Boundary

(336) The 9 nm Natural Resources Boundary is the seaward limit of the submerged lands of Puerto Rico, Texas and the Gulf coast of Florida. It coincides with the inner limit of the U.S. outer continental shelf under the Outer Continental Shelf Lands Act.

(337)

Notification of Arrival and Vessel Response Plans

(338) A **Notification of Arrival (NOA)** must be submitted by all U.S. and foreign vessels bound for or departing from ports or places in the United States. (See **33 CFR 160 – Subpart C**, chapter 2). Additionally, tank vessels and non-tank vessels are required to submit an oil spill response plan. (See **33 CFR 155**– Subparts D and J, not contained in this Coast Pilot.)

(339)

Marine Protected Area (MPA)

(340) Marine Protected Areas (MPAs) are particular places in ocean, coastal and estuarine ecosystems where vital natural and cultural resources are given greater protection than in surrounding waters. MPAs have been established in the U.S. for more than a century. Currently, there are over 1,700 MPAs in U.S. marine waters and the Great Lakes, with levels of protection ranging from a few "no-take" areas that prohibit all extractive uses to the more common multiple use areas that allow vessel access, anchoring, fishing and non-consumptive activities. MPAs are managed by dozens of Federal, state, tribal and local authorities. For detailed information on MPA locations, types, interactive map, purposes and legal restrictions, visit *marineprotectedareas.noaa.gov.*

(341)

Archaeological Resource Preservation

(342) Under Federal and state laws it is illegal to destroy, deface, collect, transport, sell or trade archaeological, cultural, submerged and historic resources without authorization. Applicable laws include, but are not limited to, the Historic Sites Act, the Archaeological Resource Protection Act, the National Historic Preservation Act the Abandoned Shipwreck Act, and the Sunken Military Craft Act. These laws protect archaeological resources on lands administered by the National Park Service, U.S. Fish and Wildlife Service, Bureau of Land Management, and National Marine Sanctuaries as well as state, private and Native lands.

(343)

DEPARTMENT OF AGRICULTURE

(344)

Animal and Plant Health Inspection Service

(345) The Animal and Plant Health Inspection Service is responsible for protecting the Nation's animal population, food and fiber crops and forests from invasion by foreign pests. They administer agricultural quarantine and restrictive orders issued under authority provided in various acts of Congress. The regulations prohibit or restrict the importation or interstate movement of live animals, meats, animal products, plants, plant products, soil, injurious insects, and associated items that may introduce or spread plant pests and animal diseases which may be new to or not widely distributed within the United States or its territories. Inspectors examine imports at ports of entry as well as the vessel, its stores and crew or passenger baggage.

(346) The Service also provides an inspection and certification service for exporters to assist them in meeting the quarantine requirements of foreign countries. (See **Appendix A** for a list of ports where agricultural inspectors are located and inspections conducted.)

(347)

DEPARTMENT OF COMMERCE

(348)

National Oceanic and Atmospheric Administration (NOAA)

(349) The National Oceanic and Atmospheric Administration (NOAA) conducts research and gathers data about the global oceans, atmosphere, space and sun, and applies this knowledge to improve our understanding and stewardship of the environment.

(350) NOAA provides services to the nation and the public through five major organizations: the National Ocean Service; the National Weather Service; the National Marine Fisheries Service; the National Environmental Satellite, Data and Information Service (NESDIS); and NOAA Research; and numerous special program units. In addition, NOAA research and operational activities are supported by the Nation's seventh uniformed service, the NOAA Corps, a commissioned officer corps of men and women who operate NOAA ships and aircraft and serve in scientific and administrative positions.

(351)

National Ocean Service (NOS)

(352) The National Ocean Service's primary concern is the health and safety of our Nation's coastal and oceanic environment. Within NOS, the **Office of Coast Survey** is responsible for producing and maintaining the suite of over 1000 nautical charts and the Coast Pilots that cover the coastal waters of the U.S. and its territories. Nautical charts are published primarily for the use of the mariner but serve the public interest in many other

ways. Cartographers in Coast Survey receive and compile information from a variety of government and non-governmental sources for portrayal on nautical charts and the Coast Pilots. In addition, Coast Survey hydrographers, as well as private contractors, conduct new surveys that are used to update these products. The principal facilities of Coast Survey are located at NOAA headquarters in Silver Spring, MD; Norfolk, VA (Marine Operations Center Atlantic); and Seattle, WA (Western Regional Center).

(353) The **Center for Operational Oceanographic Products and Services (CO-OPS)** collects and distributes observations and predictions of water levels and currents to ensure safe, efficient and environmentally sound maritime commerce. Users can find a variety of information, including observed water level and currents data, tide and current predictions, sea level trends and coastal inundation information. TIdes and Currents information is available at *tidesandcurrents.noaa.gov.*

(354) **PORTS® (Physical Oceanographic Real-Time System)** is a decision support tool that improves the safety and efficiency of maritime commerce and coastal resource management. Data from PORTS® supports navigation safety, improves the efficiency of U.S. ports and harbors, and ensures the protection of coastal marine resources. PORTS® collects and disseminates observations of water levels, currents, salinity, bridge air gap and meteorological parameters (e.g., winds, atmospheric pressure, air and water temperatures) that mariners need to navigate safely and allows seaport and terminal facilities to make good decisions. PORTS® data and information is provided via the internet at *tidesandcurrents.noaa.gov/ports_info.html* and, in some areas, via telephone voice response.

(355)

NOAA Tide Predictions and Tidal Current Predictions

(356) NOAA discontinued the annual printed Tide Tables and Tidal Current Tables in 2020, and has transitioned to providing this information digitally online. The online prediction service equals or exceeds the accuracy of the historically printed publications. Tide and tidal current predictions needed for navigation can be generated in real-time for any time period required by the mariner, for as short as one day, or as long as an entire year. All predictions for U.S. waters are available at *tidesandcurrents.noaa.gov*.

(357) U.S. Coast Guard regulations do not consider access to NOAA's online prediction service "while navigating" as meeting carriage requirements. In order to use predictions from these services, the predictions must be generated in advance and either be stored on the user's device as an electronic file (PDF, screen image, data table, etc.), or as a printed page.

(358) **NOAA Tide Predictions** - *tidesandcurrents.noaa.gov/tide_predictions.html* - allows the generation of predicted tides for more than 3000 locations along the U.S. coastline. Tide predictions may be generated as times and heights of high and low tides for all locations, or as interval predictions (hourly, 15-minute, 6-minute, etc.) for many locations. Tide predictions may be generated for past, present, or future dates; with lengths of 1 day to 1 month, or the full calendar year. The Users Guide - *tidesandcurrents.noaa.gov/PageHelp.html* - describes the displays, formats, additional capabilities, and uses of this online service.

(359) **Caution** –When using Tide Predictions, slack water should not be confused with high or low water. For ocean stations there is often little difference between the time of high or low water and the start of flood/ebb currents; but for places in narrow channels, landlocked harbors or on tidal rivers, the time of slack current may differ by several hours from the time of high or low water. The relationship of the times of high or low water to the flood and ebb of the current depends upon a number of factors unique to each location; no simple general rule can be given which applies to every location. For navigation or other activities which depend on slack water, tidal current predictions should be used to provide times of slack water.

(360) **NOAA Tidal Current Predictions** –*tidesandcurrents.noaa.gov/noaacurrents/Regions* - allows the generation of predicted currents for more than 2500 locations along the U.S. coastline. Tidal current predictions may be generated as times and speeds of flood/ebb currents and times of slack water for all locations; or as interval predictions of speed (hourly, 30-minute, 6-minute) for many locations. Tidal current predictions may be generated for past, present or future dates; with length of 1 day to 2 weeks, or the full calendar year. The Users Guide - *tidesandcurrents.noaa.gov/noaacurrents/Help* - describes the displays, formats, additional capabilities, and uses of this online service.

(361)

National Weather Service (NWS)

(362)

National Data Buoy Center Meteorological Buoys

(363) The National Data Buoy Center (NDBC) deploys moored meteorological buoys that provide weather data directly to the mariner as well as to marine forecasters.

(364) These buoys have a watch circle radius (WCR) of 2,000 to 4,000 yards from assigned position (AP). In addition, any mooring in waters deeper than 1,000 feet will have a floating "loop" or catenary that may be as little as 500 feet below the surface. This catenary could be anywhere within the buoy's WCR. Any underwater activity within this radius may contact the mooring, causing a failure.

(365) To avoid cutting or damaging a mooring, mariners are urged to exercise extreme caution when navigating in the vicinity of meteorological buoys and to remain well clear of the watch circle. If a mooring is accidentally contacted or cut, please notify NDBC at 228-688-2835 or 228-688-2436.

(366) For further information relating to these buoys visit *ndbc.noaa.gov*.

(367)

Marine Weather Forecasts

(368) The NWS provides marine weather forecasts and warnings for the U.S. coastal waters, the Great Lakes, offshore waters and high seas areas. Scheduled marine forecasts are issued four times daily from **National Weather Service Offices** with local areas of responsibility around the United States, Guam, American Samoa and Puerto Rico. (See Appendix A for NWS Offices located in the area covered by this Coast Pilot.)

(369) Typically, the forecasts contain information on wind speed and direction, wave heights, visibility, weather and a general synopsis of weather patterns affecting the region. The forecasts are supplemented with special marine warnings and statements, radar summaries, marine observations, small-craft advisories, gale warnings, storm warnings and various categories of tropical cyclone warnings, e.g., tropical depression, tropical storm and hurricane warnings. Specialized products such as coastal flood, seiche, and tsunami warnings, heavy surf advisories, low water statements, ice forecasts and outlooks and lake shore warnings and statements are issued as necessary. (For further information, go to *nws.noaa.gov/om/marine/home.htm*.)

(370) The principal means of disseminating marine weather services and products in coastal areas is **NOAA Weather Radio**. This network of more than 900 transmitters, covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands and the U.S. Pacific Territories, is operated by the NWS and provides continuous broadcasts of weather information for the general public. These broadcasts repeat recorded messages every 4 to 6 minutes. Messages are updated periodically, usually every 2-3 hours and amended as required to include the latest information. When severe weather threatens, routine transmissions are interrupted and the broadcast is devoted to emergency warnings. (See Appendix A for NOAA Weather Radio Stations covered by this Coast Pilot.)

(371) In coastal areas, the programming is tailored to the needs of the marine community. Each coastal marine forecast covers a specific area. For example, "Cape Henlopen to Virginia Beach, out 20 miles." The broadcast range is about 40 miles from the transmitting antenna site, depending on terrain and quality of the receiver used. When transmitting antennas are on high ground, the range is somewhat greater, reaching 60 miles or more. Some receivers are equipped with a warning alert device that can be turned on by means of a tone signal controlled by the NWS office concerned. This signal is transmitted for 13 seconds preceding an announcement of a severe weather warning.

(372) Marine weather warnings are displayed to small-craft operators and others within sight of the shore by the flags, pennants and lights of the **Coastal Warning Display** program. These displays are meant to warn the public of approaching storm conditions and visually communicate that citizens should take personal responsibility for individual safety in the face of an approaching storm. Anyone observing the signals displayed by the program is urged to tune to the NWS radio broadcasts for the latest information. (See **National Weather Service Coastal Warning Displays** illustration for additional information.)

(374) NWS marine weather products are also disseminated to marine users through the broadcast facilities of the Coast Guard, Navy and commercial marine radio stations. Details on these broadcasts including times, frequencies and broadcast content are listed on the NWS internet site, **Marine Product Dissemination Information**, *nws.noaa.gov/om/marine/home.htm.*

(375) Ships of all nations share equally in the effort to report weather observations. These reports enable meteorologists to create a detailed picture of wind, wave and weather patterns over the open waters that no other data source can provide and upon which marine forecasts are based. The effectiveness and reliability of these forecasts and warnings plus other services to the marine community are strongly linked to the observations received from mariners. There is an especially urgent need for ship observations in the coastal waters, and the NWS asks that these be made and transmitted whenever possible. Many storms originate and intensify in coastal areas. There may be a great difference in both wind direction and speed between the open sea, the offshore waters and on the coast itself.

(376) Information on how ships, commercial fishermen, offshore industries and others in the coastal zone may participate in the marine observation program is available from **National Weather Service Port Meteorological Officers (PMOs)**. PMOs are located in major U.S. port cities where they visit ships in port to assist masters and mates with the weather observation program, provide instruction on the interpretation of weather charts, calibrate barometers and other meteorological instruments and discuss marine weather communications and marine weather requirements affecting the ships' operations. (For further information on the Voluntary Observing Ship Program and PMOs, go to *vos.noaa.gov*.)

(377)

Space Weather Prediction Center (SWPC)

(378) The Space Weather Prediction Center provides real-time monitoring and forecasting of solar and geophysical events that impact satellites, power grids, communications, navigation and many other technological systems. (See Space Weather Prediction Center in Appendix A.)

(379)

National Environmental Satellite, Data, and Information Service (NESDIS)

(380) Among its functions, NESDIS archives, processes and disseminates the non-real-time meteorological and oceanographic data collected by government agencies

(373)

NATIONAL WEATHER SERVICE COASTAL WARNING DISPLAYS

DAYTIME SIGNALS

SMALL CRAFT ADVISORY

GALE WARNING

STORM WARNING

HURRICANE WARNING

NIGHT (LIGHT) SIGNALS

SMALL CRAFT ADVISORY

GALE WARNING

STORM WARNING

HURRICANE WARNING

SMALL CRAFT ADVISORY: An advisory issued by coastal and Great Lakes Weather Forecast Offices (WFO) for areas included in the Coastal Waters Forecast or Nearshore Marine Forecast (NSH) products. Thresholds governing the issuance of small craft advisories are specific to geographic areas. A Small Craft Advisory may also be issued when sea or lake ice exists that could be hazardous to small boats. There is no precise definition of a small craft. Any vessel that may be adversely affected by Small Craft Advisory criteria should be considered a small craft. Other considerations include the experience of the vessel operator, and the type, overall size, and sea worthiness of the vessel. There is no legal definition of “small craft”. The Small Craft Advisory is an advisory in Coastal Waters and Nearshore forecasts for sustained winds, frequent gusts, or sea/wave conditions, exceeding defined thresholds specific to geographic areas. A Small Craft Advisory may also be issued when sea or lake ice exists that could be hazardous to small boats.

Eastern (ME to SC, Lake Erie, Lake Ontario) – Sustained winds or frequent gusts ranging between 25 and 33 knots (except 20 to 25 knots, lower threshold area dependent, to 33 knots for harbors, bays, etc.) and/or seas or waves 5 to 7 feet and greater, area dependent.

Central (MN to OH) – Sustained winds or frequent gusts (on the Great Lakes) between 22 and 33 knots inclusive, and/or seas or waves greater than 4 feet.

Southern (GA to TX and Caribbean) – Sustained winds of 20 to 33 knots, and/or forecast seas 7 feet or greater that are expected for more than 2 hours.

Western (WA..CA) - Sustained winds of 21 to 33 knots, potentially in combination with wave heights exceeding 10 feet (or wave steepness values exceeding local thresholds).

Alaska (AK) – Sustained winds or frequent gusts of 23 to 33 knots. A small craft advisory for rough seas may be issued for sea/wave conditions deemed locally significant, based on user needs, and should be no lower than 8 feet.

Hawaii (HI), Samoa – Sustained winds 25 knots or greater and seas 10 feet or greater.

Guam and the Northern Mariana Islands – Sustained winds 22 to 33 knots and/or combined seas of 10 feet or more. “Frequent gusts”are typically long duration conditions (greater than 2 hours).

For a list of NWS Weather Offices by Region, refer to the following website: http://www.nws.noaa.gov/organization.php

GALE WARNING: To indicate winds within the range 34 to 47 knots are forecast for the area.

STORM WARNING: To indicate winds 48 knots and above, no matter how high the speed, are forecast for the area. However, if the winds are associated with a tropical cyclone (hurricane), the STORM WARNING indicates that winds within the range 48-63 knots are forecast.

HURRICANE WARNING: Issued only in connection with a tropical cyclone (hurricane) to indicate that winds 64 knots and above are forecast for the area.

NOTE: A “HURRICANE WATCH” is an announcement issued by the National Weather Service via press and television broadcasts whenever a tropical storm or hurricane becomes a threat to a coastal area. The “Hurricane Watch” announcement is not a warning, rather it indicates that the hurricane is near enough that everyone in the area covered by the “Watch” should listen to their radios for subsequent advisories and be ready to take precautionary action in case hurricane warnings are issued.

NOTE: A SPECIAL MARINE WARNING is issued whenever a severe local storm or strong wind of brief duration is imminent and is not covered by existing warnings or advisories. No visual displays will be used in connection with the Special Marine Warning Bulletin; boaters will be able to receive thesespecial warnings by keeping tuned to a NOAA Weather Radio station or to Coast Guard and commercial radio stations that transmit marine weather information.

and private institutions. Marine weather observations are collected from ships at sea on a voluntary basis. About one million observations are received annually at NESDIS's National Climatic Center. They come from vessels representing every maritime nation. These observations, along with land data, are returned to the mariners in the form of climatological summaries and atlases for coastal and ocean areas. They are available in such NOAA publications as the **U.S. Coast Pilot, Mariners Weather Log** and **Local Climatological Data, Annual Summary**. They also appear in the National Geospatial-Intelligence Agency's **Pilot Chart Atlases** and **Sailing Directions Planning Guides**.

(381)

DEPARTMENT OF DEFENSE

(382)

National Geospatial-Intelligence Agency (NGA)

(383) The National Geospatial-Intelligence Agency provides hydrographic, navigational, topographic, and geodetic data, charts, maps and related products and services to the Armed Forces, other Federal Agencies, the Merchant Marine and mariners in general. Publications include Sailing Directions, List of Lights, Distances Between Ports, Radio Navigational Aids, International Code of Signals, American Practical Navigator (Bowditch) and Notice to Mariners. (See NGA Procurement Information in Appendix A.)

(384)

Army Corps of Engineers

(385) The U.S. Army Corps of Engineers has charge of the improvement of the rivers and harbors of the United States and of miscellaneous other civil works, which include the administration of certain Federal laws enacted for the protection and preservation of navigable waters of the United States; the establishment of regulations for the use, administration, and navigation of navigable waters; the establishment of harbor lines; the removal of sunken vessels obstructing or endangering navigation; and the granting of permits for structures or operations in navigable waters and for discharges and deposits of dredged and fill materials in these waters.

(386) **Restricted areas** in most places are defined and regulations governing them are established by the USACE. The regulations are enforced by the authority designated in the regulations, and the areas are shown on the large-scale charts of the National Ocean Service. Copies of the regulations may be obtained at the District offices of the USACE. The regulations also are included in the appropriate Coast Pilot.

(387) Information concerning the various ports, improvements, channel depths, navigable waters and the condition of the Intracoastal Waterways in the areas under their jurisdiction may be obtained direct from the District Engineer Offices. (See Appendix A for addresses.)

(388) The USACE has general supervision of location, construction and manner of maintenance of all **fishtraps,** weirs, pounds or other fishing structures in the navigable waters of the United States. Where state and/or local controls are sufficient to regulate these structures, including that they do not interfere with navigation, the USACE leaves such regulation to the state or local authority. (See **33 CFR 330** (not carried in this Pilot) for applicable Federal regulations.) Construction permits issued by the Engineers specify the lights and signals required for the safety of navigation.

(389) **Fish havens**, artificial reefs constructed to attract fish, can be established in U.S. coastal waters only as authorized by a USACE permit; the permit specifies the location, extent and depth over these mounds of rubble.

(390)

Naval Observatory

(391) The United States Naval Observatory (USNO) provides a wide range of astronomical data and products and serves as the official source of time for the U.S. Department of Defense and a standard of time for the entire United States. The USNO provides earth orientation products such as the latest 24-hour and 48-hour sets of GPS satellite orbits, the latest determinations and predictions for polar motion and information for GPS users. The USNO also maintains a reference for precise time (USNO Master Clock) and monitors the GPS constellation. For extensive information on the USNO products available, visit: *https://www.public.navy.mil/fltfor/cnmoc/Pages/usno_test_page.aspx* or contact by telephone at 202-762-1467.

(392)

DEPARTMENT OF HEALTH AND HUMAN SERVICES

(393)

Food and Drug Administration (FDA)

(394) Under the provisions of the Control of Communicable Diseases Regulations (**21 CFR 1240**) and Interstate Conveyance Sanitation Regulations (**21 CFR 1250**), vessel companies operating in interstate traffic must obtain potable water for drinking and culinary purposes only at watering points found acceptable to the FDA. Water supplies used in watering point operations must also be inspected to determine compliance with applicable Interstate Quarantine Regulations (**42 CFR 72**). These regulations are based on authority contained in the Public Health Service Act (PL 78–410). Penalties for violation of any regulation prescribed under authority of the Act are provided for under Section 368 (42 USC 271) of the Act.

(395)

Public Health Service

(396) The Public Health Service administers foreign quarantine procedures at U.S. ports of entry.

(397) All vessels arriving in the United States are subject to public health inspection. Vessels subject to routine boarding for quarantine inspection are only those which

have had on board during the 15 days preceding the date of expected arrival or during the period since departure (whichever period of time is shorter) the occurrence of any death or ill person among passengers or crew (including those who have disembarked or have been removed). The master of a vessel must report such occurrences immediately by radio to the quarantine station at or nearest the port at which the vessel will arrive.

(398) In addition, the master of a vessel carrying 13 or more passengers must report by radio 24 hours before arrival the number of cases (including zero) of diarrhea in passengers and crew recorded in the ship's medical log during the current cruise. All cases that occur after the 24 hour report must also be reported not less than 4 hours before arrival.

(399) *Ill person* means a person who:

(400) 1. Has a temperature of 100°F (or 38°C) or greater, accompanied by a rash, glandular swelling or jaundice, or which has persisted for more than 48 hours; or

(401) 2. Has diarrhea, defined as the occurrence in a 24 hour period of three or more loose stools or of a greater than normal (for the person) amount of loose stools.

(402) Vessels arriving at ports under control of the United States are subject to sanitary inspection to determine whether measures should be applied to prevent the introduction, transmission or spread of communicable disease.

(403) Specific public health laws, regulations, policies and procedures may be obtained by contacting U.S. Quarantine Stations, U.S. Consulates or the Chief Program Operations, Division of Quarantine, Centers for Disease Control, Atlanta, GA 30333. (See Appendix A for addresses of U.S. Public Health Service Quarantine Stations.)

(404)

DEPARTMENT OF HOMELAND SECURITY

(405)

Citizenship and Immigration Services

(406) The **U.S. Citizenship and Immigration Service** (USCIS) is the federal agency that oversees lawful immigration to the United States. the Service enhances security and improves the efficiency of national immigration services by exclusively focusing on the administration of benefit applications. No person may enter the United States until they have been inspected by an immigration officer. A list of the offices covered by this Coast Pilot is given in Appendix A.

(407)

U.S. Coast Guard

(408) The U.S. Coast Guard has among its duties the enforcement of the laws of the United States on the high seas and in coastal and inland waters of the U.S. and its possessions; enforcement of navigation and neutrality laws and regulations; establishment and enforcement of navigational regulations upon the Inland Waters of the United States, including the establishment of a demarcation line separating the high seas from waters upon which U.S. navigational rules apply; administration of the Oil Pollution Act of 1990, as amended; establishment and administration of vessel anchorages; approval of bridge locations and clearances over navigable waters; administration of the alteration of obstructive bridges; regulation of drawbridge operations; inspection of vessels of the Merchant Marine; admeasurement of vessels; documentation of vessels; preparation and publication of merchant vessel registers; registration of stack insignia; port security; issuance of Merchant Marine licenses and documents; search and rescue operations; investigation of marine casualties and accidents and suspension and revocation proceedings; destruction of derelicts; operation of aids to navigation; maintenance and issuance of Light Lists and Local Notices to Mariners; and operation of ice-breaking facilities.

(409) Issuance of certificates of registry (more commonly referred to as Certificates of Documentation) with endorsements indicating eligibility of vessels that measure at least 5 net tons to engage in various trades for commercial vessels and certain recreational vessels that are numbered either by the Coast Guard or by a state having an approved numbering system (the latter is the most common) and the administration of the various laws pertaining thereto are functions of the Coast Guard and specifically the National Vessel Documentation Center. Owners of vessels may obtain the necessary information from the National Vessel Documentation Center either by mail to the National Vessel Documentation Center, 792 T.J. Jackson Drive, Falling Waters, WV 25419-9502; via toll free number: 800-799-8362; or via online at: *dco.uscg.mil/Our-Organization/Deputy-for-Operations-Policy-and-Capabilities-DCO-D/National-Vessel-Documentation-Center/*.

(410)

U.S. Customs and Border Protection

(411) The U.S. Customs and Border Protection administers certain laws relating to:

(412) – entry and clearance of vessels and permits for certain vessel movements between points in the United States

(413) – prohibitions against coastwise transportation of passengers and merchandise

(414) – salvage

(415) – dredging and towing by foreign vessels

(416) – certain activities of vessels in the fishing trade

(417) – regular and special tonnage taxes on vessels

(418) – landing and delivery of foreign merchandise (including unlading, appraisement, lighterage, drayage, warehousing and shipment in bond)

(419) – collection of customs duties, including duty on imported pleasure boats and yachts and 50% duty on foreign repairs to American vessels engaged in trade

(420) – customs treatment of sea and ship's stores while in port and the baggage of crewmen and passengers

(421) – illegally imported merchandise

(422) – remission of penalties or forfeiture if customs or navigation laws have been violated.

(423) Customs and Border Protection also cooperates with many other Federal agencies in the enforcement of statutes for which they are responsible for. Customs districts and ports of entry are listed in Appendix A.

(424) The Customs and Border Protection office may issue, without charge, a **cruising license**, normally valid for one year, to a yacht of a foreign country that has a reciprocal agreement with the United States. A foreign yacht holding a cruising license is exempt from having to undergo formal entry and clearance procedures such as filing manifests and obtaining permits to proceed as well as from payment of tonnage tax and entry and clearance fees at all but the first port of entry. These vessels must not engage in trade, violate the laws of the United States or visit a vessel not yet inspected by a Customs Agent and does, within 24 hours of arrival at each port or place in the United States, report the fact of arrival to the nearest customhouse. Countries that have reciprocal agreements granting these privileges to U.S. yachts are:

(425)

Countries with U.S. Cruising License Reciprocity	
Argentina	Honduras
Australia	Ireland
Austria	Italy
Bahama Islands	Jamaica
Belguim	Liberia
Bermuda	Marshall Islands
Canada	Netherlands
Denmark	New Zealand
Finland	Norway
France	Sweden
Germany	Switzerland
Great Britain	Turkey
Greece	

(426) Further information concerning cruising licenses may be obtained from the headquarters port for the customs district in which the license is desired or at *cbp.gov*. U.S. yacht owners planning cruises to foreign ports may contact the nearest customs district headquarters as to customs requirements.

(427)

ENVIRONMENTAL PROTECTION AGENCY (EPA)

(428) The U.S. EPA provides coordinated governmental action to ensure the protection of the environment by abating and controlling pollution on a systematic basis. The ocean dumping permit program of the EPA provides that except when authorized by permit, the dumping of any material into the ocean is prohibited by the "Marine Protection, Research, and Sanctuaries Act of 1972, Public Law 92–532," as amended (33 USC 1401 et seq.).

(429) Permits for the **dumping of dredged material** into waters of the United States, including the territorial sea, and into ocean waters are issued by the U.S. Army Corps of Engineers. Permits for the dumping of fill material into waters of the United States, including the territorial sea, are also issued by the U.S. Army Corps of Engineers. Permits for the dumping of other material in the territorial sea and ocean waters are issued by the EPA.

(430) U.S. Army Corps of Engineers regulations relating to the above are contained in **33 CFR 323** and **324**; EPA regulations are in **40 CFR 220** though **228**. (See Disposal Sites, this chapter.)

(431) Persons or organizations who want to file for an application for an ocean dumping permit should write the EPA Regional Office for the region in which the port of departure is located. (See Appendix A for addresses of regional offices and States in the EPA coastal regions.)

(432) The letter should contain the name and address of the applicant, name and address of person or firm, the name and usual location of the conveyance to be used in the transportation and dumping of the material involved, a physical description where appropriate, and the quantity to be dumped and proposed dumping site.

(433) Everyone who writes EPA will be sent information about a final application for a permit as soon as possible. This final application is expected to include questions about the description of the process or activity giving rise to the production of the dumping material, information on past activities of applicant or others with respect to the disposal of the type of material involved, and a description about available alternative means of disposal of the material with explanations about why an alternative is thought by the applicant to be inappropriate.

(434)

FEDERAL COMMUNICATIONS COMMISSION (FCC)

(435) The Federal Communications Commission controls non-government radio communications in the United States, Guam, Puerto Rico and the Virgin Islands. Commission inspectors have authority to board ships to determine whether their radio stations comply with international treaties, Federal laws and Commission regulations. The commission has field offices in the principal U.S. ports. (See Appendix A for addresses.) Information concerning ship radio regulations and service documents may be obtained from the Federal Communications Commission, Washington, DC 20554, or from any of the field offices.

(436)

Measurements and Equivalencies

nautical mile — 1,852 meters / 6,076.12 feet
statute mile — 5,280 feet / 1,609.3 meters / 1.6093 kilometers
cable — 0.1 nautical mile (CN) / 720 feet (US)
fathom — 6 feet / 1.8288 meters
foot — 0.3048 meter
inch — 2.54 centimeters
pound (avoirdupois) — 453.59 gram
kilometer — 1,000 meters
knot — 1.6877 feet per second / 0.5144 meters per second
miles/hour (statute) — 1.466 feet per second / 0.44704 meters per second
acre — 43,560 square feet / 4,046.82 square meters
gram — 0.0022046 pound (avoirdupois) / 0.035274 ounce
meter — 39.37 inches / 3.281 feet / 1.0936 yards
short ton — 2,000 pounds
long ton — 2,240 pounds
metric ton — 2,204.6 pounds
kilogram — 2.2 pounds
liter — 1.0567 quarts
barrel (petroleum) — 42 gallons (US)

Conversion Factors

Linear

inches — muiltiply by 25.40 — millimeters
inches — multiply by 2.540 — centimeters
centimeters — multiply by 0.032808 — feet
feet — multiply by 30.48 — centimeters
feet — multiply by 0.3048 — meters
feet — multiply by 0.00016458 — nautical miles
yard — multiply by 0.9144 — meters
meters — multiply by 3.2808 — feet
meters — multiply by 1.094 — yards
meters — multiply by 0.0005399 — nautical miles
statute miles — multiply by 0.86897 — nautical miles
statute miles — multiply by 1.6093 — kilometers
statute miles — multiply by 1,609.3 — meters
nautical miles — multiply by 1.151 — statute miles

Area

acres — multiply by 4,046.9 — square meters
acres — multiply by 43,560 — square feet
acres — multiply by 0.404685 — hectare
hectare — multiply by 2.471054 — acres
hectare — multiply by 10,000 — square meters
hectare — multiply by 1.07639×10^5 — square feet
square feet — multiply by 0.0929 — square meters
square feet — multiply by 0.00002296 — acres
square meters — multiply by 10.764 — square feet
square meters — multiply by 0.0002471 — acres

Depths

fathoms — multiply by 1.8288 — meters
feet — multiply by 0.3048 — meters
meters — multiply by 0.54681 — fathoms
meters — multiply by 3.2808 — feet

Rate

feet/second — multiply by 0.5925 — knots
feet/second — multiply by 0.6818 — miles/hour
feet/second — multiply by 30.48 — centimeters/second
statute miles/hour — multiply by 0.8689 — knots
statute miles/hour — multiply by 1.467 — feet/second
statute miles/hour — multiply by 0.447 — meters/second
knots — multiply by 1.151 — miles/hour
knots — multiply by 0.5144 — meters/second
knots — multiply by 1.6878 — feet/second
centimeters/second — multiply by 0.01944 — miles/hour
centimeters/second — multiply by 0.02237 — miles/hour
centimeters/second — multiply by 0.032808 — feet/second

Mass

grams — multiply by 0.035275 — ounces
grams — multiply by 0.002205 — pounds
ounces — multiply by 28.349 — grams
pounds — multiply by 0.45359 — kilograms
short tons — multiply by 2,000 — pounds
short tons — multiply by 0.89286 — long tons
short tons — multiply by 0.9072 — metric tons
long tons — multiply by 2,240 — pounds
long tons — multiply by 1.12 — short tons
long tons — multiply by 1.016 — metric tons
metric tons — multiply by 1,000 — kilograms
metric tons — multiply by 0.9842 — long tons
metric tons — multiply by 1.1023 — short tons
metric tons — multiply by 2,204.6 — pounds

Volume

barrels (petroleum) — multiply by 42 — gallons (US)
barrels (petroleum) — multiply by 158.99 — liters
barrels (liquid, US) — multiply by 31.5 — gallons (US)
barrels (liquid, US) — multiply by 26.229 — gallons (British)
barrels (liquid, US) — multiply by 119.24 — liters
gallons (US) — multiply by 0.02381 — barrels (petroleum)
gallons (US) — multiply by 3.7854 — liters
liters — multiply by 0.26417 — gallons (US)

(437)

Tips for BOATING CLEAN AND GREEN

Practice preventative engine maintenance
Keep your engine well tuned and practice preventative engine maintenance by regularly checking hoses and lines for chaffing or deterioration.

Use oil absorbants
Place and secure an oil absorbent under the engine and in the bilge. Avoid using bilge cleaners as they may get discharged overboard. It is illegal to use soap to disperse fuel and oil spills. Report oil and chemical spills by calling the EPA National Response Center at 800–424–8802.

Spill-proof your fueling practices
Use a spill proof system like a portable oil change pump to change your oil. Use oil absorbents when fueling and changing the oil. Do not top-off your fuel tank; leave it 10 percent empty to allow fuel to expand as it warms.

Reduce greywater discharges
Use shore-side facilities for laundry, showers, and dish washing whenever possible. Use only phosphate-free and biodegradable soaps. The legality of discharging greywater into a marina or within three miles off the coast varies from place to place. In some areas, there are local ordinances and codes that allow harbor patrol to issue citations for any discharge that is not "clean and clear." To avoid any potential fines and to protect the aquatic environment, do not discharge greywater overboard.

WARNING
HAZARDOUS WASTE

Dispose of hazardous waste properly
Recycle and properly dispose of absorbents, used oil, oil filters, paint, and batteries at your local household hazardous waste collection site.

Minimize boat cleaning and maintenance conducted on the water
- Use more elbow grease.
- Use products that are water-based, biodegradable, phosphate-free, and labeled as less toxic.
- Check out less toxic cleaning alternatives for all types of uses. Visit http://dbw.parks.ca.gov/?page_id=29184.
- Buy only the amount that you need and use products for spot cleaning only.
- Properly handle and store materials. Dispose of hazardous waste legally and safely.

Reduce discharges from bottom paints
- Consider alternative, non-biocide hull coatings.
- Clean the bottom with a soft, non-abrasive sponge.
- Use hull cleaning companies who use green management practices such as monitoring their divers and using non-abrasive scrubbing agents that do not release paint into the water. For more information visit https://www3.epa.gov/npdes/pubs/vgp_hull_husbandry.pdf.

Stow it, don't throw it
Keep your trash on-board. Recycle plastic, glass, metal, and paper. Avoid excess packaging.

P
Pump-out

Dump at the pump!
It is illegal to discharge untreated sewage anywhere within the three-mile territorial limit including lakes, rivers, reservoirs or coastal waters. Never discharge treated sewage into "restricted waters" such as a marina, swimming/wading areas, a sanctuary, poorly flushed areas, lakes, reservoirs, or freshwater impoundments and federal No Discharge Zones. Use sewage pumpouts, dump stations, or mobile-pumpout services.

Prevent the spread of aquatic invasive species
Before leaving any body of water, examine your boat and equipment and remove any visible mud, plants, or animals before transporting equipment. Never release plants or animals into a body of water or storm drains unless they came out of that body of water. Use cleaning procedures for anything that contacts the water. Visit https://invasivemusselcollaborative.net/wp-content/uploads/2018/11/NOAA-Decon-Watercraft.pdf.

For hazardous waste recycling or collection centers call 800–CLEAN–UP or visit http://www.earth911.com

Navigation Regulations

(1) This chapter contains extracts from **Code of Federal Regulations (CFR)** that are of importance to mariners in the area covered by this Coast Pilot. Sections of little value to the mariner are sometimes omitted. Omitted sections are signified by the following [...]

(2) Extracts from the following titles are contained in this chapter.

(3)

Title 15: Commerce and Foreign Trade
- Part 922—National Marine Sanctuary Program Regulations

Title 33: Navigation and Navigable Waters
- Part 26—Vessel Bridge-to-Bridge Radiotelephone Regulations
- Part 80—COLREGS Demarcation Lines
- Part 81—72 COLREGS: Implementing Rules
- Part 82—72 COLREGS: Interpretive Rules
- Part 88—Annex V: Pilot Rules
- Part 89—Inland Navigation Rules: Implementing Rules
- Part 90—Inland Rules: Interpretive Rules
- Part 110—Anchorage Regulations
- Part 117—Drawbridge Operation Regulations
- Part 147—Safety Zones
- Part 150—Deepwater Ports: Operations (in part)
- Part 156—Oil and Hazardous Material Transfer Operations
- Part 157—Rules for the Protection of the Marine Environment Relating to Tank Vessels Carrying Oil in Bulk (in part)
- Part 160—Ports and Waterways Safety-General
- Part 161—Vessel Traffic Management
- Part 162—Inland Waterways Navigation Regulations
- Part 164—Navigation Safety Regulations (in part)
- Part 165—Regulated Navigation Areas and Limited Access Areas
- Part 166—Shipping Safety Fairways
- Part 167—Offshore Traffic Separation Schemes
- Part 169—Ship Reporting Systems
- Part 207—Navigation Regulations
- Part 334—Danger Zones and Restricted Area Regulations

Title 40: Protection of Environment
- Part 140—Marine Sanitation Device Standard

Title 50: Wildlife and Fisheries
- Part 224—Endangered Marine and Anadromous Species
- Part 226—Designated Critical Habitat

(4) These regulations can only be amended by the enforcing agency or other authority cited in the regulations. Accordingly, requests for changes to these regulations should be directed to the appropriate agency for action. In those regulations where the enforcing agency is not cited or is unclear, recommendations for changes should be directed to the following Federal agencies for action:

(5) **National Oceanic and Atmospheric Administration–15 CFR 922**; **50 CFR 224** and **226**

(6) **United States Coast Guard–33 CFR 26**, **80**, **81**, **82**, **88**, **89**, **90**, **110**, **117**, **150**, **160**, **161**, **162**, **164**, **165**, **166**, **167** and **169**

(7) **United States Army Corps of Engineers–33 CFR 207** and **334**

(8) **Environmental Protection Agency–40 CFR 140**

(9)

TITLE 15–COMMERCE AND FOREIGN TRADE

(10)

Part 922–National Marine Sanctuary Program Regulations

(11)

Subpart A–Regulations of General Applicability

(12)

§922.1 Purposes and applicability of the regulations.

(13) (a) The purposes of this part are:

(14) (1) To implement title III of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended (16 U.S.C. 1431 et seq., also known as the National Marine Sanctuaries Act (NMSA or Act)), the Florida Keys National Marine Sanctuary and Protection Act (FKNMSPA) (Pub. L. 101–605) and the Hawaiian Islands National Marine Sanctuary Act (sections 2301–2307 of Pub. L. 102–587); and

(15) (2) To implement the designations of the national marine sanctuaries, for which site specific regulations appear in subparts F through T of this part, by regulating activities affecting them, consistent with their respective terms of designation, in order to protect, restore, preserve, manage, and thereby ensure the health, integrity and continued availability of the conservation, recreational, ecological, historical, scientific, educational, cultural, archeological and aesthetic resources and qualities of these areas.

(16) (b) The regulations of this part are binding on any person subject to the jurisdiction of the United States. Designation of a national marine sanctuary beyond the U.S. territorial sea does not constitute any claim to territorial jurisdiction on the part of the United States. The regulations of this part shall be applied in accordance with generally recognized principles of international law, 1 and in accordance with treaties, conventions, and other

agreements to which the United States is a party. No regulation of this part shall apply to a person who is not a citizen, national, or resident alien of the United States, unless in accordance with:

(17) (1) Generally recognized principles of international law;

(18) (2) An agreement between the United States and the foreign state of which the person is a citizen; or

(19) (3) An agreement between the United States and the flag state of the foreign vessel, if the person is a crew member of the vessel.

(20) (c) Unless noted otherwise, the regulations in this subpart and subpart D of this part apply to all national marine sanctuaries immediately upon designation.

(21)

§922.2 Mission, goals, and special policies.

(22) (a) In accordance with the standards set forth in the Act, the mission of the Office of National Marine Sanctuaries (Office) is to identify, designate, protect, restore, and manage areas of the marine environment of special national, and in some cases international, significance due to their conservation, recreational, ecological, historical, scientific, educational, cultural, archeological, or aesthetic resources and qualities.

(23) (b) The goal of the Office is to carry out the mission of the Act in a manner consistent with the purposes and policies of the Act (16 U.S.C. 1431(b)); the Florida Keys National Marine Sanctuary and Protection Act (Pub. L. 101–605) which designated Florida Keys National Marine Sanctuary; the Hawaiian Islands National Marine Sanctuary and Protection Act (Pub. L. 102–587), which designated Hawaiian Islands Humpback Whale National Marine Sanctuary; the Oceans Act of 1992 (Pub. L. 102–587), which designated Stellwagen Bank National Marine Sanctuary; and the National Marine Sanctuaries Preservation Act of 1996 (Pub. L. 104–283), which added Stetson Bank to Flower Garden Banks National Marine Sanctuary.

(24) (c) Management efforts will be coordinated to the extent practicable with other countries managing marine protected areas;

(25) (d) Program regulations, policies, standards, guidelines, and procedures developed pursuant to the Act concerning the identification, evaluation, registration, and treatment of historical resources shall be consistent, to the extent practicable, with the declared national policy for the protection and preservation of these resources as stated in the National Historic Preservation Act of 1966, 54 U.S.C. 300101 et seq., the Archeological and Historical Preservation Act of 1974, 54 U.S.C. 312501 et seq., and the Archeological Resources Protection Act of 1979 (ARPA), 16 U.S.C. 470aa et seq. The same degree of regulatory protection and preservation planning policy extended to historical resources on land shall be extended, to the extent practicable, to historical resources in the marine environment within the boundaries of designated national marine sanctuaries. The management of historical resources under the authority of the Act shall be consistent, to the extent practicable, with the Federal archeological program by consulting the Uniform Regulations, ARPA (43 CFR part 7) and other relevant Federal regulations. The Secretary of the Interior's Standards and Guidelines for Archeology may also be consulted for guidance.

(26)

§922.3 Issuance of regulations for fishing.

(27) If a proposed Sanctuary includes waters within the exclusive economic zone, the Secretary shall notify the appropriate Regional Fishery Management Council(s). The appropriate Council(s) shall have one hundred and eighty (180) days from the date of such notification to make recommendations and, if appropriate, prepare draft fishing regulations for the area within the exclusive economic zone and submit them to the Secretary. In preparing its recommendations and draft regulations, the Council(s) shall use as guidance the national standards of section 301(a) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1851) to the extent that they are consistent and compatible with the goals and objectives of the proposed Sanctuary designation. Any fishing activities not proposed for regulation under section 304(a)(5) of the NMSA may be listed in the draft Sanctuary designation document as being subject to regulation, without following the procedures specified in section 304(a)(5) of the NMSA. If the Secretary subsequently determines that regulation of fishing is necessary, then NOAA will follow the procedures specified in section 304(a)(5) of the NMSA.

(28)

(29)

§922.4 Boundaries.

(30) The boundaries for each of the fifteen National Marine Sanctuaries covered by this part are described in subparts F through T, respectively.

(31) **§922.4 Allowed activities.**

(32) All activities (e.g., fishing, boating, diving, research, education) may be conducted unless prohibited or otherwise regulated in subparts F through T of this part, subject to any emergency regulations promulgated pursuant to § 922.7, § 922.112(b), § 922.165, § 922.185, § 922.196, § 922.204, or § 922.214 subject to all prohibitions, regulations, restrictions, and conditions validly imposed by any Federal, State, tribal, or local authority of competent jurisdiction, including, but not limited to, Federal, Tribal, and State fishery management authorities, and subject to the provisions of section 312 of the NMSA. The Director may only directly regulate fishing activities pursuant to the procedure set forth in section 304(a)(5) of the NMSA.

(33) **§922.6 Prohibited or otherwise regulated activities.**

(34) Subparts F through T set forth sitespecific regulations applicable to the activities specified therein.

(35) **§922.7 Emergency regulations.**

(36) (a) Where necessary to prevent or minimize the destruction of, loss of, or injury to a Sanctuary resource or quality, or minimize the imminent risk of such destruction, loss, or injury, any and all such activities are subject to immediate temporary regulation, including prohibition.

(37) (b) This section does not apply to the following national marine sanctuaries with site-specific regulations that establish procedures for issuing emergency regulations:

(38) (1) Cordell Bank National Marine Sanctuary, § 922.112(e).

(39) (2) Florida Keys National Marine Sanctuary, § 922.165.

(40) (3) Hawaiian Islands Humpback Whale National Marine Sanctuary, § 922.185.

(41) (4) Thunder Bay National Marine Sanctuary, § 922.196.

(42) (5) Mallows Bay—Potomac River National Marine Sanctuary, § 922.204.

(43) (6) Wisconsin Shipwreck Coast National Marine Sanctuary, § 922.214.

(44) **§922.8 Penalties.**

(45) (a) Each violation of the NMSA or the other statutes designating national marine sanctuaries listed in § 922.2(b), any regulation in this part or any permit issued pursuant thereto, is subject to a civil penalty. Each day of a continuing violation constitutes a separate violation. (b) Regulations setting forth the procedures governing administrative proceedings for assessment of civil penalties, permit sanctions and denials for enforcement reasons, issuance and use of written warnings, and release or forfeiture of seized property appear at 15 CFR part 904.

(46) **§922.9 Response costs and damages.**

(47) Under section 312 of the Act, any person who destroys, causes the loss of, or injures any Sanctuary resource is liable to the United States for response costs and damages resulting from such destruction, loss, or injury. Any vessel used to destroy, cause the loss of, or injure any Sanctuary resource is liable in rem to the United States for response costs and damages resulting from such destruction, loss, or injury.

(48) **§922.10 Pre-existing authorizations or rights and certifications of pre-existing authorizations or rights.**

(49) Any valid lease, permit, license, or right of subsistence use or of access that is in existence on the effective date of final regulations for a designation or revised terms of designation of any National Marine Sanctuary may not be terminated by the Director. The Director may, however, regulate the exercise of such leases, permits, licenses, or rights consistent with the purposes for which the Sanctuary was designated.

(50)

Subpart L–Flower Garden Banks National Marine Sanctuary

(51)

§922.120 Boundary.

(52) The Flower Garden Banks National Marine Sanctuary (the Sanctuary) consists of three separate areas of ocean waters over and surrounding the East and West Flower Garden Banks and Stetson Bank, and the submerged lands thereunder including the Banks, in the northwestern Gulf of Mexico. The area designated at the East Bank is located approximately 120 nautical miles (nmi) south-southwest of Cameron, LA, and encompasses 19.20 nmi2. The area designated at the West Bank is located approximately 110 nmi southeast of Galveston, Texas, and encompasses 22.50 nmi2. The area designated at Stetson Bank is located approximately 70 nmi southeast of Galveston, Texas, and encompasses 0.64 nmi2. The three areas encompass a total of 42.34 nmi2 (145.09 square kilometers). The boundary coordinates for each area are listed in appendix A to this subpart.

(53)

§922.121 Definitions.

(54) As used in this subpart:

(55) *Disturb or disturbing a ray or whale shark* means to, or attempt to touch, handle, ride, pursue, chase away, hunt, restrain, detain (no matter how temporarily), capture, collect, or conduct any other activity that disrupts or has the potential to disrupt any ray or whale shark in the Sanctuary by any means. Notwithstanding the above, the mere presence of human beings (e.g., swimmers, divers, boaters, kayakers) is exempted from this definition.

(56) *Harmful matter* means any substance, or combination of substances, that because of its quantity, concentration, or physical, chemical, or infectious characteristics may pose a present or potential threat to Sanctuary resources or qualities, including but not limited to: Fishing nets, fishing line, hooks, fuel, oil, and those contaminants (regardless of quantity) listed at 40 CFR 302.4 pursuant to 42 U.S.C. 9601(14) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended.

(57) *No-activity zone* (applicable only to oil and gas industry activities) means the geographic areas delineated by the Department of the Interior in Topographic Features Stipulations for Outer Continental Shelf (OCS) lease sales as defined by a bathymetric contour (isobath) ranging from 55–85m in depth, with the exception of Stetson Bank (52m) and East and West Flower Garden Banks (100m). The Notice to Lessees (NTL) No. 2009–G39 provides and consolidates guidance for the avoidance and protection of biologically sensitive features and areas (i.e. topographic features, pinnacles, live bottoms (low relief features)) and other potentially sensitive biological features (PSBFs) when conducting operations in water depths shallower than 980 feet (300 meters) in the Gulf of Mexico. NTL 2009–G39 remains in effect pursuant to

NTL No. 2015–N02. The no-activity zones are based on depth contours as noted for the following Banks: Stetson Bank (52 meters), MacNeil Bank (82 meters), Rankin Banks (including 28 Fathom Bank) (85 meters), Bright Bank (85 meters), Geyer Bank (85 meters), Elvers Bank (85 meters), McGrail Bank (85 meters), Bouma Bank (85 meters), Rezak Bank (85 meters), Sidner Bank (85 meters), Sonnier Bank (55 meters), Alderdice Bank (80 meters), and Parker Bank (85 meters). For East and West Flower Garden Banks, the no-activity zones are based on the "1/4 1/4 1/4" aliquot system formerly used by the Department of the Interior, a method that delineates a specific portion of a block rather than the actual underlying isobath. The precise aliquot part description of these areas around East and West Flower Garden Banks are provided in appendix A of this subpart.

(58)

§922.122 Prohibited or otherwise regulated activities.

(59) (a) Except as specified in paragraphs (c) through (h) of this section, the following activities are prohibited and thus are unlawful for any person to conduct or to cause to be conducted:

(60) (1) Exploring for, developing, or producing oil, gas, or minerals except outside of all no-activity zones and provided all drilling cuttings and drilling fluids are shunted to the seabed through a downpipe that terminates an appropriate distance, but no more than ten meters, from the seabed.

(61) (2)(i) Anchoring any vessel within the Sanctuary.

(62) (ii) Mooring any vessel within the Sanctuary, except that vessels 100 feet (30.48 meters) or less in registered length may moor to a Sanctuary mooring buoy.

(63) (iii) Mooring a vessel in the Sanctuary without clearly displaying the blue and white International Code flag "A" ("alpha" dive flag) or the red and white "sports diver" flag whenever a SCUBA diver from that vessel is in the water and removing the "alpha" dive flag or "sports diver" flag after all SCUBA divers exit the water and return back on board the vessel, consistent with U.S. Coast Guard guidelines relating to sports diving as contained within "Special Notice to Mariners" (00–208) for the Gulf of Mexico.

(64) (3)(i) Discharging or depositing from within or into the Sanctuary any material or other matter except:

(65) (A) Fish, fish parts, chumming materials, or bait used in or resulting from fishing with conventional hook and line gear in the Sanctuary, provided that such discharge or deposit occurs during the conduct of such fishing within the Sanctuary;

(66) (B) Clean effluent generated incidental to vessel use by an operable Type I or Type II marine sanitation device (U.S. Coast Guard classification) approved in accordance with section 312 of the Federal Water Pollution Control Act, as amended (FWPCA), 33 U.S.C. 1322. Vessel operators must lock marine sanitation devices in a manner that prevents discharge or deposit of untreated sewage;

(67) (C) Clean vessel deck wash down, clean vessel engine cooling water, clean vessel generator cooling water, clean bilge water, or anchor wash;

(68) (D) Engine exhaust;

(69) (E) In areas of the Sanctuary outside the no-activity zones, drilling cuttings and drilling fluids necessarily discharged incidental to the exploration for, development of, or production of oil or gas in those areas and in accordance with the shunting requirements of paragraph (a)(1) of this section unless such discharge injures a Sanctuary resource or quality.

(70) (ii) Discharging or depositing, from beyond the boundaries of the Sanctuary, any material or other matter, except those listed in paragraphs (a)(3)(i)(A) through (D) of this section, that subsequently enters the Sanctuary and injures a Sanctuary resource or quality.

(71) (4) Drilling into, dredging, or otherwise altering the seabed of the Sanctuary (except as allowed under paragraph (c) of this section); or constructing, placing, or abandoning any structure, material, or other matter on the seabed of the Sanctuary.

(72) (5) Injuring or removing, or attempting to injure or remove, any coral or other bottom formation, coralline algae or other plant, marine invertebrate, brine-seep biota, or carbonate rock within the Sanctuary.

(73) (6) Taking any marine mammal or turtle within the Sanctuary, except as permitted by regulations, as amended, promulgated under the Marine Mammal Protection Act, as amended, 16 U.S.C. 1361 *et seq.,* and the Endangered Species Act, as amended, 16 U.S.C. 1531 *et seq*.

(74) (7) Injuring, catching, harvesting, collecting or feeding, or attempting to injure, catch, harvest, collect or feed, any fish within the Sanctuary by use of longlines, traps, nets, bottom trawls or any other gear, device, equipment or means except by use of conventional hook and line gear.

(75) (8) Injuring, catching, harvesting, collecting, or feeding, or attempting to injure, catch, harvest, collect, or feed, any fish within the Sanctuary by use of bottom longlines, traps, nets, bottom trawls, or any other gear, device, equipment, or means except by use of conventional hook and line gear.

(76) (9) Possessing within the Sanctuary (regardless of where collected, caught, harvested or removed), except for valid law enforcement purposes, any carbonate rock, coral or other bottom formation, coralline algae or other plant, marine invertebrate, brine-seep biota, or fish (except for fish caught by use of conventional hook and line gear).

(77) (10) Possessing or using within the Sanctuary, except possessing while passing without interruption through it or for valid law enforcement purposes, any fishing gear, device, equipment or means except conventional hook and line gear.

(78) (11) Possessing, except for valid law enforcement purposes, or using explosives or releasing electrical charges within the Sanctuary.

(79) (b) If any valid regulation issued by any Federal authority of competent jurisdiction, regardless of when issued, conflicts with a Sanctuary regulation, the regulation deemed by the Director as more protective of Sanctuary resources and qualities shall govern.

(80) (c) The prohibitions in paragraphs (a)(2)(i), (a)(4), and (a)(11) of this section do not apply to necessary activities conducted in areas of the Sanctuary outside the no-activity zones and incidental to exploration for, development of, or production of oil or gas in those areas.

(81) (d) The prohibitions in paragraphs (a)(2) through (11) of this section do not apply to activities necessary to respond to emergencies threatening life, property, or the environment.

(82) (e)(1) The prohibitions in paragraphs (a)(2) through (11) of this section do not apply to activities being carried out by the Department of Defense as of March 22, 2021. Such activities shall be carried out in a manner that minimizes any adverse impact on Sanctuary resources or qualities. The prohibitions in paragraphs (a)(2) through (11) of this section do not apply to any new activities carried out by the Department of Defense that do not have the potential for any significant adverse impact on Sanctuary resources or qualities. Such activities shall be carried out in a manner that minimizes any adverse impact on Sanctuary resources or qualities. New activities with the potential for significant adverse impact on Sanctuary resources or qualities may be exempted from the prohibitions in paragraphs (a)(2) through (11) of this section by the Director after consultation between the Director and the Department of Defense. If it is determined that an activity may be carried out, such activity shall be carried out in a manner that minimizes any adverse impact on Sanctuary resources or qualities.

(83) (2) In the event of threatened or actual destruction of, loss of, or injury to a Sanctuary resource or quality resulting from an untoward incident, including but not limited to spills and groundings, caused by a component of the Department of Defense, the cognizant component shall promptly coordinate with the Director for the purpose of taking appropriate actions to respond to and mitigate the harm and, if possible, restore or replace the Sanctuary resource or quality.

(84) (f) The prohibitions in paragraphs (a)(2) through (10) of this section do not apply to any activity specifically authorized by and conducted in accordance with the scope, purpose, terms, and conditions of a National Marine Sanctuary permit or ONMS authorization issued pursuant to subpart D of this part and § 922.123 or a special use permit issued pursuant to subpart D of this part.

(85) (g) The prohibitions in paragraphs (a)(2) through (11) of this section do not apply to any activity authorized by any lease, permit, license, approval or other authorization issued after January 18, 1994, provided that the applicant complies with §922.49, the Director notifies the applicant and authorizing agency that he or she does not object to issuance of the authorization, and the applicant complies with any terms and conditions the Director deems necessary to protect Sanctuary resources and qualities.

(86) (h) Notwithstanding paragraphs (f) and (g) of this section, in no event may the Director issue a National Marine Sanctuary permit under subpart D of this part and § 922.123 authorizing, or otherwise approve, the exploration for, development of, or production of oil, gas, or minerals in a no-activity zone. Any leases, permits, approvals, or other authorizations authorizing the exploration for, development of, or production of oil, gas, or minerals in a no-activity zone and issued after January 18, 1994 shall be invalid.

(87)

§922.62 Permit procedures.

(88) (a) A person may conduct an activity otherwise prohibited by § 922.61 if such activity is specifically authorized by and conducted in accordance with the scope, purpose, terms and conditions of a permit issued under this section and subpart D of this part.

(89) (b) Applications for permits should be addressed to the Director, Office of National Marine Sanctuaries; ATTN: Superintendent, Monitor National Marine Sanctuary, c/o The Mariners' Museum, 100 Museum Drive, Newport News, VA 23606.

(90) (c) The Director, at his or her discretion, may issue a permit, subject to such terms and conditions as he or she deems appropriate, to conduct an activity prohibited by §922.122(a)(2) through (11), if the Director finds that the activity will: Further research related to Sanctuary resources; further the educational, natural or historical resource value of the Sanctuary; further salvage or recovery operations in or near the Sanctuary in connection with a recent air or marine casualty; or assist in managing the Sanctuary. In deciding whether to issue a permit, the Director shall consider such factors as: The professional qualifications and financial ability of the applicant as related to the proposed activity; the duration of the activity and the duration of its effects; the appropriateness of the methods and procedures proposed by the applicant for the conduct of the activity; the extent to which the conduct of the activity may diminish or enhance Sanctuary resources and qualities; the cumulative effects of the activity; and the end value of the activity. In addition, the Director may consider such other factors as he or she deems appropriate.

(91) (d) It shall be a condition of any permit issued that the permit or a copy thereof be displayed on board all vessels or aircraft used in the conduct of the activity.

(92) (e) The Director may, inter alia, make it a condition of any permit issued that any information obtained under the permit be made available to the public.

(93) (f) The Director may, inter alia, make it a condition of any permit issued that a NOAA official be allowed to observe any activity conducted under the permit and/or that the permit holder submit one or more reports on the status, progress, or results of any activity authorized by the permit.

(94)

Appendix A to Subpart L of Part 922 –Flower Garden Banks National Marine Sanctuary Boundary Coordinates

(95) Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(96)

Table – Coordinates for Stetson Bank

Point ID	Latitude	Longitude
1	28.15673 N	– 94.29673 W
2	28.15661 N	– 94.30312 W
3	28.15862 N	– 94.30888 W
4	28.15862 N	– 94.30839 W
5	28.17386 N	– 94.30257 W
6	28.17583 N	– 94.29445 W
7	28.17543 N	– 94.29327 W
8	28.17284 N	– 94.28952 W
9	28.16924 N	– 94.28677 W
10	28.16428 N	– 94.28681 W
11	28.16274 N	– 94.28756 W
12	28.15796 N	– 94.29047 W
13	28.15673 N	– 94.29673 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(97)

Table – Coordinates for West Flower Garden Bank

Point ID	Latitude	Longitude
1	27.84363 N	– 93.78549 W
2	27.81750 N	– 93.81056 W
3	27.81752 N	– 93.84752 W
4	27.83069 N	– 93.86271 W
5	27.81735 N	– 93.87490 W
6	27.83220 N	– 93.89185 W
7	27.85854 N	– 93.89369 W
8	27.87925 N	– 93.87853 W
9	27.92626 N	– 93.82011 W
10	27.92620 N	– 93.81759 W
11	27.91801 N	– 93.80801 W
12	27.90969 N	– 93.77939 W
13	27.88644 N	– 93.77939 W
14	27.84363 N	– 93.78549 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(98)

Table – Coordinates for Horseshoe Bank

Point ID	Latitude	Longitude
1	27.82317 N	– 93.62789 W
2	27.80927 N	– 93.63578 W
3	27.80568 N	– 93.65541 W
4	27.79429 N	– 93.66555 W
5	27.78357 N	– 93.68846 W
6	27.79640 N	– 93.70534 W
7	27.81855 N	– 93.75198 W
8	27.82742 N	– 93.74743 W
9	27.81868 N	– 93.68868 W
10	27.83143 N	– 93.68941 W
11	27.84699 N	– 93.70079 W
12	27.87165 N	– 93.73947 W
13	27.88602 N	– 93.73294 W
14	27.87252 N	– 93.64648 W
15	27.85861 N	– 93.63908 W
16	27.82317 N	– 93.62789 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(99)

Table – Coordinates for East Flower Garden Bank

Point ID	Latitude	Longitude
1	27.89455 N	– 93.57040 W
2	27.87999 N	– 93.61309 W
3	27.88003 N	– 93.62961 W
4	27.89330 N	– 93.64172 W
5	27.92101 N	– 93.64747 W
6	27.95899 N	– 93.64490 W
7	27.97485 N	– 93.63086 W
8	27.98177 N	– 93.60996 W
9	27.98554 N	– 93.58188 W
10	27.95206 N	– 93.57810 W
11	27.92151 N	– 93.56880 W
12	27.89455 N	– 93.57040 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(100)

Table – Coordinates for MacNeil Bank

Point ID	Latitude	Longitude
1	28.00226 N	– 93.51550 W
2	27.99707 N	– 93.52669 W
3	28.00136 N	– 93.52423 W
4	28.00518 N	– 93.52425 W
5	28.01694 N	– 93.52233 W
6	28.01883 N	– 93.51264 W
7	28.03670 N	– 93.50300 W
8	28.03724 N	– 93.49844 W
9	28.03113 N	– 93.49199 W
10	28.01300 N	– 93.49624 W
11	28.00331 N	– 93.50725 W
12	28.00226 N	– 93.51550 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(101)

Table – Coordinates for Rankin Bank & 28–Fathom Bank		
Point ID	**Latitude**	**Longitude**
1	27.92554 N	– 93.40593 W
2	27.92039 N	– 93.41021 W
3	27.92035 N	– 93.42474 W
4	27.91387 N	– 93.43165 W
5	27.90829 N	– 93.42234 W
6	27.90641 N	– 93.42535 W
7	27.90489 N	– 93.44219 W
8	27.89549 N	– 93.44396 W
9	27.88892 N	– 93.43403 W
10	27.88072 N	– 93.42805 W
11	27.87676 N	– 93.42787 W
12	27.88449 N	– 93.44458 W
13	27.88803 N	– 93.45159 W
14	27.88794 N	– 93.45905 W
15	27.89234 N	– 93.46410 W
16	27.89971 N	– 93.45571 W
17	27.90910 N	– 93.45343 W
18	27.92847 N	– 93.45335 W
19	27.93407 N	– 93.44743 W
20	27.93599 N	– 93.44215 W
21	27.92554 N	– 93.40593 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(102)

Table – Coordinates for Bright Bank		
Point ID	**Latitude**	**Longitude**
1	27.87310 N	– 93.27056 W
2	27.86549 N	– 93.29462 W
3	27.87300 N	– 93.31055 W
4	27.89058 N	– 93.32193 W
5	27.89839 N	– 93.31987 W
6	27.90336 N	– 93.30953 W
7	27.91010 N	– 93.30562 W
8	27.91634 N	– 93.29292 W
9	27.91263 N	– 93.28816 W
10	27.90354 N	– 93.28386 W
11	27.90253 N	– 93.27238 W
12	27.89927 N	– 93.26729 W
13	27.87310 N	– 93.27056 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(103)

Table – Coordinates for Geyer Bank		
Point ID	**Latitude**	**Longitude**
1	27.78848 N	– 93.07794 W
2	27.79458 N	– 93.08448 W
3	27.83313 N	– 93.07913 W
4	27.85306 N	– 93.08279 W
5	27.86328 N	– 93.07885 W
6	27.86908 N	– 93.06974 W
7	27.86556 N	– 93.05944 W
8	27.85211 N	– 93.05391 W
9	27.83713 N	– 93.05725 W
10	27.82540 N	– 93.04312 W
11	27.82490 N	– 93.04276 W
12	27.80846 N	– 93.03412 W
13	27.78997 N	– 93.04096 W
14	27.78602 N	– 93.05384 W
15	27.78848 N	– 93.07794 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(104)

Table – Coordinates for Elvers Bank A		
Point ID	**Latitude**	**Longitude**
1	27.82285 N	– 92.88605 W
2	27.82087 N	– 92.88600 W
3	27.82009 N	– 92.88670 W
4	27.81869 N	– 92.89235 W
5	27.81690 N	– 92.89404 W
6	27.81615 N	– 92.89653 W
7	27.80645 N	– 92.90884 W
8	27.81221 N	– 92.92082 W
9	27.81599 N	– 92.93908 W
10	27.81934 N	– 92.93940 W
11	27.82250 N	– 92.92465 W
12	27.82809 N	– 92.91359 W
13	27.83973 N	– 92.89876 W
14	27.83972 N	– 92.88038 W
15	27.83003 N	– 92.86983 W
16	27.82285 N	– 92.88605 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(105)

Table – Coordinates for Elvers Bank B		
Point ID	**Latitude**	**Longitude**
1	27.85645 N	– 92.92310 W
2	27.85662 N	– 92.91922 W
3	27.85334 N	– 92.91631 W
4	27.85076 N	– 92.91727 W
5	27.84903 N	– 92.92097 W
6	27.85145 N	– 92.92524 W
7	27.85645 N	– 92.92310 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(106)

Table – Coordinates for McGrail Bank A

Point ID	Latitude	Longitude
1	27.97684 N	– 92.58489 W
2	27.97749 N	– 92.57716 W
3	27.97475 N	– 92.56753 W
4	27.97304 N	– 92.56191 W
5	27.95173 N	– 92.53902 W
6	27.94849 N	– 92.54254 W
7	27.96632 N	– 92.56116 W
8	27.96792 N	– 92.58152 W
9	27.95989 N	– 92.58187 W
10	27.95409 N	– 92.57057 W
11	27.94951 N	– 92.57135 W
12	27.94920 N	– 92.57994 W
13	27.95846 N	– 92.60274 W
14	27.97286 N	– 92.61901 W
15	27.98096 N	– 92.60158 W
16	27.97684 N	– 92.58489 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(107)

Table – Coordinates for McGrail Bank B

Point ID	Latitude	Longitude
1	27.94116 N	– 92.54750 W
2	27.94180 N	– 92.54543 W
3	27.94010 N	– 92.54202 W
4	27.93616 N	– 92.54151 W
5	27.93481 N	– 92.54398 W
6	27.93529 N	– 92.54803 W
7	27.93859 N	– 92.54901 W
8	27.94116 N	– 92.54750 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(108)

Table – Coordinates for Bouma Bank

Point ID	Latitude	Longitude
1	28.07909 N	– 92.47305 W
2	28.07370 N	– 92.44900 W
3	28.07370 N	– 92.44891 W
4	28.06544 N	– 92.43518 W
5	28.05162 N	– 92.43380 W
6	28.03846 N	– 92.44065 W
7	28.03463 N	– 92.45289 W
8	28.03114 N	– 92.45537 W
9	28.02915 N	– 92.46338 W
10	28.03154 N	– 92.47259 W
11	28.04166 N	– 92.47229 W
12	28.04525 N	– 92.46717 W
13	28.04751 N	– 92.47310 W
14	28.04676 N	– 92.48308 W

Table – Coordinates for Bouma Bank

Point ID	Latitude	Longitude
15	28.04866 N	– 92.48462 W
16	28.05687 N	– 92.48145 W
17	28.06388 N	– 92.49262 W
18	28.07018 N	– 92.49141 W
19	28.06974 N	– 92.48613 W
20	28.06594 N	– 92.48098 W
21	28.07109 N	– 92.47708 W
22	28.07683 N	– 92.48071 W
23	28.07909 N	– 92.47305 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(109)

Table – Coordinates for Sonnier Bank

Point ID	Latitude	Longitude
1	28.32652 N	– 92.45356 W
2	28.32495 N	– 92.45647 W
3	28.32501 N	– 92.45965 W
4	28.32796 N	– 92.46626 W
5	28.33523 N	– 92.47536 W
6	28.34453 N	– 92.47511 W
7	28.34840 N	– 92.47439 W
8	28.35256 N	– 92.47181 W
9	28.35416 N	– 92.46784 W
10	28.35456 N	– 92.46135 W
11	28.35351 N	– 92.45729 W
12	28.35174 N	– 92.45107 W
13	28.34852 N	– 92.44564 W
14	28.34303 N	– 92.44045 W
15	28.34048 N	– 92.44024 W
16	28.33584 N	– 92.44669 W
17	28.33068 N	– 92.44985 W
18	28.32652 N	– 92.45356 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(110)

Table – Coordinates for Rezak Bank

Point ID	Latitude	Longitude
1	27.95420 N	– 92.36641 W
2	27.95847 N	– 92.37739 W
3	27.95629 N	– 92.38599 W
4	27.97297 N	– 92.39248 W
5	27.97892 N	– 92.39845 W
6	27.98869 N	– 92.39964 W
7	27.99372 N	– 92.38244 W
8	27.98603 N	– 92.36697 W
9	27.98022 N	– 92.36429 W
10	27.97442 N	– 92.36996 W
11	27.96006 N	– 92.36854 W

Table – Coordinates for Rezak Bank		
Point ID	Latitude	Longitude
12	27.95420 N	– 92.36641 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(111)

Table – Coordinates for Sidner Bank		
Point ID	Latitude	Longitude
1	27.93046 N	– 92.36762 W
2	27.91368 N	– 92.37398 W
3	27.91462 N	– 92.38530 W
4	27.91976 N	– 92.39427 W
5	27.92306 N	– 92.38792 W
6	27.94525 N	– 92.38305 W
7	27.94166 N	– 92.37565 W
8	27.94231 N	– 92.37189 W
9	27.93046 N	– 92.36762 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(112)

Table – Coordinates for Parker Bank A		
Point ID	Latitude	Longitude
1	27.95067 N	– 92.00294 W
2	27.94177 N	– 91.99762 W
3	27.93547 N	– 91.99568 W
4	27.92937 N	– 91.99981 W
5	27.93224 N	– 92.02999 W
6	27.93401 N	– 92.03946 W
7	27.93958 N	– 92.05015 W
8	27.95012 N	– 92.05050 W
9	27.96214 N	– 92.05407 W
10	27.96630 N	– 92.04745 W
11	27.96869 N	– 92.04120 W
12	27.96925 N	– 92.02758 W
13	27.96678 N	– 92.02175 W
14	27.95067 N	– 92.00294 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(113)

Table – Coordinates for Parker Bank B		
Point ID	Latitude	Longitude
1	27.96082 N	– 91.99450 W
2	27.96432 N	– 91.99285 W
3	27.96566 N	– 91.99014 W
4	27.96385 N	– 91.98600 W
5	27.96149 N	– 91.98639 W
6	27.95931 N	– 91.98760 W
7	27.95824 N	– 91.99183 W
8	27.96082 N	– 91.99450 W

Table – Coordinates for Parker Bank B		
Point ID	Latitude	Longitude

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(114)

Table – Coordinates for Alderdice Bank		
Point ID	Latitude	Longitude
1	28.09726 N	– 91.99328 W
2	28.09474 N	– 91.98619 W
3	28.09569 N	– 91.97526 W
4	28.09184 N	– 91.97361 W
5	28.08410 N	– 91.97273 W
6	28.07506 N	– 91.97457 W
7	28.07053 N	– 91.98465 W
8	28.06959 N	– 91.99347 W
9	28.06819 N	– 92.00512 W
10	28.07026 N	– 92.01321 W
11	28.07562 N	– 92.02032 W
12	28.08058 N	– 92.02436 W
13	28.08463 N	– 92.02577 W
14	28.09024 N	– 92.02296 W
15	28.09487 N	– 92.01231 W
16	28.09627 N	– 92.00735 W
17	28.09507 N	– 92.00008 W
18	28.09726 N	– 91.99328 W

* Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

(115)

Appendix B to Subpart L of Part 922—Flower Garden Banks National Marine Sanctuary—Terms of Designation

(116) **Preamble**

(117) Under the authority of title III of the Marine Protection, Research, and Sanctuaries Act, as amended (“the Act”), 16 U.S.C. 1431 et seq., 19 separate unique polygon areas of ocean waters and the submerged lands thereunder, along the continental shelf and shelf edge in the northwestern Gulf of Mexico, as described in Article II, are hereby designated as Flower Garden Banks National Marine Sanctuary for the purposes of protecting and managing the conservation, ecological, recreation, research, education, historic and aesthetic resources and qualities of these areas.

(118) **Article I—Effect of Designation**

(119) The Act authorizes the Secretary of Commerce to issue such final regulations as are necessary and reasonable to implement the designation, including managing and protecting the conservation, recreational, ecological, historical, research, educational, and esthetic resources and qualities of a sanctuary. Section 1 of Article IV of this Designation Document lists those activities that may be regulated on the effective date of designation or at some later date in order to protect Sanctuary resources

and qualities. Thus, the act of designation empowers the Secretary of Commerce to regulate the activities listed in Section 1. Listing does not necessarily mean that an activity will be regulated. However, if an activity is not listed it may not be regulated, except on an emergency basis, unless Section 1 of Article IV is amended by the same procedures by which the original designation was made.

(120) **Article II—Description of the Area**

(121) The Flower Garden Banks National Marine Sanctuary (Sanctuary) boundary encompasses a total area of approximately 121 square nautical miles (160 square miles) of offshore ocean waters, and submerged lands thereunder, along the continental shelf and shelf edge in the northwestern Gulf of Mexico. The entire sanctuary boundary is composed of 19 unique polygons. The precise boundary coordinates for each polygon are listed in appendix A to this subpart.

(122) The sanctuary boundary for Polygon 1 begins at Point 1 and continues in numerical order to Point 13 and contains the submerged feature of Stetson Bank with an area of approximately 1.1 square nautical miles (1.5 square miles), located approximately 71 nautical miles (82 miles) south-southeast of Galveston, Texas. The sanctuary boundary for Polygon 2 begins at Point 1 and continues in numerical order to Point 14 and contains the submerged feature of West Flower Garden Bank with an area of approximately 28.0 square nautical miles (37.1 square miles), located approximately 97 nautical miles (111 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 3 begins at Point 1 and continues in numerical order to Point 16 and contains the submerged feature of Horseshoe Bank with an area of approximately 21.7 square nautical miles (28.7 square miles), located approximately 102 nautical miles (117 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 4 begins at Point 1 and continues in numerical order to Point 12 and contains the submerged feature of East Flower Garden Bank with an area of approximately 21.0 square nautical miles (27.8 square miles), located approximately 101 nautical miles (116 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 5 begins at Point 1 and continues in numerical order to Point 12 and contains the submerged feature of MacNeil Bank with an area of approximately 2.1 square nautical miles (2.7 square miles), located approximately 103 nautical miles (118 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 6 begins at Point 1 and continues in numerical order to Point 21 and contains the submerged features of Rankin Bank and 28 Fathom Bank with an area of approximately 4.2 square nautical miles (5.6 square miles), located approximately 109 nautical miles (126 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 7 begins at Point 1 and continues in numerical order to Point 13 and contains the submerged features of Bright Bank with an area of approximately 5.8 square nautical miles (7.6 square miles), located approximately 115 nautical miles (133 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 8 begins at Point 1 and continues in numerical order to Point 15 and contains the submerged feature of Geyer Bank within an area of approximately 8.7 square nautical miles (11.5 square miles), located approximately 126 nautical miles (145 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 9A begins at Point 1 and continues in numerical order to Point 16 and contains part of the submerged feature of Elvers Bank within an area of approximately 3.3 square nautical miles (4.4 square miles), located approximately 134 nautical miles (154 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 9B begins at Point 1 and continues in numerical order to Point 7 and also contains part of the submerged feature of Elvers Bank within an area of approximately 0.1 square nautical miles (0.2 square miles), located approximately 133 nautical miles (153 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 10A begins at Point 1 and continues in numerical order to Point 16 and contains part of the submerged feature of McGrail Bank with an area of approximately 3.4 square nautical miles (4.5 square miles), located approximately 142 nautical miles (163 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 10B begins at Point 1 and continues in numerical order to Point 8 and also contains part of the submerged feature of McGrail Bank with an area of approximately 0.1 square nautical miles (0.2 square miles), located approximately 146 nautical miles (168 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 11 begins at Point 1 and continues in numerical order to Point 23 and contains the submerged feature of Bouma Bank with an area of approximately 5.8 square nautical miles (7.7 square miles), located approximately 145 nautical miles (167 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 12 begins at Point 1 and continues in numerical order to Point 18 and contains the submerged feature of Sonnier Bank with an area of approximately 2.3 square nautical miles (3.1 square miles), located approximately 138 nautical miles (159 miles) east-southeast of Galveston, Texas. The sanctuary boundary for Polygon 13 begins at Point 1 and continues in numerical order to Point 12 and contains the submerged feature of Rezak Bank with an area of approximately 2.8 square nautical miles (3.7 square miles), located approximately 151 nautical miles (174 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 14 begins at Point 1 and continues in numerical order to Point 9 and contains the submerged feature of Sidner Bank with an area of approximately 1.5 square nautical miles (2.0 square miles), located approximately 153 nautical miles (177 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 15A begins at Point 1 and continues in numerical order to Point 14 and contains part of the submerged feature of Parker Bank within an area of approximately 5.2 square nautical miles (6.8 square miles), located approximately 168 nautical miles (194 miles) southeast of Galveston,

Texas. The sanctuary boundary for Polygon 15B begins at Point 1 and continues in numerical order to Point 8 and also contains part of the submerged feature of Parker Bank within an area of approximately 0.1 square nautical miles (0.2 square miles), located approximately 171 nautical miles (197 miles) southeast of Galveston, Texas. The sanctuary boundary for Polygon 16 begins at Point 1 and continues in numerical order to Point 18 and contains the submerged feature of Alderdice Bank within an area of approximately 3.8 square nautical miles (5.0 square miles), located approximately 166 nautical miles (191 miles) east-southeast of Galveston, Texas.

(123) **Article III—Characteristics of Area That Give it Particular Value**

(124) The Sanctuary contains a series of underwater features located along the edge of the continental shelf in the northwestern Gulf of Mexico. These features are of interest from both a geological and biological perspective. Formed primarily as the result of the movement of underlying salt deposits (also called salt domes or salt diapirs), and bathed by waters of tropical origin, they contain important geological features, biological habitats and other marine resources of national significance. They contain highly productive marine ecosystems that support a variety of fish and invertebrate communities of biological and economic importance.

(125) The reefs and banks of the northwestern Gulf of Mexico are structurally complex and contain a range of marine habitats, including coral reefs, coralline algal reefs, algal nodule beds, mesophotic and deepwater reefs, and soft bottom communities. The composition, diversity and vertical distribution of benthic communities on the banks are strongly influenced by the physical environment, including water temperature, turbidity and current regime. Geological features of interest include brine seeps, exposed basalt, methane seeps, and mud volcanoes. East and West Flower Garden Banks, the most well-known of the features, sustain the northernmost living coral reefs on the U.S. continental shelf, considered among the healthiest coral reefs in the Caribbean and Western Atlantic region. A deeper water coral reef also exists at McGrail Bank, consisting primarily of large colonies of blushing star coral (Stephanocoenia intersepta) at depths between 140 and 160 feet. These coral reefs are isolated from other reef systems by over 300 nautical miles (342 miles) and exist under hydrographic conditions generally near the northern limit for tropical reef formation. Several other banks, including Stetson, Sonnier, Geyer, and Bright Banks, contain various combinations of non-reef building coral species known collectively as coral communities, comprised of sponges, stony corals, fire coral, leafy algae and coralline algae. The deeper portions of the banks host thriving mid-depth (or "mesophotic") coral habitats characterized by the presence of both light-dependent and deepwater corals, including black corals, gorgonian corals, and associated organisms. Biological communities are distributed among several interrelated biotic zones, including a coralline algae zone, deep reef rocky outcrops, and soft bottom communities. The complex and biologically productive ecological communities of the banks offer a combination of aesthetic appeal and recreational and research opportunity matched in few other ocean areas. The following are qualitative descriptions of the individual reefs and banks within the Sanctuary; specific boundary coordinates can be found in appendix A to this subpart.

(126) *a. Stetson Bank, Depth Range 56ft–194ft*

(127) Boundaries encompass a claystone/siltstone ring feature of mesophotic coral habitat revealed by high resolution multibeam bathymetric surveys, and subsequently ground-truthed by remotely operated vehicle surveys. These features are surface expressions of the salt dome associated with the feature, and provide habitat for sponges, gorgonians, stony branching corals, black corals, and associated fish and mobile invertebrates.

(128) *b. West Flower Garden Bank, Depth Range 59ft–545ft*

(129) Boundaries encompass mesophotic coral patch reefs to the north, southwest, and east of the existing sanctuary. These reefs provide coralline algae reef habitat for black corals, gorgonians, stony branching corals, and associated fish and mobile invertebrates.

(130) *c. East Flower Garden Bank, Depth Range 52ft–446ft*

(131) Boundaries to encompass mesophotic coral patch reefs to the north and southeast of the existing sanctuary. These reefs provide deep coral habitat for dense populations of black corals, gorgonians, stony branching corals, and associated fish and mobile invertebrates.

(132) *d. Horseshoe Bank, Depth Range 243ft–614ft*

(133) Extensive deepwater habitat and coralline algae reefs in the form of hundreds of patchy outcroppings covering an area of approximately 1.9 miles (3km) wide and having 16.4–49.2ft (5–15m) of relief above the seafloor, with dense assemblages of mesophotic black coral, gorgonians, stony branching corals, sponges, algae invertebrates, and fish; several conicalshaped mud volcanoes clustered near the center of the feature, with one rising 328ft (100m) above the sea floor.

(134) *e. MacNeil Bank, Depth Range 210ft–315ft*

(135) Deep reef bedrock outcrops and coralline algae patch reefs harboring populations of black corals and gorgonians, sponges, fish, and mobile invertebrates.

(136) f. Rankin/28 Fathom Banks, Depth Range 164ft–571ft

(137) Rankin Bank is just north of 28 Fathom Bank, and separated from it by a long trough, approximately 1,640-foot (500 m) wide, approximately 6,070-foot (1,850 m) which extends to a depth of approximately 570ft (174 m). The boundaries encompass the shallowest portions of Rankin and 28 Fathom Banks, which harbor coral algae reefs and deep coral reefs with populations of gorgonians, black corals, sponges, and associated fish and mobile invertebrates.

(138) *g. Bright Bank, Depth Range 112ft–384ft*

(139) Bright Bank previously harbored a coral reef on the very shallowest portions of the bank, which sustained extensive damage from salvage and mining activities employing dynamite for excavation activities. The cap is now considered a coral community, and in spite of these impacts, nine species of shallow water scleractinian corals survive, along with two deeper water species. The feature also harbors extensive coralline algae reefs, providing habitat for populations of gorgonians, black corals, sponges, and associated fish and mobile invertebrates.

(140) *h. Geyer Bank, Depth Range 128ft–722ft*

(141) Geyer Bank is a broad, relatively flat faultbounded structure situated on an active salt diaper. This feature supports a coral community, as well as extensive coralline algae reefs and fields of algal nodules including dense fields of macro-algae, black corals, gorgonians, sponges, and associated fish and mobile invertebrates. Seasonal spawning aggregations of fish are associated with this bank, including enormous numbers of reef butterflyfish.

(142) *i. Elvers Bank, Depth Range 213ft–686ft*

(143) Two discreet polygons have been developed to protect portions of Elvers Bank: A larger polygon encompassing 4.43 square miles on the south side of the feature, and a small polygon, encompassing 0.19 square miles on the north side of the feature. The shallow areas of the bank feature coralline algae reefs and algal nodule fields, and the deeper areas in the southern polygon harbor large deep reef outcroppings, both providing habitat for black corals, gorgonians, sponges, and associated fish and mobile invertebrates. The deep reefs also harbor glass sponge fields, a feature not documented in any other areas of the sanctuary, as well as a previously undescribed species of black coral.

(144) *j. McGrail Bank, Depth Range 144ft–512ft*

(145) Two discreet polygons have been developed to protect portions of McGrail Bank: A larger claw shaped polygon reaching from northwest to southeast, encompassing 4.54 square miles, and a smaller polygon, encompassing 0.17 square miles, situated on the southeast of the feature that wraps around a conical shaped mound. This bank features unique areas of coral reefs dominated by large colonies of the blushing star coral, Stephanocoenia intersepta, with 28% live coral cover in discrete areas (no other known coral reef is dominated by this species). Pinnacles varying in diameter from ~80 to 395 feet (24–120 m) and as tall as ~25 feet (8 m) are found on the southwest rim of the main feature, along east- and southeasttrending scarps leading away from the bank and in concentric fields to the south and southeast of the bank. A significant portion of the depth zone between 145 and 170 feet is dominated by coral colonies up to 5 feet tall, covering an area of approximately 37 acres. At least 14 species of stony corals have been recorded. Deeper portions of this site harbor mesophotic coral habitat for deep coral, coralline algae reefs, and fields of algal nodules. Dense populations of black corals, gorgonians, macro-algae fields, and associated fish and mobile invertebrates are present.

(146) *k. Sonnier Bank, Depth Range 62ft–210ft*

(147) Sonnier Bank consists of a series of isolated clusters of pinnacles comprised of uplifted siltstone and claystone, that rise mostly around the perimeter of a single, roughly circular ring 1.9 miles (3.2km) in diameter. Two peaks are accessible and popular with recreational scuba divers. The peaks are dominated by coral communities featuring fire coral, sponges, and algae. The deeper portions of the feature are fairly heavily silted, but provide habitat for black corals, gorgonians, and associated fish and mobile invertebrates.

(148) *l. Bouma Bank, Depth Range 187ft–322ft*

(149) Bouma Bank is dominated by coralline algae reefs and algal nodule fields, providing habitat for populations of black corals, gorgonians, algae, branching stony coral, clusters of cup coral, and associated fish and mobile invertebrates.

(150) *m. Rezak Bank, Depth Range 197ft–430ft*

(151) Rezak Bank is dominated by coralline algae reefs and extensive algal nodule fields, providing habitat for populations of black corals, gorgonians, algae, and associated fish and mobile invertebrates.

(152) *n. Sidner Bank, Depth Range 190ft–420ft*

(153) Dominated by coralline algae reefs and extensive algal nodule fields providing habitat for populations of black corals, gorgonians, algae, sponges, and associated fish and mobile invertebrates.

(154) *o. Alderdice Bank, Depth Range 200ft–322ft*

(155) This feature includes spectacular basalt outcrops of Late Cretaceous origin (approximately 77 million years old) representing the oldest rock exposed on the continental shelf offshore of Louisiana and Texas. The outcrops at Alderdice Bank bear diverse, extremely dense assemblages of gorgonians and black corals, sponges, and swarms of reef fish. Mesophotic coralline algae reef habitats below the spires, silted over in areas, provide habitat for dense populations of black corals, gorgonians, sponges, branching stony corals, fields of macro-algae, and associated fish and mobile invertebrates.

(156) *p. Parker Bank, Depth Range 187ft–387ft*

(157) Two discreet polygons have been developed to protect portions of Parker Bank. A larger polygon bounding the central portion of the features, encompassing 6.82 square miles, and a smaller polygon to the east, encompassing 0.14 square miles. These boundaries protect the shallowest portions of the bank, which harbor coralline algae reefs and algal nodule fields and support populations of plating stony corals, black corals, gorgonians, sponges, macro-algae, and associated fish and mobile invertebrates.

(158) **Article IV—Scope of Regulations**

(159) **Section 1. Activities Subject to Regulation**

(160) The following activities are subject to regulation, including prohibition, to the extent necessary and reasonable to ensure the protection and management of the conservation, recreational, ecological, historical, research, educational and esthetic resources and qualities of the area:

(161) a. Anchoring or otherwise mooring within the Sanctuary;

(162) b. Discharging or depositing, from within the boundaries of the Sanctuary, any material or other matter;

(163) c. Discharging or depositing, from beyond the boundaries of the Sanctuary, any material or other matter;

(164) d. Drilling into, dredging or otherwise altering the seabed of the Sanctuary; or constructing, placing or abandoning any structure, material or other matter on the seabed of the Sanctuary;

(165) e. Exploring for, developing or producing oil, gas or minerals within the Sanctuary;

(166) f. Taking, removing, catching, collecting, harvesting, feeding, injuring, destroying or causing the loss of, or attempting to take, remove, catch, collect, harvest, feed, injure, destroy or cause the loss of, a Sanctuary resource;

(167) g. Possessing within the Sanctuary a Sanctuary resource or any other resource, regardless of where taken, removed, caught, collected or harvested, that, if it had been found within the Sanctuary, would be a Sanctuary resource.

(168) h. Possessing or using within the Sanctuary any fishing gear, device, equipment or other apparatus.

(169) i. Possessing or using airguns or explosives or releasing electrical charges within the Sanctuary.

(170) j. Interfering with, obstructing, delaying or preventing an investigation, search, seizure or disposition of seized property in connection with enforcement of the Act or any regulation or permit issued under the Act.

(171) *Section 2. Consistency With International Law*

(172) Any regulation of activities listed in Section 1 of this Article will be applied and enforced as mandated by 16 U.S.C. 1435(a). 1

(173) 1 Based on the legislative history of the NMSA, NOAA has long interpreted the text of 16 U.S.C. 1435(a) as encompassing international law, including customary international law.

(174) *Section 3. Emergency Regulations*

(175) Where necessary to prevent or minimize the destruction of, loss of, or injury to a Sanctuary resource or quality, or minimize the imminent risk of such destruction, loss or injury, any and all activities, including those not listed in section 1 of this Article, are subject to immediate temporary regulation, including prohibition.

(176) **Article V—Effect on Other Regulations, Leases, Permits, Licenses, and Rights**

(177) *Section 1. Fishing Regulations, Licenses, and Permits*

(178) The regulation of fishing is authorized under Article IV. All regulatory programs pertaining to fishing, including fishery management plans promulgated under the Magnuson Fishery Conservation and Management Act, 16 U.S.C. 1801 et seq., shall remain in effect. Where a valid regulation promulgated under these programs conflicts with a Sanctuary regulation, the regulation deemed by the Secretary of Commerce or designee as more protective of Sanctuary resources and qualities shall govern.

(179) *Section 2. Other Licenses, Regulations, and Permits*

(180) If any valid regulation issued by any Federal authority of competent jurisdiction, regardless of when issued, conflicts with a Sanctuary regulation, the regulation deemed by the Secretary of Commerce or designee as more protective of Sanctuary resources and qualities shall govern.

(181) Pursuant to section 304(c)(1) of the Act, 16 U.S.C. 1434(c)(1), no valid lease, permit, license, approval, or other authorization issued by any Federal authority of competent jurisdiction, or any valid right of subsistence use or access, may be terminated by the Secretary of Commerce or designee as a result of this designation or as a result of any Sanctuary regulation if such authorization or right was in existence on the effective date of this designation. However, the Secretary of Commerce or designee may regulate the exercise of such authorization or right consistent with the purposes for which the Sanctuary is designated.

(182) Accordingly, the prohibitions set forth in the Sanctuary regulations shall not apply to any activity authorized by any valid lease, permit, license, approval, or other authorization in existence on the effective date of Sanctuary designation and issued by any Federal authority of competent jurisdiction, or by any valid right of subsistence use or access in existence on the effective date of Sanctuary designation, provided that the holder of such authorization or right complies with Sanctuary regulations regarding the certification of such authorizations and rights (*e.g.*, notifies the Secretary or designee of the existence of, requests certification of, and provides requested information regarding such authorization or right) and complies with any terms and conditions on the exercise of such authorization or right imposed as a condition of certification by the Secretary or designee as he or she deems necessary to achieve the purposes for which the Sanctuary was designated.

(183) Pending final agency action on the certification request, such holder may exercise such authorization or right without being in violation of any prohibitions set forth in the Sanctuary regulations, provided the holder is in compliance with Sanctuary regulations regarding certifications.

(184) The prohibitions set forth in the Sanctuary regulations shall not apply to any activity conducted in accordance with the scope, purpose, terms, and conditions of the National Marine Sanctuary permit issued by the Secretary or designee in accordance with the Sanctuary regulations. Such permits may only be issued if the Secretary or designee finds that the activity for which the permit is applied will: Further research related to Sanctuary resources; further the educational, natural or historical resource value of the Sanctuary; further salvage or recovery operations in or near the Sanctuary in connection with a recent air or marine casualty; or assist in managing the Sanctuary.

(185) The prohibitions set forth in the sanctuary regulations shall not apply to any activity conducted in accordance with the scope, purpose, terms, and conditions of a

Special Use permit issued by the Secretary or designee in accordance with section 310 of the Act. However, in areas where sanctuary regulations prohibit oil, gas, or mineral exploration, development or production, the Secretary or designee may in no event, permit or otherwise, approve such activities in that area. Any leases, licenses, permits, approvals, or other authorizations issued after the effective date of designation authorizing the exploration or production of oil, gas, or minerals in that area shall be invalid.

(186) *Section 3. Department of Defense Activities*

(187) The prohibitions in § 922.122(a)(2) through (11) do not apply to activities being carried out by the Department of Defense as of the effective date of designation. Such activities shall be carried out in a manner that minimizes any adverse impact on Sanctuary resources and qualities. The prohibitions in § 922.122(a)(2) through (11) do not apply to any new activities carried out by the Department of Defense that do not have the potential for any significant adverse impact on Sanctuary resources and qualities. Such activities shall be carried out in a manner that minimizes any adverse impact on Sanctuary resources and qualities. New activities with the potential for significant adverse impact on Sanctuary resources and qualities may be exempted from the prohibitions in § 922.122(a)(2) through (11) of this section by the Director after consultation between the Director and the Department of Defense. If it is determined that an activity may be carried out, such activity shall be carried out in a manner that minimizes any adverse impact on Sanctuary resources and qualities. In the event of threatened or actual destruction of, loss of, or injury to a Sanctuary resource or quality resulting from an untoward incident, including but not limited to spills and groundings, caused by a component of the Department of Defense, the cognizant component shall promptly coordinate with the Director for the purpose of taking appropriate actions to respond to and mitigate the harm and, if possible, restore or replace the Sanctuary resource or quality.

(188) **Article VI—Alterations to This Designation**

(189) The terms of designation may be modified only by the same procedures by which the original designation is made, including public hearings; consultation with any appropriate Federal, State, regional and local agencies; review by the appropriate Congressional committees; and approval by the Secretary of Commerce or designee.

(190)

Subpart P–Florida Keys National Marine Sanctuary

(191)

§922.160 Purpose.

(192) (a) The purpose of the regulations in this subpart is to implement the comprehensive management plan for the Florida Keys National Marine Sanctuary by regulating activities affecting the resources of the Sanctuary or any of the qualities, values, or purposes for which the Sanctuary is designated, in order to protect, preserve and manage the conservation, ecological, recreational, research, educational, historical, and aesthetic resources and qualities of the area. In particular, the regulations in this part are intended to protect, restore, and enhance the living resources of the Sanctuary, to contribute to the maintenance of natural assemblages of living resources for future generations, to provide places for species dependent on such living resources to survive and propagate, to facilitate to the extent compatible with the primary objective of resource protection all public and private uses of the resources of the Sanctuary not prohibited pursuant to other authorities, to reduce conflicts between such compatible uses, and to achieve the other policies and purposes of the Florida Keys National Marine Sanctuary and Protection Act and the National Marine Sanctuaries Act.

(193) (b) Section 304(e) of the NMSA requires the Secretary to review management plans and regulations every five years, and make necessary revisions. Upon completion of the five year review of the Sanctuary management plan and regulations, the Secretary will repropose the regulations in their entirety with any proposed changes thereto, including those regulations in subparts A and E of this part that apply to the Sanctuary. The Governor of the State of Florida will have the opportunity to review the reproposed regulations before they take effect and if the Governor certifies such regulations as unacceptable, they will not take effect in State waters of the Sanctuary.

(194)

§922.161 Boundary.

(195) The sanctuary consists of an area of approximately 2,872 square nautical miles (nmi2) (3,803 sq. mi.) of coastal and ocean waters, and the submerged lands thereunder, surrounding the Florida Keys in Florida. Appendix I to this subpart sets forth the precise Sanctuary boundary.

(196)

§922.163 Prohibited activities–Sanctuary-wide.

(197) (a) Except as specified in paragraph (b) through (e) of this section, the following activities are prohibited and thus are unlawful for any person to conduct or to cause to be conducted:

(198) (1) *Mineral and hydrocarbon exploration, development and production*. Exploring for, developing, or producing minerals or hydrocarbons within the Sanctuary.

(199) (2) *Removal of, injury to, or possession of coral or live rock*. (I) Moving, removing, taking, harvesting, damaging, disturbing, breaking, cutting, or otherwise injuring, or possessing (regardless of where taken from) any living or dead coral, or coral formation, or attempting any of these activities, except as permitted under **50 CFR part 622**.

(200) (ii) Harvesting, or attempting to harvest, any live rock from the Sanctuary, or possessing (regardless of where taken from) any live rock within the Sanctuary, except as

authorized by a permit for the possession or harvest from aquaculture operations in the Exclusive Economic Zone, issued by the National Marine Fisheries Service pursuant to applicable regulations under the appropriate Fishery Management Plan, or as authorized by the applicable State authority of competent jurisdiction within the Sanctuary for live rock cultured on State submerged lands leased from the State of Florida, pursuant to applicable State law. See §370.027, Florida Statutes and implementing regulations.

(201) (3) *Alteration of, or construction on, the seabed*. Drilling into, dredging, or otherwise altering the seabed of the Sanctuary, or engaging in prop-dredging; or constructing, placing or abandoning any structure, material, or other matter on the seabed of the Sanctuary, except as an incidental result of:

(202) (I) Anchoring vessels in a manner not otherwise prohibited by this part (see §§922.163(a)(5)(ii) and 922.164(d)(1)(v));

(203) (ii) Traditional fishing activities not otherwise prohibited by this part;

(204) (iii) Installation and maintenance of navigational aids by, or pursuant to valid authorization by, any Federal, State, or local authority of competent jurisdiction;

(205) (iv) Harbor maintenance in areas necessarily associated with Federal water resource development projects in existence on March 8, 2001, including maintenance dredging of entrance channels and repair, replacement, or rehabilitation of breakwaters or jetties;

(206) (v) Construction, repair, replacement, or rehabilitation of docks, seawalls, breakwaters, piers, or marinas with less than ten slips authorized by any valid lease, permit, license, approval, or other authorization issued by any Federal, State, or local authority of competent jurisdiction.

(207) (4) *Discharge or deposit of materials or other matter*. (I) Discharging or depositing, from within the boundary of the Sanctuary, any material or other matter, except:

(208) (A) Fish, fish parts, chumming materials, or bait used produced incidental to and while conducting a traditional fishing activity in the Sanctuary;

(209) (B) Water generated by routine vessel operations (e.g., deck wash down and graywater as defined in section 312 of the FWPCA), excluding oily wastes from bilge pumping; or

(210) (C) Cooling water from vessels or engine exhaust;

(211) (ii) Discharging or depositing, from beyond the boundary of the Sanctuary, any material or other matter that subsequently enters the Sanctuary and injures a Sanctuary resource or quality, except:

(212) (A) Those listed in paragraph (a)(4)(i)(A) through (a)(4)(i)(C) of this section;

(213) (B) Sewage incidental to vessel use and generated by a marine sanitation device approved in accordance with section 312 of the Federal Water Pollution Control Act (FWPCA) as amended, 33 U.S.C. 1322 et seq.;

(214) (C) Those authorized under Monroe County land use permits; or

(215) (D) Those authorized under State permits.

(216) (5) *Operation of Vessels*. (i) Operating a vessel in such a manner as to strike or otherwise injure coral, seagrass, or any other immobile organism attached to the seabed, including, but not limited to, operating a vessel in such a manner as to cause prop-scarring.

(217) (ii) Having a vessel anchored on living coral other than Hard bottom in water depths less than 50 feet when visibility is such that the seabed can be seen.

(218) (iii) Except in officially marked channels, operating a vessel at a speed greater than 4 knots or in a manner which creates a wake:

(219) (A) Within an area designated idle speed only/no wake;

(220) (B) Within 100 yards of navigational aids indicating emergent or shallow reefs (international diamond warning symbol);

(221) (C) Within 100 yards of the red and white "divers down" flag (or the blue and white "alpha" flag in Federal waters);

(222) (D) Within 100 yards of residential shorelines; or

(223) (E) Within 100 yards of stationary vessels.

(224) (iv) Operating a vessel in such a manner as to injure or take wading, roosting, or nesting birds or marine mammals.

(225) (v) Operating a vessel in a manner which endangers life, limb, marine resources, or property.

(226) (vi) Having a marine sanitation device that is not secured in a manner that prevents discharges or deposits of treated and untreated sewage. Acceptable methods include, but are not limited to, all methods that have been approved by the U.S. Coast Guard (at **33 CFR 159.7(b)** and **(c)**).

(227) (6) *Conduct of diving/snorkeling without flag*. Diving or snorkeling without flying in a conspicuous manner the red and white "divers down" flag (or the blue and white "alpha" flag in Federal waters).

(228) (7) *Release of exotic species*. Introducing or releasing an exotic species of plant, invertebrate, fish, amphibian, or mammals into the Sanctuary.

(229) (8) *Damage or removal of markers*. Marking, defacing, or damaging in any way or displacing, removing, or tampering with any official signs, notices, or placards, whether temporary or permanent, or with any navigational aids, monuments, stakes, posts, mooring buoys, boundary buoys, trap buoys, or scientific equipment.

(230) (9) *Movement of, removal of, injury to, or possession of Sanctuary historical resources*. Moving, removing, injuring, or possessing, or attempting to move, remove, injure, or possess, a Sanctuary historical resource.

(231) (10) *Take or possession of protected wildlife*. Taking any marine mammal, sea turtle, or seabird in or above the Sanctuary, except as authorized by the Marine Mammal Protection Act, as amended, (MMPA), 16 U.S.C. 1361 et seq., the Endangered Species Act, as amended, (ESA), 16

U.S.C. 1531 et seq., and the Migratory Bird Treaty Act, as amended, (MBTA) 16 U.S.C. 703 et seq.

(232) (11) *Possession or use of explosives or electrical charges*. Possessing, or using explosives, except powerheads, or releasing electrical charges within the Sanctuary.

(233) (12) *Harvest or possession of marine life species*. Harvesting, possessing, or landing any marine life species, or part thereof, within the Sanctuary, except in accordance with rules 68B-42 of the Florida Administrative Code, and such rules shall apply mutatis mutandis (with necessary editorial changes) to all Federal and State waters within the Sanctuary.

(234) (13) *Interference with law enforcement*. Interfering with, obstructing, delaying or preventing an investigation, search, seizure, or disposition of seized property in connection with enforcement of the Acts or any regulation or permit issued under the Acts.

(235) (b) Notwithstanding the prohibitions in this section and in § 922.164, and any access and use restrictions imposed pursuant thereto, a person may conduct an activity specifically authorized by and conducted in accordance with the scope, purpose, terms, and conditions of a National Marine Sanctuary permit issued pursuant to § 922.166 and subpart D of this part.

(236) (c) Notwithstanding the prohibitions in this section and in § 922.164, and any access and use restrictions imposed pursuant thereto, a person may conduct an activity specifically authorized by any valid Federal, State, or local lease, permit, license, approval, or other authorization issued after the effective date of these regulations, provided that the applicant complies with § 922.36, the Director notifies the applicant and authorizing agency that he or she does not object to issuance of the authorization, and the applicant complies with any terms and conditions the Director deems reasonably necessary to protect Sanctuary resources and qualities. Amendments of authorizations in existence on the effective date of these regulations constitute authorizations issued after the effective date of these regulations.

(237) (d)(1) All military activities shall be carried out in a manner that avoids to the maximum extent practical any adverse impacts on Sanctuary resources and qualities. The prohibitions in paragraph (a) of this section and §922.164 do not apply to existing classes of military activities which were conducted prior to the effective date of these regulations, as identified in the Environmental Impact Statement and Management Plan for the Sanctuary. New military activities in the Sanctuary are allowed and may be exempted from the prohibitions in paragraph (a) of this section and in §922.164 by the Director after consultation between the Director and the Department of Defense pursuant to section 304(d) of the NMSA. When a military activity is modified such that it is likely to destroy, cause the loss of, or injure a Sanctuary resource or quality in a manner significantly greater than was considered in a previous consultation under section 304(d) of the NMSA, or it is likely to destroy, cause the loss of, or injure a Sanctuary resource or quality not previously considered in a previous consultation under section 304(d) of the NMSA, the activity is considered a new activity for purposes of this paragraph. If it is determined that an activity may be carried out, such activity shall be carried out in a manner that avoids to the maximum extent practical any adverse impact on Sanctuary resources and qualities.

(238) (2) In the event of threatened or actual destruction of, loss of, or injury to a Sanctuary resource or quality resulting from an untoward incident, including but not limited to spills and groundings caused by the Department of Defense, the cognizant component shall promptly coordinate with the Director for the purpose of taking appropriate actions to prevent, respond to or mitigate the harm and, if possible, restore or replace the Sanctuary resource or quality.

(239) (e) The following prohibitions do not apply to Federal, State and local officers while performing enforcement duties in their official capacities or responding to emergencies that threaten life, property, or the environment:

(240) (1) Those contained in paragraph (a)(4) of this section only as it pertains to discharges of sewage incidental to vessel use and generated by a marine sanitation device approved in accordance with section 312 of the Federal Water Pollution Control Act (FWPCA), as amended, 33 U.S.C. 1322 et seq.; and

(241) (2) Those contained in paragraph (a)(5) of this section.

(242) (f) In no event may the Director issue a certification, authorization, or permit under §§ 922.10, 922.163(c), and 922.166 and subpart D of this part, respectively, authorizing, or otherwise approving, the exploration for, leasing, development, or production of minerals or hydrocarbons within the Sanctuary, the disposal of dredged material within the Sanctuary other than in connection with beach renourishment or Sanctuary restoration projects, or the discharge of untreated or primary treated sewage, and any purported authorizations issued by other authorities for any of these activities within the Sanctuary shall be invalid.

(243) (g) Any amendment to these regulations shall not take effect in Florida State waters until approved by the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida. Any fishery regulations in the Sanctuary shall not take effect in Florida State waters until established by the Florida Marine Fisheries Commission.

(244)

§922.164 Additional activity regulations by Sanctuary area.

(245) In addition to the prohibitions set forth in §922.163, which apply throughout the Sanctuary, the following regulations apply with respect to activities conducted within the Sanctuary areas described in this section and in Appendix (II) through (VII) to this subpart. Activities

located within two or more overlapping Sanctuary areas are concurrently subject to the regulations applicable to each overlapping area.

(246) (a) *Areas To Be Avoided*. Operating a tank vessel or a vessel greater than 50 meters in registered length is prohibited in all areas to be avoided, except if such vessel is a public vessel and its operation is essential for national defense, law enforcement, or responses to emergencies that threaten life, property, or the environment. Appendix VII to this subpart sets forth the geographic coordinates of these areas.

(247) (b) *Existing Management Areas*.–(1) Key Largo and Looe Key Management Areas. The following activities are prohibited within the Key Largo and Looe Key Management Areas (also known as the Key Largo and Looe Key National Marine Sanctuaries) described in Appendix II to this subpart:

(248) (i) Removing, taking, damaging, harmfully disturbing, breaking, cutting, spearing or similarly injuring any coral or other marine invertebrate, or any plant, soil, rock, or other material, except commercial taking of spiny lobster and stone crab by trap and recreational taking of spiny lobster by hand or by hand gear which is consistent with these regulations and the applicable regulations implementing the applicable Fishery Management Plan.

(249) (ii) Taking any tropical fish.

(250) (iii) Fishing with wire fish traps, bottom trawls, dredges, fish sleds, or similar vessel-towed or anchored bottom fishing gear or nets.

(251) (iv) Fishing with, carrying or possessing, except while passing through without interruption or for law enforcement purposes: pole spears, air rifles, bows and arrows, slings, Hawai‘ian slings, rubber powdered arbaletes, pneumatic and spring-loaded guns or similar devices known as spearguns

(252) (2) *Great White Heron and Key West National Wildlife Refuge Management Areas*. Operating a personal watercraft, operating an airboat, or water skiing except within Township 66 South, Range 29 East, Sections 5, 11, 12 and 14; Township 66 South, Range 28 East, Section 2; Township 67 South, Range 26 East, Sections 16 and 20, all Tallahassee Meridian, are prohibited within the marine portions of the Great White Heron and Key West National Wildlife Refuge Management Areas described in Appendix II to this subpart:

(253) (c) *Wildlife Management Areas*. (1) Marine portions of the Wildlife Management Areas listed in Appendix III to this subpart or portions thereof may be designated “idle speed only/no-wake”, “no-motor” or “no-access buffer” zones or “closed.” The Director, in cooperation with other Federal, State, or local resource management authorities, as appropriate, shall post signs conspicuously, using mounting posts, buoys, or other means according to location and purpose, at appropriate intervals and locations, clearly delineating an area as an “idle speed only/no wake”, a “no- motor”, or a “no-access buffer” zone or as “closed”, and allowing instant, long-range recognition by boaters. Such signs shall display the official logo of the Sanctuary.

(254) (2) The following activities are prohibited within the marine portions of the Wildlife Management Areas listed in Appendix III to this subpart:

(255) (i) In those marine portions of any Wildlife Management Area designated an “idle speed only/no wake” zone in Appendix III to this subpart, operating a vessel at a speed greater that idle speed only/no wake.

(256) (ii) In those marine portions of any Wildlife Management Area designated a “no-motor” zone in Appendix III to this subpart, using internal combustion motors or engines for any purposes. A vessel with an internal combustion motor or engine may access a “no-motor” zone only through the use of a push pole, paddle, sail, electric motor or similar means of propulsion.

(257) (iii) In those marine portions of any Wildlife Management Area designated a “no-access buffer” zone in Appendix III of this subpart, entering the area by vessel.

(258) (iv) In those marine portions of any Wildlife Management Area designated as closed in Appendix III to this subpart, entering or using the area.

(259) (3) The Director shall coordinate with other Federal, State, or local resource management authorities, as appropriate, in the establishment and enforcement of access restrictions described in paragraph (c)(2) (i)–(iv) of this section in the marine portions of Wildlife Management Areas.

(260) (4) The Director may modify the number and location of access restrictions described in paragraph (c)(2) (i)–(iv) of this section within the marine portions of a Wildlife Management Area if the Director finds that such action is reasonably necessary to minimize disturbances to Sanctuary wildlife, or to ensure protection and preservation of Sanctuary wildlife consistent with the purposes of the Sanctuary designation and other applicable law governing the protection and preservation of wildlife resources in the Sanctuary. The Director will effect such modification by:

(261) (i) Publishing in the **Federal Register**, after notice and an opportunity for public comments in accordance, an amendment to the list of such areas set forth in Appendix III to this subpart, and a notice regarding the time and place where maps depicting the precise locations of such restrictions will be made available for public inspection, and

(262) (ii) Posting official signs delineating such restrictions in accordance with paragraph (c)(1) of this section.

(263) (d) *Ecological Reserves, Sanctuary Preservation Areas, and Special Use (Research only) Areas*. (1) The following activities are prohibited within the Ecological Reserves described in Appendix IV to this subpart, within the Sanctuary Preservation Areas described in Appendix V to this subpart, and within the Special Use (Research only Areas) described in Appendix VI to this subpart:

(264) (i) Discharging or depositing any material or other matter except cooling water or engine exhaust.

(265) (ii) Possessing, moving, harvesting, removing, taking, damaging, disturbing, breaking, cutting, spearing, or otherwise injuring any coral, marine invertebrate, fish, bottom formation, algae, seagrass or other living or dead organism, including shells, or attempting any of these activities. However, fish, invertebrates, and marine plants may be possessed aboard a vessel in an Ecological Reserve or Sanctuary Preservation Area, provided such resources can be shown not to have been harvested within, removed from, or taken within, the Ecological Reserve or Sanctuary Preservation Area, as applicable, by being stowed in a cabin, locker, or similar storage area prior to entering and during transit through such reserves or areas.

(266) (iii) Except for catch and release fishing by trolling in the Conch Reef, Alligator Reef, Sombrero Reef, and Sand Key SPAs, fishing by any means. However, gear capable of harvesting fish may be aboard a vessel in an Ecological Reserve or Sanctuary Preservation Area, provided such gear is not available for immediate use when entering and during transit through such Ecological Reserve or Sanctuary Preservation Area, and no presumption of fishing activity shall be drawn therefrom.

(267) (iv) Touching living or dead coral, including but not limited to, standing on a living or dead coral formation.

(268) (v) *Anchoring in the Tortugas Ecological Reserve*. In all other Ecological Reserves and Sanctuary Preservation Areas, placing any anchor in a way that allows the anchor or any portion of the anchor apparatus (including the anchor, chain or rope) to touch living or dead coral, or any attached organism. When anchoring dive boats, the first diver down must inspect the anchor to ensure that it is not touching living or dead coral, and will not shift in such a way as to touch such coral or other attached organisms. No further diving shall take place until the anchor is placed in accordance with these requirements.

(269) (vi) Except in the Tortugas Ecological Reserve where mooring buoys must be used, anchoring instead of mooring when a mooring buoy is available or anchoring in other than a designated anchoring area when such areas have been designated and are available.

(270) (vii) Except for passage without interruption though that area, for law enforcement purposes, or for purposes of monitoring pursuant to paragraph (d)(2) of this section, violating a temporary access restriction imposed by the Director pursuant to paragraph (d)(2) of this section.

(271) (viii) Except for passage without interruption through the area, for law enforcement purposes, or for purposes of monitoring pursuant to paragraph (d)(2) of this section: entering the Tortugas South area of the Tortugas Ecological Reserve; or entering the Tortugas North area of the Tortugas Ecological Reserve without a valid access permit issued pursuant to §922.167 or entering or leaving the Tortugas North area with a valid access permit issued pursuant to §922.167 without notifying FKNMS staff at the Dry Tortugas National Park office by telephone or radio no less than 30 minutes and no more than 6 hours, before entering and upon leaving the Tortugas Ecological Reserve.

(272) (ix) Tying a vessel greater than 100 feet (30.48 meters) LOA, or tying more than one vessel (other than vessels carried on board a vessel) if the combined lengths would exceed 100 feet (30.48 meters) LOA, to a mooring buoy or to a vessel tied to a mooring buoy in the Tortugas Ecological Reserve.

(273) (2) The Director may temporarily restrict access to any portion of any Sanctuary Preservation Area or Ecological Reserve if the Director, on the basis of the best available data, information and studies, determines that a concentration of use appears to be causing or contributing to significant degradation of the living resources of the area and that such action is reasonably necessary to allow for recovery of the living resources of such area. The Director will provide for continuous monitoring of the area during the pendency of the restriction. The Director will provide public notice of the restriction by publishing a notice in the **Federal Register**, and by such other means as the Director may deem appropriate. The Director may only restrict access to an area for a period of 60 days, with one additional 60 day renewal. The Director may restrict access to an area for a longer period pursuant to a notice and opportunity for public comment rulemaking under the Administrative Procedure Act. Such restriction will be kept to the minimum amount of area necessary to achieve the purpose thereof.

(274) (e) *Special-use Areas*. (1) The Director may set aside discrete areas of the Sanctuary as Special-use Areas, and, by designation pursuant to this paragraph, impose the access and use restrictions specified in paragraph (e)(3) of this section. Special-use Areas are described in Appendix VI to this subpart, in accordance with the following designations and corresponding objectives:

(275) (i) "Recovery area" to provide for the recovery of Sanctuary resources from degradation or other injury attributable to human uses:

(276) (ii) "Restoration area" to provide for restoration of degraded or otherwise injured Sanctuary resources;

(277) (iii) "Research-only area" to provide for scientific research or education relating to protecting and management through the issuance of a Sanctuary General permit for research pursuant to §922.166; and

(278) (iv) "Facilitated-use area" to provide for the prevention of use or user conflicts or the facilitation of access and use, or to promote public use and understanding, of Sanctuary resources through the issuance of special-use permits.

(279) (2) A Special-use Area shall be no larger than the size the Director deems reasonably necessary to accomplish the applicable objective.

(280) (3) Persons conducting activities within any Special-use Area shall comply with the access and use restrictions specified in this paragraph and made applicable to such area by means of its designations as a "recovery area,""restoration area,""research-only area," or "facilitated-use area." Except for passage without interruption through the area or for law enforcement purposes, no person may enter a Special-use Area

except to conduct or cause to be conducted the following activities:

(281) (i) In such area designated as a "recovery area" or a "restoration area," habitat manipulation related to restoration of degraded or otherwise injured Sanctuary resources, or activities reasonably necessary to monitor recovery of degraded or otherwise injured Sanctuary resources;

(282) (ii) In such area designated as a "research only area," scientific research or educational use specifically authorized by and conducted in accordance with the scope, purpose, terms and conditions of a valid National Marine Sanctuary General or Historical Resources permit, or

(283) (iii) In such area designated as a "facilitated-use area," activities specified by the Director or specifically authorized by and conducted in accordance with the scope, purpose, terms, and conditions of a valid Special-use permit.

(284) (4)(i) The Director may modify the number of, location of, or designations applicable to, Special-use Areas by publishing in the Federal Register, after notice and an opportunity for public comment in accordance with the Administration Procedure Act, an amendment to Appendix VI to this subpart, except that, with respect to such areas designated as a "recovery area,""restoration area," or "research only area," the Director may modify the number of, location of, or designation applicable to, such areas by publishing a notice of such action in the **Federal Register** if the Director determines that immediate action is reasonably necessary to:

(285) (A) Prevent significant injury to Sanctuary resources where circumstances create an imminent risk to such resources;

(286) (B) Initiate restoration activity where a delay in time would significantly impair the ability of such restoration activity to succeed;

(287) (C) Initiate research activity where an unforeseen natural event produces an opportunity for scientific research that may be lost if research is not initiated immediately.

(288) (ii) If the Director determines that a notice of modification must be promulgated immediately in accordance with paragraph (e)(4)(i) of this section, the Director will, as part of the same notice, invite public comment and specify that comments will be received for 15 days after the effective date of the notice. As soon as practicable after the end of the comment period, the Director will either rescind, modify or allow the modification to remain unchanged through notice in the **Federal Register**.

(289) (5) In addition to paragraph (e)(3) of this section no person shall conduct activities listed in paragraph (d) of this section in "Research-only Areas."

(290) (f) Additional Wildlife Management Areas, Ecological Reserves, Sanctuary Preservation Areas, or Special-use Areas, and additional restrictions in such areas, shall not take effect in Florida State waters unless first approved by the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida.

(291) (g) *Anchoring on Tortugas Bank*. Vessels 50 meters or greater in registered length, are prohibited from anchoring on the Tortugas Bank within the Florida Keys National Marine Sanctuary west of the Dry Tortugas National Park that is outside of the Tortugas Ecological Reserve. The boundary of the area closed to anchoring by vessels 50 meters or greater in registered length is formed by connecting in succession the points at the following coordinates (based on the North American Datum of 1983):

(292) (1) 24°32.00'N., 83°00.05'W.

(293) (2) 24°37.00'N., 83°06.00'W.

(294) (3) 24°39.00'N., 83°06.00'W.

(295) (4) 24°39.00'N., 83°00.05'W.

(296) (5) 24°32.00'N., 83°00.05'W.

(297)

§922.165 Emergency regulations.

(298) Where necessary to prevent or minimize the destruction of, loss of, or injury to a Sanctuary resource or quality, or minimize the imminent risk of such destruction, loss, or injury, any and all activities are subject to immediate temporary regulation, including prohibition. Emergency regulations shall not take effect in Florida territorial waters until approved by the Governor of the State of Florida. Any temporary regulation may be in effect for up to 60 days, with one 60-day extension. Additional or extended action will require notice and comment rulemaking under the Administrative Procedure Act, notice in local newspapers, notice to Mariners, and press releases.

(299)

§922.166 Permits other than for access to the Tortugas Ecological Reserve-application procedures and issuance criteria.

(300) (a) A person may conduct an activity otherwise prohibited by § 922.163 or § 922.164 if the activity is specifically allowed by and conducted in accordance with the scope, purpose, terms and conditions of a permit issued under this section and subpart D of this part.

(301) (1) Applications for permits should be addressed to the Director, Office of National Marine Sanctuaries; ATTN: Superintendent, Florida Keys National Marine Sanctuary, 33 East Quay Road, Key West, FL 33040.

(302) (2) For activities proposed to be conducted within any of the areas described in § 922.164 (b) through (e), the Director shall not issue a permit unless he or she further finds that such activities will further and are consistent with the purposes for which such area was established, as described in §§ 922.162 and 922.164 and in the management plan for the Sanctuary.

(303) (3) A person may conduct an activity otherwise prohibited by § 922.163 or § 922.164, if such activity is specifically allowed by and conducted in accordance with the scope, purpose, terms and conditions of a permit issued under this section and subpart D of this part, and

any additional permit issuance criteria and requirements in paragraphs (b), (c), (f), and (i) through (m) of this section.

(304) (i) The applicant is professionally qualified to conduct and complete the proposed activity;

(305) (ii) The applicant has adequate financial resources available to conduct and complete the proposed activity;

(306) (iii) The duration of the proposed activity is no longer than necessary to achieve its stated purpose;

(307) (iv) The methods and procedures proposed by the applicant are appropriate to achieve the proposed activity's goals in relation to the activity's impacts on Sanctuary resources and qualities;

(308) (v) The proposed activity will be conducted in a manner compatible with the primary objective of protection of Sanctuary resources and qualities, considering the extent to which the conduct of the activity may diminish or enhance Sanctuary resources and qualities, any indirect, secondary or cumulative effects of the activity, and the duration of such effects;

(309) (vi) It is necessary to conduct the proposed activity within the Sanctuary to achieve its purposes; and

(310) (vii) The reasonably expected and value of the activity to the furtherance of Sanctuary goals and purposes outweighs any potential adverse impacts on Sanctuary resources and qualities from the conduct of the activity.

(311) (4) For activities proposed to be conducted within any of the areas described in §922.164(b)–(e), the Director shall not issue a permit unless he or she further finds that such activities will further and are consistent with the purposes for which such area was established, as described in §§922.162 and 922.164 and in the management plan for the Sanctuary.

(312) (b) National Marine Sanctuary Survey/Inventory of Historical Resources Permit.

(313) (1) A person may conduct an activity prohibited by §§922.163 or 922.164 involving the survey/inventory of Sanctuary historical resources if such activity is specifically authorized by, and is conducted in accordance with the scope, purpose, terms and conditions of, a Survey/Inventory of Historical Resources permit issued under this paragraph (b). Such permit is not required if such survey/inventory activity does not involve any activity prohibited by §§922.163 or 922.164. Thus, survey/inventory activities that are non-intrusive, do not include any excavation, removal, or recovery of historical resources, and do not result in destruction of, loss of, or injury to Sanctuary resources or qualities do not require a permit. However, if a survey/inventory activity will involve test excavations or removal of artifacts or materials for evaluative purposes, a Survey/Inventory of Historical Resources permit is required. Regardless of whether a Survey/Inventory permit is required, a person may request such permit. Persons who have demonstrated their professional abilities under a Survey/Inventory permit will be given preference over other persons in consideration of the issuance of a Research/Recovery permit. While a Survey/Inventory permit does not grant any rights with regards to areas subject to pre-existing rights of access which are still valid, once a permit is issued for an area, other survey/inventory permits will not be issued for the same area during the period for which the permit is valid.

(314) (2) The Director, at his or her discretion, may issue a Survey/Inventory permit under this paragraph (b), subject to such terms and conditions as he or she deems appropriate, if the Director finds that such activity:

(315) (i) Satisfies the requirements for a permit issued under paragraph (a)(3) of this section;

(316) (ii) Either will be non-intrusive, not include any excavation, removal, or recovery of historical resources, and not result in destruction of, loss of, or injury to Sanctuary resources or qualities, or if intrusive, will involve no more than the minimum manual alteration of the seabed and/or the removal of artifacts or other material necessary for evaluative purposes and will cause no significant adverse impacts on Sanctuary resources or qualities; and

(317) (iii) That such activity will be conducted in accordance with all requirements of the Programmatic Agreement for the Management of Submerged Cultural Resources in the Florida Keys National Marine Sanctuary among NOAA, the Advisory Council on Historic Preservation, and the State of Florida (hereinafter SCR Agreement), and that such permit issuance is in accordance with such SCR Agreement.

(318) Copies of the SCR Agreement may also be examined at, and obtained from, the Sanctuaries and Reserves Division, Office of Ocean and Coastal Resource Management, National Ocean Service, National Oceanic and Atmospheric Administration, 1305 East-West Highway, 12th floor, Silver Spring, MD 20910; or from the Florida Keys National Marine Sanctuary Office, P.O. Box 500368, Marathon, FL 33050.

(319) (c) National Marine Sanctuary Research/Recovery of Sanctuary Historical Resources Permit.

(320) (1) A person may conduct any activity prohibited by §§922.163 or 922.164 involving the research/recovery of Sanctuary historical resources if such activity is specifically authorized by, and is conducted in accordance with the scope, purpose, terms and conditions of, a Research/Recovery of Historical Resources permit issued under this paragraph (c).

(321) (2) The Director, at his or her discretion, may issue a Research/Recovery of Historical Resources permit, under this paragraph (c), and subject to such terms and conditions as he or she deems appropriate, if the Director finds that:

(322) (i) Such activity satisfies the requirements for a permit issued under paragraph (a)(3) of this section;

(323) (ii) The recovery of the resource is in the public interest as described in the SCR Agreement;

(324) (iii) Recovery of the resource is part of research to preserve historic information for public use; and

(325) (iv) Recovery of the resource is necessary or appropriate to protect the resource, preserve historical

information, and/or further the policies and purposes of the NMSA and the FKNMSPAK, and that such permit issuance is an accordance with, and that the activity will be conducted in accordance with, all requirements of the SCR Agreement.

(326) (d) National Marine Sanctuary Special-use Permit.

(327) (1) A person may conduct any commercial or concession-type activity prohibited by §§922.163 or 922.164, if such activity is specifically authorized by, and is conducted in accordance with the scope, purpose, terms and conditions of, a Special-use permit issued under this paragraph (d). A Special-use permit is required for the deaccession/transfer of Sanctuary historical resources.

(328) (2) The Director, at his or her discretion, may issue a Special-use permit in accordance with this paragraph (d), and subject to such terms and conditions as he or she deems appropriate and the mandatory terms and conditions of section 310 of the NMSA, if the Director finds that issuance of such permit is reasonably necessary to: establish conditions of access to and use of any Sanctuary resource; or promote public use and understanding of any Sanctuary resources. No permit may be issued unless the activity is compatible with the purposes for which the Sanctuary was designated and can be conducted in a manner that does not destroy, cause the loss of, or injure any Sanctuary resource, and if for the deaccession/transfer of Sanctuary Historical Resources, unless such permit issuance is in accordance with, and that the activity will be conducted in accordance with, all requirements of the SCR Agreement.

(329) (3) The Director may assess and collect fees for the conduct of any activity authorized by a Special-use permit issued pursuant to this paragraph (d). No Special-use permit shall be effective until all assessed fees are paid, unless otherwise provided by the Director by a fee schedule set forth as a permit condition. In assessing fee, the Director shall include:

(330) (i) All costs incurred, or expected to be incurred, in reviewing and processing the permit application, including, but not limited to, costs for:

(331) (A) Number of personnel;

(332) (B) Personnel hours;

(333) (C) Equipment;

(334) (D) Biological assessments;

(335) (E) Copying; and

(336) (F) Overhead directly related to reviewing and processing the permit application;

(337) (ii) All costs incurred, or expected to be incurred, as a direct result of the conduct of the activity for which the Special-use permit is being issued, including, but not limited to:

(338) (A) The cost of monitoring the conduct both during the activity and after the activity is completed in order to assess the impacts to Sanctuary resources and qualities;

(339) (B) The use of an official NOAA observer, including travel and expenses and personnel hours; and

(340) (C) Overhead costs directly related to the permitted activity; and

(341) (iii) An amount which represents the fair market value of the use of the Sanctuary resource and a reasonable return to the United States Government.

(342) (4) Nothing in this paragraph (d) shall be considered to require a person to obtain a permit under this paragraph for the conduct of any fishing activities within the Sanctuary.

(343) (e) *Applications*. (1) Application for permits should be addressed to the Director, Office of Ocean and Coastal Resource Management; ATTN: Sanctuary Superintendent, Florida Keys National Marine Sanctuary, PO Box 500368, Marathon, FL 33050. All applications must include:

(344) (i) A detailed description of the proposed activity including a timetable for completion of the activity and the equipment, personnel and methodology to be employed;

(345) (ii) The qualifications and experience of all personnel;

(346) (iii) The financial resources available to the applicant to conduct and complete the proposed activity;

(347) (iv) A statement as to why it is necessary to conduct the activity within the Sanctuary;

(348) (v) The potential impacts of the activity, if any, on Sanctuary resources and qualities;

(349) (vi) The benefit to be derived from the activity; and

(350) (vii) Such other information as the Director may request depending on the type of activity. Copies of all other required licenses, permits, approvals, or other authorizations must be attached to the application.

(351) (2) Upon receipt of an application, the Director may request such additional information from the applicant as he or she deems reasonably necessary to act on the application and may seek the views of any persons. The Director may require a site visit as part of the permit evaluation. Unless otherwise specified the information requested must be received by the Director within 30 days of the postmark date of the request. Failure to provide such additional information on a timely basis may be deemed by the Director to constitute abandonment or withdrawal of the permit application.

(352) (f) A permit may be issued for a period not exceeding five years. All permits will be reviewed annually to determine to the permittee's compliance with permit scope, purpose, terms and conditions and progress toward reaching the stated goals and appropriate action taken under paragraph (g) of this section if warranted. A permittee may request permit renewal pursuant to the same procedures for applying for a new permit. Upon the permittee's request for renewal, the Director shall review all reports submitted by the permittee as required by the permit conditions. In order to renew the permit, the Director must find that the:

(353) (1) Activity will continue to further the purposes for which the Sanctuary was designated in accordance with the criteria applicable to the initial issuance of the permit;

(354) (2) Permittee has at no time violated the permit, or these regulations; and

(355) (3) The activity has not resulted in any unforeseen adverse impacts to Sanctuary resources or qualities.

(356) (g) The Director may amend, suspend, or revoke a permit for good cause. The Director may deny a permit application, in whole or in part, if it is determined that the permittee or applicant has acted in violation of a previous permit, of these regulations, of the NMSA or FKNMSPA, or for other good cause. Any such action shall be communicated in writing to the permittee or applicant by certified mail and shall set forth the reason(s) for the action taken. Procedures governing permit sanctions and denials for enforcement reasons are set forth in subpart D of **15 CFR part 904**.

(357) (h) The applicant for or holder of a National Marine Sanctuary permit may appeal the denial, conditioning, amendment, suspension or revocation of the permit in accordance with the procedures set forth in §922.50.

(358) (i) A permit issued pursuant to this section other than a Special-use permit is nontransferable. Special-use permits may be transferred, sold, or assigned with the written approval of the Director. The permittee shall provide the Director with written notice of any proposed transfer, sale, or assignment no less than 30 days prior to its proposed consummation. Transfers, sales, or assignments consummated in violation of this requirement shall be considered a material breach of the Special-use permit, and the permit shall be considered void as of the consummation of any such transfer, sale, or assignment.

(359) (j) The permit or a copy thereof shall be maintained in legible condition on board all vessels or aircraft used in the conduct of the permitted activity and be displayed for inspection upon th e request of any authorized officer.

(360) (k) Any permit issued pursuant to this section shall be subject to the following terms and conditions:

(361) (1) All permitted activities shall be conducted in a manner that does not destroy, cause the loss of, or injure Sanctuary resources or qualities, except to the extent that such may be specifically authorized.

(362) (2) The permittee agrees to hold the United States harmless against any claims arising out of the conduct of the permitted activities.

(363) (3) All necessary Federal, State, and local permits from all agencies with jurisdiction over the proposed activities shall be secured before commencing field operations.

(364) (l) In addition to the terms and conditions listed in paragraph (k) of this section, any permit authorizing the research/recovery of historical resources shall be subject to the following terms and conditions:

(365) (1) A professional archaeologist shall be in charge of planning, field recovery operations, and research analysis.

(366) (2) An agreement with a conservation laboratory shall be in place before field recovery operations are begun, an approved nautical conservator shall be in charge of planning, conducting, and supervising the conservation of any artifacts and other materials recovered.

(367) (3) A curation agreement with a museum or facility for curation, public access and periodic public display, and maintenance of the recovered historical resources shall be in place before commencing field operations (such agreement for the curation and display of recovered historical resources may provide for the release of public artifacts for deaccession/transfer if such deaccession/transfer is consistent with preservation, research, education, or other purposes of the designation of the designation and management of the Sanctuary. Deaccession/transfer of historical resources requires a Special-use permit issued pursuant to paragraph (d) of this section and such deaccession/transfer shall be executed in accordance with the requirements of the SCR Agreement).

(368) (4) The site's archaeological information is fully documented, including measured drawings, site maps drawn to professional standards, and photographic records.

(369) (m) In addition to the terms and conditions listed in paragraph (k) and (l) of this section, any permit issued pursuant to this section is subject to such other terms and conditions, including conditions governing access to, or use of, Sanctuary resources, as the Director deems reasonably necessary or appropriate and in furtherance of the purposes for which the Sanctuary is designated. Such terms and conditions may include, but are not limited to:

(370) (1) Any data or information obtained under the permit shall be made available to the public.

(371) (2) A NOAA official shall be allowed to observe any activity conducted under the permit.

(372) (3) The permittee shall submit one or more reports on the status, progress, or results of any activity authorized by the permit.

(373) (4) The permittee shall submit an annual report to the Director not later than December 31 of each year on activities conducted pursuant to the permit. The report shall describe all activities conducted under the permit and all revenues derived from such activities during the year and/or term of the permit.

(374) (5) The permittee shall purchase and maintain general liability insurance or other acceptable security against potential claims for destruction, loss of, or injury to Sanctuary resources arising out of the permitted activities. The amount of insurance or security should be commensurate with an estimated value of the Sanctuary resources in the permitted area. A copy of the insurance policy or security instrument shall be submitted to the Director.

(375)

§992.167 Permits for access to the Tortugas Ecological Reserve.

(376) (a) A person may enter the Tortugas North area of the Tortugas Ecological Reserve other than for passage without interruption through the reserve, for law enforcement purposes, or for purposes of monitoring

pursuant to paragraph (d)(2) of §922.164, if authorized by a valid access permit issued pursuant to §922.167.

(377) (b)(1) Access permits must be requested at least 72 hours but no longer than one month before the date the permit is desired to be effective. Access permits do not require written applications or the payment of any fee. Permits may be requested via telephone or radio by contacting FKNMS at any of the following numbers:

(378) Key West office: telephone: 305–292–0311

(379) Marathon office: telephone: 305–743–2437

(380) (2) The following information must be provided, as applicable:

(381) (i) Vessel name.

(382) (ii) Name, address, and telephone number of owner and operator.

(383) (iii) Name, address, and telephone number of applicant.

(384) (iv) USCG documentation, state license, or registration number.

(385) (v) Home port.

(386) (vi) Length of vessel and propulsion type (i.e., motor or sail).

(387) (vii) Number of divers.

(388) (viii) Requested effective date and duration of permit (2 weeks, maximum).

(389) (c) The Sanctuary Superintendent will issue a permit to the owner or to the owner's representative for the vessel when all applicable information has been provided. The Sanctuary Superintendent will provide a permit number to the applicant and confirm the effective date and duration period of the permit. Written confirmation of permit issuance will be provided upon request.

(390)

§922.168 [Removed and reserved]

(391)

Appendix I to Subpart P of Part 922–Florida Keys National Marine Sanctuary Boundary Coordinates

(392) (Appendix based on North American Datum of 1983)

(393) (1) The boundary of the Florida Keys National Marine Sanctuary–

(394) (a) Begins at the northeasternmost point of Biscayne National Park located at approximately 25°39'N., 80°05'W., then runs eastward to the 300-foot isobath located at approximately 25°39'N., 80°04'W.;

(395) (b) Then runs southward and connects in succession the points at the following coordinates:

(396) (i) 25°34'N., 80°04'W.,

(397) (ii) 25°28'N., 80°05'W., and

(398) (iii) 25°21'N., 80°07'W.;

(399) (iv) 25°16'N., 80°08'W.;

(400) (c) Then runs southwesterly approximating the 300-foot isobath and connects in succession the points at the following coordinates:

(401) (i) 25°07'N., 80°13'W.,

(402) (ii) 24°57'N., 80°21'W.,

(403) (iii) 24°39'N., 80°52'W.,

(404) (iv) 24°30'N., 81°23'W.,

(405) (v) 24°25'N., 81°50'W.,

(406) (vi) 24°22'N., 82°48'W.,

(407) (vii) 24°37'N., 83°06'W.,

(408) (viii) 24°46'N., 83°06'W.,

(409) (ix) 24°46'N., 82°54'W.,

(410) (x) 24°44'N., 81°55'W.,

(411) (xi) 24°51'N., 81°26'W., and

(412) (xii) 24°55'N., 80°56'W.;

(413) (d) Then follows the boundary of Everglades National Park in a southerly then northeasterly direction through Florida Bay, Buttonwood Sound, Tarpon Basin, and Blackwater Sound;

(414) (e) After Division Point, then departs from the boundary of Everglades National Park and follows the western shoreline of Manatee Bay, Barnes Sound, and Card Sound;

(415) (f) then follows the southern boundary of Biscayne National Park to the southeasternmost point of Biscayne National Park; and

(416) (g) then follows the eastern boundary of Biscayne National Park to the beginning point specified in paragraph (a).

(417) (2) The shoreward boundary of the Florida Keys National Marine Sanctuary is the mean high-water mark except around the Dry Tortugas where the boundary is coterminous with that of the Dry Tortugas National Park, formed by connecting in succession the point at the following coordinates:

(418) (a) 24°34'00"N., 82°54'00"W.;

(419) (b) 24°34'00"N., 82°58'00"W.;

(420) (c) 24°39'00"N., 82°58'00"W.;

(421) (d) 24°43'00"N., 82°54'00"W.;

(422) (e) 24°43'00"N., 82°52'00"W.;

(423) (f) 24°43'00"N., 82°48'00"W.;

(424) (g) 24°42'00"N., 82°46'00"W.;

(425) (h) 24°40'00"N., 82°46'00"W.,

(426) (i) 24°37'00"N., 82°48'00"W.; and

(427) (j) 24°34'00"N., 82°54'00"W.

(428) (3) The Florida Keys National Marine Sanctuary also includes the area located within the boundary formed by connecting in succession the points at the following coordinates:

(429) (a) 24°33'N., 83°09'W.;

(430) (b) 24°33'N., 83°05'W.;

(431) (c) 24°18'N., 83°05'W.;

(432) (d) 24°18'N., 83°09'W.; and

(433) (e) 24°33'N., 83°09'W.;

(434)

Appendix II to Subpart P of Part 922–Existing Management Areas Boundary Coordinates

(435) (1) The boundary of each of the Existing Management Areas is formed by connecting in succession the points at the following coordinates:

(436)

National Oceanic and Atmospheric Administration

(437)

KEY LARGO-MANAGEMENT AREA

(438) [Based on differential Global Positioning Systems data]

(439) 25°19.45'N., 80°12.00'W.

(440) 25°16.02'N., 80°08.07'W.

(441) 25°07.05'N., 80°12.05'W.

(442) 25°58.03'N., 80°19.08'W.

(443) 25°02.02'N., 80°25.25'W.

(444) 25°19.45'N., 80°12.00'W.

(445)

LOOE KEY MANAGEMENT AREA

(446) [Based on differential Global Positioning Systems data]

(447) 24°31.62'N., 80°26.00'W.

(448) 25°33.57'N., 80°26.00'W.

(449) 25°34.15'N., 80°23.00'W.

(450) 25°32.20'N., 80°23.00'W.

(451) 25°31.62'N., 80°26.00'W.

(452)

UNITED STATES FISH AND WILDLIFE SERVICE

(453)

GREAT WHITE HERON NATIONAL WILDLIFE REFUGE

(454) [Based on the North American Datum of 1983]

(455) 24°43.8'N., 81°48.6'W.

(456) 24°43.8'N., 81°37.2'W.

(457) 24°49.2'N., 81°37.2'W.

(458) 24°49.2'N., 81°19.8'W.

(459) 24°48.0'N., 81°19.8'W.

(460) 24°48.0'N., 81°14.4'W.

(461) 24°49.2'N., 81°14.4'W.

(462) 24°49.2'N., 81°08.4'W.

(463) 24°43.8'N., 81°08.4'W.

(464) 24°43.8'N., 81°14.4'W.

(465) 24°43.2'N., 81°14.4'W.

(466) 24°43.2'N., 81°16.2'W.

(467) 24°42.6'N., 81°16.2'W.

(468) 24°42.6'N., 81°21.0'W.

(469) 24°41.4'N., 80°21.0'W.

(470) 24°41.4'N., 80°22.2'W.

(471) 24°43.2'N., 80°22.2'W.

(472) 24°43.2'N., 80°22.8'W.

(473) 24°43.8'N., 80°22.8'W.

(474) 24°43.8'N., 80°24.0'W.

(475) 24°43.2'N., 80°24.0'W.

(476) 24°43.2'N., 80°26.4'W.

(477) 24°43.8'N., 80°26.4'W.

(478) 24°43.8'N., 81°27.0'W.

(479) 24°43.2'N., 81°27.0'W.

(480) 24°43.2'N., 81°29.4'W.

(481) 24°42.6'N., 81°29.4'W.

(482) 24°42.6'N., 81°30.6'W.

(483) 24°41.4'N., 81°30.6'W.

(484) 24°41.4'N., 81°31.2'W.

(485) 24°40.8'N., 81°31.2'W.

(486) 24°40.8'N., 81°32.4'W.

(487) 24°41.4'N., 81°32.4'W.

(488) 24°41.4'N., 81°34.2'W.

(489) 24°40.8'N., 81°34.2'W.

(490) 24°48.0'N., 81°35.4'W.

(491) 24°39.6'N., 81°35.4'W.

(492) 24°39.6'N., 81°36.0'W.

(493) 24°39.0'N., 81°36.0'W.

(494) 24°39.0'N., 81°37.2'W.

(495) 24°37.8'N., 81°37.2'W.

(496) 24°37.8'N., 81°37.8'W.

(497) 24°37.2'N., 81°37.8'W.

(498) 24°37.2'N., 81°40.2'W.

(499) 24°36.0'N., 81°40.2'W.

(500) 24°36.0'N., 81°40.8'W.

(501) 24°35.4'N., 81°40.8'W.

(502) 24°35.4'N., 81°42.0'W.

(503) 24°36.0'N., 81°42.0'W.

(504) 24°36.0'N., 81°48.6'W.

(505) 24°43.8'N., 81°48.6'W.

(506)

KEY WEST NATIONAL WILDLIFE REFUGE

(507) [Based on the North American Datum of 1983]

(508) 24°40.0'N., 81°49.0'W.

(509) 24°40.0'N., 82°10.0'W.

(510) 24°27.0'N., 82°10.0'W.

(511) 24°27.0'N., 81°49.0'W.

(512) 24°40.0'N., 81°49.0'W.

(513) (2) When differential Global Positioning Systems data becomes available, these coordinates may be published in the **Federal Register** to reflect the increased accuracy of such data.

(514)

Appendix IV to Subpart P of Part 922–Ecological Reserves Boundary

(515) Coordinates

(516) (1) The boundary of the Western Sambo Ecological Reserve is formed by connecting in succession the points at the following coordinates:

(517)

WESTERN SAMBO

(518) [Based on differential Global Positioning Systems data]

(519) 24°33.70'N., 81°40.80'W.

(520) 24°28.85'N., 81°41.90'W.

(521) 24°28.50'N., 81°43.70'W.

(522) 24°33.50'N., 81°43.10'W.

(523) 24°33.70'N., 81°40.80'W.

(524) (2) The Tortugas Ecological Reserve consists of two discrete areas, Tortugas North and Tortugas South.

(525) (3) The boundary of Tortugas North is formed by connecting in succession the points at the following coordinates:

(526)

TORTUGAS NORTH

(527) 24°46.00'N., 83°06.00'W.

(528) 24°46.00'N., 82°54.00'W.

(529) 24°45.80'N., 82°49.00'W.
(530) 24°43.53'N., 82°48.00'W.
(531) 24°43.53'N., 82°52.00'W.
(532) 24°43.00'N., 82°54.00'W.
(533) 24°39.00'N., 82°58.00'W.
(534) 24°39.00'N., 83°06.00'W.
(535) 24°46.00'N., 83°06.00'W.
(536) (4) The boundary of Tortugas South is formed by connecting in succession the points at the following coordinates

(537)

TORTUGA S SOUTH

(538) 24°33.00'N., 83°09.00'W.
(539) 24°33.00'N. 83°05.00'W.
(540) 24°18.00'N., 83°05.00'W.
(541) 24°18.00'N., 83°09.00'W.
(542) 24°33.00'N., 83°09.00'W.

(543)

Appendix V to Subpart P of Part 922–Sanctuary Preservation Areas Boundary Coordinates

(544) The boundary of each of the Sanctuary Preservation Areas (SPAs) is formed by connecting in succession the points at the following coordinates:

(545)

ALLIGATOR REEF

(546) [Based on differential Global Positioning Systems data]
(547) 24°50.98'N., 80°36.84'W.
(548) 24°50.51'N., 80°37.35'W.
(549) 24°50.81'N., 80°37.63'W.
(550) 24°51.23'N., 80°37.17'W.
(551) 24°50.98'N., 80°36.84'W.
(552) Catch and release fishing by trolling only is allowed in this SPA.

(553)

CARYSFORT/SOUTH CARYSFORT REEF

(554) [Based on Differential Global Positioning Systems data]
(555) 25°13.78'N., 80°12.00'W.
(556) 25°12.03'N., 80°12.98'W.
(557) 25°12.24'N., 80°13.77'W.
(558) 25°14.13'N., 80°12.78'W.
(559) 25°13.78'N., 80°12.00'W.

(560)

CHEECA ROCKS

(561) [Based on differential Global Positioning Systems data]
(562) 24°54.42'N., 80°36.91'W.
(563) 24°54.25'N., 80°36.77'W.
(564) 24°54.10'N., 80°37.00'W.
(565) 24°54.22'N., 80°37.15'W.
(566) 24°54.42'N., 80°36.91'W.

(567)

COFFINS PATCH

(568) [Based on differential Global Positioning Systems data]
(569) 24°41.47'N., 80°57.68'W.
(570) 24°41.12'N., 80°57.53'W.
(571) 24°40.75'N., 80°58.33'W.
(572) 24°41.06'N., 80°58.48'W.
(573) 24°41.47'N., 80°57.68'W.

(574)

CONCH REEF

(575) [Based on Differential Global Positioning Systems data]
(576) 24°57.48'N., 80°27.47'W.
(577) 24°57.34'N., 80°27.26'W.
(578) 24°56.78'N., 80°27.52'W.
(579) 24°56.96'N., 80°27.73'W.
(580) 24°57.48'N., 80°27.47'W.
(581) Catch and release fishing by trolling only is allowed in this SPA.

(582)

DAVIS REEF

(583) [Based on Differential Global Positioning Systems data]
(584) 24°55.61'N., 80°30.27'W.
(585) 24°55.41'N., 80°30.05'W.
(586) 24°55.11'N., 80°30.35'W.
(587) 24°55.34'N., 80°30.52'W.
(588) 24°55.61'N., 80°30.27'W.

(589)

DRY DOCKS

(590) [Based on Differential Global Positioning Systems data]
(591) 25°07.59'N., 80°17.91'W.
(592) 25°07.41'N., 80°17.70'W.
(593) 25°07.25'N., 80°17.82'W.
(594) 25°07.41'N., 80°18.09'W.
(595) 25°07.59'N., 80°17.91'W.

(596)

GRECIAN ROCKS

(597) [Based on Differential Global Positioning Systems data]
(598) 25°06.91'N., 80°18.20'W.
(599) 25°06.67'N., 80°18.06'W.
(600) 25°06.39'N., 80°18.32'W.
(601) 25°06.42'N., 80°18.48'W.
(602) 25°06.81'N., 80°18.44'W.
(603) 25°06.91'N., 80°18.20'W.

(604)

EASTERN DRY ROCKS

(605) [Based on Differential Global Positioning Systems data]
(606) 24°27.92'N., 81°50.55'W.
(607) 24°27.73'N., 81°50.33'W.
(608) 24°27.47'N., 81°50.80'W.
(609) 24°27.72'N., 81°50.86'W.
(610) 24°27.92'N., 81°50.55'W.

(611)

THE ELBOW

(612) [Based on Differential Global Positioning Systems data]

(613) 25°08.97'N., 80°15.63'W.

(614) 25°08.95'N., 80°15.22'W.

(615) 25°08.18'N., 80°15.64'W.

(616) 25°08.50'N., 80°16.07'W.

(617) 25°08.97'N., 80°15.63'W.

(618)

FRENCH REEF

(619) [Based on Differential Global Positioning Systems data]

(620) 25°02.20'N., 80°20.63'W.

(621) 25°01.81'N., 80°21.02'W.

(622) 25°02.36'N., 80°21.27'W.

(623) 25°02.20'N., 80°20.63'W.

(624)

HEN AND CHICKENS

(625) [Based on Differential Global Positioning Systems data]

(626) 24°56.38'N., 80°32.86'W.

(627) 24°56.21'N., 80°32.63'W.

(628) 24°55.96'N., 80°32.95'W.

(629) 24°25.04'N., 80°33.19'W.

(630) 24°56.38'N., 80°32.86'W.

(631)

LOOE KEY

(632) [Based on Differential Global Positioning Systems data]

(633) 24°33.24'N., 81°24.03'W.

(634) 24°32.70'N., 81°23.85'W.

(635) 24°32.52'N., 81°24.70'W.

(636) 24°33.12'N., 81°24.81'W.

(637) 24°33.24'N., 81°24.03'W.

(638)

MOLASSES REEF

(639) [Based on Differential Global Positioning Systems data]

(640) 25°01.00'N., 80°22.53'W.

(641) 25°01.06'N., 80°21.84'W.

(642) 25°00.29'N., 80°22.70'W.

(643) 25°00.72'N., 80°22.83'W.

(644) 25°01.00'N., 80°22.53'W.

(645)

NEWFOUND HARBOR KEY

(646) [Based on Differential Global Positioning Systems data]

(647) 24°37.10'N., 81°23.34'W.

(648) 24°36.85'N., 81°23.28'W.

(649) 24°36.74'N., 81°23.80'W.

(650) 24°37.00'N., 81°23.86'W.

(651) 24°37.10'N., 81°23.34'W.

(652)

ROCK KEY

(653) [Based on Differential Global Positioning Systems data]

(654) 24°27.48'N., 81°51.35'W.

(655) 24°27.30'N., 81°51.15'W.

(656) 24°27.21'N., 81°51.60'W.

(657) 24°27.45'N., 81°51.65'W.

(658) 24°27.48'N., 81°51.35'W.

(659)

SAND KEY

(660) [Based on Differential Global Positioning Systems data]

(661) 24°27.58'N., 81°52.29'W.

(662) 24°27.01'N., 81°52.32'W.

(663) 24°27.02'N., 81°52.95'W.

(664) 24°27.61'N., 81°52.94'W.

(665) 24°27.58'N., 81°52.29'W.

(666) Catch and release fishing by trolling only is allowed in this SPA.

(667)

SOMBRERO KEY

(668) [Based on Differential Global Positioning Systems data]

(669) 24°37.91'N., 81°06.78'W.

(670) 24°37.50'N., 81°06.19'W.

(671) 24°37.25'N., 81°06.90'W.

(672) 24°37.91'N., 81°06.78'W.

(673) Catch and release fishing by trolling only is allowed in this SPA.

(674)

Appendix VI to Subpart P of 922–Special-Use Areas Boundary Coordinates and Use Designations

(675) The boundary of each of the Special-Use Areas is formed by connecting in succession the points at the following coordinates:

(676)

CONCH REEF

(677) (Research Only)–[Based on differential Global Positioning Systems data]

(678) 24°56.83'N., 80°27.26'W.

(679) 24°57.10'N., 80°26.93'W.

(680) 24°56.99'N., 80°27.26'W.

(681) 24°57.34'N., 80°27.26'W.

(682) 24°56.83'N., 80°72.26'W.

(683)

EASTERN SAMBO

(684) (Research Only)–[Based on differential Global Positioning Systems data]

(685) 24°29.84'N., 81°39.59'W.

(686) 24°29.55'N., 81°39.35'W.

(687) 24°29.37'N., 81°39.96'W.

(688) 24°29.77'N., 81°40.03'W.

(689) 24°29.84'N., 81°39.59'W.

(690)

LOOE KEY

(691) (Research Only)–[Based on differential Global Positioning Systems data]

(692) 24°34.17'N., 81°23.01'W.

(693) 24°33.98'N., 81°22.96'W.

(694) 24°33.84'N., 81°23.60'W.

(695) 24°34.23'N., 81°23.68'W.

(696) 24°34.17'N., 81°23.01'W.

(697)

TENNESSEE REEF

(698) (Research Only)–[Based on differential Global Positioning Systems data]

(699) 24°44.77'N., 80°47.12'W.

(700) 24°44.57'N., 80°46.98'W.

(701) 24°44.68'N., 80°46.59'W.

(702) 24°44.95'N., 80°46.74'W.

(703) 24°44.77'N., 80°47.12'W.

(704)

Appendix VII to Subpart P of 922–Areas To Be Avoided Boundary Coordinates

(705)

Appendix VII to Subpart P of Part 922–Areas To Be Avoided Boundary Coordinates

(706)

IN THE VICINITY OF THE FLORIDA KEYS

(707) [Reference Charts: United States 11466, 37th Edition–August 1, 2005 and United States 11450, 9th Edition–November 1, 2003]

(708) 25°45.00'N., 80°06.10'W.

(709) 25°38.70'N., 80°02.70'W.

(710) 25°22.00'N., 80°03.00'W.

(711) 25°06.38'N., 80°10.48'W.

(712) 24°56.37'N., 80°19.26'W.

(713) 24°37.90'N., 80°47.30'W.

(714) 24°29.20'N., 81°17.30'W.

(715) 24°22.30'N., 81°43.17'W.

(716) 24°28.00'N., 81°43.17'W.

(717) 24°28.70'N., 81°43.50'W.

(718) 24°29.80'N., 81°43.17'W.

(719) 24°33.10'N., 81°35.15'W.

(720) 24°33.60'N., 81°26.00'W.

(721) 24°38.20'N., 81°07.00'W.

(722) 24°43.20'N., 80°53.20'W.

(723) 24°46.10'N., 80°46.15'W.

(724) 24°51.10'N., 80°37.10'W.

(725) 24°57.50'N., 80°27.50'W.

(726) 25°09.90'N., 80°16.20'W.

(727) 25°24.00'N., 80°09.10'W.

(728) 25°31.50'N., 80°07.00'W.

(729) 25°39.70'N., 80°06.85'W.

(730) 25°45.00'N., 80°06.10'W.

(731)

IN THE VICINITY OF KEY WEST HARBOR

(732) [Reference Chart: United States 11434, 26th Edition–April 1, 2005]

(733) 24°27.95'N., 81°48.65'W.

(734) 24°23.00'N., 81°53.50'W.

(735) 24°26.60'N., 81°58.50'W.

(736) 24°27.75'N., 81°55.70'W.

(737) 24°29.35'N., 81°53.40'W.

(738) 24°29.35'N., 81°50.00'W.

(739) 24°27.95'N., 81°48.65'W.

(740)

AREA SURROUNDING THE MARQUESAS KEYS

(741) [Reference Chart: United States 11434, 26th Edition–April 1, 2005]

(742) 24°26.60'N., 81°59.55'W.

(743) 24°23.00'N., 82°03.50'W.

(744) 24°23.60'N., 82°27.80'W.

(745) 24°34.50'N., 82°37.50'W.

(746) 24°43.00'N., 82°26.50'W.

(747) 24°38.31'N., 81°54.06'W.

(748) 24°37.91'N., 81°53.40'W.

(749) 24°36.15'N., 81°51.78'W.

(750) 24°34.40'N., 81°50.60'W.

(751) 24°33.44'N., 81°49.73'W.

(752) 24°31.20'N., 81°52.10'W.

(753) 24°28.70'N., 81°56.80'W.

(754) 24°26.60'N., 81°59.55'W.

(755)

AREA SURROUNDING THE DRY TORTUGAS ISLANDS

(756) [Reference Chart: United States 11434, 26th Edition–April 1, 2005]

(757) 24°32.00'N., 82°53.50'W.

(758) 24°32.00'N., 83°00.05'W.

(759) 24°39.70'N., 83°00.05'W.

(760) 24°45.60'N., 82°54.40'W.

(761) 24°45.60'N., 82°47.02'W.

(762) 24°42.80'N., 82°43.90'W.

(763) 24°39.50'N., 82°43.90'W.

(764) 24°35.60'N., 82°46.40'W.

(765) 24°32.00'N., 82°53.50'W.

(766)

TITLE 33–NAVIGATION AND NAVIGABLE WATERS

(767)

Part 26–Vessel Bridge-to-Bridge Radiotelephone Regulations

(768)

§26.01 Purpose.

(769) (a) The purpose of this part is to implement the provisions of the Vessel Bridge-to-Bridge Radiotelephone Act. This part –

(770) (1) Requires the use of the vessel bridge-to-bridge radiotelephone;

(771) (2) Provides the Coast Guard's interpretation of the meaning of important terms in the Act;

(772) (3) Prescribes the procedures for applying for an exemption from the Act and the regulations issued under the Act and a listing of exemptions.

(773) (b) Nothing in this part relieves any person from the obligation of complying with the rules of the road and the applicable pilot rules.

(774)

§26.02 Definitions.

(775) For the purpose of this part and interpreting the Act –

(776) *Act* means the "Vessel Bridge-to-Bridge Radiotelephone Act", 33 U.S.C. sections 1201-1208;

(777) Length is measured from end to end over the deck excluding sheer;

(778) *Power-driven vessel* means any vessel propelled by machinery; and

(779) Secretary means the Secretary of the Department in which the Coast Guard is operating;

(780) Territorial sea means all waters as defined in §2.22(a)(1) of this chapter.

(781) *Towing vessel* means any commercial vessel engaged in towing another vessel astern, alongside, or by pushing ahead.

(782) *Vessel Traffic Services (VTS)* means a service implemented under Part 161 of this chapter by the United States Coast Guard designed to improve the safety and efficiency of vessel traffic and to protect the environment. The VTS has the capability to interact with marine traffic and respond to traffic situations developing in the VTS area.

(783) *Vessel Traffic Service Area or VTS Area* means the geographical area encompassing a specific VTS area of service as described in Part 161 of this chapter. This area of service may be subdivided into sectors for the purpose of allocating responsibility to individual Vessel Traffic Centers or to identify different operating requirements.

(784) **Note:** Although regulatory jurisdiction is limited to the navigable waters of the United States, certain vessels will be encouraged or may be required, as a condition of port entry to report beyond this area to facilitate traffic management within the VTS area.

(785)

§26.03 Radiotelephone required.

(786) (a) Unless an exemption is granted under §26.09 and except as provided in paragraph (a)(4) of this section, this part applies to:

(787) (1) Every power-driven vessel of 20 meters or over in length while navigating;

(788) (2) Every vessel of 100 gross tons and upward carrying one or more passengers for hire while navigating;

(789) (3) Every towing vessel of 26 feet or over in length while navigating; and

(790) (4) Every dredge and floating plant engaged in or near a channel or fairway in operations likely to restrict or affect navigation of other vessels except for an unmanned or intermittently manned floating plant under the control of a dredge.

(791) (b) Every vessel, dredge, or floating plant described in paragraph (a) of this section must have a radiotelephone on board capable of operation from its navigational bridge, or in the case of a dredge, from its main control station, and capable of transmitting and receiving on the frequency or frequencies within the 156-162 Mega-Hertz band using the classes of emissions designated by the Federal Communications Commission for the exchange of navigational information.

(792) (c) The radiotelephone required by paragraph (b) of this section must be carried on board the described vessels, dredges, and floating plants upon the navigable waters of the United States.

(793) (d) The radiotelephone required by paragraph (b) of this section must be capable of transmitting and receiving on VHF FM channel 22A (157.1 MHz).

(794) (e) While transiting any of the following waters, each vessel described in paragraph (a) of this section also must have on board a radiotelephone capable of transmitting and receiving on VHF FM channel 67 (156.375 MHz):

(795) (1) The lower Mississippi River from the territorial sea boundary, and within either the Southwest Pass safety fairway or the South Pass safety fairway specified in 33 CFR 166.200, to mile 242.4 AHP (Above Head of Passes) near Baton Rouge;

(796) (2) The Mississippi River-Gulf Outlet from the territorial sea boundary, and within the Mississippi River-Gulf outlet Safety Fairway specified in **33 CFR 166.200**, to that channel's junction with the Inner Harbor Navigation Canal; and

(797) (3) The full length of the Inner Harbor Navigation Canal from its junction with the Mississippi River to that canal's entry to Lake Pontchartrain at the New Seabrook vehicular bridge.

(798) (f) In addition to the radiotelephone required by paragraph (b) of this section each vessel described in paragraph (a) of this section while transiting any waters within a Vessel Traffic Service Area, must have on board a radiotelephone capable of transmitting and receiving on the VTS designated frequency in Table 161.12(c) (VTS and VMRS Centers, Call Signs/MMSI, Designated Frequencies, and Monitoring Areas).

(799) **Note:** A single VHF-FM radio capable of scanning or sequential monitoring (often referred to as "dual watch" capability) will not meet the requirements for two radios.

(800)

§26.04 Use of the designated frequency.

(801) (a) No person may use the frequency designated by the Federal Communications Commission under section 8 of the Act, 33 U.S.C. 1207 (a), to transmit any information other than information necessary for the safe navigation of vessels or necessary tests.

(802) (b) Each person who is required to maintain a listening watch under section 5 of the Act shall, when necessary, transmit and confirm, on the designated frequency, the intentions of his vessel and any other information necessary for the safe navigation of vessels.

(803) (c) Nothing in these regulations may be construed as prohibiting the use of the designated frequency to communicate with shore stations to obtain or furnish information necessary for the safe navigation of vessels.

(804) (d) On the navigable waters of the United States, channel 13 (156.650 MHz) is the designated frequency required to be monitored in accordance with §26.05(a) except that in the area prescribed in §26.03(e), channel 67 (156.375 MHz) is the designated frequency.

(805) (e) On those navigable waters of the United States within a VTS area, the designated VTS frequency is an additional designated frequency required to be monitored in accordance with §26.05.

(806)

§26.05 Use of radiotelephone.

(807) Section 5 of the Act states that the radiotelephone required by this Act is for the exclusive use of the master or person in charge of the vessel, or the person designated by the master or person in charge to pilot or direct the movement of the vessel, who shall maintain a listening watch on the designated frequency. Nothing herein shall be interpreted as precluding the use of portable radiotelephone equipment to satisfy the requirements of this act.

(808)

§26.06 Maintenance of radiotelephone; failure of radiotelephone.

(809) Section 6 of the Act states:

(810) (a) Whenever radiotelephone capability is required by this Act, a vessel's radiotelephone equipment shall be maintained in effective operating condition. If the radiotelephone equipment carried aboard a vessel ceases to operate, the master shall exercise due diligence to restore it or cause it to be restored to effective operating condition at the earliest practicable time. The failure of a vessel's radiotelephone equipment shall not, in itself, constitute a violation of this Act, nor shall it obligate the master of any vessel to moor or anchor his vessel; however, the loss of radiotelephone capability shall be given consideration in the navigation of the vessel.

(811)

§26.07 Communications.

(812) No person may use the services of, and no person may serve as, a person required to maintain a listening watch under section 5 of the Act, 33 U.S.C. 1204, unless the person can communicate in the English language.

(813)

§26.08 Exemption procedures.

(814) (a) The Commandant has redelegated to the Assistant Commandant for Prevention Policy, U.S. Coast Guard Headquarters, with the reservation that this authority shall not be further redelegated, the authority to grant exemptions from provisions of the Vessel Bridge-to-Bridge Radiotelephone Act and this part.

(815) (b) Any person may petition for an exemption from any provision of the Act or this part;

(816) (c) Each petition must be submitted in writing to Commandant (CG–DCO–D), Attn: Deputy for Operations Policy and Capabilities, U.S. Coast Guard Stop 7318, 2703 Martin Luther King Jr. Avenue SE., Washington, DC 20593–7318, and must state:

(817) (1) The provisions of the Act or this part from which an exemption is requested; and

(818) (2) The reasons why marine navigation will not be adversely affected if the exemption is granted and if the exemption relates to a local communication system how that system would fully comply with the intent of the concept of the Act but would not conform in detail if the exemption is granted.

(819)

§26.09 List of exemptions.

(820) (a) All vessels navigating on those waters governed by the navigation rules for Great Lakes and their connecting and tributary waters (33 U.S.C. 241 et seq.) are exempt from the requirements of the Vessel Bridge-to-Bridge Radiotelephone Act and this part until May 6, 1975.

(821) (b) Each vessel navigating on the Great Lakes as defined in the Inland Navigational Rules Act of 1980 (33 U.S.C. 2001 et seq.) and to which the Vessel Bridge-to-Bridge Radiotelephone Act (33 U.S.C. 1201–1208) applies is exempt from the requirements in 33 U.S.C. 1203, 1204, and 1205 and the regulations under §§26.03, 26.04, 26.05, 26.06, and 26.07. Each of these vessels and each person to whom 33 U.S.C. 1208(a) applies must comply with Articles VII, X, XI, XII, XIII, XV, and XVI and Technical Regulations 1-9 of "The Agreement Between the United States of America and Canada for Promotion of Safety on the Great Lakes by Means of Radio, 1973."

(822)

Part 80–COLREGS Demarcation Lines

(823)

§80.01 General basis and purpose of demarcation lines.

(824) (a) The regulations in this part establish the lines of demarcation delineating those waters upon which mariners shall comply with the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS) and those waters upon which mariners shall comply with the Inland Navigation Rules.

(825) (b) The waters inside of the lines are Inland Rules waters. The waters outside the lines are COLREGS waters.

(826) (c) Geographic coordinates expressed in terms of latitude or longitude, or both, are not intended for plotting on maps or charts whose reference horizontal datum is the North American Datum of 1983 (NAD 83), unless such geographic coordinates are expressly labeled NAD 83. Geographic coordinates without the NAD 83 reference may be plotted on maps or charts referenced to NAD 83

only after application of the appropriate corrections that are published on the particular map or chart being used.

(827)

§80.738 Puerto Rico and Virgin Islands.

(828) (a) Except inside lines specifically described in this section, the 72 COLREGS shall apply on all other bays, harbors and lagoons of Puerto Rico and the U.S. Virgin Islands.

(829) (b) A line drawn from Puerto San Juan Light to position 18°28.5'N., 66°08.4'W., at the northwest extent of Isla de Cabras across the entrance of San Juan Harbor.

(830)

§80.740 Long Key, FL to Cape Sable, FL.

(831) A line drawn from the microwave tower charted on Long Key at approximate position latitude 24°48.8'N., longitude 80°49.6'W. to Long Key Light 1; thence to Arsenic Bank Light 2; thence to Sprigger Bank Light 5; thence to Schooner Bank Light 6; thence to Oxfoot Bank Light 10; thence to East Cape Light 2; thence through East Cape Daybeacon 1A to the shoreline at East Cape.

(832)

80.745 Cape Sable, FL to Cape Romano, FL.

(833) (a) A line drawn following the general trend of the mainland, highwater shoreline from Cape Sable at East Cape to Little Shark River Light 1; thence to westernmost extremity of Shark Point; thence following the general trend of the mainland, highwater shoreline crossing the entrances of Harney River, Broad Creek, Broad River, Rodgers River First Bay, Chatham River, Huston River, to the shoreline at coordinate latitude 25°41.8'N., longitude 81°17.9'W.

(834) (b) The 72 COLREGS shall apply to the waters surrounding the Ten Thousand Islands and the bays, creeks, inlets, and rivers between Chatham Bend and Marco Island except inside lines specifically described in this part.

(835) (c) A north-south line drawn at longitude 81°20.2'W., across the entrance to Lopez River.

(836) (d) A line drawn across the entrance to Turner River parallel to the general trend of the shoreline.

(837) (e) A line formed by the centerline of Highway 92 Bridge at Goodland.

(838)

§80.748 Cape Romano, FL to Sanibel Island, FL.

(839) (a) A line drawn across Big Marco Pass parallel to the general trend of the seaward, highwater shoreline.

(840) (b) A line drawn from the northwesternmost extremity of Coconut Island 000°T across Capri Pass.

(841) (c) Lines drawn across Hurricane and Little Marco Passes parallel to the general trend of the seaward, highwater shoreline.

(842) (d) A line from the seaward extremity of Gordon Pass South Jetty 014° true to the shoreline at approximate latitude 26°05.7'N., longitude 81°48.1'W.

(843) (e) A line drawn across the seaward extremity of Doctors Pass Jetties.

(844) (f) Lines drawn across Wiggins, Big Hickory, New, and Big Carlos Passes parallel to the general trend of the seaward highwater shoreline.

(845) (g) A straight line drawn from Sanibel Island Light through Matanzas Pass Channel Light 2 to the shore of Estero Island.

(846)

§80.750 Sanibel Island, FL to St. Petersburg, FL.

(847) (a) A line formed by the centerline of the highway bridge over Blind Pass, between Captiva Island and Sanibel Island, and lines drawn across Redfish and Captiva Passes parallel to the general trend of the seaward, highwater shorelines.

(848) (b) A line drawn across the Charlotte Harbor entrance from position 26°42.18′N., 070°41.2′W., to Port Boca Grande Light.

(849) (c) Lines drawn across Gasparilla and Stump Passes parallel to the general trend of the seaward, highwater shorelines.

(850) (d) A line across the seaward extremity of Venice Inlet Jetties.

(851) (e) A line drawn across Midnight Pass parallel to the general trend of the seaward, highwater shoreline.

(852) (f) A line drawn from position 27°17.89′N., 082°33.55′W., to the southernmost extremity of Lido Key (position 27°17.93′N., 082°33.99′W.).

(853) (g) A line drawn across New Pass tangent to the seaward, highwater shoreline of Longboat Key.

(854) (h) A line drawn across Longboat Pass parallel to the seaward, highwater shoreline.

(855) (i) A line drawn from the northwesternmost extremity of Bean Point to the southeasternmost extremity of Egmont Key.

(856) (j) A straight line drawn from Egmont Key Light through Egmont Channel Range Rear Light to the shoreline on Mullet Key.

(857) (k) A line drawn from the northernmost extremity of Mullet Key across Bunces Pass and South Channel to Pass-a-Grille Channel Light 8; thence to Pass-a-Grille Channel Daybeacon 9; thence to the southwesternmost extremity of Long Key.

(858)

§80.753 St. Petersburg, FL to Anclote, FL.

(859) (a) A line drawn across Blind Pass, from the seaward extremity of the Long Key jetty to the seaward extremity of the Treasure Island jetty.

(860) (b) Lines formed by the centerline of the highway bridges over Johns and Clearwater Passes.

(861) (c) A line drawn across Dunedin and Hurricane Passes parallel with the general trend of the seaward, highwater shoreline.

(862) (d) A line drawn from the northernmost extremity of Honeymoon Island to Anclote Anchorage South Entrance Light 3; thence to Anclote Key position 28°10.0′N., 082°50.6′W.; thence a straight line to position 28°11.11′N., 082°47.91′W.

(863)

§80.755 Anclote, FL to the Suncoast Keys, FL.

(864) (a) Except inside lines specifically described in this section, the 72 COLREGS shall apply on the bays, bayous, creeks, marinas, and rivers from Anclote to the Suncoast Keys.

(865) (b) A north-south line drawn at longitude 82°38.3'W. across the Chassahowitzka River Entrance.

(866)

§80.757 Suncoast Keys, FL to Horseshoe Point, FL.

(867) (a) Except inside lines specifically described in this section, the 72 COLREGS shall apply on the bays, bayous, creeks, and marinas from the Suncoast Keys to Horseshoe Point.

(868) (b) A line formed by the centerline of Highway 44 Bridge over the Salt River.

(869) (c) A north-south line drawn through Crystal River Entrance Daybeacon 25 across the river entrance.

(870) (d) A north-south line drawn through the Cross Florida Barge Canal Daybeacon 48 across the canal.

(871) (e) A north-south line drawn through Withlacoochee River Daybeacon 40 across the river.

(872) (f) A line drawn from the westernmost extremity of South Point north to the shoreline across the Waccasassa River Entrance.

(873) (g) A line drawn from position latitude 29°16.6'N., longitude 83°06.7'W., 300° true to the shoreline of Hog Island.

(874) (h) A north-south line drawn through Suwannee River Mcgriff Pass Daybeacons 30 and 31 across the Suwannee River.

(875)

§80.760 Horsehoe Point, FL to Rock Islands, FL.

(876) (a) Except inside lines specifically described provided in this section, the 72 COLREGS shall apply on the bays, bayous, creeks, marinas, and rivers from Horseshoe Point to the Rock Islands.

(877) (b) A north-south line drawn through Steinhatchee River Light 21.

(878) (c) A line drawn from Fenholloway River Approach Light FR east across the entrance to Fenholloway River.

(879)

§80.805 Rock Island, FL to Cape San Blas, FL.

(880) (a) A south-north line drawn from the Econfina River Light to the opposite shore.

(881) (b) A line drawn from Gamble Point Light to the southernmost extremity of Cabell Point.

(882) (c) A line drawn from St. Marks Range Rear Light to St. Marks Channel Light 11; thence to the southernmost extremity of Live Oak Point; thence in a straight line through Shell Point Light to the southernmost extremity of Ochlockonee Point; thence to Bald Point along longitude 84°20.5'W.

(883) (d) A line drawn from the south shore of Southwest Cape at longitude 84°22.7'W., to Dog Island Reef East Light 1; thence a straight line to the easternmost extremity of Dog Island.

(884) (e) A line drawn from the westernmost extremity of Dog Island to the easternmost extremity of St. George Island.

(885) (f) A line drawn across the seaward extremity of the St. George Island Channel Jetties.

(886) (g) A line drawn from the northwesternmost extremity of Sand Island to West Pass Light 7.

(887) (h) A line drawn from the westernmost extremity of St. Vincent Island to the southeast, highwater shoreline of Indian Peninsula at longitude 85°13.5'W.

(888)

§80.810 Cape San Blas, FL to Perdido Bay, FL.

(889) (a) A line drawn from St. Joseph Bay Entrance Range A Rear Light through St. Joseph Bay Entrance Range B Front Light to St. Joseph Point.

(890) (b) A line drawn across the mouth of Salt Creek as an extension of the general trend of the shoreline to continue across the inlet to St. Andrews Sound in the middle of Crooked Island.

(891) (c) A line drawn between the seaward end of the St. Andrews Bay Entrance Jetties.

(892) (d) A line drawn between the seaward end of the Choctawhatchee Bay Entrance Jetties.

(893) (e) An east-west line drawn from Fort McRee Leading Light across the Pensacola Bay entrance along latitude 30°l9.5'N.

(894) (f) A line drawn between the seaward end of the Perdido Pass Jetties.

(895)

§80.815 Mobile Bay, AL to the Chandeleur Islands, LA.

(896) (a) A line drawn across the inlets to Little Lagoon as an extension of the general trend of the shoreline.

(897) (b) A line drawn from 30°14′41.4″N., 088°01′26.5″W. (Mobile Point Light) to 30°15′13.3″N., 088°03′22.6″W. (Dauphin Island Channel Light 1) to the eastern corner of Fort Gaines at Pelican Point.

(898) (c) A line drawn from the westernmost extremity of Dauphin Island to the easternmost extremity of Petit Bois Island.

(899) (d) A line drawn from Horn Island Pass Entrance Range Front Light on Petit Bois Island to the easternmost extremity of Horn Island.

(900) (e) An east-west line (latitude 30°14.7'N.) drawn between the westernmost extremity of Horn Island to the easternmost extremity of Ship Island.

(901) (f) A curved line drawn following the general trend of the seaward, highwater shoreline of Ship Island.

(902) (g) A line drawn from Ship Island Light to Chandeleur Light; thence in a curved line following the general trend of the seaward, highwater shorelines of the Chandeleur Islands to the island at

(903) 29°44.1'N., 88°53.0'W.; thence to

(904) 29°26.5'N., 88°55.6'W.

(905)

§80.825 Mississippi Passes, LA.

(906) (a) A line drawn from

(907) 29°26.5'N., 88°55.6'W. to
(908) 29°10.6'N., 88°59.8'W.; thence to
(909) 29°03.5'N., 89°03.7'W.; thence to
(910) 28°58.8'N., 89°04.3'W.
(911) (b) A line drawn from
(912) 28°58.8'N., 89°04.3'W.; to
(913) 28°57.3'N., 89°05.3'W.; thence to
(914) 28°56.95'N., 89°05.6'W.; thence to
(915) 29°00.4'N., 89°09.8'W.; thence following the general trend of the seaward highwater shoreline in a northwesterly direction to
(916) 29°03.4'N., 89°13.0'W.; thence west to
(917) 29°03.5'N., 89°15.5'W.; thence following the general trend of the seaward highwater shoreline in a southwesterly direction to
(918) 28°57.7'N., 89°22.3'W.
(919) (c) A line drawn from
(920) 28°57.7'N., 89°22.3'W.; to
(921) 28°51.4'N., 89°24.5'W.; thence to
(922) 28°52.65'N., 89°27.1'W.; thence to the seaward extremity of the Southwest Pass West Jetty located at
(923) 28°54.5'N., 89°26.1'W.
(924)

§80.830 Mississippi Passes, LA to Point au Fer, LA.

(925) (a) A line drawn from the seaward extremity of the Southwest Pass West Jetty located at coordinate latitude 28°54.5'N., longitude 89°26.1'W.; thence following the general trend of the seaward, highwater jetty and shoreline in a north, northeasterly direction to Old Tower latitude 28°58.8'N., longitude 89°23.3'W.; thence to westernmost point near Pass du Bois; thence to coordinate latitude 29°05.2′N., longitude 89°24.3′W.; thence a curved line following the general trend of the highwater shoreline to Point Au Fer Island except as otherwise described in this section.
(926) (b) A line drawn across the seaward extremity of the Empire Waterway (Bayou Fontanelle) entrance jetties.
(927) (c) An east-west line drawn from the westernmost extremity of Grand Terre Islands in the direction of 194° true to the Grand Isle Fishing Jetty Light.
(928) (d) A line drawn between the seaward extremity of the Belle Pass Jetties.
(929) (e) A line drawn from the westernmost extremity of the Timbalier Island to the easternmost extremity of Isles Dernieres.
(930) (f) A south-north line drawn from Caillou Bay Light 13 across Caillou Boca.
(931) (g) A line drawn 107° true from Caillou Bay Boat Landing Light across the entrances to Grand Bayou du Large and Bayou Grand Caillou.
(932) (h) A line drawn on an axis of 103° true through Taylors Bayou Entrance Light 2 across the entrances to Jack Stout Bayou, Taylors Bayou, Pelican Pass, and Bayou de West.
(933)

§80.835 Point au Fer, LA to Calcasieu Pass, LA.

(934) (a) A line drawn from Point Au Fer to Atchafalaya Channel Light 34; thence to Atchafalaya Channel Light 33; thence to latitude 29°25.0′N., longitude 91°31.7'W.; thence to Atchafalaya Bay Light 1 latitude 29°25.3′N., longitude 91°35.8′W.; thence to South Point.
(935) (b) Lines following the general trend of the highwater shoreline drawn across the bayou and canal inlets from the Gulf of Mexico between South Point and Calcasieu Pass except as otherwise described in this section.
(936) (c) A line drawn on an axis of 140° true through Southwest Pass Vermilion Bay Light 4 across Southwest Pass.
(937) (d) A line drawn across the seaward extremity of the Freshwater Bayou Canal Entrance Jetties.
(938) (e) A line drawn from Mermentau Channel East Jetty Light 6 to Mermentau Channel West Jetty Light 7.
(939) (f) A line drawn from the radio tower charted in approximate position latitude 29°45.7'N., longitude 93°06.3'W., 115° true across Mermentau Pass.
(940) (g) A line drawn across the seaward extremity of the Calcasieu Pass Jetties.
(941)

§80.840 Sabine Pass, TX to Galveston, TX.

(942) (a) A line drawn from the Sabine Pass East Jetty Light to the seaward end of the Sabine Pass West Jetty.
(943) (b) Lines drawn across the small boat passes through the Sabine Pass East and West Jetties.
(944) (c) A line formed by the centerline of the highway bridge over Rollover Pass at Gilchrist.
(945)

§80.845 Galveston, TX to Freeport, TX.

(946) (a) A line drawn from Galveston North Jetty Light 6A to Galveston South Jetty Light 5A.
(947) (b) A line formed by the centerline of the highway bridge over San Luis Pass.
(948) (c) Lines formed by the centerlines of the highway bridges over the inlets to Christmas Bay (Cedar Cut) and Drum Bay.
(949) (d) A line drawn from the seaward extremity of the Freeport North Jetty to Freeport Entrance Light 6; thence Freeport Entrance Light 7; thence the seaward extremity of Freeport South Jetty.
(950)

§80.850 Brazos River, TX to the Rio Grande, TX.

(951) (a) Except as otherwise described in this section lines drawn continuing the general trend of the seaward, highwater shorelines across the inlets to Brazos River Diversion Channel, San Bernard River, Cedar Lakes, Brown Cedar Cut, Colorado River, Matagorda Bay, Cedar Bayou, Corpus Christi Bay, and Laguna Madre.
(952) (b) A line drawn across the seaward extremity of Matagorda Ship Channel North Jetties.
(953) (c) A line drawn from the seaward tangent of Matagorda Peninsula at Decros Point to Matagorda Light.

(954) (d) A line drawn across the seaward extremity of the Aransas Pass Jetties.

(955) (e) A line drawn across the seaward extremity of the Port Mansfield Entrance Jetties.

(956) (f) A line drawn across the seaward extremity of the Brazos Santiago Pass Jetties.

(957)

Part 81–72 COLREGS: IMPLEMENTING RULES

(958)

§81.1 Definitions.

(959) As used in this part:

(960) *72 COLREGS* refers to the International Regulations for Preventing Collisions at Sea, 1972, done at London, October 20, 1972, as rectified by the Proces-Verbal of December 1, 1973, as amended.

(961) *A vessel of special construction or purpose* means a vessel designed or modified to perform a special function and whose arrangement is thereby made relatively inflexible.

(962) *Interference with the special function of the vessel* occurs when installation or use of lights, shapes, or sound-signaling appliances under 72 COLREGS prevents or significantly hinders the operation in which the vessel is usually engaged.

(963)

§81.3 General.

(964) Vessels of special construction or purpose which cannot fully comply with the light, shape, and sound signal provisions of 72 COLREGS without interfering with their special function may instead meet alternative requirements. The Chief of the Prevention Division in each Coast Guard District Office makes this determination and requires that alternative compliance be as close as possible with the 72 COLREGS. These regulations set out the procedure by which a vessel may be certified for alternative compliance. The information collection and recordkeeping requirements in §§81.5 and 81.18 have been approved by the Office of Management and Budget under OMB control No. 1625-0019.

(965)

Alternative Compliance

(966)

§81.5 Application for a Certificate of Alternative Compliance.

(967) (a) The owner, builder, operator, or agent of a vessel of special construction or purpose who believes the vessel cannot fully comply with the 72 COLREGS light, shape, or sound signal provisions without interference with its special function may apply for a determination that alternative compliance is justified. The application must be in writing, submitted to the Chief of the Prevention Division of the Coast Guard District in which the vessel is being built or operated, and include the following information:

(968) (1) The name, address, and telephone number of the applicant.

(969) (2) The identification of the vessel by its:

(970) (i) Official number;

(971) (ii) Shipyard hull number;

(972) (iii) Hull identification number; or

(973) (iv) State number, if the vessel does not have an official number or hull identification number.

(974) (3) Vessel name and home port, if known.

(975) (4) A description of the vessel's area of operation.

(976) (5) A description of the provision for which the Certificate of Alternative Compliance is sought, including:

(977) (i) The 72 COLREGS Rule or Annex section number for which the Certificate of Alternative Compliance is sought;

(978) (ii) A description of the special function of the vessel that would be interfered with by full compliance with the provision of that Rule or Annex section; and

(979) (iii) A statement of how full compliance would interfere with the special function of the vessel.

(980) (6) A description of the alternative installation that is in closest possible compliance with the applicable 72 COLREGS Rule or Annex section.

(981) (7) A copy of the vessel's plans or an accurate scale drawing that clearly shows:

(982) (i) The required installation of the equipment under the 72 COLREGS,

(983) (ii) The proposed installation of the equipment for which certification is being sought, and

(984) (iii) Any obstructions that may interfere with the equipment when installed in:

(985) (A) The required location; and

(986) (B) The proposed location.

(987) (b) The Coast Guard may request from the applicant additional information concerning the application.

(988)

§81.9 Certificate of Alternative Compliance: Contents.

(989) The Chief of the Prevention Division issues the Certificate of Alternative Compliance to the vessel based on a determination that it cannot comply fully with 72 COLREGS light, shape, and sound signal provisions without interference with its special function. This Certificate includes—

(990) (a) Identification of the vessel as supplied in the application under §81.5(a)(2);

(991) (b) The provision of the 72 COLREGS for which the Certificate authorizes alternative compliance;

(992) (c) A certification that the vessel is unable to comply fully with the 72 COLREGS lights, shape, and sound signal requirements without interference with its special function;

(993) (d) A statement of why full compliance would interfere with the special function of the vessel;

(994) (e) The required alternative installation;

(995) (f) A statement that the required alternative installation is in the closest possible compliance with the 72 COLREGS without interfering with the special function of the vessel;

(996) (g) The date of issuance;

(997) (h) A statement that the Certificate of Alternative Compliance terminates when the vessel ceases to be usually engaged in the operation for which the certificate is issued.

(998)

§81.17 Certificate of Alternative Compliance: Termination.

(999) The Certificate of Alternative Compliance terminates if the information supplied under §81.5(a) or the Certificate issued under §81.9 is no longer applicable to the vessel.

(1000)

§81.18 Notice and record of certification of vessels of special construction or purpose.

(1001) (a) In accordance with 33 U.S.C. 1605(c), a notice is published in the Federal Register of the following:

(1002) (1) Each Certificate of Alternative Compliance issued under §81.9; and

(1003) (2) Each Coast Guard vessel determined by the Commandant to be a vessel of special construction or purpose.

(1004) (b) Copies of Certificate of Alternative Compliance and documentation concerning Coast Guard vessels are available for inspection at Marine Transportation Systems Directorate, U.S. Coast Guard Headquarters, (CG-5PW), Stop 7509, 2703 Martin Luther King Avenue SE., Washington, DC 20593-7509.

(1005) (c) The owner or operator of a vessel issued a Certificate shall ensure that the vessel does not operate unless the Certificate of Alternative Compliance or a certified copy of that Certificate is on board the vessel and available for inspection by Coast Guard personnel.

(1006)

Exemptions

(1007)

§81.20 Lights and sound signal appliances.

(1008) Each vessel under the 72 COLREGS, except the vessels of the Navy, is exempt from the requirements of the 72 COLREGS to the limitation for the period of time stated in Rule 38 (a), (b), (c), (d), (e), (f), and (g) if:

(1009) (a) Her keel is laid or is at a corresponding stage of construction before July 15, 1977; and

(1010) (b) She meets the International Regulations for Preventing Collisions at Sea, 1960 (77 Stat. 194, 33 U.S.C. 1051-1094).

(1011)

Part 82–72 COLREGS: INTERPRETATIVE RULES

(1012)

§82.1 Purpose.

(1013) This part contains the interpretative rules concerning the 72 COLREGS that are adopted by the Coast Guard for the guidance of the public.

(1014)

§82.3 Pushing vessel and vessel being pushed: Composite unit.

(1015) Rule 24(b) of the 72 COLREGS states that when a pushing vessel and a vessel being pushed ahead are rigidly connected in a composite unit, they are regarded as a power-driven vessel and must exhibit the lights under Rule 23. A "composite unit" is interpreted to be a pushing vessel that is rigidly connected by mechanical means to a vessel being pushed so they react to sea and swell as one vessel. "Mechanical means" does not include the following:

(1016) (a) Lines.

(1017) (b) Hawsers.

(1018) (c) Wires.

(1019) (d) Chains.

(1020)

§82.5 Lights for moored vessels.

(1021) For the purposes of Rule 30 of the 72 COLREGS, a *vessel at anchor* includes a barge made fast to one or more mooring buoys or other similar device attached to the sea or river floor. Such a barge may be lighted as a vessel at anchor in accordance with Rule 30, or may be lighted on the corners in accordance with 33 CFR 83.30(h) through (l).

(1022)

§82.7 Sidelights for unmanned barges.

(1023) An unmanned barge being towed may use the exception of COLREGS Rule 24(h). However, this exception only applies to the vertical sector requirements.

(1024)

Part 88—ANNEX V: PILOT RULES

(1025)

§88.01 Purpose and applicability.

(1026) This part applies to all vessels operating on United States inland waters and to United States vessels operating on the Canadian waters of the Great Lakes to the extent there is no conflict with Canadian law.

(1027)

§88.03 Definitions.

(1028) The terms used in this part have the same meaning as the terms defined in part 83 of this subchapter.

(1029)

§88.05 Law enforcement vessels.

(1030) (a) Law enforcement vessels may display a flashing blue light when engaged in direct law enforcement or

public safety activities. This light must be located so that it does not interfere with the visibility of the vessel's navigation lights.

(1031) (b) The blue light described in this section may be displayed by law enforcement vessels of the United States and the States and their political subdivisions.

(1032)

§88.07 Public safety activities.

(1033) (a) Vessels engaged in government sanctioned public safety activities, and commercial vessels performing similar functions, may display an alternately flashing red and yellow light signal. This identification light signal must be located so that it does not interfere with the visibility of the vessel's navigation lights. The identification light signal may be used only as an identification signal and conveys no special privilege. Vessels using the identification light signal during public safety activities must abide by the Inland Navigation Rules, and must not presume that the light or the exigency gives them precedence or right of way.

(1034) (b) Public safety activities include but are not limited to patrolling marine parades, regattas, or special water celebrations; traffic control; salvage; firefighting; medical assistance; assisting disabled vessels; and search and rescue.

(1035)

Part 89—INLAND NAVIGATION RULES: IMPLEMENTING RULES

(1036)

Subpart A—Certificate of Alternative Compliance

(1037)

§89.1 Definitions.

(1038) As used in this subpart:

(1039) *Inland Rules* refers to the Inland Navigation Rules contained in the Inland Navigational Rules Act of 1980 (Pub. L. 96-591) and the technical annexes established under that act.

(1040) *A vessel of special construction or purpose* means a vessel designed or modified to perform a special function and whose arrangement is thereby made relatively inflexible.

(1041) *Interference with the special function of the vessel* occurs when installation or use of lights, shapes, or sound-signaling appliances under the Inland Rules prevents or significantly hinders the operation in which the vessel is usually engaged.

(1042)

§89.3 General.

(1043) Vessels of special construction or purpose which cannot fully comply with the light, shape, and sound signal provisions of the Inland Rules without interfering with their special function may instead meet alternative requirements. The Chief of the Prevention Division in each Coast Guard District Office makes this determination and requires that alternative compliance be as close as possible with the Inland Rules. These regulations set out the procedure by which a vessel may be certified for alternative compliance. The information collection and recordkeeping requirements in §§89.5 and 89.18 have been approved by the Office of Management and Budget under OMB control No. 1625-0019.

(1044)

§89.5 Application for a Certificate of Alternative Compliance.

(1045) (a) The owner, builder, operator, or agent of a vessel of special construction or purpose who believes the vessel cannot fully comply with the Inland Rules light, shape, or sound signal provisions without interference with its special function may apply for a determination that alternative compliance is justified. The application must be in writing, submitted to the Chief of the Prevention Division of the Coast Guard District in which the vessel is being built or operated, and include the following information:

(1046) (1) The name, address, and telephone number of the applicant.

(1047) (2) The identification of the vessel by its:

(1048) (i) Official number;

(1049) (ii) Shipyard hull number;

(1050) (iii) Hull identification number; or

(1051) (iv) State number, if the vessel does not have an official number or hull identification number.

(1052) (3) Vessel name and home port, if known.

(1053) (4) A description of the vessel's area of operation.

(1054) (5) A description of the provision for which the Certificate of Alternative Compliance is sought, including:

(1055) (i) The Inland Rules Rule or Annex section number for which the Certificate of Alternative Compliance is sought;

(1056) (ii) A description of the special function of the vessel that would be interfered with by full compliance with the provision of that Rule or Annex section; and

(1057) (iii) A statement of how full compliance would interfere with the special function of the vessel.

(1058) (6) A description of the alternative installation that is in closest possible compliance with the applicable Inland Navigation Rules Rule or Annex section.

(1059) (7) A copy of the vessel's plans or an accurate scale drawing that clearly shows:

(1060) (i) The required installation of the equipment under the Inland Rules,

(1061) (ii) The proposed installation of the equipment for which certification is being sought, and

(1062) (iii) Any obstructions that may interfere with the equipment when installed in:

(1063) (A) The required location; and

(1064) (B) The proposed location.

(1065) (b) The Coast Guard may request from the applicant additional information concerning the application.

(1066)

§89.9 Certificate of Alternative Compliance: Contents.

(1067) The Chief of the Prevention Division issues the Certificate of Alternative Compliance to the vessel based on a determination that it cannot comply fully with Inland Rules light, shape, and sound signal provisions without interference with its special function. This Certificate includes:

(1068) (a) Identification of the vessel as supplied in the application under §89.5(a)(2);

(1069) (b) The provision of the Inland Rules for which the Certificate authorizes alternative compliance;

(1070) (c) A certification that the vessel is unable to comply fully with the Inland Rules light, shape, and sound signal requirements without interference with its special function;

(1071) (d) A statement of why full compliance would interfere with the special function of the vessel;

(1072) (e) The required alternative installation;

(1073) (f) A statement that the required alternative installation is in the closest possible compliance with the Inland Rules without interfering with the special function of the vessel;

(1074) (g) The date of issuance;

(1075) (h) A statement that the Certificate of Alternative Compliance terminates when the vessel ceases to be usually engaged in the operation for which the certificate is issued.

(1076)

§89.17 Certificate of Alternative Compliance: Termination.

(1077) The Certificate of Alternative Compliance terminates if the information supplied under §89.5(a) or the Certificate issued under §89.9 is no longer applicable to the vessel.

(1078)

§89.18 Record of certification of vessels of special construction or purpose.

(1079) (a) Copies of Certificates of Alternative Compliance and documentation concerning Coast Guard vessels are available for inspection at the offices of the Marine Transportation Systems Directorate, U.S. Coast Guard Headquarters (CG-5PW), Stop 7509, 2703 Martin Luther King Avenue SE., Washington, DC 20593-7509.

(1080) (b) The owner or operator of a vessel issued a Certificate shall ensure that the vessel does not operate unless the Certificate of Alternative Compliance or a certified copy of that Certificate is on board the vessel and available for inspection by Coast Guard personnel.

(1081)

Subpart B—Waters Upon Which Certain Inland Navigation Rules Apply

(1082)

§89.21 Purpose.

(1083) Inland Navigation Rules 9(a)(ii), 14(d), and 15(b) apply to the Great Lakes, and along with 24(i), apply on the "Western Rivers" as defined in Rule 3(1), and to additional specifically designated waters. The purpose of this Subpart is to specify those additional waters upon which Inland Navigation Rules 9(a)(ii), 14(d), 15(b), and 24(i) apply.

(1084)

§89.23 Definitions.

(1085) As used in this subpart:

(1086) *Inland Rules* refers to the Inland Navigation Rules contained in the Inland Navigational Rules Act of 1980 (Pub. L. 96-591, 33 U.S.C. 2001 et. seq.) and the technical annexes established under that Act.

(1087)

§89.25 Waters upon which Inland Rules 9(a)(ii), 14(d), and 15(b) apply.

(1088) Inland Rules 9(a)(ii), 14(d), and 15(b) apply on the Great Lakes, the Western Rivers, and the following specified waters:

(1089) (a) Tennessee-Tombigbee Waterway.

(1090) (b) Tombigbee River.

(1091) (c) Black Warrior River.

(1092) (d) Alabama River.

(1093) (e) Coosa River.

(1094) (f) Mobile River above the Cochrane Bridge at St. Louis Point.

(1095) (g) Flint River.

(1096) (h) Chattahoochee River.

(1097) (i) The Apalachicola River above its confluence with the Jackson River.

(1098)

§89.27 Waters upon which Inland Rule 24(j) applies.

(1099) (a) Inland Rule 24(j) applies on the Western Rivers and the specified waters listed in §89.25 (a) through (i).

(1100) (b) Inland Rule 24(j) applies on the Gulf Intracoastal Waterway from St. Marks, Florida, to the Rio Grande, Texas, including the Morgan City-Port Allen Alternate Route and the Galveston-Freeport Cutoff, except that a power-driven vessel pushing ahead or towing alongside shall exhibit the lights required by Inland Rule 24(c), while transiting within the following areas:

(1101) (1) St. Andrews Bay from the Hathaway Fixed Bridge at Mile 284.6 East of Harvey Locks (EHL) to the DuPont Fixed Bridge at Mile 295.4 EHL.

(1102) (2) Pensacola Bay, Santa Rosa Sound and Big Lagoon from the Light "10" off of Trout Point at Mile 176.9 EHL to the Pensacola Fixed Bridge at Mile 189.1 EHL.

(1103) (3) Mobile Bay and Bon Secour Bay from the Dauphin Island Causeway Fixed Bridge at Mile 127.7 EHL to Little Point Clear at Mile 140 EHL.

(1104) (4) Mississippi Sound from Grand Island Waterway Light "1" at Mile 53.8 EHL to Light "40" off the West Point of Dauphin Island at Mile 118.7 EHL.

(1105) (5) The Mississippi River at New Orleans, Mississippi River-Gulf Outlet Canal and the Inner Harbor Navigation Canal from the junction of the Harvey Canal and the Algiers Alternate Route at Mile 6.5 West of Harvey Locks (WHL) to the Michoud Canal at Mile 18 EHL.

(1106) (6) The Calcasieu River from the Calcasieu Lock at Mile 238.6 WHL to the Ellender Lift Bridge at Mile 243.6 WHL.

(1107) (7) The Sabine Neches Canal from mile 262.5 WHL to mile 291.5 WHL.

(1108) (8) Bolivar Roads from the Bolivar Assembling Basin at Mile 346 WHL to the Galveston Causeway Bridge at Mile 357.3 WHL.

(1109) (9) Freeport Harbor from Surfside Beach Fixed Bridge at Mile 393.8 WHL to the Bryan Beach Pontoon Bridge at Mile 397.6 WHL.

(1110) (10) Matagorda Ship Channel area of Matagorda Bay from Range "K" Front Light at Mile 468.7 WHL to the Port O'Connor Jetty at Mile 472.2 WHL.

(1111) (11) Corpus Christi Bay from Redfish Bay Day Beacon "55" at Mile 537.4 WHL when in the Gulf Intracoastal Waterway main route or from the north end of Lydia Ann Island Mile 531.1A when in the Gulf Intracoastal Waterway Alternate Route to Corpus Christi Bay LT 76 at Mile 543.7 WHL.

(1112) (12) Port Isabel and Brownsville Ship Channel south of the Padre Island Causeway Fixed Bridge at Mile 665.1 WHL.

(1113)

Part 90—INLAND RULES: INTERPRETATIVE RULES

(1114)

§90.1 Purpose.

(1115) This part contains the interpretative rules for the Inland Rules. These interpretative rules are intended as a guide to assist the public and promote compliance with the Inland Rules.

(1116)

§90.3 Pushing vessel and vessel being pushed: Composite unit.

(1117) Rule 24(b) of the Inland Rules states that when a pushing vessel and a vessel being pushed ahead are rigidly connected in a composite unit, they are regarded as a power-driven vessel and must exhibit the lights prescribed in Rule 23. A "composite unit" is interpreted to be the combination of a pushing vessel and a vessel being push ahead that are rigidly connected by mechanical means so they react to sea and swell as one vessel. Mechanical means does not include lines, wires, hawsers, or chains.

(1118)

§90.5 Lights for moored vessels.

(1119) A *vessel at anchor* includes a vessel made fast to one or more mooring buoys or other similar device attached to the ocean floor. Such vessels may be lighted as a vessel at anchor in accordance with Rule 30, or may be lighted on the corners in accordance with 33 CFR 88.30(h) through (l).

(1120)

§90.7 Sidelights for unmanned barges.

(1121) An unmanned barge being towed may use the exception of COLREGS Rule 24(h). However, this exception only applies to the vertical sector requirements for sidelights.

(1122)

Part 110–AnchorageRegulations

(1123)

§110.1 General.

(1124) (a) The areas described in subpart A of this part are designated as special anchorage areas for the purposes of rule 30 (**33 CFR 83.30**) and rule 35 (**33 CFR 83.35**) of the Inland Navigation Rules, 33 CFR chapter I, subchapter E. Vessels of less than 20 meters in length; and barges, canal boats, scows, or other nondescript craft, are not required to sound signals required by rule 35 of the Inland Navigation Rules. Vessels of less than 20 meters are not required to exhibit anchor lights or shapes required by rule 30 of the Inland Navigation Rules.

(1125) (b) The anchorage grounds for vessels described in Subpart B of this part are established, and the rules and regulations in relation thereto adopted, pursuant to the authority contained in section 7 of the act of March 4, 1915, as amended (38 Stat. 1053; 33 U.S.C. 471).

(1126) (c) All bearings in this part are referred to true meridian.

(1127) (d) Geographic coordinates expressed in terms of latitude or longitude, or both, are not intended for plotting on maps or charts whose referenced horizontal datum is the North American Datum of 1983 (NAD 83), unless such geographic coordinates are expressly labeled NAD 83. Geographic coordinates without the NAD 83 reference may be plotted on maps or charts referenced to NAD 83 only after application of the appropriate corrections that are published on the particular map or chart being used.

(1128)

Subpart A–Special Anchorage Areas

(1129)

§110.74 Marco Island, Marco River, FL.

(1130) Beginning at a point approximately 300 feet east of the Captains Landing Docks at latitude 25°58'04"N., longitude 81°43'31"W.; thence 108°, 450 feet; thence 198°, 900 feet; thence 288°, 450 feet; thence 018°, 900 feet to the point of beginning.

(1131) NOTE: The area is principally for use by yachts and other recreational craft. Fore and aft moorings will be allowed. Temporary floats or buoys for marking anchors in place will be allowed. Fixed mooring piles or stakes are prohibited. All moorings shall be so placed that no vessel, when anchored, shall at any time extend beyond the limits of the area.

(1132)

§110.74a Manatee River, Bradenton, FL.

(1133) The waters of the Manatee River enclosed by a line beginning at

(1134) 27°31'18.6"N., 82°36'49.2"W.; thence westerly to

(1135) 27°31'21.0"N., 82°37'07.2"W.; thence northwesterly to

(1136) 27°31'22.2"N., 82°37'08.4"W.; thence northeasterly to

(1137) 27°31'25.8"N., 82°37'00.0"W.; thence easterly to

(1138) 27°31'24.0"N., 82°36'44.4"W.; thence to the point of beginning.

(1139)

§110.74b Apollo Beach, FL.

(1140) Beginning at a point approximately 300 feet south of the Tampa Sailing Squadron at

(1141) 27°46'50.2"N., 82°25'27.8"W.; thence southeasterly to

(1142) 27°46'45.6"N., 82°25'23.2"W.; thence southwesterly to

(1143) 27°46'35.8"N., 82°25'34.8"W.; thence northwesterly to

(1144) 27°46'39.9"N., 82°25'39.6"W.; thence to the point of beginning.

(1145)

§110.74c Bahia de San Juan, P.R.

(1146) The waters of San Antonio Channel, Bahia de San Juan, eastward of longitude 66°05'45"W.

(1147)

§110.75 Corpus Christi Bay, TX.

(1148) (a) *South area*. Southward of the southernmost T-head pier at the foot of Cooper Avenue and of a line bearing 156°44', 340.6 feet, from the southerly corner of said pier to a point on the rubble breakwater; westward and northward of said breakwater; and eastward of the Corpus Christi sea wall.

(1149)

Subpart B–AnchorageGrounds

(1150)

§110.189a Key West Harbor, Key West, FL; naval explosives anchorage area

(1151) (a) *The anchorage ground*. A circular area with its center at latitude 24°30'50.6", longitude 81°50'31.6" with a radius of 300 yards, for use for ammunition exceeding the prescribed limits for pierside handling.

(1152) (b) *The regulations*. (1) When occupied by a vessel handling explosives, no other vessel may enter the area unless authorized by the enforcing agency.

(1153) (2) Only one vessel handling explosives may anchor in the area at one time.

(1154) (3) No more than 300,000 pounds net of high explosives or equivalent may be handled in the area at any one time.

(1155) (4) The regulations in this section shall be enforced by the Commander, U.S. Naval Base, Key West, FL, and any other agencies he may designate.

(1156)

§110.190 Tortugas Harbor, in the vicinity of Garden Key, Dry Tortugas, FL.

(1157) (a) *The anchorage grounds*. All of Bird Key Harbor, southwest of Garden Key, bounded by the surrounding reefs and shoals and, on the northeast, by a line extending from Fort Jefferson West Channel Daybeacon 2 to Fort Jefferson West Channel Daybeacon 4, thence to Fort Jefferson West Channel Daybeacon 6, and thence to Fort Jefferson West Channel Daybeacon 8.

(1158) (b) *The regulations*. Except in cases of emergency involving danger to life or property, no vessel engaged in commercial fishing or shrimping shall anchor in any of the channels, harbors, or lagoons in the vicinity of Garden Key, Bush Key, or the surrounding shoals, outside of Bird Key Harbor.

(1159)

§110.193 Tampa Bay, FL.

(1160) (a) *The anchorage grounds*–(1) *Explosives anchorage east of Mullet Key*. A rectangular area in Tampa Bay, approximately 4,459 yards long and 1,419 yards wide, beginning at

(1161) 27°38'30"N., 82°39'09"W.; and extending northeasterly to

(1162) 27°39'48"N., 82°37'15"W.; thence southeasterly to

(1163) 27°39'17"N., 82°36'46"W.; thence southwesterly to

(1164) 27°37'52"N., 82°38'38"W.; thence northwesterly to the point of beginning.

(1165) (2) *Temporary explosives anchorage south of Interbay Peninsula*. Beginning at a point bearing 107°, 1,750 yards from Cut F Range Front Light; thence to a point bearing 125°, 2,050 yards, from Cut "F" Range Front Light; thence to a point bearing 180°, 1,725 yards, from Cut "F" Range Front Light; thence to a point bearing 222°, 2,180 yards, from Cut "F" Range Front Light; thence to a point bearing 251°, 1,540 yards, from Cut "F" Range Front Light; and thence to the point of beginning.

(1166) (3) *Temporary explosives anchorage off Port Tampa*. A circular area with a radius of 200 yards with the point at latitude 27°50'22", longitude 82°34'15".

(1167) (4) *Quarantine Anchorage*. Southeast of the temporary explosive anchorage, beginning at a point bearing 97° true, 4,370 yards, from Cut "F" Range Front Light; thence to a point bearing 113°30', 5,370 yards, from Cut "F" Range Front Light; thence to a point bearing 161°30', 3,770 yards, from Cut "F" Range Front Light; thence to a point bearing 163°30', 2,070 yards, from Cut "F" Range Front Light; thence to the point of beginning.

(1168) (5) *Barge Fleeting Area, Hillsborough Bay*. Located 400 feet west of Cut "D" Channel at a point beginning at

(1169) 27°54'34"N., 82°26'35"W.; thence northerly 1,000 feet to

(1170) 27°54'43"N., 82°26'40"W.; thence westerly 500 feet to

(1171) 27°54'41"N., 82°26'45"W.; thence southerly 1,000 feet to

(1172) 27°54'32"N., 82°26'40"W.; thence easterly 500 feet to the point of beginning.

(1173) NOTE: This area is reserved for transient barges only. Barges shall not occupy this anchorage for a period longer than 96 hours unless permission is obtained from the Captain of the Port for this purpose.

(1174) (b) *The regulations*. (1) The explosives anchorage east of Mullet Key shall be used by vessels awaiting loading or unloading at Port Tampa that have explosives actually on board and where the duration of anchorage will exceed 72 hours.

(1175) (2) The temporary explosives anchorages south of Interbay Peninsula and off Port Tampa shall be used for vessels engaged in loading explosives when the duration of the anchorage is less than 72 hours.

(1176)

§110.193a St. Joseph Bay, FL.

(1177) (a) *The anchorage grounds*–(1) *Explosives Anchorage Area 1*. A rectangular area 3,000 yards long by 700 yards wide beginning at a point 1,350 yards west of U.S. Highway 98 Bridge over Gulf County Canal. The area is parallel to and 450 yards northeast of the north entrance channel to Port St. Joe, FL.

(1178) (2) *Explosives Anchorage Area 2*. A circular area with a 500-yard radius around a center point located at latitude 29°47'30"; longitude 85°21'30", 3,100 yards southeast of FW South Channel Light and 5,250 yards south of FW North Channel Light, in St. Joseph Bay, Port St. Joe, FL.

(1179) (b) *The regulations*. (1) The explosives anchorage areas shall be used as temporary anchorage for vessels engaged in loading and unloading explosives at the port of Port St. Joe, FL, when the duration of the anchorage period is less than 96 hours.

(1180) (2) No vessel shall occupy this anchorage without obtaining a permit from the Captain of the Port.

(1181)

§110.194 Mobile Bay, AL, at entrance.

(1182) (a) *The anchorage grounds*. The waters within a radius of 750 yards from a point located 1,000 yards true north from Fort Morgan Light.

(1183) (b) *The regulations*. (1) This anchorage shall be used by vessels loading or discharging high explosives. It shall also be used by vessels carrying dangerous or inflammable cargoes requiring an anchorage. It may be used for a general anchorage when not required for vessels carrying explosives or dangerous or inflammable cargoes.

(1184) (2) No vessel shall occupy this anchorage without obtaining a permit from the Captain of the Port.

(1185)

§110.194a Mobile Bay, AL, and Mississippi Sound, MS.

(1186) (a) *The anchorage grounds*. (1) The waters of lower Mobile Bay, near Cedar Point, within an area bounded on the north by latitude 30°21'00", on the east by longitude 88°05'00", on the south by latitude 30°20'00", and on the west by longitude 88°06'00".

(1187) (2) The waters of Mississippi Sound, south of Biloxi, within an area bounded on the north by latitude 30°20'00", on the east by longitude 88°54'00", on the south by latitude 30°19'00", and on the west by longitude 88°55'00".

(1188) (b) *The regulations*. (1) The anchorages are exclusively for the use of unmanned barges, canal boats, scows, and other nondescript vessels. Such craft shall be so anchored that they will not at any time extend outside the limits of the anchorages.

(1189) (2) In emergencies or whenever maritime or commercial interests of the United States so require, the Captain of the Port is authorized to shift the position of any craft in the anchorages.

(1190) (3) Whenever in the opinion of the Captain of the Port, such action may be necessary, any or all craft in these anchorages may be required to be moored with two or more anchors.

(1191) (4) No vessel shall be navigated within the anchorages at a speed exceeding six knots.

(1192)

§110.194b Mississippi Sound and Gulf of Mexico, near Petit Bois Island, MS.

(1193) (a) *The anchorage grounds*–(1) *Explosives Anchorage Area No. 1*. A circular area with a one-half mile radius with its center located at latitude 30°14'09", longitude 88°29'13", in the waters of Mississippi Sound north of the west end of Petit Bois Island.

(1194) (2) *Explosives Anchorage Area No. 2*. A circular area with a three-fourths mile radius with its center located at latitude 30°11'12", longitude 88°30'07", in the waters of Gulf of Mexico south of the west end of Petit Bois Island.

(1195) (b) *The regulations*. (1) The areas shall be used as temporary anchorages for vessels engaged in loading and unloading explosives at the Port of Pascagoula, MS.

(1196) (2) No vessel shall occupy the areas without obtaining a permit from the Captain of the Port.

(1197)

§110.195 Mississippi River below Baton Rouge, LA, including South and Southwest Passes.

(1198) (a) *The Anchorage Grounds*. Unless otherwise specified, all anchorage widths are measured from the average low water plane (ALWP).

(1199) (1) *Pilottown Anchorage*. An area 5.2 miles in length along the right descending bank of the river from mile 1.5 to mile 6.7 above Head of Passes, extending in width to 1,600 feet from the left descending bank of the river.

(1200) Caution: A wreck is located within the boundaries of this anchorage. Mariners are urged to use caution in this anchorage.

(1201) (2) *Lower Venice Anchorage*. An area 1.6 miles in length along the left descending bank of the river from mile 8.0 to mile 9.6 above Head of Passes with the west limit 1,200 feet from the ALWP of the right descending bank.

(1202) Caution: A pipeline crossing exists at mile 9.8 AHOP. Mariners are urged to use caution between mile 9.6 AHOP and mile 10.0 AHOP.

(1203) (3) *Upper Venice Anchorage*. An area 1.2 miles in length along the left descending bank of the river from mile 10.0 to mile 11.2 above Head of Passes with the west limit 1,200 feet from the ALWP of the right descending bank.

(1204) (4) *Boothville Anchorage*. An area, 6.45 miles in length, along the right descending bank of the river extending from mile 12.05 to mile 18.5 Above Head of Passes. The width of the anchorage is 750 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 250 feet from the water's edge into the river as measured from the Low Water Reference Plane (LWRP). The outer boundary of the anchorage is a line parallel to the nearest bank 1,000 feet from the water's edge into the river as measured from the LWRP.

(1205) **Note:** Venice Revetment extends/runs adjacent to this anchorage. Mariners are urged to use caution in this anchorage.

(1206) (5) *Ostrica Anchorage*. An area 1.4 miles in length along the right descending bank of the river extending from mile 23.0 to mile 24.4 above Head of Passes. The width of the anchorage is 800 feet.

(1207) (6) *Port Sulphur Anchorage*. An area 2.2 miles in length along the left descending bank of the river, 800 feet wide, extending from mile 37.5 to mile 39.7 above Head of Passes.

(1208) (7) *Magnolia Anchorage*. An area, 2.2 miles in length, along the right descending bank of the river extending from mile 45.4 to mile 47.6 Above Head of Passes. The width of the anchorage is 700 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 400 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 1,100 feet from the water's edge into the river as measured from the LWRP.

(1209) **Note:** Point Michel and Diamond Revetments extend/run adjacent to this anchorage. Mariners are urged to use caution in this anchorage.

(1210) (8) *Point Celeste Anchorage*. An area 2.2 miles in length along the right descending bank of the river extending from mile 49.8 to mile 52.0 above Head of Passes. The width of the anchorage is 400 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 400 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 800 feet from the water's edge into the river as measured from the LWRP.

(1211) (9) *Davant Anchorage.* An area, 1.4 miles in length, along the left descending bank of the river extending from mile 52.5 to mile 53.9 Above Head of Passes. The width of the anchorage is 800 feet.he river extending from mile 52.8 to mile 53.9 above Head of Passes. The width of the anchorage is 800 feet.

(1212) (10) *Alliance Anchorage*. An area 2.0 miles in length along the right descending bank of the river extending from mile 63.8 to mile 65.8 above Head of Passes. The width of the anchorage is 400 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 400 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 800 feet from the water's edge into the river as measured from the LWRP.

(1213) (11) *Wills Point Anchorage.* An area, 1.1 miles in length, along the left descending bank of the river extending from mile 66.5 to mile 67.6 Above Head of Passes. The width of the anchorage is 500 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 200 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 700 feet from the water's edge into the river as measured from the LWRP.

(1214) (12) *Cedar Grove Anchorage.* An area, 1.34 miles in length, along the right descending bank of the river extending from mile 69.56 to mile 70.9 Above Head of Passes. The width of the anchorage is 500 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 200 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 700 feet from the water's edge into the river as measured from the LWRP.

(1215) **Note:** Jesuit Bend Revetment extends/runs adjacent to the lower portion of this anchorage. Mariners are urged to use caution in this anchorage.

(1216) (13) *Belle Chasse Anchorage*. An area, 2.15 miles in length, along the right descending bank of the river extending from mile 73.05 to mile 75.2 Above Head of Passes. The width of the anchorage is 500 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 375 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 875 feet from the water's edge into the river as measured from the LWRP.

(1217) **Note:** Oak Point Revetment extends/runs adjacent to the lower portion of this anchorage. Mariners are urged to use caution in this anchorage.

(1218) (14) *Lower 12 Mile Point Anchorage*. An area, 2.2 miles in length, along the right descending bank of the river extending from mile 78.6 to mile 80.8 Above Head of Passes. The width of the anchorage is 500 feet. The inner boundary of the anchorage is a line parallel to the

nearest bank 300 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 800 feet from the water's edge into the river as measured from the LWRP.

(1219) **Note:** English Turn Revetment extends/runs adjacent to the lower portion of this anchorage. Mariners are urged to use caution in this anchorage.

(1220) (15) *Lower 9 Mile Anchorage*. An area, 2.4 miles in length, along the right descending bank of the river extending from mile 82.6 to mile 85.0 Above Head of Passes. The width of the anchorage is 500 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 300 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 800 feet from the water's edge into the river as measured from the LWRP.

(1221) **Note:** Twelve Mile Point Revetment extends/runs adjacent to the lower portion of this anchorage. Mariners are urged to use caution in this anchorage. Caution: A wreck is located within the boundaries of this anchorage. Mariners are urged to use caution in this anchorage.

(1222) **Caution:** A wreck is located within the boundaries of this anchorage. Mariners are urged to use caution in this anchorage.

(1223) (16) *New Orleans Emergency Anchorage*. An area 0.5 mile in length along the right descending bank of the river extending from mile 89.6 to mile 90.1 above Head of Passes. The width of the anchorage is 550 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 250 feet from the water's edge into the river as measured from LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 800 feet from the water's edge into the river as measured from the LWRP.

(1224) **Note:** No vessel shall occupy this anchorage unless expressly authorized by the Captain of the Port. No vessel may anchor in this anchorage exceeding 24 hours without the authorization of the Captain of the Port.

(1225) (17) *New Orleans General Anchorage*. An area 0.8 mile in length along the right descending bank of the river extending from mile 90.1 to mile 90.9 above Head of Passes. The width of the anchorage is 550 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 250 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 800 feet from the water's edge into the river as measured from the LWRP.

(1226) (18) *Quarantine Anchorage*. An area 0.7 mile in length along the right descending bank of the river extending from mile 90.9 to mile 91.6 above Head of Passes. The width of the anchorage is 800 feet.

(1227) **Caution:** A wreck is located within the boundaries of this anchorage. Mariners are urged to use caution in the anchorage.

(1228) **Note:** Vessels carrying cargos of particular hazard as defined in **33 CFR 126.10** or cargos of petroleum products in bulk may not be anchored in the New Orleans General Anchorage or the Quarantine Anchorage without permission from the Captain of the Port.

(1229) Except when required by the United States Public Health Service for quarantine inspection, the Quarantine Anchorage may be used as a general anchorage.

(1230) (19) *Lower Kenner Bend Anchorage*. An area 1.0 mile in length along the right descending bank of the river extending from mile 113.3 to mile 114.3 above Head of Passes. The width of the anchorage is 350 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 350 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 700 feet from the water's edge into the river as measured from the LWRP.

(1231) (20) *Kenner Bend Anchorage*. An area 0.9 mile in length along the right descending bank of the river extending from mile 114.7 to mile 115.6 above Head of Passes. The width of the anchorage is 700 feet.

(1232) (21) *Ama Anchorage*. An area 1.8 miles in length along the left descending bank of the river extending from mile 115.5 to mile 117.3 above Head of Passes. The width of the anchorage is 400 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 300 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 700 feet from the water's edge into the river as measured from the LWRP.

(1233) **Caution:** A wreck is located at mile 115.4 left descending bank above Head of Passes marked by Mississippi River Wreck Lighted Buoy WR4. Mariners are urged to use caution when anchoring in the lower end of this anchorage.

(1234) (22) *Bonnet Carre Anchorage*. An area 1.5 miles in length along the left descending bank of the river extending from mile 127.3 to mile 128.8 above Head of Passes. This area is located adjacent to the river end of the Bonnet Carre Spillway. The width of the anchorage is 600 feet.

(1235) **Note:** When the Bonnet Carre Spillway is open, no vessel may be anchored in the Bonnet Carre Anchorage.

(1236) (23) *La Place Anchorage*. An area 0.7 mile in length along the left descending bank of the river extending from mile 134.7 to mile 135.4 above Head of Passes. The width of the anchorage is 600 feet.

(1237) (24) *Reserve Anchorage*. An area 0.5 mile in length along the right descending bank of the river extending from mile 137.0 to mile 137.5 above Head of Passes. The width of the anchorage is 500 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 300 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 800 feet from the water's edge into the river as measured from the LWRP.

(1238) (25) *Lower Grandview Reach Anchorage*. An area 0.3 mile in length along the left descending bank of the river extending from mile 146.4 to mile 146.7 above Head of Passes. The width of the anchorage is 500 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 200 feet from the water's edge in the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 700 feet from the water's edge into the river as measured for the LWRP.

(1239) (26) *Middle Grandview Reach Anchorage*. An area 0.4 mile in length along the left descending bank of the river extending from mile 146.8 to mile 147.2 above Head of Passes. The width of the anchorage is 500 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 200 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 700 feet from the water's edge into the river as measured from the LWRP.

(1240) (27) *Upper Grandview Reach Anchorage*. An area 1.3 miles in length along the left descending bank of the river extending from mile 147.5 to mile 148.8 above Head of Passes. The width of the anchorage is 500 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 200 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 700 feet from the water's edge into the river as measured from the LWRP.

(1241) (28) *Sunshine Anchorage*. An area 2.0 miles in length along the left descending bank of the river extending from mile 165.0 to mile 167.0 above Head of Passes. The width of the anchorage is 450 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 350 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 800 feet from the water's edge into the river as measured from the LWRP.

(1242) (29) *White Castle Anchorage*. An area, 0.84 mile in length, along the right descending bank of the river extending from mile 190.3 to mile 191.14 Above Head of Passes. The width of the anchorage is 300 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 400 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 700 feet from the water's edge into the river as measured from the LWRP.

(1243) (30) *Baton Rouge General Anchorage*. An area 1.5 miles in length along the right descending bank of the river, 1,400 feet wide, extending from mile 225.8 to mile 227.3 above Head of Passes.

(1244) **Caution:** Two wrecks are located within the boundaries of this anchorage. Mariners are urged to use caution in this anchorage.

(1245) (31) *Lower Baton Rouge Anchorage*. An area 0.5 mile in length near midchannel between mile 228.5 and mile 229.0 above Head of Passes with the west limit 1,100 feet off the right descending bank and having the width of 700 feet at both the upper and lower limits.

(1246) (32) *Middle Baton Rouge Anchorage*. An area 0.2 mile in length near midchannel between mile 229.6 and mile 229.8 above Head of Passes with the west limit 1,100 feet off the right descending bank and having a width of 700 feet at both the upper and lower limits.

(1247) (33) *Upper Baton Rouge Anchorage*. An area 0.4 mile in length near mid-channel between mile 230.6 and mile 231.0 above Head of Passes with the west limit 1,100 feet off the right descending bank and having a width of 1,075 feet at the upper limit and 1,200 feet at the lower limit.

(1248) (34) *Belmont Anchorage*. An area 1.1 miles in length along the left descending bank of the river extending from mile 152.9 (Belmont Light) to mile 154.0 above Head of Passes. The width of the anchorage is 300 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 400 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 700 feet from the water's edge into the river as measured from the LWRP.

(1249) (35) *Point Michel Anchorage.* An area, 2.2 miles in length, along the right descending bank of the river extending from mile 40.0 to mile 42.2 Above Head of Passes. The width of the anchorage is 500 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 325 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 825 feet from the water's edge into the river as measured from the LWRP.

(1250) **Note:** Point Michel Revetment extends/runs adjacent to this anchorage. Mariners are urged to use caution in this anchorage.

(1251) (36) *Plaquemines Point Anchorage.* An area, 0.5 mile in length, along the right descending bank of the river extending from mile 203.9 to mile 204.4 Above Head of Passes. The width of the anchorage is 500 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 400 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 900 feet from the water's edge into the river as measured from the LWRP.

(1252) (37) *Phoenix Anchorage.* An area, 0.6 mile in length, along the left descending bank of the river extending from mile 57.82 to mile 58.42 Above Head of Passes. The width of the anchorage is 400 feet. The inner boundary of the anchorage is a line parallel to the nearest bank 400 feet from the water's edge into the river as measured from the LWRP. The outer boundary of the anchorage is a line parallel to the nearest bank 800 feet from the water's edge into the river as measured from the LWRP.

(1253) **Note:** Myrtle Grove Revetment extends/runs adjacent to this anchorage. Mariners are urged to use caution in this anchorage.

(1254) (b) *Temporary Anchorages*. (1) Temporary anchorages are non-permanent anchorages established by the Commander, Eighth Coast Guard District to provide additional anchorage space. Establishment of temporary anchorages is based on recommendations by the Captain of the Port.

(1255) (2) Each vessel using temporary anchorages shall anchor as prescribed by the Captain of the Port.

(1256) (3) Establishment of each temporary anchorage and any requirement for the temporary anchorage will be published in the Local Notice to Mariners.

(1257) (4) Each person who has notice of any requirement prescribed for a temporary anchorage shall comply with that requirement.

(1258) (c) *The Regulations*. (1) Anchoring in the Mississippi River below Baton Rouge, LA., including South and Southwest Passes is prohibited outside of established anchorages except in cases of emergency. In an emergency, if it becomes necessary to anchor a vessel outside an established anchorage, the vessel shall be anchored so that it does not interfere with or endanger any facility or other vessel. The master or person in charge of the vessel shall notify the Captain of the Port of the location of the emergency anchoring by the most expeditious means and shall move the vessel as soon as the emergency is over.

(1259) (2) In an emergency, if it becomes necessary to anchor a vessel in South Pass or Southwest Pass, the vessel shall be positioned as close to the left descending bank as possible.

(1260) (3) No vessel may be anchored unless it maintains a bridge watch, guards and answers Channel 16 FM (or the appropriate VTS New Orleans sector frequency), maintains an accurate position plot and can take appropriate action to ensure the safety of the vessel, structure, and other vessels.

(1261) (4) When anchoring individually, or in fleets, vessels shall be anchored with sufficient anchors, or secured with sufficient lines, to ensure their remaining in place and withstanding the actions of the winds, currents and the suction of passing vessels.

(1262) (5) No vessel may be anchored over revetted banks of the river or within any cable or pipeline area. The locations of revetted areas and cable and pipeline areas may be obtained from the District Engineer, Corps of Engineers, New Orleans, LA.

(1263) (6) The intention to transfer any cargo while in an anchorage shall be reported to the Captain of the Port, giving particulars as to name of ships involved, quantity and type of cargo, and expected duration of the operation. The Captain of the Port shall be notified upon completion of operations. Cargo transfer operations are not permitted in the New Orleans General or Quarantine Anchorages. Bunkering and similar operations related to ship's stores are exempt from reporting requirements.

(1264) **Note:** Activities conducted within a designated anchorage (e.g. cargo transfer, tank cleaning, stack blowing, etc.) may be restricted by other Federal, State or local regulations. Owners, or persons in charge of any vessel should consider all safety and/or environmental regulations prior to engaging in any activity within designated anchorages.

(1265) (7) Vessels anchored in the Lower Kenner Bend Anchorage are prohibited from using or exercising the ship's hold cargo cranes. Vessels in this anchorage must keep the ship's hold cargo gear in the down and hawsed position, as rigged for sea transits. Deck-mounted cranes, deck booms and stiff legs may be used to take on ships stores and spare parts and may be used to move manifold hoses.

(1266) (8) Nothing in this section relieves the owner or person in charge of any vessel from the penalties for obstructing or interfering with navigational aids or for failing to comply with the navigation laws for lights, day shapes, or fog signals and any other applicable laws and regulations.

(1267)

§110.196 Sabine Pass Channel, Sabine Pass, TX

(1268) (a) *The anchorage area*. The water bounded by a line connecting the following coordinates:

(1269) 29°43′59.0″ N., 93°52′08.1″ W.

(1270) 29°44′06.8″ N., 93°51′57.6″ W.

(1271) 29°43′53.0″ N., 93°51′47.1″ W.

(1272) 29°43′36.7″ N., 93°51′50.9″ W.

(1273) (b) *The regulations*. (1) The anchorage area is for the temporary use of vessels of all types, but especially for naval and merchant vessels awaiting weather and tidal conditions favorable to the resumption of their voyages.

(1274) (2) Except when stress of weather or adverse tides or currents make sailing impractical or hazardous, vessels shall not anchor in the anchorage area for periods exceeding 48 hours unless expressly authorized by the Captain of the Port to anchor for longer periods.

(1275) (3) Vessels shall not anchor so as to obstruct the passage of other vessels proceeding to or from available anchorage spaces.

(1276) (4) Anchors shall not be placed channelward from the anchorage area, and no portion of the hull or rigging of any anchored vessel shall extend channelward from the limits of the anchorage area.

(1277) (5) Vessels using spuds for anchors shall anchor as close to shore as practicable having due regard for the provisions in paragraph (b)(3) of this section.

(1278) (6) Fixed moorings, piles or stakes, and floats or buoys for marking anchorages or moorings in place are prohibited.

(1279) (7) Whenever the maritime or commercial interests of the United States so require, the Captain of the Port is hereby empowered to shift the position of any vessel anchored or moored within or outside of the anchorage area including any vessel which is moored or anchored so as to obstruct navigation or interfere with range lights.

(1280)

§110.197 Galveston Harbor, Bolivar Roads Channel, TX

(1281) (a)(1) Anchorage area (A). The water bounded by a line connecting the following points:

(1282) 29°20'48.5"N., 94°42'54.0"W.;

(1283) 29°20'43.0"N., 94°44'46.5"W.;

(1284) 29°21'15.0"N., 94°44'27.0"W.;

(1285) 29°21'05.0"N., 94°42'52.0"W.; and thence to the point of beginning.

(1286) (2) Anchorage area (B). The water bounded by a line connecting the following points:

(1287) 29°20'43.0"N., 94°44'46.5"W.;

(1288) 29°20'37.0"N., 94°46'08.0"W.;

(1289) 29°21'14.0"N., 94°45'50.0"W.;

(1290) 29°21'15.0"N., 94°44'27.0"W.; and thence to the point of beginning.

(1291) (3) Anchorage area (C). The water bounded by a line connecting the following points:

(1292) 29°20'39.0"N., 94°46'07.5"W.

(1293) 29°21'06.1"N., 94°47'00.2"W.

(1294) 29°21'24.0"N., 94°46'34.0"W.

(1295) 29°21'14.5"N., 94°45'49.0"W.; and thence to the point of beginning.

(1296) (4) *Anchorage Area (A) East*. The waters bounded by a line connecting the following points:

(1297) 29°21′5.87″ N, 094°42′52.7″ W 29°20′53.99″ N, 094°42′7.13″ W 29°20′45.31″ N, 094°42′37.75″ W 29°20′39.16″ N, 094°42′7.81″ W and thence to the point of beginning. The coordinates are based on NAD 83.

(1298) (b) *The regulations*. (1) The anchorage area is for the temporary use of vessels of all types, but especially for vessels awaiting weather and other conditions favorable to the resumption of their voyages.

(1299) (2) Except when stress of weather makes sailing impractical or hazardous, vessels shall not anchor in anchorage areas (A), (B), or (C) for more than 48 hours unless expressly authorized by the Captain of the Port Houston-Galveston. Permission to anchor for longer periods may be obtained through Coast Guard Vessel Traffic Service Houston/Galveston on VHF–FM channels 12 (156.60 MHz) or 13 (156.65 MHz).

(1300) (3) No vessel with a draft of less than 22 feet may occupy anchorage (A) without prior approval of the Captain of the Port.

(1301) (4) No vessel with a draft of less than 16 feet may anchor in anchorage (c) without prior approval of the Captain of the Port Houston-Galveston.

(1302) (5) Vessels shall not anchor so as to obstruct the passage of other vessels proceeding to or from other anchorage spaces.

(1303) (6) Anchors shall not be placed in the channel and no portion of the hull or rigging of any anchored vessel shall extend outside the limits of the anchorage area.

(1304) (7) Vessels using spuds for anchors shall anchor as close to shore as practicable having due regard for the provisions in paragraph (b)(5) of this section.

(1305) (8) Fixed moorings, piles or stakes, and floats or buoys for marking anchorages or mooring in place, are prohibited.

(1306) (9) Whenever the maritime or commercial interests of the United States so require, the Captain of the Port, or his authorized representative, may direct the movement of any vessel anchored or moored within the anchorage areas.

(1307)

§110.240 San Juan Harbor, P.R.

(1308) (a) *The anchorage grounds*–(1) *Temporary Anchorage E (general)*. Beginning at a point which bears 262°T., 878 yards from Isla Grande Aero Beacon; thence along a line 75°47', 498 yards; thence along a line 134°49', 440 yards; thence along a line 224°49' to the northerly channel limit of Graving Dock Channel, and thence to the point of beginning.

(1309) (2) *Restricted Anchorage F*. Beginning at a point which bears 212°30', 1,337.5 yards from Isla Grande Light; thence along a line 269°00', 550 yards; thence along a line 330°00' to the westerly channel limit of Anegado Channel; and thence along the westerly channel limit of Anegado Channel to the point of beginning.

(1310) (b) *The regulations*. (1) Vessels awaiting customs or quarantine shall use Temporary Anchorage E. No vessel shall remain in this anchorage more than 24 hours without a permit from the U.S. Coast Guard Captain of the Port.

(1311) (2) Restricted Anchorage F shall serve both as an additional general anchorage area in cases where the temporary anchorage is full, and as an explosives anchorage for vessels loading or unloading explosives in quantities no greater than forty (40) tons, Commercial Class "A" Explosives, when so authorized by the United States Coast Guard Captain of the Port. No vessel shall enter or anchor therein without first obtaining a permit from the United States Coast Guard Captain of the Port.

(1312)

§110.245 Vieques Passage and Vieques Sound, near Vieques Island, P.R.

(1313) (a) *The anchorage grounds*–(1) Vieques Passage explosives anchorage and ammunition handling berth (Area 1). A circular area having a radius of 1,700 yards with its center at latitude 18°09'00", longitude 65°32'40".

(1314) (2) Vieques Sound explosives anchorage and ammunition handling berth (Area 2). A circular area having a radius of 2,000 yards with its center at latitude 18°11'48", longitude 65°26'06".

(1315) (3) Southern Vieques Passage explosives anchorage and ammunition handling berth (Area 3). A circular area having a radius of 2,000 yards with its center at latitude 18°05'51", longitude 65°36'14".

(1316) (b) *The regulations*. (1) No vessel or craft shall enter or remain in these anchorages while occupied by vessels having on board explosives or other dangerous cargo. Explosives in quantities no greater than 1,625 short tons will be handled in any area at one time.

(1317) (2) The regulations of this section shall be enforced by the Commander, Coast Guard Sector San Juan, Puerto Rico, and such agencies as he may designate.

(1318)

§110.250 St. Thomas Harbor, Charlotte Amalie, V.I.

(1319) (a) *The anchorage grounds*–(1) *Inner harbor anchorage*. Beginning at a point bearing 085°, 525 yards from the outer end of a pier at latitude 18°20'19", longitude 64°56'26" (approximate); thence 146°, 800 yards; thence 070°, 860 yards; thence 340°, 500 yards; and thence to the point of beginning.

(1320) (2) *Outer harbor anchorage*. Beginning at Scorpion Rock lighted buoy No. 1 (latitude 18°19'25.6", longitude 64°55'41.8"); thence 180° 1,580 yards; thence 264°30', 2,490 yards; thence due north 1,255 yards; thence due east to the southerly tip of Sprat Point, Water Island; thence to Cowell Point, Hassel Island; and thence to the point of beginning.

(1321) (3) *East Gregerie Channel anchorage (general purpose)*. Bounded on the northeast by Hassel Island; on the southeast by the northwest boundary of the outer harbor anchorage; on the southwest by Water Island; and on the northwest by a line running from Banana Point, Water Island, 55° to Hassel Island.

(1322) (4) *Small-craft anchorage*. All the waters north of a line passing through the outer end of a pier at latitude 18°20'19", longitude 64°56'26" (approximate) and ranging 85°.

(1323) (5) Deep-draft anchorage. A circular area having a radius of 400 yards with its center at latitude 18°19'12.2", longitude 64°58'47.8".

(1324) (6) *Long Bay anchorage*. The waters of Long Bay bounded on the north by the southerly limit line of Anchorage E, on the west by the easterly limit line of Anchorage A to a point at latitude 18°20'18", thence to latitude 18°20'13", longitude 64°55'21"; and thence to the shoreline at latitude 18°20'15", longitude 64°55'13".

(1325) (b) *The regulations*. (1) The outer harbor anchorage shall be used by vessels undergoing examination by quarantine, customs, immigration, and Coast Guard officers. Upon completion of these examinations vessels shall move promptly to anchorage. This anchorage shall also be used by vessels having drafts too great to permit them to use the inner harbor anchorage. No vessel shall remain more than 48 hours in this anchorage without a permit from the Harbor Master.

(1326) (2) The small-craft anchorage shall be used by small vessels undergoing examination and also by small vessels anchoring under permit from the Harbor Master.

(1327) (3) The requirements of the Navy shall predominate in the deep-draft anchorage. When occupied by naval vessels all other vessels and craft shall remain clear of the area. When the area is not required for naval vessels, the Harbor Master may upon application made in advance assign other vessels to the area. Vessels so assigned and occupying the area shall move promptly upon notification by the Harbor Master.

(1328) (4) The harbor regulations for the Port of St. Thomas, V.I. of the United States and approaches thereto, including all waters under its jurisdiction, as adopted by the Government of the Virgin Islands, will apply to the Long Bay Anchorage.

(1329) (5) In addition, the Long Bay Anchorage is reserved for all types of small vessels, including sailing and motor pleasure craft, and such craft shall anchor in no other area except Anchorage E, in the northern portion of the harbor of Charlotte Amalie.

(1330) (6) Floats for marking anchors in place will be allowed in the Long Bay anchorage; stakes or mooring piles are prohibited.

(1331) (7) Vessels not more than 65 feet in length are not required to exhibit or carry anchor lights within the Long Bay anchorage, but must display them if emergency requires anchoring in any other part of the harbor.

(1332) (8) No vessel may anchor in any of the St. Thomas Harbor Anchorages without a permit from the Harbor Master.

(1333) (9) The Coast Guard Captain of the Port San Juan, is hereby empowered, whenever the maritime or commercial interests of the United States so require, to shift the position of any vessel anchored within the Long Bay anchorage, and of any vessel which is so moored or anchored as to impede or obstruct vessel movement in the harbor, and to enforce all regulations of this section should the need arise.

(1334)

§110.255 Ponce Harbor, P.R.

(1335) (a) *Small-craft anchorage*. On the northwest of Ponce Municipal Pier and northeast of Cayitos Reef, bounded as follows: Beginning at latitude 17°58'27", longitude 66°37'29.5", bearing approximately 325° true, 2,200 feet from the most southwest corner of Ponce Municipal Pier; thence 273°30' true, 1,800 feet; thence 15° true, 900 feet; thence 93°30' true, 1,800 feet; thence 195° true, 900 feet to the point of beginning.

(1336) (b) *The regulations*. (1) The Commonwealth Captain of the Port may authorize use of this anchorage whenever he finds such use required in safeguarding the maritime or commercial interests.

(1337) (2) No vessel shall anchor within the area until assigned a berth by the Commonwealth Captain of the Port. Application for permission to occupy the anchorage must be submitted in advance by the master or authorized representative of the vessel.

(1338) (3) Vessels occupying the anchorage will at all times keep within the limits of the area, and shall move or shift their position promptly upon notification by the Commonwealth Captain of the Port.

(1339) (4) The anchorage is reserved for all types of small craft, including schooners, fishing vessels, yachts and pleasure craft.

(1340) (5) Floats for marking anchors in place will be allowed; stakes or mooring piles are prohibited.

(1341)

Part 117–DrawbridgeOperation Regulations

(1342)

Subpart A–General Requirements

(1343)

§117.1 Purpose.

(1344) (a) This part prescribes the general and special drawbridge operating regulations that apply to the drawbridges across the navigable waters of the United States and its territories. The authority to regulate drawbridges across the navigable waters of the United States is vested in the Secretary of Homeland Security.

(1345) (b) Subpart A contains the general operation requirements that apply to all drawbridges.

(1346) (c) Subpart B contains specific requirements for operation of individual drawbridges. These requirements are in addition to or vary from the general requirements in Subpart A. Specific sections in subpart B that vary from a general requirement in Subpart A supersede the general requirement. All other general requirements in Subpart A, that are not at variance, apply to the drawbridges and removable span bridges listed in Subpart B.

(1347)

§117.3 [Removed].

(1348)

§117.4 Definitions.

(1349) The following definitions apply to this part:

(1350) *Appurtenance* means an attachment or accessory extending beyond the hull or superstructure that is not an integral part of the vessel and is not needed for a vessel's piloting, propelling, controlling, or collision avoidance capabilities.

(1351) *Automated drawbridge* means a drawbridge that is operated by an automated mechanism, not a drawtender. An automated drawbridge is normally kept in the open to navigation position and closes when the mechanism is activated.

(1352) Deviation means a District Commander's action authorizing a drawbridge owner to temporarily not comply with the drawbridge opening requirements in this part.

(1353) *Drawbridge* means a bridge with an operational span that is intended to be opened for the passage of waterway traffic.

(1354) *Drawspan* means the operational span of a drawbridge.

(1355) *Lowerable* means a non-structural vessel appurtenance that is or can be made flexible, hinged, collapsible, or telescopic so that it can be mechanically or manually lowered.

(1356) *Nonstructural* means that the item is not rigidly fixed to the vessel and can be relocated or altered.

(1357) *Not essential to navigation* means that a nonstructural vessel appurtenance, when in the lowered position, would not adversely affect the vessel's piloting, propulsion, control, or collision-avoidance capabilities.

(1358) *Public vessel* means a vessel that is owned and operated by the United States Government and is not engaged in commercial service, as defined in 46 U.S.C. 2101.

(1359) *Remotely operated drawbridge* means a drawbridge that is operated by remote control from a location away from the drawbridge.

(1360) *Removable span bridge* means a bridge that requires the complete removal of a span by means other than machinery installed on the bridge to open the bridge to navigation.

(1361) *Untended* means that there is no drawtender at the drawbridge.

(1362)

§117.5 When the drawbridge must open.

(1363) Except as otherwise authorized or required by this part, drawbridges must open promptly and fully for the passage of vessels when a request or signal to open is given in accordance with this subpart.

(1364)

§117.7 General requirements of drawbridge owners.

(1365) Except for drawbridges that have been authorized, before January 3, 2007, to remain closed to navigation or as otherwise specified in subpart B, drawbridge owners must:

(1366) (a) Provide the necessary drawtender(s) for the safe and prompt opening of the drawbridge.

(1367) (b) Maintain the working machinery of the drawbridge in good operating condition.

(1368) (c) Cycle the drawspan(s) periodically to ensure operation of the drawbridge.

(1369) (d) Ensure that the drawbridge operates in accordance with the requirements of this part.

(1370) (e) Any drawbridge allowed to remain closed to navigation prior to January 3, 2007, when necessary, must be returned to operable condition within the designated time set forth by the District Commander and will become subject to the requirements of this part.

(1371)

§117.8 Permanent changes to drawbridge operation.

(1372) (a) Anyone may submit a written request to the District Commander for a permanent change to a drawbridge operating requirement. The request must include documentation supporting or justifying the requested change.

(1373) (b) If after evaluating the request, the District Commander determines that the requested change is not needed, he or she will respond to the request in writing and provide the reasons for denial of the requested change.

(1374) (c) If the District Commander decides that a change may be needed, he or she will begin a rulemaking to implement the change.

(1375)

§117.9 Delaying opening of a draw.

(1376) No person shall unreasonably delay the opening of a draw after the signals required by §117.15 have been given.

(1377)

Note

(1378) Trains are usually controlled by the block method. That is, the track is divided into blocks or segments of a mile or more in length. When a train is in a block with a drawbridge, the draw may not be able to open until the train has passed out of the block and the yardmaster or other manager has "unlocked" the drawbridge controls. The maximum time permitted for delay is defined in Subpart B for each affected bridge. Land and water traffic should pass over or through the draw as soon as possible in order to prevent unnecessary delays in the opening and closure of the draw.

(1379)

§117.11 Unnecessary opening of the draw.

(1380) No vessel owner or operator shall–

(1381) (a) Signal a drawbridge to open if the vertical clearance is sufficient to allow the vessel, after all lowerable nonstructural vessel appurtenances that are not essential to navigation have been lowered, to safety pass under the drawbridge in the closed position; or

(1382) (b) Signal a drawbridge to open for any purpose other than to pass through the drawbridge opening.

(1383)

§117.15 Signals.

(1384) (a) *General*. (1) The operator of each vessel requesting a drawbridge to open shall signal the drawtender and the drawtender shall acknowledge that signal. The signal shall be repeated until acknowledged in some manner by the drawtender before proceeding.

(1385) (2) The signals used to request the opening of the draw and to acknowledge that request shall be sound signals, visual signals, or radiotelephone communications described in this subpart.

(1386) (3) Any of the means of signaling described in this subpart sufficient to alert the bridge being signaled may be used.

(1387) (b) *Sound signals*. (1) Sound signals shall be made by whistle, horn, megaphone, Hailar, or other device capable of producing the described signals loud enough to be heard by the drawtender.

(1388) (2) As used in this section, "prolonged blast" means a blast of four to six seconds duration and "short blast" means a blast of approximately one second duration.

(1389) (3) The sound signal to request the opening of a draw is one prolonged blast followed by one short blast sounded not more than three seconds after the prolonged blast. For vessels required to be passed through a draw during a scheduled closure period, the sound signal to request the opening of the draw during that period is five short blasts sounded in rapid succession.

(1390) (4) When the draw can be opened immediately, the sound signal to acknowledge a request to open the draw is one prolonged blast followed by one short blast sounded not more than 30 seconds after the requesting signal.

(1391) (5) When the draw cannot be opened immediately, or is open and shall be closed promptly, the sound signal to acknowledge a request to open the draw is five short blasts sounded in rapid succession not more than 30 seconds after the vessel's opening signal. The signal shall be repeated until acknowledged in some manner by the requesting vessel.

(1392) (c) *Visual signals*. (1) The visual signal to request the opening of a draw is –

(1393) (i) A white flag raised and lowered vertically; or

(1394) (ii) A white, amber, or green light raised and lowered vertically.

(1395) (2) When the draw can be opened immediately, the visual signal to acknowledge a request to open the draw, given not more than 30 seconds after the vessel's opening signal, is –

(1396) (i) A white flag raised and lowered vertically;

(1397) (ii) A white, amber, or green light raised and lowered vertically, or

(1398) (iii) A fixed or flashing white, amber, or green light or lights.

(1399) (3) When the draw cannot be opened immediately, or is open and must be closed promptly, the visual signal to acknowledge a request to open the draw is –

(1400) (i) A red flag or red light swung back and forth horizontally in full sight of the vessel given not more than 30 seconds after the vessel's opening signal; or

(1401) (ii) A fixed or flashing red light or lights given not more than 30 seconds after the vessel's opening signal.

(1402) (4) The acknowledging signal when the draw cannot open immediately or is open and must be closed promptly shall be repeated until acknowledged in some manner by the requesting vessel.

(1403) (d) Radiotelephone communications. (1) Radiotelephones may be used to communicate the same information provided by sound and visual signals.

(1404) (2) The vessel and the drawtender shall monitor the frequency used until the vessel has cleared the draw.

(1405) (3) When radiotelephone contact cannot be initiated or maintained, sound or visual signals under this section shall be used.

(1406)

§117.17 Signalling for contiguous drawbridges.

(1407) When a vessel must pass two or more drawbridges close together, the opening signal is given for the first bridge. After acknowledgment from the first bridge that it will promptly open, the opening signal is given for the second bridge, and so on until all bridges that the vessel must pass have been given the opening signal and have acknowledged that they will open promptly.

(1408)

§117.19 Signalling when two or more vessels are approaching a drawbridge.

(1409) When two or more vessels are approaching the same drawbridge at the same time, or nearly the same time, whether from the same or opposite directions, each vessel shall signal independently for the opening of the draw and the drawtender shall reply in turn to the signal of each vessel. The drawtender need not reply to signals by vessels accumulated at the bridge for passage during a scheduled open period.

(1410)

§117.21 Signalling for an opened drawbridge.

(1411) When a vessel approaches a drawbridge with the draw in the open position, the vessel shall give the opening signal. If no acknowledgment is received within 30 seconds, the vessel may proceed, with caution, through the open draw.

(1412)

§117.23 Installation of radiotelephones.

(1413) (a) When the District Commander deems it necessary for reasons of safety of navigation, the District Commander may require the installation and operation of a radiotelephone on or near a drawbridge.

(1414) (b) The District Commander gives written notice of the proposed requirement to the bridge owner.

(1415) (c) All comments the owner wishes to submit shall be submitted to the District Commander within 30 days of receipt of the notice under paragraph (b) of this section.

(1416) (d) If, upon consideration of the comments received, the District Commander determines that a radiotelephone is necessary, the District Commander notifies the bridge owner that a radiotelephone shall be installed and gives a reasonable time, not to exceed six months, to install the radiotelephone and commence operation.

(1417)

§117.24 Radiotelephone installation identification.

(1418) (a) The Coast Guard authorizes, and the District Commander may require the installation of a sign on drawbridges, on the upstream and downstream sides, indicating that the bridge is equipped with and operates a VHF radiotelephone in accordance with §117.23.

(1419) (b) The sign shall give notice of the radiotelephone and its calling and working channels –

(1420) (1) In plain language; or

(1421) (2) By a sign consisting of the outline of a telephone handset with the long axis placed horizontally and a vertical three-legged lightning slash superimposed over the handset. The slash shall be as long vertically as the handset is wide horizontally and normally not less than 27 inches and no more than 36 inches long. The preferred calling channel should be shown in the lower left quadrant and the preferred working channel should be shown in the lower right quadrant.

(1422) **Note:** It is recommended that the radiotelephone sign be similar in design to the Service Signs established by the Federal Highway Administration (FHWA) in U.S. Road Symbol Signs using Reflective Blue and Reflective White colors. Color and design information is available from the District Commander of the Coast Guard District in which the bridge is located.

(1423)

§117.31 Drawbridge operations for emergency vehicles and emergency vessels.

(1424) (a) Upon receiving notification that an emergency vehicle is responding to an emergency situation, a drawtender must make all reasonable efforts to have the drawspan closed at the time the emergency vehicle arrives.

(1425) (b) When a drawtender receives notice, or a proper signal as provided in §117.15 of this part, the drawtender shall take all reasonable measures to have the draw opened, regardless of the operating schedule of the draw, for passage of the following, provided this opening does not conflict with local emergency management procedures which have been approved by the cognizant Coast Guard Captain of the Port:

(1426) (1) Federal, State, and local government vessels used for public safety;

(1427) (2) Vessels in distress where a delay would endanger life or property;

(1428) (3) Commercial vessels engaged in rescue or emergency salvage operations; and

(1429) (4) Vessels seeking shelter from severe weather.

(1430)

§117.33 Closure of draw for natural disasters or civil disorders.

(1431) Drawbridges need not open for the passage of vessels during periods of natural disasters or civil disorders declared by the appropriate authorities unless otherwise provided for in Subpart B or directed to do so by the District Commander.

(1432)

§117.35 Temporary change to a drawbridge operating schedule.

(1433) (a) For any temporary change to the operating schedule of a drawbridge, lasting less than or equal to 180 days, the District Commander may issue a deviation approval letter to the bridge owner and publish a "Notice of temporary deviation from regulations" in the **Federal Register**.

(1434) (b) If the time period for a temporary change to the operating schedule of a drawbridge will be greater then 180 days, the District Commander will follow appropriate rulemaking procedures and publish a temporary rule in the **Federal Register** prior to the start of the action.

(1435) (c) *Request for change*. (1) To temporarily change the drawbridge-operating requirements the bridge owner must submit a written request to the District Commander for approval of the change.

(1436) (2) The request must describe the reason for the deviation and the dates and times scheduled for the start and end of the change.

(1437) (3) Requests should be submitted as early as possible, preferably 90 days before the start of the action. District Commanders have discretion to accept requests submitted less than 90 days before a needed change if those requests can be processed before the date of the needed change.

(1438) (d) *Determination*. The District Commander's determination to allow the schedule change is normally forwarded to the bridge owner within ten working days after receipt of the request. If the request is denied, the reasons for the denial will be set out in the District Commander's decision letter.

(1439) (e) The drawbridge must return to its regular operating schedule immediately at the end of the designated time period.

(1440) (f) If the authorized deviation period for an event is broken into separate time periods on the same day or on consecutive days, the drawbridge must provide openings for navigation between authorized schedule changes.

(1441) (g) The District Commander will also announce the change to the operating schedule in the Local Notice to Mariners and other appropriate local media.

(1442)

§117.36 Closure of drawbridge for emergency repair.

(1443) (a) When a drawbridge unexpectedly becomes inoperable, or should be immediately rendered inoperable because of mechanical failure or structural defect, the drawbridge owner must notify the District Commander of the closure without delay and give the reason for the emergency closure of the drawbridge and an estimated time when the drawbridge will be returned to operating condition.

(1444) (b) The District Commander will notify mariners about the drawbridge status through Broadcast Notices to Mariners, Local Notice to Mariners and any other appropriate local media.

(1445) (c) Repair work under this section must be performed with all due speed in order to return the drawbridge to operation as soon as possible.

(1446)

§117.37 [Removed].

(1447)

§117.39 Authorized closure of drawbridge due to infrequent requests for openings.

(1448) (a) When there have been no requests for drawbridge openings for at least two years, a bridge owner may request in writing that the District Commander authorize the drawbridge to remain closed to navigation and to be untended.

(1449) (b) The District Commander may:

(1450) (1) Authorize the closure of the drawbridge;

(1451) (2) Set out any conditions in addition to the requirement in paragraph (d): and

(1452) (3) Revoke an authorization and order the drawbridge returned to operation when necessary.

(1453) (c) All drawbridges authorized to remain closed to navigation, under this section, must be maintained in operable condition.

(1454) (d) Authorization under this section does not:

(1455) (1) Authorize physical changes to the drawbridge structure, or

(1456) (2) Authorize removal of the operating machinery.

(1457) (e) Drawbridges authorized under this section to remain closed to navigation and to be untended are identified in subpart B of this part.

(1458)

§117.40 Advance notice for drawbridge opening.

(1459) (a) Upon written request by the owner of a drawbridge, the District Commander may authorize a drawbridge to operate under an advance notice for opening. The drawbridge tender, after receiving the advance notice, must open the drawbridge at the requested time and allow for a reasonable delay in arrival of the vessel giving the advance notice.

(1460) (b) If the request is approved, a description of the advanced notice for the drawbridge will be added to subpart B of this part.

(1461)

§117.41 Maintaining drawbridges in the fully open position.

(1462) (a) Drawbridges permanently maintained in the fully open to navigation position may discontinue drawtender service as long as the drawbridge remains fully open to navigation. The drawbridge must remain in the fully open position until drawtender service is restored.

(1463) (b) If a drawbridge is normally maintained in the fully open to navigation position, but closes to navigation for the passage of pedestrian, vehicular, rail, or other traffic, the drawbridge must be tended unless:

(1464) (1) Special operating requirements are established in subpart B of this part for that drawbridge; or

(1465) (2) The drawbridge is remotely operated or automated.

(1466)

§117.42 Remotely operated and automated drawbridges.

(1467) (a) Upon written request by the owner of a drawbridge, the District Commander may authorize a drawbridge to operate under an automated system or from a remote location.

(1468) (b) If the request is approved, a description of the full operation of the remotely operated or automated drawbridge will be added to subpart B of this part.

(1469)

§117.43 [Removed].

(1470)

§117.45 [Removed].

(1471)

§117.47 Clearance gauges.

(1472) (a) Clearance gages are required for drawbridges across navigable waters of the United States discharging

into the Atlantic Ocean south of Delaware Bay (including the Lewes and Rehoboth Canal, DE) or into the Gulf of Mexico (including coastal waterways contiguous thereto and tributaries to such waterways and the Lower Atchafalaya River, LA), except the Mississippi River and its tributaries and outlets.

(1473) (b) Except for provisions in this part which specify otherwise for particular drawbridges, clearance gauges shall be designed, installed, and maintained according to the provisions of 33 CFR 118.160 (not carried in this Coast Pilot).

(1474)

Note

(1475) Clearance gauge requirements, if any, for drawbridges other than those referred to in this section are listed in Subpart B under the appropriate bridge.

(1476)

§117.49 Process of violations.

(1477) (a) Complaints of alleged violations under this part are submitted to the District Commander of the Coast Guard District in which the drawbridge is located.

(1478) (b) Penalties for violations under this part are assessed and collected under Subpart 1.07 of Part 1 of this chapter (not published in this Coast Pilot; see 33 CFR 1.07).

(1479)

Subpart B–Specific Requirements

(1480)

§117.51 General.

(1481) The drawbridges in this subpart are listed by the state in which they are located and by the waterway they cross. Waterways are arranged alphabetically by state. The drawbridges listed under a waterway are generally arranged in order from the mouth of the waterway moving upstream. The drawbridges on the Atlantic Intracoastal Waterway are listed from north to south and on the Gulf Intracoastal Waterway from east to west.

(1482)

§117.53 [Removed].

(1483)

§117.55 Posting of requirements.

(1484) (a) The owner of each drawbridge under this subpart, other than removable span bridges, must ensure that a sign summarizing the requirements in this subpart applicable to the drawbridge is posted both upstream and downstream of the drawbridge. The requirements to be posted need not include those in Subpart A or §§117.51 through 117.59 of this part.

(1485) (b) The signs shall be of sufficient size and so located as to be easily read at any time from an approaching vessel.

(1486) (c) If advance notice is required to open the draw, the signs shall also state the name, address, and telephone number of the person to be notified.

(1487)

§117.57 [Removed].

(1488)

§117.59 Special requirements due to hazards.

(1489) For the duration of occurrences hazardous to safety or navigation, such as floods, freshets, and damage to the bridge or fender system, the District Commander may require the owner of an operational drawbridge listed in this subpart to have the bridge attended full time and open on signal.

(1490)

ALABAMA

(1491)

§117.101 Alabama River.

(1492) (a) The Alabama & Gulf Coast Railway Drawbridge, mile 105.3 at Coy, shall open on signal if at least 48 hours notice is given.

(1493) (b) The draw of the Meridian and Bigbee Railroad (MNBR) Bridge, mile 205.9, at Selma, shall open on signal if at least 24 hours notice is given. An opening can be arranged by contacting the Meridian and Bigbee Railroad Roadmaster at 601–480–5071.

(1494) (c) The draw of the Canadian National/Illinois Central Gulf railroad bridge, mile 277 near Montgomery, shall open on signal if at least 24 hours notice is given.

(1495) (d) The draw of the CSX Transportation Railroad bridge, mile 293.3 near Montgomery, shall open on signal if at least 24 hours notice is given.

(1496)

§117.103 Bayou LaBatre.

(1497) The draw of SR 188 Bridge, mile 2.3, at Bayou La Batre, will open on signal every hour on the hour daily between 4 a.m. and 8 p.m., Monday through Sunday. The bridge need not open for the passage of vessels on the hours of 7 a.m., 3 p.m., and 4 p.m., Monday through Friday. Monday through Friday the draw will open on signal for the passage of vessels at 3:30 p.m. The bridge will remain closed to marine traffic from 8 p.m. to 4 a.m. daily except for emergencies.

(1498)

§117.105 Bayou Sara.

(1499) (a) The draw of the CSX Transportation Railroad bridge, mile 0.1 near Saraland, shall open on signal; except that, from 6 p.m. to 10 a.m. the draw shall open on signal if at least eight hours' notice is given. During periods of severe storms or hurricanes, from the time the National Weather Service sounds an "alert" for the area until the "all clear" is sounded, the draw shall open on signal.

(1500) (b) The draw of the CSX Transportation Railroad bridge, mile 0.1 near Saraland, AL shall be remotely operated by the bridge tender at CSX's bridge remote control center in Mobile, Alabama. Vessels can contact the CSX bridge tender via VHF–FM channel 13 or by telephone at the number displayed on the signs posted at the bridge to request an opening of the draw.

(1501) (c) CSX will return the tender to the bridge location within 3 hours following any of the below situations:

(1502) (1) Any component of the remote operations system fails and prevents the remote operator from being able to visually identify vessels, communicate with vessels, detect vessels immediately underneath the bridge or visually identify trains approaching the bridge;

(1503) (2) CSX fails to meet Federal Railway Administration (FRA) or any other government agency safety requirements;

(1504) (3) Anytime at the direction of the District Commander.

(1505)

§117.106 Black Warrior River.

(1506) The draw of the Alabama Gulf Coast (AGR) vertical lift span (Yo-Yo) bridge across the Black Warrior River, mile 219.0, at Demopolis, shall operate as follows:

(1507) (a) The draw shall be maintained in the fully open-to-navigation position for vessels at all times, except during periods when it is closed for the passage of rail traffic.

(1508) (b) Railroad track circuits will initiate the automatic bridge opening and closing sequences. (Estimated duration that the bridge will remain closed for passage of rail traffic is 10 to 15 minutes.)

(1509) (c) Upon detecting an approaching train, the track circuits will initiate bridge closing warning consisting of continuous horn blowing and the navigation lights changing to flashing yellow. Photoelectric (infrared) boat detectors will monitor the waterway beneath the bridge for the presence of vessels.

(1510) (d) At the end of a six-minute warning period, if no vessels have been detected by the boat detectors, the bridge lowering sequence will automatically proceed taking approximately two minutes to complete. As soon as the bridge leaves the up position, the horn will silence but the navigation lights change to flashing red.

(1511) (e) Upon passage of the train, the bridge will automatically open unless another movement is detected. The navigation lights will continue to flash red until the bridge has returned to the full open position at which time they will change to steady green.

(1512) (f) The bridge can also be operated from two locked trackside control location (key releases) on the approach spans, one on each side of the movable span.

(1513) (g) To request openings of the bridge when the lift span is in the closed-to-navigation position, mariners may contact the AGR via VHF–FM channel 16 or by telephone at 205–654–4364.

(1514)

§117.107 ChattahoocheeRiver.

(1515) The draw of the CSX Transportation Railroad bridge, mile 117.1 near Omaha, GA, shall open on signal if at least six hours notice is given.

(1516) **§117.111 Mobile River.**

(1517) (a) The draw of the CSX Transportation Railroad bridge, mile 13.1 near Hurricane, AL shall be remotely operated by the bridge tender at CSX's bridge remote control center in Mobile, AL and shall open promptly and fully when signaled to open. Vessels can contact the CSX bridge tender via VHF–FM channel 13 or by telephone at the number displayed on the signs posted at the bridge to request an opening of the draw.

(1518) (b) CSX will return the tender to the bridge location within 3 hours following any of the below situations:

(1519) (1) Any component of the remote operations system fails and prevents the remote operator from being able to visually identify vessels, communicate with vessels, detect vessels immediately underneath the bridge or visually

(1520) (2) CSX fails to meet Federal Railway Administration (FRA) or any other government agency safety requirements;

(1521) (3) Anytime at the direction of the District Commander.

(1522)

§117.113 Tensaw River.

(1523) The draw of the CSX Transportation Railroad bridge, mile 15.0 at Hurricane, shall open on signal if at least ten-hours notice is given. The draw shall open at the direction of the District Commander.

(1524)

§117.115 Three Mile Creek.

(1525) (a) The draw of the US 43 bridge, mile 1.0 at Mobile, need not be opened from 7 a.m. to 9 a.m. and from 4:30 p.m. to 6:30 p.m. daily. At all other times, the draw shall open on signal if at least 12 hours notice is given.

(1526) (b) The draw of the Norfolk Southern railroad bridge, mile 1.1 at Mobile, shall open on signal if at least five days notice is given.

(1527)

§117.118 Tombigbee River.

(1528) (a) The draw of the Meridian and Bigbee Railroad (MNBR) vertical lift span bridge across the Tombigbee River, mile 128.6 (Black Warrior Tombigbee (BWT) Waterway mile 173.6), at Naheola, shall operate as follows:

(1529) (1) The draw shall be maintained in the fully open-to-navigation position for vessels at all times, except during periods when it is closed for the passage of rail traffic.

(1530) (2) When a train approaches the bridge, it will stop and a crewmember from the train will observe the waterway for approaching vessels. If vessels are observed approaching the bridge, they will be allowed to pass prior to lowering the bridge. The crewmember will then announce via radiotelephone on VHF–FM channel 16 that the bridge is preparing to be lowered. If, after two minutes, no response has been received, the crewmember will initiate the lowering sequence.

(1531) (3) After the train has completely passed over the bridge, the crewmember will initiate the raising sequence. When the bridge is in the fully open-to-navigation position, the crewmember will announce via

radiotelephone on VHF–FM channel 16 that the bridge is in the fully open-to-navigation position.

(1532) (4) To request openings of the bridge when the lift span is in the closed-to-navigation position, mariners may contact the MNBR via VHF–FM channel 16 or by telephone at 205–654–4364.

(1533) (b) The draw of the Norfolk Southern Railroad (NSRR) Vertical Lift Bridge across the Tombigbee River, mile 89.9, near Jackson, Washington and Clarke Counties, Alabama shall be operated as follows:

(1534) (1) The draw shall be kept in the open-to-vessel position, except during periods when it will close for the passage of rail traffic or to perform periodic maintenance authorized in accordance with subpart A of this part.

(1535) (2) When a train approaches the bridge, the draw tender will initiate the bridge closing warning signal, consisting of radio calls via VHF–FM channels 13 and 16 and activation of flashing red warning lights at each end of the span. The radio calls will be broadcast at five (5) minutes prior to bridge closing and at two (2) minutes prior to bridge closing. At the end of the two-minute warning period, if there are no vessels passing beneath the bridge or there have been no requests to pass beneath the bridge then the draw will automatically close. Upon passage of the train, the draw will return to the open-to-vessel position. The warning lights will continue to flash red until the draw is completely opened.

(1536) (3) The draw shall be remotely operated by the draw tender at Norfolk Southern Railroad's bridge control center in Decatur, Alabama. Closed Circuit TVs, infrared detectors and an Automatic Identification System have been installed at the bridge. Vessels can contact the NSRR draw tender via VHF–FM channel 13 or by telephone at the number displayed on the signs posted at the bridge to request an opening of the draw when the vertical lift span is in the closed-to-vessel position.

(1537) (4) NSRR will immediately provide an on-site bridge tender if:

(1538) (i) Any component of the remote operations system fails and prevents the remote operator from being able to visually identify vessels, communicate with vessels, detect vessels immediately underneath the bridge or visually identify trains approaching the bridge.

(1539) (ii) Anytime NSRR cannot meet Federal Railway Administration (FRA) or any other government agency safety requirements.

(1540) (iii) Anytime that the NSRR procedures or equipment to close or open the bridge listed in paragraph (b)(2) of this section fail.

(1541) (iv) When weather reaches a point where the remote draw tender cannot visually identify a vessel from the remote location.

(1542) (v) At the direction of the District Commander.

(1543)

ARKANSAS

(1544)

§117.135 Red River.

(1545) The draws of the bridges above mile 276.0 at the Arkansas Louisiana border, need not be opened for the passage of vessels.

(1546)

FLORIDA

(1547)

§117.267 Big Carlos Pass.

(1548) The draw of the SR865 bridge, mile 0.0 between Estero Island and Black Island, shall open on signal; except that, the draw need not be opened from 7 p.m. to 8 a.m.

(1549)

§117.271 Blackwater River.

(1550) The draw of the CSX Transportation Railroad bridge, mile 2.8 at Milton, shall open on signal; except that, from 8 p.m. to 4 a.m., the draw shall open on signal if at least eight hours notice is given.

(1551)

§117.277 [Removed].

(1552)

§117.279 Coffeepot Bayou.

(1553) The draw of the Snell Isle Boulevard bridge, mile 0.4 at St. Petersburg, need not be opened for the passage of vessels.

(1554)

§117.287 Gulf Intracoastal Waterway.

(1555) (a) Public vessels of the United States and tugs with tows must be passed through the drawspan of each drawbridge listed in this section at anytime.

(1556) (a-1) The draw of the Boca Grande Swingbridge, mile 34.3, shall open on signal; except that, from 7 a.m. to 6 p.m., Monday through Friday, except Federal holidays, the draw need open only on the hour and half hour. On Saturday, Sunday and Federal holidays, from 7 a.m. to 6 p.m., the draw need open only on the hour, quarter hour, half hour and three quarter hour.

(1557) (a-2) The draw of the Venice Avenue bridge, mile 56.6 at Venice, shall open on signal, except that from 7 a.m. to 4:30 p.m., Monday through Friday except Federal holidays, the draw need open only at 10 minutes after the hour, 30 minutes after the hour and 50 minutes after the hour and except between 4:35 p.m. and 5:35 p.m. when the draw need not open.

(1558) (b) The draw of the Hatchett Creek (US–41) bridge, mile 56.9 at Venice, shall open on signal, except that, from 7 a.m. to 4:20 p.m., Monday through Friday except Federal holidays, the draw need open only on the hour, 20 minutes after the hour, and 40 minutes after the hour and except between 4:25 p.m. and 5:25 p.m. when the draw need not open. On Saturdays, Sundays, and Federal holidays from 7:30 a.m. to 6 p.m. the draw need open only on the hour, quarter-hour, half-hour, and three

quarter-hour. This bridge need not open to navigation on the second Sunday of November annually, from 9 a.m. to 5 p.m., to facilitate the Iron Man Triathlon event.

(1559) (c)(1) The Stickney Point Bridge, mile 68.6, at South Sarasota, Florida shall open on signal, except that from 6 a.m. to 7 p.m. daily, the draw need only open on the hour and half hour.

(1560) (2) The draw of the Siesta Drive Bridge, mile 71.6, at Sarasota, Florida shall open on signal, except that from 6 a.m. to 7 p.m. daily, the draw need only open on the hour and half hour.

(1561) (d)(1) The draw of the Cortez (SR 684) Bridge, mile 87.4, at Bradenton Beach, Florida shall open on signal, except that from 6 a.m. to 7 p.m. daily, the draw need only open on the quarter hour and three quarter hour.

(1562) (2) The draw of the Anna Maria (SR 64) (Manatee Avenue West) Bridge, mile 89.2, at Bradenton Beach, Florida shall open on signal, except that from 6 a.m. to 7 p.m. daily, the draw need only open on the quarter hour and three quarter hour.

(1563) (e) [Reserved]

(1564) (f) The draw of the Corey Causeway (SR693) bridge, mile 117.7 at South Pasadena, shall open on signal; except that, from 8 a.m. to 7 p.m. Monday through Friday, and 10 a.m. to 7 p.m. Saturdays, Sundays, and Federal holidays, the draw need be opened only on the hour, 20 minutes after the hour, and 40 minutes after the hour.

(1565) (g) The draw of the Treasure Island Causeway bridge, mile 119.0 shall open on signal except that from 7 a.m. to 7 p.m. the draw need open on the hour, 20 minutes after the hour and 40 minutes after the hour Monday through Friday and on the quarter hour and three quarter hour on Saturday, Sunday and Federal holidays.

(1566) (h) The draw of the Welch Causeway (SR 699) Bridge, Gulf Intracoastal Waterway mile 122.8, at Madeira Beach, Florida, shall open on signal; except that, from 7 a.m. to 7 p.m. daily, except Federal holidays, the draw need only open on the hour and half hour.

(1567)

§117.291 Hillsborough River.

(1568) (a) The drawspans for the drawbridges at Platt Street, mile 0.0, Brorein Street, mile 0.16, Kennedy Boulevard, mile 0.4, Cass Street, mile 0.7, Laurel Street, mile 1.0, West Columbus Drive, mile 2.3, and West Hillsborough Avenue, mile 4.8, must open on signal if at least two hours notice is given; except that, the drawspan must open on signal as soon as possible for public vessels of the United States.

(1569) (b) The draw of the CSX Railroad Bridge across the Hillsborough River, mile 0.7, at Tampa, operates as follows:

(1570) (1) The bridge is not tended.

(1571) (2) The draw is normally in the fully open position, displaying green lights to indicate that vessels may pass.

(1572) (3) As a train approaches, provided the marine traffic detection laser scanners do not detect a vessel under the draw, the lights change to flashing red and a horn continuously sounds while the draw closes. The draw remains closed until the train passes.

(1573) (4) After the train clears the bridge, the lights continue to flash red and the horn again continuously sounds while the draw opens, until the draw is fully open and the lights return to green.

(1574)

§117.297 Little Manatee River.

(1575) The draw for the CSX Railroad Bridge, mile 2.4 near Ruskin, FL, shall operate as follows:

(1576) (a) The bridge is normally maintained in the closed position.

(1577) (b) The bridge is not tendered locally, but will be monitored and operated by a remote bridge tender.

(1578) (c) Marine radio communication shall be maintained, by the remote bridge tender, with mariners near the bridge for the safety of navigation. Visual monitoring of the waterway shall be maintained with the use of cameras. Detection sensors shall be installed for the detection of vessels within the radius of the swing span of the bridge.

(1579) (d) The draw must open on signal if at least three hours advance notice is requested via marine radio channel 9 VHF or telephone (813) 677–3974.

(1580) (e) The bridge shall not be operated from the remote location in the following events: Failure or obstruction of the detection sensors, cameras, or marine radio communications. In these situations, a bridge tender must be onsite and locally operate the bridge.

(1581)

§117.300 Manatee River.

(1582) The draw of the CSX Railroad Bridge across the Manatee River, mile 4.5 Bradenton, operates as follows:

(1583) (a) The bridge is not tended.

(1584) (b) The draw is normally in the fully open position, displaying green lights to indicate that vessels may pass.

(1585) (c) As a train approaches, provided the scanners do not detect a vessel under the draw, the lights change to flashing red and a horn continuously sounds while the draw closed. The draw remains closed until the train passes.

(1586) (d) After the train clears the bridge, the lights continue to flash red and the horn again continuously sounds while the draw opens, until the draw is fully open and the lights return to green.

(1587)

§117.303 Matlacha Pass.

(1588) The draw of the SR78 bridge, mile 6.0 at Fort Myers, shall open on signal from 8 a.m. to 10 a.m. and from 3 p.m. to 7 p.m. Monday through Saturday. On Sundays the draw shall open on signal from 7 a.m. to 10 a.m. and from 3 p.m. to 7 p.m. At all other times, the draw need not be opened for the passage of vessels.

(1589)

§117.311 New Pass.

(1590) The drawspan for the State Road 789 Drawbridge, mile 0.05, at Sarasota, need only open on the hour twenty minutes past the hour, and forty minutes past the hour

from 7 a.m. to 6 p.m. From 6 p.m. to 7 a.m., the drawspan must open on signal if at least 3 hours notice is given to the drawtender. Public vessels of the United States and tugs with tows must be passed at anytime.

(1591)

§117.317 Okeechobee Waterway.

(1592) (a) through (i) not in this Coast Pilot.

(1593) (j) Caloosahatchee River Bridge (SR 29), Mile 103, Labelle, FL. The Caloosahatchee River bridge (SR 29), mile 103, shall open on signal, except that from 7 a.m. to 9 a.m. and from 4 p.m. to 6 p.m., Monday through Friday, except Federal holidays, the bridge need not open. Exempt vessels shall be passed at any time.

(1594)

§117.323 Outer Clam Bay.

(1595) The drawspan of the Outer Clam Bay Boardwalk Drawbridge shall open on signal if at least 30 minutes advance notice is given.

(1596)

§117.327 [Removed]

(1597)

§117.333 Suwannee River.

(1598) The draw of Suwannee River bridge, mile 35 at Old Town need not be opened for the passage of vessels, however, the draw shall be restored to operable condition within 6 months after notification by the District Commander to do so.

(1599)

§117.341 Whitcomb Bayou.

(1600) The draw of the Beckett Bridge, mile 0.5, at Tarpon Springs, FL shall open on signal if at least two hours notice is given.

(1601)

GEORGIA

(1602)

§117.359 Chattahoochee River.

(1603) See §117.107, Chattahoochee River, listed under Alabama.

(1604)

§117.361 Flint River.

(1605) The draws of the CSX Transportation Railroad bridges, miles 28.0 and 28.7, both at Bainbridge, shall open on signal if at least 15 days notice is given.

(1606)

LOUISIANA

(1607)

§117.422 Amite River.

(1608) (a) The draw of the S22 bridge, mile 6.0 at Clio, shall open on signal if at least four hours notice is given.

(1609) (b) The draws of the S16 bridge, mile 21.4 near French Settlement, and the S42 bridge, mile 32.0 at Port Vincent, shall open on signal if at least 48 hours notice is given.

(1610)

§117.423 Atchafalaya River.

(1611) The draw of the Kansas City Southern Railway Bridge, mile 133.1 (mile 5.0 on N.O.S. Chart) above the mouth of the waterway, at Simmesport, shall open on signal if at least three hours advance notice is given.

(1612)

§117.424 Belle River.

(1613) The draw of the SR70 bridge, mile 23.8 near Belle River, shall open on signal; except that, from 10 p.m. to 6 a.m., the draw shall open on signal if at least four hours notice is given, and from June 1 through August 31 the draw shall open on signal on the hour from 6 a.m. to 10 p.m. The bridge shall open anytime at the direction of the District Commander.

(1614)

§117.425 Black Bayou.

(1615) The draws of the Terrebonne Parish Police Jury bridges, miles 7.5, 15.0, 18.7 and 22.5, between Gibson and Houma, shall open on signal if at least 24 hours notice is given. The draw of the U.S. 182 bridge, mile 7.0 near Gibson, need not be opened for the passage of vessels.

(1616)

§117.429 Boeuf Bayou.

(1617) The draw of the S307 bridge, mile 1.3 at Kraemer, shall open on signal; except that, from 9 p.m. to 5 a.m., the draw shall open on signal if at least 12 hours notice is given.

(1618)

§117.433 Bonfouca Bayou.

(1619) The draw of the S433 Bridge, mile 7.0, at Slidell, shall open on signal, except that from 6 p.m. to 6 a.m. from November 1 through February 28 or February 29, the draw shall open on signal if at least two hours, notice is given. From March 1 through October 30, from 9 p.m. to 7 a.m. the draw shall open on signal if at least two hours, notice is given.On Monday through Friday, except Federal holidays, throughout the year, the draw need not open for the passage of vessels from 7 a.m. to 8 a.m. and from 1:45 p.m. to 2:45 p.m.

(1620)

§§117.435 Carlin Bayou.

(1621) (a) The draw of the Louisiana and Delta Railroad (LDRR) Bridge, mile 6.4, at Delcambre, shall operate as follows:

(1622) (1) The draw shall be maintained in the fully open position for navigation at all times, except during periods when it is closed for the passage of rail traffic.

(1623) (2) When a train approaches the bridge, it will stop and a crewmember from the train will observe the waterway for approaching vessels. If vessels are observed approaching the bridge, they will be allowed to pass prior to lowering the bridge. The crewmember will verify that the adjacent highway bridge is in the closed-to-navigation position prior to initiating the lowering sequence.

(1624) (3) After the train has completely passed over the bridge, the crewmember will initiate the raising sequence.

(1625) (4) To request openings of the bridge when the lift span is in the closed-to-navigation position, mariners may call the LDRR Signal Supervisor at 337–316–6015.

(1626) (b) The draw of the S14 bridge, mile 6.4 at Delcambre, shall open on signal; except that, from 9 p.m. to 5 a.m. the draw shall open on signal if at least four hours notice is given. The draw shall open on less than four hours notice for an emergency and shall open on demand should a temporary surge in waterway traffic occur.

(1627)

§117.436 Chef Menteur Pass.

(1628) The draw of the U.S. Highway 90 bridge, mile 2.8, at Lake Catherine, shall open on signal; except that, from 5:30 a.m. to 7:30 a.m., Monday through Friday except Federal holidays, the draw need open only on the hour and on the half-hour for the passage of vessels. The draw shall open at any time for a vessel in distress.

(1629)

§117.438 Colyell Bayou.

(1630) The removable span of the Louisiana highway bridge, mile 1.0 near Port Vincent, shall be removed for the passage of vessels if at least 48 hours notice is given.

(1631)

§117.439 Company Canal.

(1632) (a) The draw of the LA1 bridge, mile 0.4 at Lockport, shall open on signal; except that, from 6 p.m. to 10 a.m. the draw shall open on signal if at least four hours notice is given. During the advance notice period, the draw shall open on less than four hours notice for an emergency and shall open on demand should a temporary surge in waterway traffic occur.

(1633) (b) The draw of the S24 bridge, mile 8.1 at Bourg, shall open on signal; except that, from 10 p.m. to 6 a.m. the draw shall open on signal if at least four hours notice is given. During the advance notice period, the draw shall open on less than four hours notice for an emergency and shall open on demand should a temporary surge in waterway traffic occur.

(1634)

§117.440 Des Allemands Bayou.

(1635) (a) The draw of the S631 bridge, mile 13.9 at Des Allemands, shall open on signal if at least four hours notice is given.

(1636) (b) The draw of the Burlington Northern Santa Fe Railroad bridge, mile 14.0, shall open on signal Monday through Friday from 7 a.m. to 3 p.m. At all other times the draw shall open on signal if at least 4 hours notice is given.

(1637)

§117.441 D'Inde Bayou

(1638) The draw of the Union Pacific railroad bridge, mile 4.3, shall open on signal if at least 72 hours notice is given to the Defense Plant Corporation, Cities Service Refining Corporation Agent.

(1639)

§117.443 Du Large Bayou.

(1640) The draw of the Terrebonne Parish bridge, mile 23.2, near Theriot, shall open on signal; except that, from 9 p.m. to 5 a.m., the draw shall open on signal if at least 12 hours notice is given.

(1641)

§117.445 Franklin Canal.

(1642) The draw of the Chatsworth bridge, mile 4.8 at Franklin, shall open on signal from 5 a.m. to 9 p.m. if at least one hour notice is given. From October 1 through January 31 from 9 p.m to 5 a.m., the draw shall be opened on signal if at least three hours notice is given. From February 1 through September 30 from 9 p.m. to 5 a.m., the draw shall open on signal if at least 12 hours notice is given.

(1643)

§117.447 Grand Cabahanosse Bayou.

(1644) The draw of the S70 bridge, mile 7.6 near Paincourtville, shall open on signal if at least 24 hours notice is given.

(1645)

§117.449 Grosse Tete Bayou.

(1646) The removable span of the S377 Bridge, mile 15.3 near Rosedale, shall be opened for the passage of vessels if at least 48 hours notice is given.

(1647)

§117.451 Gulf Intracoastal Waterway.

(1648) (a) The draw of the Lapalco Boulevard Bridge, Harvey Canal Route, mile 2.8 at Harvey, shall open on signal; except that, from 6:30 a.m. to 8:30 a.m. and from 3:45 p.m. to 5:45 p.m. Monday through Friday except holidays, the draw need not be opened for the passage of vessels.

(1649) (b) The draw of the SR 23 bridge, Algiers Alternate Route, mile 3.8 at Belle Chasse, shall open on signal; except that, from 6 a.m. to 8:30 a.m. and from 3:30 p.m. to 5:30 p.m. Monday through Friday, except Federal holidays, the draw need not be opened for the passage of vessels.

(1650) (c) The draw of the SR 315 (Bayou Dularge) bridge, mile 59.9 west of Harvey Lock, at Houma, shall open on signal; except that, the draw need not open for the passage of vessels Monday through Friday except Federal holidays from 6:30 a.m. to 8:30 a.m., from 11:45 a.m. to 12:15 p.m., from 12:45 p.m. to 1:15 p.m. and from 4:30 p.m. to 6 p.m.

(1651) (d) The draw of the SR 319 (Louisiana) bridge across the Gulf Intracoastal Waterway, mile 134.0 west of Harvey Lock, near Cypremort, shall open on signal if at least 24 hours notice is given.

(1652) (e) The draw of the Louisiana highway bridge, mile 243.8 west of Harvey Canal Locks, shall open on signal when more than 50 feet vertical clearance is required, if at least four hours notice is given to the Louisiana Department of Highways, District Maintenance Engineer, at Lake Charles.

(1653)

§117.453 Houma Canal.

(1654) The draw of the S3197 bridge, mile 1.7 at Houma, shall open on signal if at least four hours notice is given.

(1655)

§117.455 Houma Navigation Canal.

(1656) The draw of SR 661 (Houma Nav Canal) bridge, mile 36.0 at Houma, shall open on signal; except that, the draw need not open for the passage of vessels Monday through Friday except Federal holidays from 6:30 a.m. to 8:30 a.m., from 11:45 a.m. to 12:15 p.m., from 12:45 p.m. to 1:15 p.m. and from 4:30 p.m. to 6 p.m.

(1657)

§117.457 Houston River.

(1658) The draw of the Kansas City Southern Railroad bridge, mile 5.2 near Lake Charles, shall open on signal if at least 24 hours notice is given.

(1659)

§117.458 Inner Harbor Navigation Canal, New Orleans.

(1660) (a) The draws of the SR 46 (St. Claude Avenue) bridge, mile 0.5 (GIWW mile 6.2 East of Harvey Lock), the SR 39 (Judge Seeber/Claiborne Avenue) bridge, mile 0.9 (GIWW mile 6.7 East of Harvey Lock), and the Florida Avenue bridge, mile 1.7 (GIWW mile 7.5 East of Harvey Lock), shall open on signal; except that, from 6:30 a.m. to 8:30 a.m. and from 3:30 p.m. to 5:45 p.m., Monday through Friday, except federal holidays, the draws need not open for the passage of vessels. The draws shall open at any time for a vessel in distress.

(1661) (b) The US 90 (Danzinger) Bridge, mile 3.1, shall open on signal if at least two hours notice is given; except that the draw need not be opened from 7 a.m. to 8:30 a.m. and 5 p.m. to 6:30 p.m. Monday through Friday.

(1662) (c) The draw of the Senator Ted Hickey (Leon C. Simon Blvd./Seabrook) Bridge, mile 4.6, shall open on signal from 7 a.m. to 8 p.m.; except that the bridge need not open from 7 a.m. to 8:30 a.m. and 5 p.m. to 6:30 p.m. Monday through Friday. From 8 p.m. to 7 a.m., the draw shall open on signal if at least two hours notice is given.

(1663)

§117.459 Kelso Bayou

(1664) The draw of the S27 bridge mile 0.7 at Hackberry, shall operate as follows:

(1665) (a) From May 20, through October 31, the draw shall open on signal from 7 a.m. to 7 p.m. From 7 p.m. to 7 a.m., the draw shall open on signal if at least four hours notice is given.

(1666) (b) From November 1 through December 22, the draw shall open on signal from 7 a.m. to 3 p.m. From 3 p.m. to 7 a.m., the draw shall open on signal if at least four hours notice is given.

(1667) (c) From December 23 through May 19, the draw shall open on signal if at least 24 hours notice is given.

(1668)

§117.460 La Carpe Bayou.

(1669) The draw of the S661 bridge, mile 7.5, shall open on signal if at least four hours advance notice is given; except that, the draw need not be opened for the passage of vessels Monday through Friday except holidays from 7 a.m. to 8:30 a.m. and 4:30 p.m. to 6 p.m.

(1670)

§117.461 Lacassine Bayou.

(1671) The draws of the S14 bridge, mile 17.0, and the Southern Pacific railroad bridge, mile 20.4, both near Hayes, shall open on signal if at least 24 hours notice is given.

(1672)

§117.463 Lacombe Bayou.

(1673) (a) The draw of the US190 bridge, mile 6.8 at Lacombe, shall open on signal if at least 48 hours notice is given.

(1674) (b) The draw of the Tammany Trace bridge, mile 5.2 at Lacombe, shall open on signal if at least 2 hours notice is given.

(1675)

§117.465 Lafourche Bayou.

(1676) (a) The draws of the following bridges shall open on signal; except that, from August 1 through May 31, the draw need not open for the passage of vessels Monday through Friday except Federal holidays from 7 a.m. to 8:30 a.m.; from 2 p.m. to 4 p.m.; and from 4:30 p.m. to 5:30 p.m.:

(1677) (1) SR 308 (Golden Meadow) Bridge, mile 23.9, at Golden Meadow

(1678) (2) Galliano Pontoon Bridge, mile 27.8, at Galliano

(1679) (3) SR 308 (South Lafourche (Tarpon)) Bridge, mile 30.6, at Galliano, need not open for the passage of vessels from August 1 through May 31, Monday through Friday except Federal holidays from 6:45 a.m. to 8:30 a.m.; from 2 p.m. to 4 p.m. and from 4:30 p.m. to 5:30 p.m.

(1680) (4) Cote Blanche Pontoon Bridge, mile 33.9, at Cutoff

(1681) (5) Cutoff Vertical Lift Bridge, mile 36.3, at Cutoff

(1682) (6) LA 657 (Larose) Vertical Lift Bridge, mile 38.7, at Larose.

(1683) (b) The draw of the Valentine bridge, mile 44.7 at Valentine, shall open on signal; except that, from 6 p.m. to 6 a.m., the draw shall open on signal if at least four hours advance notification is given. During the advance notification period, the draw shall open on less than four hours notice for an emergency and shall open on demand should a temporary surge in water traffic occur.

(1684) (c) The draws of the S3220 bridge, mile 49.2 near Lockport, and the S655 bridge, mile 50.8 at Lockport, shall open on signal; except that, from 6 p.m. to 10 a.m. the draws shall open on signal if at least four hours notice is given. During the advance notice period, the draws shall open on less than four hours notice for an emergency and shall open on demand should a temporary surge in waterway traffic occur.

(1685) (d) The draw of the State Route LA 654 bridge, mile 53.2 at Clotilda, shall open if at least four hours notice is given. During the advance notice period, the draw shall open on less than four hours notice for an emergency and shall open on demand should a temporary surge in waterway traffic occur.

(1686) (e) The draws of the S3199 bridge, mile 58.2, and the Lafourche Parish bridge, mile 58.7, both at Raceland, shall open on signal if at least six hours notice is given.

(1687) (f) The draws of the S649 bridge, mile 66.6 shall open on signal if at least forty-eight hours notice is given.

(1688) (g) The draws of the Burlington Northern Santa Fe railroad bridge, mile 69.0 at Lafourche, and all bridges upstream of the Burlington Northern Santa Fe railroad bridge need not be opened for the passage of vessels.

(1689)

§117.467 Lake Pontchartrain.

(1690) (a) The south draw of the S11 bridge near New Orleans shall open on signal if at least 48 hours notice is given. In case of emergency, the draw shall open within 12 hours and shall be kept in condition for immediate operation until the emergency is over.

(1691) (b) The draw of the Norfolk Southern Railroad Bridge across Lake Pontchartrain, mile 4.80 near Slidell, St. Tammany Parish, Louisiana shall be maintained as follows:

(1692) (1) The draw shall be maintained in the fully open-to-navigation position for vessels at all times, except during periods when it is closed for the passage of rail traffic or to perform periodic maintenance authorized in accordance with subpart A of this part.

(1693) (2) The draw shall be remotely operated by the drawtender at Norfolk Southern's drawbridge in Decatur, Alabama. The estimated duration that the bridge will remain closed for the passage of rail traffic is 10 to 15 minutes per operation.

(1694) (3) When a train approaches the bridge, the drawtender will initiate the bridge closing warning signal, consisting of radio calls via VHF–FM channels 13 and 16 and activation of flashing red warning lights at each end of the span. The radio calls will be broadcast at five (5) minutes prior to bridge closing and at two (2) minutes prior to bridge closing. Photoelectric (infrared) boat detectors will monitor the waterway beneath the bridge for the presence of vessels.

(1695) (4) The drawtender will continuously monitor waterway traffic in the area using closed-circuit cameras mounted on the bridge. The draw will only be closed if the drawtender's visual inspection indicates that the channel is clear and there are no vessels transiting in the area. The drawtender will maintain constant surveillance of the navigation channel to ensure that no conflict with maritime traffic exists. Additionally, the draw will not be closed if the S11 bascule bridge that is located immediately west of the railroad bridge is in the open-to-navigation position. If two or more closed-circuit cameras are inoperable or if there is inclement weather, the draw will only be operated by a drawtender located on site at the bridge.

(1696) (5) At the end of the two-minute warning period, if no vessels have been detected by the drawtender, the draw closing sequence will automatically proceed.

(1697) (6) Upon passage of the train, the draw will be returned to the fully open-to-navigation position to allow marine traffic to pass. The warning lights will continue to flash red until the draw has returned to the fully open-to-navigation position at which time they will deactivate.

(1698) (7) After the passage of each train, the draw must be returned to its fully opento-navigation position.

(1699) (8) To request openings of the draw when the bascule span is in the closed-to-navigation position, mariners may contact Norfolk Southern Railway via VHF–FM channel 13 or by telephone at the number displayed on the signs posted at the bridge.

(1700) (9) The draw will be operated locally if:

(1701) (i) Communication is lost between the drawbridge and the drawtender in Decatur, Alabama;

(1702) (ii) More than two closed-circuit cameras are not working;

(1703) (iii) The marine radio is inoperable;

(1704) (iv) Weather conditions warrant; or

(1705) (v) Ordered by the Coast Guard.

(1706)

§117.469 Liberty Bayou.

(1707) The draw of the S433 Bridge, mile 2.0, at Slidell, shall open on signal, except that between 7 p.m. to 7 a.m., the draw shall open on signal if at least two hours notice is given.

(1708)

§117.471 Little Black Bayou.

(1709) The draw of the Southern Pacific railroad bridge, mile 1.3 at Southdown, need not be opened for the passage of vessels.

(1710)

§117.475 Little (Petit) Caillou Bayou.

(1711) (a) The draws of the S58 bridge, mile 25.7 at Sarah, the Terrebonne Parish (Smith Ridge) bridge, mile 26.6 near Montegut, shall open on signal; except that, from 9 p.m. to 5 a.m., the draws shall open on signal if at least 12 hours notice is given.

(1712) (b) The draws of the Terrebonne Parish (DuPlantis) bridge, mile 29.9 near Bourg, and the S24 bridge, mile 33.7 at Presquille, shall open on signal if at least four hours notice is given. The draws shall open on less than four hours notice for an emergency, and shall open on signal should a temporary surge in waterway traffic occur.

(1713)

§117.477 Lower Atchafalaya River.

(1714) The draw of the St. Mary Parish bridge, mile 26.8 at Patterson, shall open on signal from 5 a.m. to 9 p.m. From October 1 through January 31 from 9 p.m. to 5 a.m., the draw shall open on signal if at least three hours notice is given. From February 1 through September 30 from 9

p.m. to 5 a.m., the draw shall open on signal if at least 12 hours notice is given.

(1715)

§117.478 Lower Grand River.

(1716) (a) The draw of the LA 75 bridge, mile 38.4 (Alternate Route) at Bayou Sorrel, shall open on signal; except that, from about August 15 to about June 5 (the school year), the draw need not be opened from 6 a.m. to 8:00 a.m. and from 3 p.m. to 4:30 p.m., Monday through Friday except holidays. The draw shall open on signal at any time for an emergency aboard a vessel.

(1717) (b) The draw of the LA 77 bridge, mile 47.0 (Alternate Route) at Grosse Tete, shall open on signal; except that, from about August 15 to about June 5 (the school year), the draw need not be opened from 6 a.m. to 8 a.m. and from 2:30 p.m. to 4:30 p.m., Monday through Friday except Federal holidays. The draw shall open on signal at any time for an emergency aboard a vessel.

(1718) (c) The draw of the S997 bridge, mile 41.5 (Landside Route) at Pigeon, shall open on signal; except that, from 10 p.m. to 6 a.m., the draw shall open on signal if at least four hours notice is given. During the advanced notice period, the draw shall open on less than four hours notice for an emergency and shall open on demand should a temporary surge in waterway traffic occur.

(1719)

§117.480 Mermentau River.

(1720) The draw of the S82 bridge, mile 7.1 at Grand Chenier, shall open on signal; except that, from 6 p.m. to 6 a.m. the draw shall open on signal if at least 4 hours notice is given. During the advance notice period, the draw will open on less than 4 hours notice for an emergency and will open on demand should a temporary surge in waterway traffic occur.

(1721)

§117.482 Nezpique Bayou.

(1722) The draw of the S97 bridge, mile 7.0 near Jennings, shall open on signal if at least 48 hours notice is given.

(1723)

§117.484 Pass Manchac.

(1724) The draw of the Canadian National/Illinois Central Railroad automated bridge, mile 6.7, at Manchac, operates as follows:

(1725) (a) The draw is not constantly manned and the bridge will normally be maintained in the open position, providing 56 feet vertical clearance above mean high tide to the raised tip of the bascule span for one-half the channel, and unlimited vertical clearance for the other half.

(1726) (b) Railroad track circuits will detect an approaching train and initiate bridge closing warning broadcasts over marine radio and over the Public Address (PA) system six (6) minutes in advance of the train's arrival. Navigation channel warning lights will be lit, and photoelectric (infrared) boat detectors will monitor the waterway beneath the bridge for the presence of vessels. The waterway approaches to the bridge will be monitor by closed circuit TV (CCTV) cameras.

(1727) (c) Activation of the warning broadcasts also activates a marine radio monitor in the Mays Yard (New Orleans switch yard). The yardmaster will continuously monitor marine radio broadcasts on the normal and emergency marine radio channels throughout the warning period and at all times the bridge is closed. The yardmaster will communicate with waterway users via the marine radio, if necessary.

(1728) (d) At the end of warning period, if no vessels have been detected by the boat detectors, and no interruptions have been performed by the yardmaster based on his monitoring of the marine radio and the CCTV, the bridge lowering sequence will automatically proceed.

(1729) (e) Upon passage of the train, the bridge will automatically open. Railroad track circuits will initiate the automatic bridge opening and closing sequences. (Estimated duration that the bridge will remain closed for passage of rail traffic is 10 to 12 minutes.) The bridge will also be manually operable from two locked trackside control locations (key releases) on the approach spans, one on each side of the movable span.

(1730) (f) The yardmaster will be provided with a remote EMERGENCY STOP button which, if pressed, will stop the bridge operation, interrupt the lowering sequence, and immediately return the bridge to the open position. The yardmaster will utilize this control feature in the event a vessel operator issues an urgent radio call to keep the waterway open for immediate passage of the vessel.

(1731)

§117.485 Patout Bayou.

(1732) The draw of the S83 bridge, mile 0.4 near Weeks, shall open on signal if at least four hours notice is given.

(1733)

§117.486 Pearl River.

(1734) (a) The draw of the CSX Transportation railroad bridge, mile 1.0 near English Lookout, shall open on signal; except that, from 9 p.m. to 5 a.m. the draw shall open on signal if at least four hours notice is given.

(1735) (b) The draw of the US 90 highway bridge, mile 8.8 near Pearlington, shall open on signal; except that, from 7 p.m. to 7 a.m. the draw shall open on signal if at least four hours notice is given.

(1736)

§117.487 Pierre Pass.

(1737) The draw of the S70 bridge, mile 1.0 at Pierre Part, shall open on signal; except that, from 10 p.m. to 6 a.m., the draw shall open on signal if at least four hours notice is given. During the advance notice period, the draw shall open on less than four hours notice for an emergency and shall open on demand should a temporary surge in waterway traffic occur.

(1738)

§117.488 Plaquemine Bayou.

(1739) (a) The draw of the S3066 (Spur) bridge, mile 6.5 at Indian Village, shall open on signal if at least four hours notice is given.

(1740) (b) The draws of the Union Pacific railroad bridge, mile 10.5 at Plaquemine, and the S1 bridge, mile 10.5 at Plaquemine, need not be opened for the passage of vessels.

(1741)

§117.489 Plaquemine Brule Bayou.

(1742) The draw of the S91 bridge, mile 8.0 at Estherwood, shall open on signal from 5 a.m. to 9 p.m. if at least four hours notice is given. From 9 p.m. to 5 a.m., the draw shall open on signal if at least 12 hours notice is given.

(1743)

§117.491 Red River.

(1744) (a) The draw of the Union Pacific Railroad bridge, mile 90.1, at Alexandria, shall open on signal if at least eight hours notice is given.

(1745) (b) The draw of the US 165 (Jackson St.) bridge, mile 88.6, at Alexandria, shall open on signal if at least eight hours notice is given; except that, from 7 a.m. to 9 a.m. and from 4 p.m. to 6 p.m. the draw need not opened Monday through Friday except holidays.

(1746) (c) The draws of the bridges above mile 105.8 through mile 234.4 need not open for passage of vessels. The owner or agency controlling the bridge must restore the draw to full operation within three months if notified by the District Commander that the needs of navigation require resumed operation of the spans.

(1747) (d) The draws of the bridges above mile 234.4 to mile 276 need not be opened for passage of vessels.

(1748) (e) When a vessel which has given notice fails to arrive at the time specified in the notice, the drawtender shall remain on duty for up to two additional hours to open the draw if that vessel appears. After that time, a new notice of the appropriate length of time is required.

(1749)

§117.493 Sabine River.

(1750) (a) The draw of the Union Pacific railroad bridge, mile 19.3 near Echo shall open on signal if at least 14 days notice is given.

(1751) (b) The draw of the S12 Bridge, mile 40.8, at Starks, need not be opened for the passage of vessels.

(1752)

§117.494 Schooner Bayou Canal.

(1753) The draw of the S82 bridge, mile 4.0 from White Lake at Little Prairie Ridge, shall open on signal; except that, from 10 p.m. to 6 a.m. the draw shall open on signal if at least four hours notice is given. The draw shall open on less than four hours notice for an emergency and shall open on signal should a temporary surge in waterway traffic occur.

(1754)

§117.495 Superior Oil Canal.

(1755) The draw of the S82 bridge, mile 6.3, in Cameron Paris shall open on signal if at least 8 hours notice is given. Public vessels of the United States and vessels in distress shall be passed as soon as possible.

(1756)

§117.497 Stumpy Bayou.

(1757) The removable span of the Louisiana highway bridge, mile 1.0 near Weeks Island, shall be removed for the passage of vessels if at least six days notice is given.

(1758)

§117.499 Tante Phine Pass.

(1759) The draw of the Tidewater Associated Oil Company bridge, mile 7.6 near Venice, shall open on signal if at least 24 hours notice is given.

(1760)

§117.500 Tchefuncta River.

(1761) The draw of the SR 22 Bridge, mile 2.5, at Madisonville, LA shall operate according to the following schedule. On Monday through Friday the draw will operate as follows: From 6 p.m. to 5:59 a.m. the draw will open on signal; from 6 a.m. to 7:59 a.m. the draw need not open; from 8 a.m. to 4 p.m. the draw will open on signal on the hour; from 4:01 p.m. to 6 p.m. the draw need not open. On Saturday and Sunday the draw will operate as follows: From 6 p.m. to 6 a.m. the draw will open on signal; from 6 a.m. to 6 p.m. the draw will open on signal on the hour.

(1762)

§117.501 Teche Bayou.

(1763) (a) The draws of the following bridges shall open on signal if at least four hours notice is given:

(1764) (1) St. Mary Parish bridge, mile 3.9 at Calumet.

(1765) (2) St. Mary Parish bridge, mile 11.8 at Centerville.

(1766) (3) S3069 bridge, mile 16.3 at Franklin.

(1767) (4) S322 bridge, mile 17.2 at Franklin.

(1768) (5) S323 bridge, mile 22.3 at Oaklawn.

(1769) (6) St Mary Parish bridge, mile 27.0 at Baldwin.

(1770) (7) S324 bridge, mile 32.5 at Charenton.

(1771) (8) S670 bridge, mile 37.0 at Adeline.

(1772) (9) St. Mary Parish bridge, mile 38.9 at Sorrel.

(1773) (10) S671 bridge, mile 41.8 at Jeanerette.

(1774) (11) S3182 bridge, mile 43.5 at Jeanerette.

(1775) (12) LSU Agri bridge, mile 46.5 near Jeanerette (notice required for opening from 7 a.m. to 5 p.m., Monday through Friday except holidays).

(1776) (13) S320 bridge, mile 48.7 at Oliver.

(1777) (14) S3195 bridge, mile 50.4 at New Iberia.

(1778) (15) S87 Spur Bridge, mile 52.5 at New Iberia.

(1779) (16) S86 bridge, mile 53.0 at New Iberia.

(1780) (17) S3156 bridge, mile 53.3 at New Iberia.

(1781) (18) S44 bridge, mile 56.7 at Morbihan.

(1782) (19) Iberia Parish bridge, mile 58.0 at New Iberia.

(1783) (20) Iberia Parish bridge, mile 60.7 at Vida.

(1784) (21) S344 bridge, mile 62.5 at Loreauville.

(1785) (22) S86 Bridge, mile 69.0 at Daspit.

(1786) (23) S92 bridge, mile 73.3 at St. Martinville.

(1787) (b) The draws of the S96 bridge, mile 75.2 at St. Martinville, the S350 bridge, mile 82.0 at Parks, shall open on signal if at least 24 hours notice is given.

(1788) (c) The draws of the S31 bridge, mile 90.5, at Breaux Bridge, and the Union Pacific railroad bridge, mile 91.0, at Breaux Bridge, shall open on signal if at least 48 hours notice is given.

(1789) (d) The draws of the bridges listed in paragraph (a) of this section shall open on less than four hours notice for an emergency during the advance notice period, and shall open on signal should a temporary surge in waterway traffic occur.

(1790)

§117.505 Terrebonne Bayou.

(1791) (a) The draw of the S58 Bridge, mile 22.2 at Montegut, and the draw of the S55 bridge, mile 27.3 at Klondyke, shall open on signal; except that from 9 p.m. to 5 a.m. the draws shall open on signal if at least four hours notice is given.

(1792) (b) The draw of the St. Ann bridge, mile 28.8 at Bourg, shall open on signal if at least 24 hours notice is given.

(1793) (c) The draw of the S3087 bridge, mile 33.9 at Houma, shall open on signal; except that, from 5 p.m. to 9 a.m. the draw shall open on signal if at least four hours notice is given.

(1794) (d) The draws of the Howard Avenue bridge, mile 35.0, and the Daigleville bridge, mile 35.5, at Houma, shall open on signal; except that, the draws need not open for the passage of vessels Monday through Friday, except holidays from 7 a.m. to 8:30 a.m. and 4:30 p.m. to 6 p.m. From 10 p.m. to 6 a.m., the draws shall open on signal if at least four hours notice is given.

(1795) (e) During advance notice periods, the draws of the bridges listed in this section shall open on less than four hours notice for an emergency and shall open on signal should a temporary surge in waterway traffic occur.

(1796)

§117.507 Tigre Bayou.

(1797) The draw of the S330 bridge, mile 2.3 near Delcambre, shall open on signal if at least four hours notice is given. The draw shall open on less than four hours notice for an emergency and shall open on signal should a temporary surge in waterway traffic occur.

(1798)

§117.509 Vermilion River.

(1799) (a) The draw of the S82 bridge, mile 22.4 at Perry, shall open on signal; except that, from 9 p.m. to 5 a.m. the draw shall open on signal if at least four hours notice is given.

(1800) (b) The draws of the following bridges shall open on signal; except that, from 6 p.m. to 10 a.m. the draws shall open on signal if at least four hours notice is given:

(1801) (1) S14 bridge, mile 25.4 at Abbeville.

(1802) (2) S14 Bypass bridge, mile 26.0 at Abbeville.

(1803) (3) Vermilion Parish bridges, mile 34.2 near Milton.

(1804) (4) S92 bridge, mile 37.6 at Milton.

(1805) (c) The draws of the following bridge shall open on signal if at least four hours notice is given:

(1806) (1) S733, mile 41.0 at Eloi Broussard.

(1807) (2) S3073 bridge, mile 44.9 at New Flanders.

(1808) (3) S182 bridge, mile 49.0 at Lafayette.

(1809) (d) During the advance notice periods, the draws of the bridges listed in this section shall open on less than four hours notice for an emergency and shall open on signal should a temporary surge in waterway traffic occur.

(1810)

§117.511 West Pearl River.

(1811) The draw of the US 90 bridge, mile 7.9 near Pearlington, shall open on signal if at least four hours notice is given.

(1812)

MISSISSIPPI

(1813)

§117.675 Back Bay of Biloxi.

(1814) (a) The draw of the I-110 bridge, mile 3.0 at Biloxi, shall open on signal if at least six hours notice is given.

(1815) (b) The draw of the Popps Ferry Road bridge, mile 8.0, at Biloxi, shall open on signal; except that, from 7:30 a.m. to 9 a.m. and from 4:30 p.m. to 6 p.m. Monday through Friday, except Federal holidays, the draw need not be opened for passage of vessels. The draw shall open at any time for a vessel in distress.

(1816)

§117.681 Old Fort Bayou.

(1817) The draw of the bridge, mile 1.6 at Ocean Springs, shall open on signal; except that, from 9 p.m. to 5 a.m., the draw shall open on signal if at least eight hour notice is given; on Thanksgiving Day, Christmas Day and New Year's Day the draw shall open on signal if at least 12 hour notice is given; and the draw need not open to vessels from 6:30 a.m. to 8 a.m. and from 4 p.m. to 6 p.m. Monday through Friday, except federal holidays. The draw shall open anytime at the direction of the District Commander.

(1818)

§117.683 Pearl River.

(1819) See §117.488, Pearl River, listed under Louisiana.

(1820)

§117.684 Bayou Portage.

(1821) The draw of the Henderson Avenue Bridge, mile 2.0 at Pass Christian, MS shall open on signal if at least two hours notice is given to the Harrison County Board of Supervisors.

(1822)

TEXAS

(1823)

§117.951 Arroyo Colorado River.

(1824) The draw of the S106 highway bridge, mile 22.5 at Rio Hondo, shall open on signal if at least 12 hours notice is given.

(1825)

§117.953 Brazos River (Diversion Channel).

(1826) (a) The draw of the S36 highway bridge, mile 4.4 at Freeport, shall open on signal if at least 12 hours notice is given.

(1827) (b) The draw of the Union Pacific railroad bridge, mile 22.6 at Brazoria, need not be opened for the passage of vessels.

(1828)

§117.955 Buffalo Bayou.

(1829) (a) The draw of the Houston Belt and Terminal railroad bridge, mile 1.2 at Houston, and all drawbridges downstream of it, shall open on signal if at least 24 hours notice is given.

(1830) (b) The draw of the Union Pacific Rail Road Bridge, mile 3.1, need not be opened for the passage of vessels.

(1831)

§117.957 Cedar Bayou.

(1832) The draw of the Union Pacific railroad automated bridge, mile 7.0 at Baytown, operates as follows:

(1833) (a) The draw shall be maintained at a vertical clearance of 81.4 feet above mean high water. Fixed green navigation lights shall be displayed in the center of the draw.

(1834) (b) When a train approaches the bridge, the navigation lights shall be changed from green to red, alternating flashing red lights turned on, and a horn sounded for six minutes. At the end of six minutes, the draw may be lowered and locked if the scanning equipment does not detect any object under the span. If the scanning equipment detects an obstruction, the draw shall be raised until the obstruction is cleared.

(1835) (c) After a train has cleared the bridge, the draw shall be raised to 81.4 feet above mean high water, the flashing red lights stopped, and the navigation lights changed from red to green.

(1836)

§117.959 Chocolate Bayou.

(1837) The draw of the Union Pacific railroad bridge, mile 11.4 at Liverpool, need not be opened for the passage of vessels.

(1838)

§117.963 Colorado River.

(1839) The draw of the highway bridge, mile 10.7 at Wadsworth need open on signal Monday through Friday only, and then only from 8 a.m. to 5 p.m. At least 48 hours notice is required.

(1840)

§117.965 Cow Bayou.

(1841) The draws of the Orange County highway bridge, mile 2.9 at West Orange, and the S87 bridge, mile 4.5 at Bridge City, shall open on signal if at least six hours notice is given.

(1842)

§117.966 Galveston Channel.

(1843) The drawspan for the Pelican Island Causeway Drawbridge across Galveston Channel, mile 4.5 of the Galveston Channel, (GIWW mile 356.1) at Galveston, Texas, must open on signal; except that, from 6:40 a.m. to 8:10 a.m., 12 noon to 1 p.m., and 4:15 p.m. to 5:15 p.m. Monday through Friday except Federal holidays, the drawspan need not be opened for passage of vessels. Public vessels of the United States must be passed at anytime.

(1844)

§117.967 Greens Bayou.

(1845) The draw of the Port Terminal Railroad Association railroad bridge, mile 2.8 at Houston, shall open on signal if at least four hours notice is given. The draw shall open on signal for three hours thereafter for returning downbound vessels.

(1846)

§117.968 Gulf Intracoastal Waterway.

(1847) The drawspan for the Port Isabel Drawbridge, mile 666.0, must open on signal; except that, from 5 a.m. to 8 p.m. on weekdays only, excluding federal, state, and local holidays, the drawspan need open only on the hour for pleasure craft. The drawspan must open on signal at anytime for commercial vessels. When the drawspan is open for a commercial vessel, waiting pleasure craft must be passed.

(1848)

§117.969 Lavaca River.

(1849) The draws of the Missouri Pacific railroad bridge, mile 11.2, and the highway bridge, mile 11.2, both at Vanderbilt, shall open on signal if at least 48 hours notice is given. In emergencies, the draws shall open as soon as possible.

(1850)

§117.971 Neches River.

(1851) (a) The draw of the Kansas City Southern automated bridge, mile 19.5, at Beaumont, is not constantly manned and is operated from a remote site in Shreveport, Louisiana. The bridge is normally maintained in the closed to navigation position, providing 13 feet of vertical clearance above mean high tide. This bridge will open on signal.

(1852) (1) Mariners may request a bridge opening at anytime via one of the following methods:

(1853) (i) Telephone at 1–800–892–6295;

(1854) (ii) Marine radio on VHF-FM Channel 16; or

(1855) (iii) Proper sound signal as prescribed in §117.15.

(1856) (2) When signaling by sound, if return sound signal is not sent from the remote bridge operator, in compliance with §117.15, contact the remote operator via telephone or marine radio.

(1857) (3) An audible warning siren will sound when the bridge is in motion. Video cameras will constantly monitor the waterway near and under the draw. Once a vessel has passed through the bridge, the draw will lower,

provided the infrared "under bridge" presence detector and video cameras reveal nothing under the draw.

(1858) (b) The draw of the Burlington Northern Santa Fe railroad bridge, mile 53.9 at Evadale, need not be opened for the passage of vessels.

(1859)

§117.975 Old Brazos River.

(1860) The draw of the Union Pacific railroad bridge, mile 4.4 at Freeport, shall be maintained in the fully open position, except for the crossing of trains or for maintenance.

(1861)

§117.979 Sabine Lake.

(1862) The draw of the S82 bridge, mile 10.0 at Port Arthur, shall open on signal; except that, from 9 p.m. to 5 a.m., the draw shall open on signal if at least six hours notice is given to the Maintenance Construction Supervisor or the Maintenance Foreman at Port Arthur.

(1863)

§117.981 Sabine River.

(1864) See §117.493, Sabine River, listed under Louisiana.

(1865)

§117.983 Sabine River [Removed}

(1866)

§117.984 San Bernard River.

(1867) The draw of the Union Pacific railroad bridge, mile 20.7 near Brazoria, shall open on signal; except that, from 10 a.m. to 2 p.m. and 10 p.m. to 2 a.m., the draw shall open on signal if at least three hours notice is given.

(1868)

§117.987 Taylor Bayou.

(1869) The draws of the Union Pacific railroad bridge, mile 2.0, and the S73 bridge, mile 10.2, both at West Port Arthur, need not be opened for the passage of vessels.

(1870)

§117.988 Taylor Bayou Outfall Canal (Joint Outfall Canal (JOC)).

(1871) The draw of the Valero Bridge, mile 2.44, at the Valero facility in West Port Arthur, shall operate as follows:

(1872) (a) The draw shall be unmanned and maintained in the fully open-to-navigation position, except 6:30 a.m. through 7:30 a.m. and 5:30 p.m. through 6:30 p.m. daily.

(1873) (b) One hour prior to closing, a broadcast will be made warning of the impending closure on VHF–FM channels 16 and 13.

(1874) (c) 10 minutes prior to closing, the broadcast will be repeated warning of the impending closure on VHF–FM channels 16 and 13.

(1875) (d) The crewmember/tender will monitor the portable marine radio on approach to the bridge. When work crew approaches the bridge, it will stop and the crewmember/tender will observe the waterway for approaching vessels. If vessels are observed approaching the bridge, they will be allowed to pass prior to closing the bridge.

(1876) (e) An audible alarm will be heard during the opening and closing sequences of the bridge.

(1877) (f) Emergency marine traffic will be allowed to pass upon request. The bridge will require up to 30 minutes to cycle to allow for the passage of vessels. This request can be made on VHF–FM channel 16.

(1878) (g) If the bridge is required to operate outside of the specified times, the bridge will be tended until it is returned to the open-to-navigation position.

(1879)

§117.989 Trinity River.

(1880) The draws of the Union Pacific Railroad bridges, mile 41.4 at Liberty, mile 54.8 at Kenefick, mile 117.3 at Goodrich, mile 181.8 at Riverside, and the Burlington Northern Santa Fe railroad bridge, mile 96.2 at Romayor, need not be opened for the passage of vessels.

(1881)

§ 117.991 Victoria Barge Canal

(1882) The draw of the Victoria Barge Canal Railroad Bridge across Victoria Barge Canal, mile 29.4, at the Bloomington, Victoria County, Texas, shall operate as follows:

(1883) (a) The draw shall be unmanned and when a vessel with AIS equipment onboard approaches the two-mile post, the dispatcher will receive a prompt to open the bridge, if required, because a vessel is approaching. The vessel may continue to transit the waterway, but must tune their radiotelephone to VHF-FM channel 13 and receive passing instructions from the railroad dispatcher. The dispatcher must contact the vessel promptly to provide passing instruction to insure the continued safe transit of the vessel. Vessels without AIS equipment or vessels with AIS who would prefer to call via telephone, may call the railroad dispatcher at 800–262–4691 to arrange passing instructions.

(1884) (b) When any vessel approaches the one-mile post, the railroad dispatcher should have either cleared the vessel through the bridge or given an indication that a train is in the block and the vessel will be cleared as soon as practicable. If the vessel has not yet spoken with the railroad dispatcher, the vessel should immediately call the railroad dispatcher via telephone at 800–262–4691.

(1885) (c) If any vessel reaches the one-half mile post and has not communicated with the railroad dispatcher nor been cleared to proceed, the vessel should stop and contact either the railroad dispatcher at 800–262–4691 or the Port of Victoria emergency contact at 361–570–8855.

(1886)

Part 147–Safety Zones

(1887) **§147.1 Purpose of safety zones.**

(1888) Safety zones may be established around OCS facilities being constructed, maintained, or operated on the Outer Continental Shelf to promote the safety of life and property on the facilities, their appurtenances and attending vessels, and on the adjacent waters within the safety zones. Regulations adopted for safety zones

may extend to the prevention or control of specific activities and access by vessels or persons, and include measures to protect the living resources of the sea from harmful agents. The regulations do not encompass the operating equipment or procedures used in the drilling for and production of oil, gas, or other minerals, or the transportation of oil, gas, or other minerals by pipeline except as they relate to the safety of life and property on OCS facilities and on the waters adjacent to OCS facilities or to the protection of the living resources of the sea within a safety zone from harmful agents.

(1889)

§147.5 Delegation of authority.

(1890) The authority to establish safety zones and to issue and enforce safety zone regulations in accordance with the provisions of this part is delegated to District Commanders.

(1891)

§147.10 Establishment of safety zones.

(1892) (a) Whenever it comes to the attention of the District Commander that a safety zone and regulations may be required concerning any OCS facility being constructed, maintained, or operated on the Outer Continental Shelf or its appurtenances and attending vessels, or the adjacent waters, the District Commander may initiate appropriate inquiry to determine whether a safety zone and regulations should be established. In making this determination, the District Commander considers all relevant safety factors, including existing or reasonably foreseeable congestion of vessels, the presence of unusually harmful or hazardous substances, and any obstructions within 500 meters of the OCS facility. If the District Commander determines that the circumstances warrant the establishment of a safety zone and regulations the District Commander takes action as necessary consistent with the provisions of this part.

(1893) (b) For purposes of establishing safety zones under this part, OCS facility includes non-mineral energy resource permanent or temporary structures.

(1894) (c) Except as provided in paragraph (c) of this section, a safety zone and necessary regulations may be established concerning any OCS facility being constructed, maintained or operated on the Outer Continental Shelf, following publication of a notice of proposed rule making in the Federal Register and after interested parties have been given the opportunity to submit comments. A zone and necessary regulations may be in effect during any period when construction equipment and materials are within 500 meters of the construction site until the removal of all portions of the facility.

(1895) (d) A safety zone and necessary regulations may be established without public rule making procedures when the District Commander determined that imminent danger exists with respect to the safety of life and property on an OCS facility constructed, maintained, or operated on the Outer Continental Shelf, its appurtenances and attending vessels or adjacent waters. A safety zone and regulations may be made effective on the date the rule is published in the Federal Register. However, if circumstances require, they may be placed into effect immediately, followed promptly by publication in the Federal Register. The District Commander may utilize, in addition to broadcast Notices to Mariners, Local Notices to Mariners, and Notices to Mariners, newspapers, and broadcasting stations to disseminate information concerning a safety zone and regulations pertaining thereto. The public may comment concerning the establishment of a safety zone or regulations under this paragraph. A safety zone or regulations may be modified or withdrawn, as appropriate, based on the comments received.

(1896) (e) Geographic coordinates expressed in terms of latitude or longitude, or both, are not intended for plotting on maps or charts whose referenced horizontal datum is the North American Datum of 1983 (NAD 83), unless such geographic coordinates are expressly labeled NAD 83. Geographic coordinates without the NAD 83 reference may be plotted on maps or charts reference to NAD 83 only after application of the appropriate corrections that are published on the particular map or chart being used.

(1897)

§147.15 Extent of safety zones.

(1898) A safety zone establishment under this part may extend to a maximum distance of 500 meters around the OCS facility measured from each point on its outer edge or from its construction site, but may not interfere with the use of recognized sea lanes essential to navigation.

(1899)

§147.20 Definitions.

(1900) Unless otherwise stated, the term “attending vessel” refers to any vessel which is operated by the owner or operator of an OCS facility located in the safety zone, which is used for the purpose of carrying supplies, equipment or personnel to or from the facility, which is engaged in construction, maintenance, alteration, or repair of the facility, or which is used for further exploration, production, transfer or storage of natural resources from the seabed beneath the safety zone.

(1901)

§147.801 Boxer Platform safety zone.

(1902) (a) *Description.* The Boxer Platform is located at position 27°56'48"N., 90°59'48"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge, not to extend into the adjacent East-West Gulf of Mexico Fairway is a safety zone.

(1903) (b) *Regulation.* No vessel may enter or remain in this safety zone except:

(1904) (1) An attending vessel;

(1905) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1906) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1907)

§147.803 Bullwinkle Platform safety zone.

(1908) (a) *Description*. The Bullwinkle Platform is located at position 27°53'01"N., 90°54'04"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone.

(1909) (b) *Regulation*. No vessel may enter or remain in this safety zone except:

(1910) (1) An attending vessel;

(1911) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1912) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1913)

§147.805 Ursa Tension Leg Platform safety zone.

(1914) (a) *Description.* The Ursa Tension Leg Platform (Ursa TLP) is located at position 28°09'14.497"N., 89°06'12.790"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone.

(1915) (b) *Regulation.* No vessel may enter or remain in this safety zone except:

(1916) (1) An attending vessel;

(1917) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1918) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1919)

§147.807 West Delta 143 Platform safety zone.

(1920) (a) *Description.* The West Delta 143 Platform is located at position 28°39'42"N., 89°33'05"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge, not to extend into the adjacent Mississippi River Approach Fairway, is a safety zone.

(1921) (b) *Regulation.* No vessel may enter or remain in this safety zone except: (1) An attending vessel;

(1922) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1923) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1924)

§147.809 Mars Tension Leg Platform safety zone.

(1925) (a) *Description.* The Mars Tension Leg Platform (Mars TLP) is located at position 28°10'10.29"N., 89°13'22.35"W. with two supply boat mooring buoys at positions 28°10'18.12"N., 89°12'52.08"W. (Northeast) and 28°09'49.62"N., 89°12'57.48"W. (Southeast). The area within 500 meters (1640.4 feet) from each point on the structure's outer edge and the area within 500 meters (1640.4 feet) of each of the supply boat mooring buoys is a safety zone.

(1926) (b) *Regulation*. No vessel may enter or remain in this safety zone except:

(1927) (1) An attending vessel;

(1928) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1929) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1930)

§147.811 Ram-Powell Tension Leg Platform safety zone.

(1931) (a) *Description.* The Ram-Powell Tension Leg Platform (Ram-Powell TLP) is located at position 29°03'52.2"N., 88°05'30"W. with two supply boat mooring buoys at positions 29°03'52.2"N., 88°05'12.6"W. (Northeast) and 29°03'28.2"N., 88°05'10.2"W. (Southeast). The area within 500 meters (1640.4 feet) from each point on the structure's outer edge and the area within 500 meters (1640.4 feet) of each of the supply boat mooring buoys is a safety zone.

(1932) (b) *Regulation.* No vessel may enter or remain in this safety zone except:

(1933) (1) An attending vessel;

(1934) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1935) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1936)

§147.813 Auger Tension Leg Platform safety zone.

(1937) (a) *Description.* The Auger Tension Leg Platform (Auger TLP) is located at position 27°32'45.4"N., 92°26'35.09"W. with two supply boat mooring buoys at positions 27°32'38.1"N., 92°26'04.8"W. (East Buoy) and 27°32'58.14"N., 92°27'04.92"W. (West Buoy). The area within 500 meters (1640.4 feet) from each point on the structure's outer edge and an area within 500 meters (1640.4 feet) of each of the supply boat mooring buoys is a safety zone.

(1938) (b) *Regulation*. No vessel may enter or remain in this safety zone except:

(1939) (1) an attending vessel;

(1940) (2) A vessel under 100 feet in length overall not engaged in towing or fishing; or

(1941) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1942)

§147.815 ExxonMobil Hoover Floating OCS Facility safety zone.

(1943) (a) *Description.* The ExxonMobil Hoover Floating OCS Facility, Alaminos Canyon Block 25A (AC25A), is located at position 26°56'33"N., 94°41'19.55"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone.

(1944) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(1945) (1) An attending vessel;

(1946) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1947) (3) A vessel authorized by the Commander, Eighth Coast Guard District

(1948)

§147.817 Sir Douglas Morpeth Tension Leg Platform safety zone.

(1949) (a) *Description.* The Sir Douglas Morpeth Tension Leg Platform (Morpeth TLP), Ewing Bank Block 921A (EW 921A), is located at position 28°02'05.28"N., 90°01'22.12"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone.

(1950) (b) *Regulation*. No vessel may enter or remain in this safety zone except the following:

(1951) (1) An attending vessel;

(1952) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1953) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1954)

§147.819 Allegheny Tension Leg Platform safety zone.

(1955) (a) *Description.* The Allegheny Tension Leg Platform (Allegheny TLP), Green Canyon Block 254A (GC 254A), is located at position 27°41'29.65"N., 90°16'31.93"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone.

(1956) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(1957) (1) An attending vessel;

(1958) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1959) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1960)

§147.821 Brutus Tension Leg Platform safety zone.

(1961) (a) *Description.* The Brutus Tension Leg Platform (Brutus TLP), Green Canyon Block 158 (GC 158), is located at position 27°47'42.86"N., 90°38'51.15"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone.

(1962) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(1963) (1) An attending vessel;

(1964) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1965) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1966)

§147.823 Enchilada Platform safety zone.

(1967) (a) *Description*. The Enchilada Platform, Garden Banks Block 128A (GB 128A), is located at position 27°52'31.31"N., 91°59'11.09"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge, not to extend into the adjacent East-West Gulf of Mexico Fairway, is a safety zone.

(1968) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(1969) (1) An attending vessel;

(1970) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1971) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1972)

§147.825 Chevron Genesis Spar safety zone.

(1973) (a) *Description.* The Chevron Genesis Spar, Green Canyon 205A (GC205A), is located at position 27°46'46.365"N., 90°31'06.553"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone.

(1974) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(1975) (1) An attending vessel;

(1976) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1977) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1978)

§147.827 Marlin Tension Leg Platform safety zone.

(1979) (a) *Description.* The Marlin Tension Leg Platform (Marlin TLP), Viasca Knoll, Block 915 (VK 915), is located at position 29°06'27.46"N., 87°56'37.14"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone.

(1980) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(1981) (1) An attending vessel;

(1982) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1983) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1984)

§147.829 Matterhorn Tension Leg Platform safety zone.

(1985) (a) *Description.* The Matterhorn Tension Leg Platform A (Matterhorn TLP), Mississippi Canyon 243 (MC 243), located at position 28°44'32"N., 88°39'32"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone. These coordinates are based upon [NAD 83].

(1986) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(1987) (1) An attending vessel;

(1988) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1989) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1990)

§147.831 Holstein Truss Spar safety zone.

(1991) (a) *Description.* Holstein, Green Canyon 645 (GC 645), located at position 27°19'17"N., 90°32'08"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone. These coordinates are based upon North American Datum 1983.

(1992) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(1993) (1) An attending vessel;

(1994) (2) A vessel under 100 feet in length overall not engaged in towing; or

(1995) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(1996)

§147.833 Na Kika FDS safety zone.

(1997) (a) *Description.* Na Kika FDS, Mississippi Canyon 474 "A" (MC 474 "A"), located at position 28°31'14.86"N., 88°17'19.69"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone. These coordinates are based upon [NAD 83].

(1998) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following: (1) An attending vessel;

(1999) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2000) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(2001)

§147.835 Magnolia TLP safety zone.

(2002) (a) *Description.* Magnolia TLP, Garden Banks 783 "A" (GB 783 "A"), located at position 27°12'13.86"N., 92°12'09.36"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone. These coordinates are based upon [NAD 83].

(2003) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(2004) (1) An attending vessel;

(2005) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2006) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(2007)

§147.837 Marco Polo Tension Leg Platform safety zone.

(2008) (a) *Description.* Marco Polo Tension Leg Platform, Green Canyon 608 (GC 608), located at position 27°21'43.32"N., 90°10'53.01"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone. These coordinates are based upon [NAD 83].

(2009) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(2010) (1) An attending vessel;

(2011) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2012) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(2013)

§147.839 Mad Dog Truss Spar Platform safety zone.

(2014) (a) *Description.* The Mad Dog Truss Spar system is in the deepwater area of the Gulf of Mexico at Green Canyon 782. The facility is located at 27°11'18.124"N., 90°16'07.363"W. and the area within 500 meters (1640.4 feet) from each point on the facility structure's outer edge is a safety zone.

(2015) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(2016) (1) An attending vessel;

(2017) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2018) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(2019)

§147.841 Atlantis Semi-Submersible safety zone.

(2020) (a) *Description*. Atlantis Semi-Submersible, Green Canyon 787 (GC 787), located at position 27°11'44"N., 90°01'37"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone. These coordinates are based upon [NAD 83].

(2021) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(2022) (1) An attending vessel;

(2023) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2024) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(2025)

§147.843 Thunder Horse Semi-Submersible safety zone.

(2026) (a) *Description.* Thunder Horse Semi-Submersible, Mississippi Canyon 778 (MC 778), located at position 28°11'26"N., 88°29'44"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone. These coordinates are based upon [NAD 83].

(2027) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(2028) (1) An attending vessel;

(2029) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2030) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(2031)

§147.845 Perdido Regional Host safety zone.

(2032) (a) *Description*. The Perdido Regional Host is located at position 26°07'44"N., 94°53'53"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge is a safety zone.

(2033) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(2034) (1) An attending vessel;

(2035) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2036) (3) A vessel authorized by the Commander, Eighth Coast Guard District or a designated representative.

(2037)

§147.847 Safety Zone; BW PIONEER Floating Production, Storage, and Offloading System Safety Zone.

(2038) (a) *Description.* The BW PIONEER, a Floating Production, Storage and Offloading (FPSO) system, is in the deepwater area of the Gulf of Mexico at Walker

Ridge 249. The FPSO can swing in a 360 degree arc around the center point of the turret buoy's swing circle at 26°41'46.25"N and 90°30'30.16"W. The area within 500 meters (1640.4 feet) around the stern of the FPSO when it is moored to the turret buoy is a safety zone. If the FPSO detaches from the turret buoy, the area within 500 meters around the center point at 26°41'46.25"N and 90°30'30.16"W is a safety zone.

(2039) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(2040) (1) An attending vessel;

(2041) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2042) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(2043)

§147.849 Safety Zone; Olympus Tension Leg Platform.

(2044) (a) *Description.* The Olympus Tension Leg Platform is in the deepwater area of the Gulf of Mexico in Mississippi Canyon Block 807B. The facility is located at 28°09'35.59"N., 89°14'20.86"W. The area within 500 meters (1640.4 feet) from each point on the structure's outer edge and the area within 500 meters (1640.4 feet) of each of the supply boat mooring buoys is a safety zone.

(2045) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(2046) (1) An attending vessel;

(2047) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2048) (3) A vessel authorized by the Commander, Eighth Coast Guard District or a designated representative.

(2049)

§147.851 Jack St. Malo Semi-Sub Facility Safety Zone.

(2050) (a) *Description.* The Jack St. Malo Semi-Sub facility is in the deepwater area of the Gulf of Mexico at Walker Ridge block 718. The facility is located at 26°14'05.94"N., 91°15'39.99"W. and the area within 500 meters (1640.4 feet) from each point on the facility structure's outer edge is a safety zone.

(2051) (b) *Regulation*. No vessel may enter or remain in this safety zone except the following:

(2052) (1) An attending vessel;

(2053) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2054) (3) A vessel authorized by the Commander, Eighth Coast Guard District or a designated representative.

(2055)

§147.853 Petronius Compliant Tower Facility Safety Zone.

(2056) (a) *Description.* The Petronius Compliant Tower facility is in the deepwater area of the Gulf of Mexico at Viosca Knoll Block 786. The facility is located at 28°13'44"N., 87°47'51"W. and the area within 500 meters (1640.4 feet) from each point on the facility structure's outer edge is a safety zone.

(2057) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(2058) (1) An attending vessel;

(2059) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2060) (3) A vessel authorized by the Commander, Eighth Coast Guard District or a designated representative.

(2061)

§147.855 Blind Faith Semi-Sub Facility Safety Zone.

(2062) (a) *Description.* The Blind Faith Semi-Sub facility is in the deepwater area of the Gulf of Mexico at Mississippi Canyon Block 650. The facility is located at 28°20'29.5279"N., 88°15'56.4728"W. and the area within 500 meters (1640.4 feet) from each point on the facility structure's outer edge is a safety zone.

(2063) (b) *Regulation*. No vessel may enter or remain in this safety zone except the following:

(2064) (1) An attending vessel;

(2065) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2066) (3) A vessel authorized by the Commander, Eighth Coast Guard District or a designated representative.

(2067)

§147.857 Tahiti SPAR Facility Safety Zone.

(2068) (a) *Description.* The Tahiti SPAR facility is in the deepwater area of the Gulf of Mexico at Tahiti SPAR. The facility is located at 27°19'33.3"N., 90°42'50.9"W. and the area within 500 meters (1640.4 feet) from each point on the facility structure's outer edge is a safety zone.

(2069) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(2070) (1) An attending vessel;

(2071) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2072) (3) A vessel authorized by the Commander, Eighth Coast Guard District or a designated representative.

(2073)

§147.859 Safety Zone; Gulfstar 1 SPAR, Mississippi Canyon Block 724, Outer Continental Shelf on the Gulf of Mexico.

(2074) (a) *Description.* The Gulfstar 1 Spar is in the deepwater area of the Gulf of Mexico at Mississippi Canyon Block 724. The facility is located at 28°14'05.904"N., 88°59'43.306"W., and the area within 500 meters (1640.4 feet) from each point on the facility structure's outer edge is a safety zone.

(2075) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(2076) (1) An attending vessel;

(2077) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2078) (3) A vessel authorized by the Commander, Eighth Coast Guard District or a designated representative.

(2079)

§147.861 Interim Big Foot TLP Construction Site safety zone.

(2080) (a) *Description.* The Big Foot Tension Leg Platform (TLP) construction site is in the deepwater area of the Gulf of Mexico at Walker Ridge 29. The Big Foot TLP construction site outermost points are located at:

(2081) NW Corner 26°56'18.85"N., 90°31'26.44"W.

(2082) NE Corner 26°56'18.85"N., 90°30'53.06"W.

(2083) SE Corner 26°55'46.76"N., 90°30'53.06"W.

(2084) SW Corner 26°55'46.76"N., 90°31'26.44"W., and the area within 500 meters of the construction site's outermost points, is a safety zone.

(2085) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(2086) (1) An attending vessel;

(2087) (2) A vessel authorized by the Commander, Eighth Coast Guard District or a designated representative.

(2088)

§147.863 Turritella FPSO System Safety Zone.

(2089) (a) *Description.* The Turritella, a Floating Production, Storage and Offloading (FPSO) system is to be installed in the deepwater area of the Gulf of Mexico at Walker Ridge 551. The FPSO can swing in a 360 degree arc around the center point of the turret buoy's swing circle at 26°25'38.74"N., 90°48'45.34"W., and the area within 500 meters (1640.4 feet) around the stern of the FPSO when it is moored to the turret buoy is a safety zone. If the FPSO detaches from the turret buoy, the area within 500 meters (1640.4 feet) around the center point at 26°25'38.74"N., 90°48'45.34"W. is a safety zone.

(2090) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(2091) (1) An attending vessel;

(2092) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2093) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(2094)

§147.865 Titan SPAR Facility Safety Zone.

(2095) (a) *Description.* The Titan SPAR system is in the deepwater area of the Gulf of Mexico at Mississippi Canyon 941. The facility is located at 28°02'02"N., 89°06'04"W. and the area within 500 meters (1640.4 feet) from each point on the facility structure's outer edge is a safety zone.

(2096) (b) *Regulation.* No vessel may enter or remain in this safety zone except the following:

(2097) (1) An attending vessel;

(2098) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2099) (3) A vessel authorized by the Commander, Eighth Coast Guard District.

(2100)

§147.871 Safety Zone, Constitution Spar, Outer Continental Shelf Facility, Green Canyon 680, Gulf of Mexico

(2101) (a) *Description*. The Constitution Spar is in the deepwater area of the Gulf of Mexico at Green Canyon Block 680. The facility is located at 27°17′31.92″N, 90°58′4.8″W, (NAD 83) and the area within 500 meters (1640.4 feet) from each point on the facility structure's outer edge is a safety zone.

(2102) (b) *Regulation*. No vessel may enter or remain in the safety zone described in paragraph (a) of this section except for the following:

(2103) (1) An attending vessel, as defined in 147.20

(2104) (2) A vessel under 100 feet in length overall not engaged in towing; or

(2105) (3) A vessel authorized by the Commander, Eighth Coast Guard District or a designated representative.

(2106) (c) *Requests for Permission.* Persons or vessels requiring authorization to enter the safety zone described in paragraph (a) of this section must request permission from the Commander, Eighth Coast Guard District or a designated representative. If permission is granted, all persons and vessels shall comply with the instructions of the Commander or designated representative.

(2107)

Part 150–Operations, Deepwater Ports (in part). For a complete description of this Part, see 33 CFR 150.

(2108)

Subpart D–Vessel Navigation

(2109)

§150.300 What does this subpart do?

(2110) This subpart supplements the International Regulations for Prevention of Collisions at Sea, 1972 (72 COLREGS) described in subchapter D of this chapter, and prescribes requirements that:

(2111) (a) Apply to the navigation of all vessels at or near a deepwater port; and

(2112) (b) Apply to all vessels while in a safety zone, area to be avoided, or no anchoring area.

(2113)

§150.305 How does this subpart apply to unmanned deepwater ports?

(2114) The master of any tanker calling at an unmanned deepwater port is responsible for the safe navigation of the vessel to and from the deepwater port, and for the required notifications in §150.325 of this part. Once the tanker is connected to the unmanned deepwater port, the master must maintain radar surveillance in compliance with the requirements of §150.310 of this part.

(2115)

§150.310 When is radar surveillance required?

(2116) A manned deepwater port's person in charge of vessel operations must maintain radar surveillance of the safety zone or area to be avoided when:

(2117) (a) A tanker is proceeding to the safety zone after submitting the report required in §150.325 in this part;

(2118) (b) A tanker or support vessel is underway in the safety zone or area to be avoided;

(2119) (c) A vessel other than a tanker or support vessel is about to enter or is underway in the safety zone or area to be avoided; or

(2120) (d) As described in the deepwater port security plan.

(2121)

§150.320 What advisories are given to tankers?

(2122) A manned deepwater port's person in charge of vessel operations must advise the master of each tanker underway in the safety zone or area to be avoided of the following:

(2123) (a) At intervals not exceeding 10 minutes, the vessel's position by range and bearing from the pumping platform complex; and

(2124) (b) The position and the estimated course and speed, if moving, of all other vessels that may interfere with the movement of the tanker within the safety zone or area to be avoided.

(2125)

§150.325 What is the first notice required before a tanker enters the safety zone or area to be avoided?

(2126) (a) The owner, master, agent, or person in charge of a tanker bound for a manned deepwater port must comply with the notice of arrival requirements in subpart C of part 160 of this chapter.

(2127) (b) The owner, master, agent, or person in charge of a tanker bound for a manned deepwater port must report the pertinent information required in §150.15(i)(4)(vi) of this part for the vessel including:

(2128) (1) The name, gross tonnage, and draft of the tanker;

(2129) (2) The type and amount of cargo in the tanker;

(2130) (3) The location of the tanker at the time of the report;

(2131) (4) Any conditions on the tanker that may impair its navigation, such as fire or malfunctioning propulsion, steering, navigational, or radiotelephone equipment. The testing requirements in §164.25 of this chapter are applicable to vessels arriving at a deepwater port;

(2132) (5) Any leaks, structural damage, or machinery malfunctions that may impair cargo transfer operations or cause a product discharge; and

(2133) (6) The operational condition of the equipment listed under §164.35 of this chapter on the tanker.

(2134) (c) If the estimated time of arrival changes by more than 6 hours from the last reported time, the National Vessel Movement Center (NVMC) and the port's person in charge of vessel operations must be notified of the correction as soon as the change is known.

(2135) (d) If the information reported in paragraphs (b)(4) or (b)(5) of this section changes at any time before the tanker enters the safety zone or area to be avoided at the deepwater port, or while the tanker is in the safety zone or area to be avoided, the master of the tanker must report the changes to the NVMC and port's person in charge of vessel operations as soon as possible.

(2136)

§150.330 What is the second notice required before a tanker enters the safety zone or area to be avoided?

(2137) When a tanker bound for a manned deepwater port is 20 miles from entering the port's safety zone or area to be avoided, the master of the tanker must notify the port's person in charge of vessel operations of the tanker's name and location.

(2138)

§150.340 What are the rules of navigation for tankers in the safety zone or area to be avoided?

(2139) (a) A tanker must enter or depart the port's safety zone or area to be avoided in accordance with the navigation procedures in the port's approved operations manual as described in §150.15(i) of this part.

(2140) (b) A tanker must not anchor in the safety zone or area to be avoided, except in a designated anchorage area.

(2141) (c) A tanker may not enter a safety zone or area to be avoided in which another tanker is present, unless it has been cleared by the person in charge of the port and no other tankers are underway.

(2142) (d) A tanker must not operate, anchor, or moor in any area of the safety zone or area to be avoided in which the net under-keel clearance would be less than 5 feet.

(2143)

§150.345 How are support vessels cleared to move within the safety zone or area to be avoided?

(2144) All movements of support vessels within a manned deepwater port's safety zone or area to be avoided must be cleared in advance by the port's person in charge of vessel operations.

(2145)

§150.350 What are the rules of navigation for support vessels in the safety zone or area to be avoided?

(2146) A support vessel must not anchor in the safety zone or area to be avoided, except:

(2147) (a) In an anchorage area; or

(2148) (b) For vessel maintenance, which, in the case of a manned deepwater port, must be cleared by the port's person in charge of vessel operations.

(2149)

§150.355 How are other vessels cleared to move within the safety zone?

(2150) (a) Clearance by a manned deepwater port's person in charge of vessel operations is required before a vessel, other than a tanker or support vessel, enters the safety zone.

(2151) (b) The port's person in charge of vessel operations may clear a vessel under paragraph (a) of this section only if its entry into the safety zone would not:

(2152) (1) Interfere with the purpose of the deepwater port;

(2153) (2) Endanger the safety of life or property or the environment; or

(2154) (3) Be prohibited by regulation.

(2155) (c) At an unmanned deepwater port, such as a submerged turret landing (STL) system, paragraphs (a) and (b) of this section would apply once a tanker connects to the STL buoy.

(2156)

§150.380 Under what circumstances may vessels operate within the safety zone or area to be avoided?

(2157) (a) Table 150.380(a) of this section lists both the areas within a safety zone where a vessel may operate and the clearance needed for that location.

(2158)

Table 150.380(a)—Regulated Activities of Vessels at Deepwater Ports

Regulated activities	Safety zone	Areas to be avoided around each deepwater port component[1]	Anchorage areas	Other areas within and adjacent to the safety zone (e.g., no anchoring area)
Tankers calling at port	C	C	C	C
Support vessel movements	C	C	C	C
Transit by vessels other than tankers or support vessels	F	D	P	P
Mooring to surface components (for example an SPM) by vessels other than tankers or support vessels	N	N	N	N
Anchoring by vessels other than tankers or support vessels	N	F	C	F
Fishing, including bottom trawl (shrimping)	N	D	P	N
Mobile drilling operations or erection of structures[2]	N	R	N	N
Lightering/trans-shipment	N	N	N	N

[1]Areas to be avoided are in subpart J of this part.
[2]Not part of Port Installation.

Key to regulated activities for Table 150.380(a):
C–Movement of the vessel is permitted when cleared by the person in charge of vessel operations.
D–Movement is not restricted, but recommended transit speed not to exceed 10 knots. Communication with the person in charge of vessel operations.
F–Only in an emergency. Anchoring will be avoided in a no anchoring area except in the case of immediate danger to the ship or persons on board.
N–Not permitted.
P–Transit is permitted when the vessel is not in the immediate area of a tanker, and when cleared by the vessel traffic supervisor.
R–Permitted only if determined that operation does not create unacceptable risk to personnel safety and security and operation. For transiting foreign-flag vessels, the requirement for clearance to enter the area to be avoided and no anchoring area is advisory in nature, but mandatory for an anchorage area established within 12 nautical miles.

(2159) (b) If the activity is not listed in table 150.380(a) of this section, or otherwise provided for in this subpart, the Sector Commander's, or MSU Commander's, with COTP and OCMI authority permission is required before operating in the safety zone or regulated navigation area.

(2160)

§150.385 What is required in an emergency?

(2161) In an emergency, for the protection of life or property, a vessel may deviate from a vessel movement requirement in this subpart without clearance from a manned deepwater port's person in charge of vessel operations if the master advises the port PIC of the reasons for the deviation at the earliest possible moment.

(2162)

Subpart J–Safety Zones, No Anchoring Areas, and Areas To Be Avoided

(2163)

§150.900 What does this subpart do?

(2164) (a) This subpart provides requirements for the establishment, restrictions, and location of safety zones, no anchoring areas (NAAs), and areas to be avoided (ATBAs) around deepwater ports.

(2165) (b) Subpart D of this part, concerning vessel navigation and activities permitted and prohibited at deepwater ports, applies to safety zones, NAAs, ATBAs, and their adjacent waters; and supplements the International Regulations for Preventing Collisions at Sea.

(2166) (c) Recommended shipping safety fairways associated with deepwater ports are described in part 166 of this chapter.

(2167)

§150.905 Why are safety zones, no anchoring areas, and areas to be avoided established?

(2168) (a) Safety zones, no anchoring areas (NAAs) and areas to be avoided (ATBAs) under this subchapter are established to promote safety of life and property, marine environmental protection, and navigational safety at deepwater ports and adjacent waters.

(2169) (b) Safety zones are the only federally regulated navigation areas. They accomplish these objectives by preventing or controlling specific activities, limiting access by vessels or persons, and by protecting the living resources of the sea from harmful agents.

(2170) (c) The NAAs and ATBAs are established via the International Maritime Organization (IMO). An NAA, specifically established to protect vessels in transit and sub-surface deepwater port components, will be mandatory. An ATBA will be a recommendatory routing measure.

(2171) (d) The sizes of restricted areas will be the minimum size needed to ensure safety, while at the same time considering potential impacts on other activities, including recreational boating, fishing, and Outer Continental Shelf activity.

(2172)

§150.910 What installations, structures, or activities are prohibited in a safety zone?

(2173) No installations, structures, or activities that are incompatible with or that present an unacceptable risk to safety of the deepwater port's operations or activity are allowed in the safety zone of a deepwater port.

(2174)

§150.915 How are safety zones, no anchoring areas, and areas to be avoided established and modified?

(2175) (a) Safety zones are developed and designated during the application process for a deepwater port license, and may be established or modified through rulemaking. Rulemakings will afford prior public notice and comment, except when there is good cause not to do so, for example due to an imminent threat to the safety of life and property.

(2176) (b) Before a safety zone, no anchoring area (NAA), or area to be avoided (ATBA) is established, all factors detrimental to safety are considered, including but not limited to:

(2177) (1) The scope and degree of the risk or hazard involved;

(2178) (2) Vessel traffic characteristics and trends, including traffic volume, the sizes and types of vessels involved, potential interference with the flow of commercial traffic, the presence of any unusual cargoes, and other similar factors;

(2179) (3) Port and waterway configurations and variations in local conditions of geography, climate and other similar factors;

(2180) (4) The need for granting exemptions for the installation and use of equipment or devices for use with vessel traffic services for certain classes of small vessels, such as self-propelled fishing vessels and recreational vessels;

(2181) (5) The proximity of fishing grounds, oil and gas drilling and production operations, or other potential or actual conflicting activity;

(2182) (6) Environmental factors;

(2183) (7) Economic impact and effects;

(2184) (8) Existing vessel traffic services; and

(2185) (9) Local practices and customs, including voluntary arrangements and agreements within the maritime community.

(2186) (c) The Executive Branch, acting through the Secretary of State and Commandant (CG–5P) proposes NAAs and ATBAs for deepwater ports to the International Maritime Organization (IMO) for approval. The ATBAs will be implemented after IMO approval is granted and announced in an IMO Circular, and after publication of a notice in the Federal Register.

(2187)

§150.920 How can I find notice of new or proposed safety zones?

(2188) In addition to documents published in the Federal Register under §150.915 of this part, the District Commander may provide public notice of new or proposed safety zones by Broadcast Notices to Mariners, Notices to Mariners, Local Notices to Mariners, newspapers, broadcast stations, or other means.

(2189)

§150.925 How long may a safety zone, no anchoring area, or area to be avoided remain in place?

(2190) A safety zone, no anchoring area, or area to be avoided may go into effect as early as initial delivery of construction equipment and materials to the deepwater port site, and may remain in place until the deepwater port is removed.

(2191)

§150.930 What datum is used for the geographic coordinates in this subpart?

(2192) The geographic coordinates used in this subpart have been revised to enable plotting using the North American Datum of 1983 (NAD 83) and no longer require the use of any further conversion factors for correction.

(2193)

§150.940 Safety zones for specific deepwater ports.

(2194) (a) Louisiana Offshore Oil Port (LOOP). (1) The location of the safety zone for LOOP is as described in Table 150.940(A) of this section:

(2195)

Table 150.940(A)—Safety Zone for LOOP, Gulf of Mexico

Plotting guidance	Latitude (N)	Longitude (W)
(i) Starting at	28°55'24"	90°00'37"
(ii) A rhumb line to:	28°53'51"	90°04'07"
(iii) Then an arc with a 4,465 meter (4,883 yard) radius centered at the	28°53'07"	90°01'30"
(iv) To a point	28°51'08"	90°03'06"
(v) Then a rhumb line to	28°50'10"	90°02'24"
(vi) Then a rhumb line to	28°49'06"	89°55'54"
(vii) Then a rhumb line to	28°48'37"	89°55'00"
(viii) Then a rhumb line to	28°52'05"	89°52'42"
(ix) Then a rhumb line to	28°53'11"	89°53'42"
(x) Then a rhumb line to	28°54'53"	89°57'00"
(xi) Then a rhumb line to	28°54'53"	89°59'36"
(xii) Then an arc with a 4,465 meter (4,883 yard) radius centered again		
(xiii) To the point of	28°55'24"	90°00'37"

(2196) (2) The areas to be avoided within the safety zone are:

(2197) (i) The area encompassed within a circle having a 600 meter radius around the deepwater port's pumping platform complex and centered at 28°53'07" N, 90°01'30" W.

(2198) (ii) The six areas encompassed within a circle having a 500 meter radius around each single point mooring (SPM) at the deepwater port and centered at:

(2199) 28°54'13"N., 90°00'37"W.;

(2200) 28°53'17"N., 89°59'59"W.;

(2201) 28°52'16"N., 90°00'19"W.;

(2202) 28°51'46"N., 90°01'25"W.;

(2203) 28°52'09"N., 90°02'33"W.;

(2204) 28°53'08"N., 90°03'02"W.

(2205) (3) The anchorage area within the safety zone is an area enclosed by the rhumb lines joining points at:

(2206) 28°52'22"N., 89°57'47"W.;
(2207) 28°54'06"N., 28°54'06"W.;
(2208) 28°52'05"N., 89°52'42"W.;
(2209) 28°50'21"N., 89°53'51"W.;
(2210) 28°52'22"N., 89°57'47"W.

(2211)

Part 156–Oil and Hazardous Material Transfer Operations

(2212)

Subpart C–Lightering Zones and Operational Requirements for the Gulf of Mexico

(2213)

§156.300 Designated lightering zones.

(2214) The following lightering zones are designated in the Gulf of Mexico and are more than 60 miles from the baseline from which the territorial sea is measured:

(2215) (a) Southtex-lightering zone. This lightering zone and the geographic area for this zone are coterminous and consist of the waters bounded by a line connecting the following points beginning at:

(2216) 27°40'00"N., 93°00'00"W., thence to
(2217) 27°40'00"N., 94°35'00"W., thence to
(2218) 28°06'30"N., 94°35'00"W., thence to
(2219) 27°21'00"N., 96°00'00"W., thence to
(2220) 26°30'00"N., 96°00'00"W., thence to
(2221) 26°30'00"N., 93°00'00"W., and thence to the point of beginning.
(2222) (NAD 83)

(2223) (b) Gulfmex No. 2-lightering zone. This lightering zone and the geographic area for this zone are coterminous and consist of the waters bounded by a line connecting the following points beginning at:

(2224) 27°53'00"N., 89°00'00"W., thence to
(2225) 27°53'00"N., 91°30'00"W., thence to
(2226) 26°30'00"N., 91°30'00"W., thence to
(2227) 26°30'00"N., 89°00'00"W., and thence to the point of beginning.
(2228) (NAD 83)

(2229) (c) Offshore Pascagoula No. 2-lightering zone. This lightering zone and the geographic area for this zone are coterminous and consist of the waters bounded by a line connecting the following points beginning at:

(2230) 29°20'00"N., 87°00'00"W., thence to
(2231) 29°12'00"N., 87°45'00"W., thence to
(2232) 28°39'00"N., 88°00'00"W., thence to
(2233) 28°00'00"N., 88°00'00"W., thence to
(2234) 28°00'00"N., 87°00'00"W., and thence to the point of beginning.
(2235) (NAD 83)

(2236) (d) South Sabine Point-lightering zone. This lightering zone and the geographic area for this zone are coterminous and consist of the waters bounded by a line connecting the following points beginning at:

(2237) 28°30'00"N., 92°38'00"W., thence to
(2238) 28°44'00"N., 93°24'00"W., thence to
(2239) 28°33'00"N., 94°00'00"W., thence to
(2240) 28°18'00"N., 94°00'00"W., thence to
(2241) 28°18'00"N., 92°38'00"W., and thence to the point of beginning.
(2242) (NAD 83)

(2243)

§156.310 Prohibited areas.

(2244) Lightering operations and STS Operations are prohibited within the following areas in the Gulf of Mexico:

(2245) (a) Claypile-prohibited area. This prohibited area consists of the waters bounded by a line connecting the following points beginning at:

(2246) 28°15'00"N., 94°35'00"W., thence to
(2247) 27°40'00"N., 94°35'00"W., thence to
(2248) 27°40'00"N., 94°00'00"W., thence to
(2249) 28°33'00"N., 94°00'00"W., and thence to the point of beginning.
(2250) (NAD 83)

(2251) (b) Flower Garden-prohibited area. This prohibited area consists of the waters bounded by a line connecting the following points beginning at:

(2252) 27°40'00"N., 94°00'00"W., thence to
(2253) 28°18'00"N., 94°00'00"W., thence to
(2254) 28°18'00"N., 92°38'00"W., thence to
(2255) 28°30'00"N., 92°38'00"W., thence to
(2256) 28°15'00"N., 91°30'00"W., thence to
(2257) 27°40'00"N., 91°30'00"W., and thence to the point of beginning.
(2258) (NAD 83)

(2259) (c) Ewing-prohibited area. This prohibited area consists of the waters bounded by a line connecting the following points beginning at:

(2260) 27°53'00"N., 91°30'00"W., thence to
(2261) 28°15'00"N., 91°30'00"W., thence to
(2262) 28°15'00"N., 90°10'00"W., thence to
(2263) 27°53'00"N., 90°10'00"W., and thence to the point of beginning.
(2264) (NAD 83)

(2265)

§156.320 Maximum operating conditions.

(2266) Unless otherwise specified, the maximum operating conditions in this section apply to tank vessels operating within the lightering zones designated in this subpart.

(2267) (a) A tank vessel shall not attempt to moor alongside another vessel when either of the following conditions exist:

(2268) (1) The wind velocity is 56 km/hr (30 knots) or more; or

(2269) (2) The wave height is 3 meters (10 feet) or more.

(2270) (b) Cargo transfer operations shall cease and transfer hoses shall be drained when –

(2271) (1) The wind velocity exceeds 82 km/hr (44 Knots); or

(2272) (2) Wave heights exceed 5 meters (16 feet).

(2273)

§156.330 Operations.

(2274) (a) Unless otherwise specified in this subpart, or when otherwise authorized by the cognizant Captain of the Port (COTP) or District Commander, the master of a vessel lightering or conducting STS Operations in a zone designated in this subpart must ensure that all officers and appropriate members of the crew are familiar with the guidelines in paragraphs (b) and (c) of this section and that the requirements of paragraphs (d) through (l) of this section are complied with.

(2275) (b) Lightering and STS operations must be conducted in accordance with the Ship to Ship Transfer Guide, (Petroleum) (incorporated by reference, see §156.111) to the maximum extent practicable.

(2276) (c) Helicopter operations must be conducted in accordance with the Guide to Helicopter/Ship Operations (incorporated by reference, see §156.111) to the maximum extent practicable.

(2277) (d) The vessel to be lightered, or the discharging vessel engaged in an STS Operation, must make a voice warning prior to the commencement of lightering activities or STS Operations via channel 13 CHF and 2182 kHz. The voice warning shall include—

(2278) (1) The names of the vessels involved;

(2279) (2) The vessels' geographical positions and general headings;

(2280) (3) A description of the operations;

(2281) (4) The expected time of commencement and duration of the operation; and

(2282) (5) Request for wide berth.

(2283) (e) In the event of a communications failure between the lightering vessels, or vessels engaged in STS Operations, or the respective persons-in-charge of the transfer, or an equipment failure affecting the vessel's cargo handling capability or ship's maneuverability, the affected vessel must suspend lightering activities, or STS Operations, and must sound at least five short, rapid blasts on the vessel's whistle. Lightering activities, or STS Operations, must remain suspended until corrective action has been completed.

(2284) (f) No vessel involved in a lightering operation, or STS Operation, may open its cargo system until the servicing vessel is securely moored alongside the vessel to be lightered (or the vessel transferring oil in an STS Operation).

(2285) (g) If any vessel not involved in the lightering operation, STS Operation, or support activities approaches within 100 meters of vessels engaged in lightering or STS Operation, the vessel engaged in lightering or STS Operation shall warn the approaching vessel by sounding a loud hailer, ship's whistle, or any other appropriate means.

(2286) (h) Only a lightering tender, a supply boat, or a crew boat, equipped with a spark arrestor on its exhaust, or a tank vessel providing bunkers, may moor alongside a vessel engaged in lightering operations or STS Operations.

(2287) (i) Lightering operations and STS Operations must not be conducted within 1 nautical mile of offshore structures or mobile offshore drilling units.

(2288) (j) No vessel engaged in lightering activities or STS Operations may anchor over charted pipelines, artificial reefs, or historical resources.

(2289) (k) All vessels engaged in lightering activities or STS Operations must be able to immediately maneuver at all times while inside a designated lightering zone. The main propulsion system must not be disabled at any time.

(2290) (l) In preparing to moor alongside the vessel to be lightered or vessel transferring oil in an STS Operation, a service vessel shall not approach the vessel closer than 1000 meters unless the service vessel is positioned broad on the quarter of the vessel transferring oil. The service vessel must transition to a nearly parallel heading prior to closing to within 50 meters of the vessel transferring oil.

(2291)

Subpart D–Prevention of Pollution During Transfer of Oil Cargo Between Oil Tankers at Sea

(2292)

§156.400 Applicability.

(2293) (a) This subpart applies to oil tankers engaged in the ship-to-ship transfer of oil cargo between oil tankers (STS Operations), and to their STS Operations conducted on or after April 1, 2012, when at least one of the oil tankers is of 150 gross tonnage and above. These rules are in addition to the rules of subpart A of this part, as well as the rules in the applicable sections of parts 151, 153, 155, 156, and 157 of this chapter.

(2294) (b) This subpart does not apply to STS Operations—

(2295) (1) If the oil cargo is intended only for use as a fuel or lubricant aboard the receiving vessel (bunker operations);

(2296) (2) When at least one of the ships involved in the oil transfer operation is a warship or a naval auxiliary or other ship owned or operated by a nation and used, at the time of the transfer, in government noncommercial service only; or

(2297) (3) When the STS Operations are necessary for the purpose of securing the safety of a ship or saving life at sea, or for combating specific pollution incidents in order to minimize the damage from pollution; except that such vessels are subject to the requirements of §§156.415(g) and 156.420.

(2298)

§156.405 Definitions.

(2299) In addition to the definitions specifically stated in this section, the definitions in §154.105 of this chapter apply to this subpart except definitions for Tank Barge, Tank Ship and Tank Vessel. Definitions specific to this part—

(2300) *Authorized Classification Society* means a recognized classification society that has been delegated the authority

to conduct certain functions and certifications on behalf of the Coast Guard.

(2301) *Flag State* means the authority under which a country exercises regulatory control over the commercial vessel which is registered under its flag. This involves the inspection, certification, and issuance of safety and pollution prevention documents.

(2302) *Marine environment* means—

(2303) (1) The navigable waters of the United States;

(2304) (2) The waters of an area over which the United States asserts exclusive fishery management authority; and

(2305) (3) The waters superjacent to the Outer Continental Shelf of the United States.

(2306) *Oil tanker* means a vessel that is constructed or adapted primarily to carry crude oil or products in bulk as cargo. This includes a tank barge, a tankship, and a combination carrier, as well as a vessel that is constructed or adapted primarily to carry noxious liquid substances in bulk as cargo and which also carries crude oil or products in bulk as cargo.

(2307) *STS Operations* means the transfer of oil cargo carried in bulk from one oil tanker to another at sea, when at least one of the oil tankers is of 150 gross tonnage and above.

(2308)

§156.410 General.

(2309) (a) Oil tankers subject to this subpart, and each U.S. oil tanker, wherever located, subject to this subpart, must carry onboard an STS Operations Plan that prescribes how that vessel will conduct STS Operations.

(2310) (b) Any oil tanker subject to this subpart must carry onboard an STS Operations Plan, prescribing how to conduct STS Operations, no later than the date of the first annual, intermediate, or renewal survey of the oil tanker, which must be carried out on or after the effective date of this final rule.

(2311) (c) The STS Operations Plan must be—

(2312) (1) Written in the working language of the oil tanker's crew;

(2313) (2) Developed using the information contained in the best practice guidelines for STS Operations identified in the Manual on Oil Pollution and in the Ship to Ship Transfer Guide (Petroleum) (both documents are incorporated by reference, see §156.111); and

(2314) (3) Approved by the vessel's Flag State for oil tankers operated under the authority of a country other than the United States. For U.S. oil tankers, the STS Operations Plan must be approved by the Commandant (CG-CVC-1) or an Authorized Classification Society.

(2315) (d) When chapter IX of the International Convention for the Safety of Life at Sea, 1974, as amended is applicable to the vessel, the STS Operations Plan may be incorporated into an existing required Safety Management System.

(2316) (e) Any oil tanker subject to this subpart must comply with the vessel's approved STS Operations Plan while engaging in STS Operations.

(2317) (f) The person in overall advisory control of STS Operations must be qualified to perform all relevant duties, taking into account the qualifications found in the best practice guidelines for STS Operations identified in the Manual on Oil Pollution and in the Ship to Ship Transfer Guide (Petroleum) (both documents are incorporated by reference, see §156.111).

(2318) (g) In addition to any records required by the vessel's approved STS Operations Plan, each STS operation must be recorded in the oil tanker's Oil Record Book, required by §151.25 of this chapter.

(2319) (h) All records of STS Operations shall be retained onboard for 3 years and be readily available for inspection.

(2320) (i) No oil tanker may transfer oil in a port or place subject to the jurisdiction of the United States, if the oil cargo has been transferred by an STS Operation in the marine environment beyond the baseline, unless:

(2321) (1) Both oil tankers engaged in the STS Operation have, onboard, at the time of transfer all certificates required by this chapter for transfer of oil cargos, including a valid Certificate of Inspection or Certificate of Compliance, as applicable to any transfer of oil taking place in a port or place subject to the jurisdiction of the United States;

(2322) (2) Both oil tankers engaged in the STS operation have onboard at the time of transfer, evidence that each vessel is operating in compliance with the National Response System as described in section 311(j) of the Federal Water Pollution Control Act (33 U.S.C. 1321(j)). Additionally, the vessels must comply with the Declaration of Inspection requirements delineated in §156.150 and a vessel response plan if required under part 155 of this chapter; and

(2323) (3) Both oil tankers engaged in STS Operations have onboard, at the time of transfer, an International Oil Pollution Prevention (IOPP) Certificate or equivalent documentation of compliance with Annex I, as would be required by part 151 of this chapter for vessels in navigable waters of the United States. The IOPP Certificate or documentation of compliance shall be that prescribed by §§151.19 and 151.21 of this chapter, and shall be effective under the same timetable as specified in §151.19.

(2324) (j) In an emergency, the Captain of the Port (COTP), upon request, may authorize a deviation from any requirement in this part if the COTP determines that its application will endanger persons, property, or the environment.

(2325)

§156.415 Notification.

(2326) (a) Except as provided for in paragraphs (f) and (g) of this section, the master, owner or agent of each oil tanker subject to this subpart planning to conduct STS Operations in the territorial sea or exclusive economic zone of the United States must give at least 48 hours advance notice to the COTP nearest the geographic

position chosen to conduct these operations. This advance notice must include:

(2327) (1) The oil tanker's name, call sign or official number, and registry;

(2328) (2) The cargo type and approximate amount onboard;

(2329) (3) The number of transfers expected, the amount of cargo expected to be transferred during each transfer, and whether such transfer will be conducted at anchor or underway;

(2330) (4) The date, estimated time of arrival, and geographical location at the commencement of the planned STS Operations;

(2331) (5) The estimated duration of STS Operations;

(2332) (6) The name and destination of receiving oil tanker(s);

(2333) (7) Identification of STS Operations service provider or person in overall advisory control and contact information; and

(2334) (8) Confirmation that the oil tanker has onboard an approved STS Operations Plan.

(2335) (b) If the estimated arrival time of an oil tanker to the reported geographic location for the commencement of STS operation changes by more than 6 hours, the master, owner, or agent of that oil tanker must provide a revised estimated time of arrival to the COTP.

(2336) (c) Where STS Operations are conducted as a result of collision, grounding, tank rupture or any similar emergency, the master, owner, or agent of a vessel must give immediate notice to the Coast Guard office.

(2337) (d) In addition to the other requirements in this section, the master, owner, or agent of a vessel that requires a Certificate of Compliance (COC) or other special Coast Guard inspection in order to conduct STS Operations must request the COC or other inspection from the cognizant Officer in Charge, Marine Inspection (OCMI) at least 72 hours prior to commencement of STS Operations.

(2338) (e) The STS Operation advanced notice is in addition to the Notification of Arrival requirements in **33 CFR part 160**.

(2339) (f) If all of the information specified in paragraph (a) is not available 48 hours in advance of a planned STS Operation, the oil tanker discharging the oil cargo must notify the COTP at least 48 hours in advance that an STS Operation will occur. In such a circumstances, the information specified in paragraph (a) must be provided to the COTP at the earliest opportunity.

(2340) (g) If STS operations are conducted under exigent circumstances to secure the safety of a ship, to save life at sea, or combat specific incidents in order to minimize the damage from pollution within the territorial sea or exclusive economic zone of the United States, the master, owner, or agent of each oil tanker subject this subpart shall provide notice with adequate explanation, as soon as practicable, to the COTP nearest the geographic position where the exigent STS operation took place.

(2341)

§156.420 Reporting of incidents.

(2342) (a) Any vessel affected by fire, explosion, collision, grounding, or any similar emergency that poses a threat to the vessel(s) engaged in STS Operations must report the incident to the nearest Coast Guard office.

(2343) (b) The POAC of an STS operation must report, in accordance with the procedures specified in §151.15 of this chapter, any incident of discharge of oil into the water.

(2344) (c) Immediately after the addressing of resultant safety concerns, all marine casualties must be reported to the nearest COTP, Sector Office, Marine Inspection Office, or OCMI in accordance with **46 CFR part 4**.

(2345)

Part 157-Rules for the Protection of the Marine Environment relating to Tank Vessels Carrying Oil in Bulk.

(2346)

Subpart A-General

(2347)

§157.01 Applicability.

(2348) (a) Unless otherwise indicated, this part applies to each vessel that carries oil in bulk as cargo and that is:

(2349) (1) Documented under the laws of the United States (a U.S. vessel); or

(2350) (2) Any other vessel that enters or operates in the navigable waters of the United States, or that operates, conducts lightering under 46 U.S.C. 3715, or receives cargo from or transfers cargo to a deepwater port under 33 U.S.C. 1501 et seq., in the United States Exclusive Economic Zone, as defined in 33 U.S.C. 2701(8).

(2351) (b) This part does not apply to a vessel exempted under 46 U.S.C. 2109 or 46 U.S.C. 3702.

(2352)

§157.02 Incorporation by reference: Where can I get a copy of the publications mentioned in this part?

(2353) (a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and **1 CFR part 51**. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*. Also, it is available for inspection at the Coast Guard Headquarters. Contact Commandant (CG–ENG), Attn: Office of Design and Engineering Standards, U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Avenue SE., Washington,

DC 20593–7509; telephone 202–372–1375. The material is also available from the sources indicated in this section.

(2354) (b) *International Maritime Organization (IMO)*—4 Albert Embankment, London SE1 7SR, United Kingdom.

(2355) (1) IMCO Assembly Resolution A.393(X), adopted on 14 November 1977, Recommendation on International Performance and Test Specifications For Oily Water Separating Equipment and Oil Content Meters ("A.393(x)"), incorporation by reference approved for §157.12.

(2356) (2) IMO Assembly Resolution A.496(XII), Adopted on 19 November 1981, Agenda Item 11, Guidelines and Specifications for Oil Discharge Monitoring and Control Systems for Oil Tankers ("A.496(XII)"), incorporation by reference approved for §157.12.

(2357) (3) IMO Assembly Resolution A.586(14), Adopted on 20 November 1985, Agenda item 12, Revised Guidelines and Specifications for Oil Discharge Monitoring and Control Systems for Oil Tankers ("A.586(14)"), incorporation by reference approved for §157.12.

(2358) (4) IMO Marine Environment Protection Committee Resolution MEPC.13 (19), adopted on 9 December 1983, Guidelines for Plan Approval and Installation Survey of Oil Discharge Monitoring and Control Systems for Oil Tankers and Environmental Testing of Control Sections Thereof ("MEPC.13(19)"), incorporation by reference approved for §157.12.

(2359) (5) IMO Marine Environment Protection Committee Resolution MEPC.108(49), Adopted on 18 July 2003, Revised Guidelines and Specifications for Oil Discharge Monitoring and Control Systems for Oil Tankers ("MEPC.108(49)"), incorporation by reference approved for §157.12.

(2360) (6) IMO Assembly Resolution A.601(15), Provision and Display of Manoeuvring Information on Board Ships, Annex sections 1.1, 2.3, 3.1, and 3.2 with appendices, adopted on 19 November 1987 ("A.601(15)"), incorporation by reference approved for §157.450.

(2361) (7) IMO Assembly Resolution A.744(18), Guidelines on the Enhanced Programme of Inspections During Surveys of Bulk Carriers and Oil Tankers, Annex B sections 1.1.3-1.1.4, 1.2-1.3, 2.1, 2.3-2.6, 3-8, and Annexes 1-10 with appendices, adopted 4 November 1993 ("A.744(18)"), incorporation by reference approved for §157.430.

(2362) (8) IMO Assembly Resolution A.751(18), Interim Standards for Ship Manoeuvrability, Annex sections 1.2, 2.3-2.4, 3-4.2, and 5, adopted 4 November 1993 with Explanatory Notes in MSC/Circ. 644 dated 6 June 1994 ("A.751(18)"), incorporation by reference approved for §157.445.

(2363) (9) MARPOL Consolidated Edition 2011, Annex I, Regulations for the prevention of pollution by oil, chapter 4—Requirements for the cargo area of oil tankers, Part A—Construction, Regulation 22, "Pump-room bottom protection," (Annex I, Regulation 22) incorporation by reference approved for §157.14.

(2364) (10) MARPOL Consolidated Edition 2011, Annex I, Regulations for the prevention of pollution by oil, chapter 4—Requirements for the cargo area of oil tankers, Part A—Construction, Regulation 23, "Accidental oil outflow performance," (Annex I, Regulation 23) incorporation by reference approved for §157.20.

(2365) (c) *Oil Companies International Marine Forum (OCIMF)* 27 Queen Anne's Gate, London, SW1H 9BU, England].

(2366) (1) International Safety Guide for Oil Tankers and Terminals, Fourth Edition, chapters 6, 7, and 10, 1996, incorporation by reference approved for §157.435.

(2367) (2) [Reserved]

(2368)

§157.03 Definitions.

(2369) Except as otherwise stated in a subpart:

(2370) *Amidships* means the middle of the length.

(2371) *Animal fat* means a non-petroleum oil, fat, or grease derived from animals and not specifically identified elsewhere in this part.

(2372) *Ballast voyage* means the voyage that a tank vessel engages in after it leaves the port of final cargo discharge.

(2373) *Breadth* or *B* means the maximum molded breadth of a vessel in meters.

(2374) *Cargo tank length* means the length from the forward bulkhead of the forwardmost cargo tanks, to the after bulkhead of the aftermost cargo tanks.

(2375) *Center tank* means any tank inboard of a longitudinal bulkhead.

(2376) *Clean ballast* means ballast which:

(2377) (1) If discharged from a vessel that is stationary into clean, calm water on a clear day, would not–

(2378) (i) Produce visible traces of oil on the surface of the water or on adjoining shore lines; or

(2379) (ii) Cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shore lines; or

(2380) (2) If verified by an approved oil discharge monitoring and control system, has an oil content that does not exceed 15 p.m.

(2381) *Combination carrier* means a vessel designed to carry oil or solid cargoes in bulk.

(2382) *Crude oil* means any liquid hydrocarbon mixture occurring naturally in the earth, whether or not treated to render it suitable for transportation, and includes crude oil from which certain distillate fractions may have been removed, and crude oil to which certain distillate fractions may have been added.

(2383) *Deadweight* or *DWT* means the difference in metric tons between the lightweight displacement and the total displacement of a vessel measured in water of specific gravity 1.025 at the load waterline corresponding to the assigned summer freeboard.

(2384) *Dedicated clean ballast tank* means a cargo tank that is allocated solely for the carriage of clean ballast.

(2385) *Domestic trade* means trade between ports or places within the United States, its territories and possessions,

either directly or via a foreign port including trade on the navigable rivers, lakes, and inland waters.

(2386) *Double bottom* means watertight protective spaces that do not carry any oil and which separate the bottom of tanks that hold any oil within the cargo tank length from the outer skin of the vessel.

(2387) *Double hull* means watertight protective spaces that do not carry any oil and which separate the sides, bottom, forward end, and aft end of tanks that hold any oil within the cargo tank length from the outer skin of the vessel as prescribed in §157.10d.

(2388) *Doubles sides* means watertight protective spaces that do not carry any oil and which separate the sides of tanks that hold any oil within the cargo tank length from the outer skin of the vessel.

(2389) *Existing vessel* means any vessel that is not a new vessel.

(2390) *Fleeting* or *assist towing vessel* means any commercial vessel engaged in towing astern, alongside, or pushing ahead, used solely within a limited geographic area, such as a particular barge fleeting area or commercial facility, and used solely for restricted service, such as making up or breaking up larger tows.

(2391) *Foreign trade* means any trade that is not domestic trade.

(2392) *From the nearest land* means from the baseline from which the territorial sea of the United States is established in accordance with international law.

(2393) *Fuel oil* means any oil used as fuel for machinery in the vessel in which it is carried.

(2394) *Inland vessel* means a vessel that is not oceangoing and that does not operate on the Great Lakes.

(2395) *Instantaneous rate of discharge of oil content* means the rate of discharge of oil in liters per hour at any instant, divided by the speed of the vessel in knots at the same instant.

(2396) *Integrated tug barge* means a tug and a tank barge with a mechanical system that allows the connection of the propulsion unit (the tug) to the stern of the cargo carrying unit (the tank barge) so that the two vessels function as a single self-propelled vessel.

(2397) Large primary structural member includes any of the following:

(2398) (1) Web frames.

(2399) (2) Girders.

(2400) (3) Webs.

(2401) (4) Main brackets.

(2402) (5) Transverses.

(2403) (6) Stringers.

(2404) (7) Struts in transverse web frames when there are 3 or more struts and the depth of each is more than 1/15 of the total depth of the tank.

(2405) *Length* or *L* means the distance in meters from the fore side of the stem to the axis of the rudder stock on a waterline at 85 percent of the least molded depth measured from the molded baseline, or 96 percent of the total length on that waterline, whichever is greater. In vessels designed with drag, the waterline is measured parallel to the designed waterline.

(2406) *Lightweight* means the displacement of a vessel in metric tons without cargo, fuel oil, lubricating oil, ballast water, fresh water, and feedwater in tanks, consumable stores, and any persons and their effects.

(2407) *Major conversion* means a conversion of an existing vessel that:

(2408) (1) Substantially alters the dimensions or carrying capacity of the vessel, except a conversion that includes only the installation of segregated ballast tanks, dedicated clean ballast tanks, a crude oil washing system, double sides, a double bottom, or a double hull;

(2409) (2) Changes the type of vessel;

(2410) (3) Substantially prolongs the vessel's service life; or

(2411) (4) Otherwise so changes the vessel that it is essentially a new vessel, as determined by the Commandant (CG–CVC).

(2412) *MARPOL 73/78* means the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating to that Convention. A copy of MARPOL 73/78 is available from the International Maritime Organization, 4 Albert Embankment, London, SE1, 7SR, England.

(2413) *New vessel* means:

(2414) (1) A U.S. vessel in domestic trade that:

(2415) (i) Is constructed under a contract awarded after December 31, 1974;

(2416) (ii) In the absence of a building contract, has the keel laid or is at a similar stage of construction after June 30, 1975;

(2417) (iii) Is delivered after December 31, 1977; or

(2418) (iv) Has undergone a major conversion for which:

(2419) (A) The contract is awarded after December 31, 1974;

(2420) (B) In the absence of a contract, conversion is begun after June 30, 1975; or

(2421) (C) Conversion is completed after December 31, 1977; and

(2422) (2) A foreign vessel or a U.S. vessel in foreign trade that;

(2423) (i) Is constructed under a contract awarded after December 31, 1975;

(2424) (ii) In the absence of a building contract, has the keel laid or is at a similar stage of construction after June 30, 1976;

(2425) (iii) Is delivered after December 31, 1979; or

(2426) (iv) Has undergone a major conversion for which:

(2427) (A) The contract is awarded after December 31, 1975;

(2428) (B) In the absence of a contract, conversion is begun after June 30, 1976; or

(2429) (C) Conversion is completed after December 31, 1979.

(2430) *Non-petroleum oil* means oil of any kind that is not petroleum-based. It includes, but is not limited to, animal fat and vegetable oil.

(2431) *Oceangoing* has the same meaning as defined in §151.05 of this chapter.

(2432) *Officer in charge of a navigational watch* means any officer employed or engaged to be responsible for navigating or maneuvering the vessel and for maintaining a continuous vigilant watch during his or her periods of duty and following guidance set out by the master, international or national regulations, and company policies.

(2433) *Oil* means oil of any kind or in any form including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. This includes liquid hydrocarbons as well as animal and vegetable oils.

(2434) *Oil cargo residue* means any residue of oil cargo whether in solid, semi-solid, emulsified, or liquid form from cargo tanks and cargo pump room bilges, including but not limited to, drainages, leakages, exhausted oil, muck, clingage, sludge, bottoms, paraffin (wax), and any constituent component of oil. The term "oil cargo residue" is also known as "cargo oil residue."

(2435) Oil residue means—

(2436) (1) Oil cargo residue; and

(2437) (2) Other residue of oil whether in solid, semi-solid, emulsified, or liquid form, resulting from drainages, leakages, exhausted oil, and other similar occurrences from machinery spaces

(2438) Oil spill response vessel means a vessel that is exclusively dedicated to operations to prevent or mitigate environmental damage due to an actual or impending accidental oil spill. This includes a vessel that performs routine service as an escort for a tank vessel, but excludes a vessel that engages in any other commercial activity, such as the carriage of any type of cargo.

(2439) Oil tanker means a vessel that is constructed or adapted primarily to carry crude oil or products in bulk as cargo. This includes a tank barge, a tankship, and a combination carrier, as well as a vessel that is constructed or adapted primarily to carry noxious liquid substances in bulk as cargo and which also carries crude oil or products in bulk as cargo.

(2440) *Oily mixture* means a mixture, in any form, with any oil content. "Oily mixture" includes, but is not limited to–

(2441) (1) Slops from bilges;

(2442) (2) Slops from oil cargoes (such as cargo tank washings, oily waste, and oily refuse);

(2443) (3) Oil residue; and

(2444) (4) Oily ballast water from cargo or fuel oil tanks, including any oil cargo residue.

(2445) Oily mixture means a mixture with any oil content.

(2446) *Other non-petroleum oil* means an oil of any kind that is not petroleum oil, an animal fat, or a vegetable oil.

(2447) *Permeability of a space* means the ratio of volume within a space that is assumed to be occupied by water to the total volume of that space.

(2448) *Petroleum oil* means petroleum in any form, including but not limited to, crude oil, fuel oil, sludge, oil residue, and refined products.

(2449) *Primary towing vessel* means any vessel engaged in towing astern, alongside, or pushing ahead and includes the tug in an integrated tug barge. It does not include fleeting or assist towing vessels.

(2450) *Product* means any liquid hydrocarbon mixture in any form, except crude oil, petrochemicals, and liquefied gases.

(2451) *Segregated ballast* means the ballast water introduced into a tank that is completely separated from the cargo oil and fuel oil system and that is permanently allocated to the carriage of ballast.

(2452) *Slop tank* means a tank specifically designated for the collection of cargo drainings, washings, and other oily mixtures.

(2453) *Tank* means an enclosed space that is formed by the permanent structure of a vessel, and designed for the carriage of liquid in bulk.

(2454) *Tank barge* means a tank vessel not equipped with a means of self-propulsion.

(2455) *Tank vessel* means a vessel that is constructed or adapted primarily to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue, and that–

(2456) (1) Is a vessel of the United States;

(2457) (2) Operates on the navigable waters of the United States; or

(2458) (3) Transfers oil or hazardous material in a port or place subject to the jurisdiction of the United States. This does not include an offshore supply vessel, or a fishing vessel or fish tender vessel of not more than 750 gross tons when engaged only in the fishing industry.

(2459) *Tankship* means a tank vessel propelled by mechanical power or sail.

(2460) *Vegetable oil* means a non-petroleum oil or fat not specifically identified elsewhere in this part that is derived from plant seeds, nuts, kernels, or fruits.

(2461) *Wing tank* means a tank that is located adjacent to the side shell plating.

(2462)

§157.04 Authorization of classification societies.

(2463) (a) The Coast Guard may authorize any classification society (CS) to perform certain plan reviews, certifications, and inspections required by this part on vessels classed by that CS except that only U.S. classification societies may be authorized to perform those plan reviews, inspections, and certifications for U.S. vessels.

(2464) (b) If a CS desires authorization to perform the plan reviews, certifications, and inspections required under this part, it must submit to the Commandant (CG–CVC), Attn: Office of Commercial Vessel Compliance, U.S. Coast Guard Stop 7501, 2703 Martin Luther King Jr. Avenue SE., Washington, DC 20593–7501, evidence from the governments concerned showing that they have authorized the CS to inspect and certify vessels on their behalf under the MARPOL 73/78.

(2465) (c) The Coast Guard notifies the CS in writing whether or not it is accepted as an authorized CS. If

authorization is refused, reasons for the refusal are included.

(2466) (d) Acceptance as an authorized CS terminates unless the following are met:

(2467) (1) The authorized CS must have each Coast Guard regulation that is applicable to foreign vessels on the navigable waters of the United States.

(2468) (2) Each issue concerning equivalents to the regulations in this part must be referred to the Coast Guard for determination.

(2469) (3) Copies of any plans, calculations, records of inspections, or other documents relating to any plan review, inspection, or certification performed to meet this part must be made available to the Coast Guard.

(2470) (4) Each document certified under §§157.116(a)(2), 157.118(b)(1)(ii), and 157.216(b)(1)(11) must be marked with the name or seal of the authorized CS.

(2471) (5) A copy of the final documentation that is issued to each vessel that is certified under this part must be referred to the Commandant (CG–CVC), Attn: Office of Commercial Vessel Compliance, U.S. Coast Guard Stop 7501, 2703 Martin Luther King Jr. Avenue SE., Washington, DC 20593–7501.

(2472)

Subpart B–Design, Equipment, and Installation

(2473)

§157.08 Applicability of Subpart B.

(2474) NOTE: An "oil tanker" as defined in §157.03 includes barges as well as self-propelled vessels.

(2475) (a) Sections 157.10d and 157.11(g) apply to each vessel to which this part applies.

(2476) (b) Sections 157.11 (a) through (f), 157.12, 157.15, 157.19(b)(3), 157.33, and 157.37 apply to each vessel to which this part applies that carries 200 cubic meters or more of crude oil or products in bulk as cargo, as well as to each oceangoing oil tanker to which this part applies of 150 gross tons or more. These sections do not apply to a foreign vessel which remains beyond the navigable waters of the United States and does not transfer oil cargo at a port or place subject to the jurisdiction of the United States.

(2477) (c) Section 157.21 applies to each oil tanker to which this part applies of 150 gross tons or more that is oceangoing or that operates on the Great Lakes. This section does not apply to a foreign vessel which remains beyond the navigable waters of the United States and does not transfer oil cargo at a port or place subject to the jurisdiction of the United States.

(2478) (d) Sections in subpart B of **33 CFR part 157** that are not specified in paragraphs (a) through (c) of this section apply to each oceangoing oil tanker to which this part applies of 150 gross tons or more, unless otherwise indicated in paragraphs (e) through (m) of this section. These sections do not apply to a foreign vessel which remains beyond the navigable waters of the United States and does not transfer oil cargo at a port or place subject to the jurisdiction of the United States.

(2479) (e) Sections 157.11 (a) through (f), 157.12, and 157.15 do not apply to a vessel, except an oil tanker, that carries less than 1,000 cubic meters of crude oil or products in bulk as cargo and which retains oil mixtures on board and discharges them to a reception facility.

(2480) (f) Sections 157.11 (a) through (f), 157.12, 157.13, and 157.15 do not apply to a tank vessel that carries only asphalt, carbon black feedstock, or other products with similar physical properties, such as specific gravity and cohesive and adhesive characteristics, that inhibit effective product/water separation and monitoring.

(2481) (g) Sections 157.11 (a) through (f), 157.12, 157.13, 157.15, and 157.23 do not apply to a tank barge that cannot ballast cargo tanks or wash cargo tanks while underway.

(2482) (h) Sections 157.19 and 157.21 do not apply to a tank barge that is certificated by the Coast Guard for limited short protected coastwise routes if the barge is otherwise constructed and certificated for service exclusively on inland routes.

(2483) (i) Section 157.09(d) does not apply to any:

(2484) (1) U.S. vessel in domestic trade that is constructed under a contract awarded before January 8, 1976;

(2485) (2) U.S. vessel in foreign trade that is constructed under a contract awarded before April 1, 1977; or

(2486) (3) Foreign vessel that is constructed under a contract awarded before April 1, 1977.

(2487) (j) Sections 157.09 and 157.10a do not apply to a new vessel that:

(2488) (1) Is constructed under a building contract awarded after June 1, 1979;

(2489) (2) In the absence of a building contract, has the keel laid or is at a similar stage of construction after January 1, 1980;

(2490) (3) Is delivered after June 1, 1982; or

(2491) (4) Has undergone a major conversion for which:

(2492) (i) The contract is awarded after June 1, 1979;

(2493) (ii) In the absence of a contract, conversion is begun after January 1, 1980; or

(2494) (iii) Conversion is completed after June 1, 1982.

(2495) (k) Sections 157.09(b)(3), 157.10(c)(3), 157.10a(d)(3), and 157.10b(b)(3) do not apply to tank barges.

(2496) (1) Section 157.10b does not apply to tank barges if they do not carry ballast while they are engaged in trade involving the transfer of crude oil from an offshore oil exploitation or production facility on the Outer Continental Shelf of the United States.

(2497) (m) Section 157.12 does not apply to a U.S. vessel that:

(2498) (1) Is granted an exemption under Subpart F of this part; or

(2499) (2) Is engaged solely in voyages that are:

(2500) (i) Between ports or places within the United States, its territories or possessions;

(2501) (ii) Of less than 72 hours in length; and

(2502) (iii) At all times within 50 nautical miles of the nearest land.

(2503) (n) Section 157.10d does not apply to:

(2504) (1) A vessel that operates exclusively beyond the navigable waters of the United States and the United States Exclusive Economic Zone, as defined in 33 U.S.C. 2701(8);

(2505) (2) An oil spill response vessel;

(2506) (3) Before January 1, 2015–

(2507) (i) A vessel unloading oil in bulk as cargo at a deepwater port licensed under the Deepwater Port Act of 1974 (33 U.S.C. 1501 et seq.); or

(2508) (ii) A delivering vessel that is offloading oil in bulk as cargo in lightering activities–

(2509) (A) Within a lightering zone established under 46 U.S.C. 3715(b)(5); and

(2510) (B) More than 60 miles from the territorial sea base line, as defined in **33 CFR 2.20**.

(2511) (4) A vessel documented under 46 U.S.C., chapter 121, that was equipped with a double hull before August 12, 1992;

(2512) (5) A barge of less than 1,500 gross tons as measured under 46 U.S.C., chapter 145, carrying refined petroleum in bulk as cargo in or adjacent to waters of the Bering Sea, Chukchi Sea, and Arctic Ocean and waters tributary thereto and in the waters of the Aleutian Islands and the Alaskan Peninsula west of 155 degrees west longitude; or

(2513) (6) A vessel in the National Defense Reserve Fleet pursuant to 50 App. U.S.C. 1744.

(2514) (o) Section 157.11(h) applies to every oil tanker delivered on or after January 1, 2010, meaning an oil tanker—

(2515) (1) For which the building contract is placed on or after January 1, 2007;

(2516) (1) For which the building contract is placed on or after January 1, 2007;

(2517) (3) The delivery of which is on or after January 1, 2010; or

(2518) (4) That has undergone a major conversion—

(2519) (i) For which the contract is placed on or after January 1, 2007;

(2520) (ii) In the absence of a contract, the construction work of which is begun on or after July 1, 2007; or

(2521) (iii) That is completed on or after January 1, 2010.

(2522)

§157.10d Double hulls on tank vessels.

(2523) (a) With the exceptions stated in §157.08(n), this section applies to a tank vessel–

(2524) (1) For which the building contract is awarded after June 30, 1990; or

(2525) (2) That is delivered after December 31, 1993;

(2526) (3) That undergoes a major conversion for which;

(2527) (i) The contract is awarded after June 30, 1990; or

(2528) (ii) Conversion is completed after December 31, 1993; or

(2529) (4) That is otherwise required to have a double hull by 46 U.S.C. 3703a(c).

(2530) NOTE: 46 U.S.C. 3703a(c) is shown in appendix G to this part.

(2531) (b) Each vessel to which this section applies must be fitted with:

(2532) (1) A double hull in accordance with this section; and

(2533) (2) If §157.10 applies, segregated ballast tanks and a crude oil washing system in accordance with that section.

(2534) (c) Except on a vessel to which §157.10d(d) applies, tanks within the cargo tank length that carry any oil must be protected by double sides and a double bottom as follows:

(2535) (1) Double sides must extend for the full depth of the vessel's side or from the uppermost deck, disregarding a rounded gunwale where fitted, to the top of the double bottom. At any cross section, the molded width of the double side, measured at right angles to the side shell plating, from the side of tanks containing oil to the side shell plating, must not be less than the distance w as shown in Figure 157.10d(c) and specified as follows:

(2537) (i) For a vessel of 5,000 DWT and above: w=[0.5+(DWT/20,000)] meters; or, w=2.0 meters (79 in.), whichever is less, but in no case less than 1.0 meter (39 in.).

(2538) (ii) For a vessel of less than 5,000 DWT: w=[0.4+(2.4)(DWT/20,000)] meters, but in no case less than 0.76 meter (30 in.).

(2536)

Figure 157.10d(c) Minimum Double Hull Dimensions

(2539) (iii) For a vessel to which paragraph (a)(4) of this section applies: w=0.76 meter (30 in.), provided that the double side was fitted under a construction or conversion contract awarded prior to June 30, 1990.

(2540) (2) At any cross section, the molded depth of the double bottom, measured at right angles to the bottom shell plating, from the bottom of tanks containing oil to the bottom shell plating, must not be less than the distance h as shown in Figure 157.10d(c) and specified as follows:

(2541) (i) For a vessel of 5,000 DWT and above: h=B/15; or, h=2.0 meters (79 in.), whichever is less, but in no case less than 1.0 meter (39 in.).

(2542) (ii) For a vessel of less than 5,000 DWT: h=B/15, but in no case less than 0.76 meter (30 in.).

(2543) (iii) For a vessel to which paragraph (a)(4) of this section applies: h=B/15; or, h=2.0 meters (79 in.), whichever is the lesser, but in no case less than 0.76 meter (30 in.), provided that the double bottom was fitted under

a construction or conversion contract awarded prior to June 30, 1990.

(2544) (3) For a vessel built under a contract awarded after September 11, 1992, within the turn of the bilge or at cross sections where the turn of the bilge is not clearly defined, tanks containing oil must be located inboard of the outer shell–

(2545) (i) For a vessel of 5,000 DWT and above: At levels up to 1.5h above the base line, not less than the distance h, as shown in Figure 157.10d(c) and specified in paragraph (c)(2) of this section. At levels greater than 1.5h above the base line, not less than the distance w, as shown in Figure 157.10d(c) and specified in paragraph (c)(1) of this section.

(2546) (ii) For a vessel of less than 5,000 DWT: Not less the distance h above the line of the mid-ship flat bottom, as shown in Figure 157.10d(c)(3)(ii) and specified in paragraph (c)(2) of this section. At levels greater than h above the line of the mid-ship flat bottom, not less than the distance w, as shown in Figure 157.10d(c)(3)(ii) and specified in paragraph (c)(1) of this section.

(2548) (4) For a vessel to which §157.10(b) applies that is built under a contract awarded after September 11, 1992.

(2549) (i) The aggregate volume of the double sides, double bottom, forepeak tanks, and afterpeak tanks must not be less than the capacity of segregated ballast tanks required under §157.10(b). Segregated ballast tanks that may be provided in addition to those required under §157.10(b) may be located anywhere within the vessel.

(2547)

Figure 157.10d(c)(3)(ii) - Minimum Double Hull Dimensions Within the turn of the bilge of Vessels under 5,000 DWT

(2550) (ii) Double side and double bottom tanks used to meet the requirements of §157.10(b) must be located as uniformly as practicable along the cargo tank length. Large inboard extensions of individual double side and double bottom tanks, which result in a reduction of overall side or bottom protection, must be avoided.

(2551) (d) A vessel of less than 10,000 DWT that is constructed and certificated for service exclusively on inland or limited short protected coastwise routes must be fitted with double sides and a double bottom as follows:

(2552) (1) A minimum of 61 cm. (2 ft.) from the inboard side of the side shell plate, extending the full depth of the side or from the main deck to the top of the double bottom, measured at right angles to the side shell; and

(2553) (2) A minimum of 61 cm. (2 ft.) from the top of the bottom shell plating, along the full breadth of the vessel's bottom, measured at right angles to the bottom shell.

(2554) (3) For a vessel to which paragraph (a)(4) of this section applies, the width of the double sides and the depth of the double bottom may be 38 cm. (15 in.), in lieu of the dimensions specified in paragraphs (d)(1) and (d)(2) of this section, provided that the double side and double bottom tanks were fitted under a construction or conversion contract awarded prior to June 30, 1990.

(2555) (4) For a vessel built under a contract awarded after September 11, 1992, a minimum 46 cm. (18 in.) clearance for passage between framing must be maintained throughout the double sides and double bottom.

(2556) (e) Except as provided in paragraph (e)(3) of this section, a vessel must not carry any oil in any tank extending forward of:

(2557) (1) The collision bulkhead; or

(2558) (2) In the absence of a collision bulk-head, the transverse plane perpendicular to the centerline through a point located:

(2559) (i) The lesser of 10 meters (32.8 ft.) or 5 percent of the vessel length, but in no case less than 1 meter (39 in.), aft of the forwarded perpendicular;

(2560) (ii) On a vessel of less than 10,000 DWT tons that is constructed and certificated for service exclusively on inland or limited short protected coastwise routes, the lesser of 7.62 meters (25 ft.) or 5 percent of the vessel length, but in no case less than 61 cm. (2 ft.), aft of the headlog or stem at the freeboard deck; or

(2561) (iii) On each vessel which operates exclusively as a box or trail barge, 61 cm. (2 ft.) aft of the headlog.

(2562) (3) This paragraph does not apply to independent fuel oil tanks that must be located on or above the main deck within the areas described in paragraphs (e)(1) and (e)(2) of this section to serve adjacent deck equipment that cannot be located further aft. Such tanks must be as small and as far aft as is practicable.

(2563) (f) On each vessel, the cargo tank length must not extend aft to any point closer to the stern than the distance equal to the required width of the double side, as prescribed in §157.10d(c)(1) or §157.10d(d)(1).

(2564)

Subpart G–Interim Measures for Certain Tank Vessels Without Double Hulls Carrying Petroleum Oils

(2565)

§157.400 Purpose and applicability.

(2566) (a) The purpose of this subpart is to establish mandatory safety and operational requirements to reduce environmental damage resulting from petroleum oil spills.

(2567) (b) This subpart applies to each tank vessels specified in §157.01 of this part that–

(2568) (1) Is 5,000 gross tons or more;

(2569) (2) Carries petroleum oil in bulk as cargo or oil cargo residue; and

(2570) (3) Is not equipped with a double hull meeting §157.10d of this part, or an equivalent to the requirements

of §157.10d, but required to be equipped with a double hull at a date set forth in 46 U.S.C. 3703a (b)(3) and (c)(3).

(2571)

§157.445 Maneuvering performance capability.

(2572) (a) A tankship owner or operator shall ensure that maneuvering tests in accordance with IMO Resolution A.751(18), sections 1.2, 2.3-2.4, 3-4.2, and 5 (with Explanatory Notes in MSC/Circ. 644) have been conducted by July 29, 1997. Completion of maneuvering performance tests must be shown by–

(2573) (1) For a foreign flag tankship, a letter from the flag administration or an authorized classification society, as described in §157.04 of this part, stating the requirements in paragraph (a) of this section have been met; or

(2574) (2) For a U.S. flag tankship, results from the vessel owner confirming the completion of the tests or a letter from an authorized classification society, as described in §157.04 of this part, stating the requirements in paragraph (a) of this section have been met.

(2575) (b) If a tankship undergoes a major conversion or alteration affecting the control systems, control surfaces, propulsion system, or other areas which may be expected to alter maneuvering performance, the tankship owner or operator shall ensure that new maneuvering tests are conducted as required by paragraph (a) of this section.

(2576) (c) If a tankship is one of a class of vessels with identical propulsion, steering, hydrodynamic, and other relevant design characteristics, maneuvering performance test results for any tankship in the class may be used to satisfy the requirements of paragraph (a) of this section.

(2577) (d) The tankship owner or operator shall ensure that the performance test results, recorded in the format of Appendix 6 of the Explanatory Notes in MSC/Circ. 644., are prominently displayed in the wheelhouse.

(2578) (e) Prior to entering the port or place of destination and prior to getting underway, the tankship master shall discuss the results of the performance tests with the pilot while reviewing the anticipated transit and the possible impact of the tankship's maneuvering capability on the transit.

(2579)

Part 160–Portsand Waterways Safety-General

(2580)

Subpart A–General

(2581)

§160.1 Purpose.

(2582) This subchapter contains regulations implementing 46 U.S.C. Chapter 700 "Ports and Waterways Safety" and related statutes.

(2583)

§160.3 Definitions.

(2584) For the purposes of this subchapter:

(2585) *Bulk* means material in any quantity that is shipped, stored, or handled without the benefit of package, label, mark or count and carried in integral or fixed independent tanks.

(2586) *Captain of the Port* means the Coast Guard officer designated by the Commandant to command a Captain of the Port Zone as described in part 3 of this chapter.

(2587) *Commandant* means the Commandant of the United States Coast Guard.

(2588) *Deviation* means any departure from any rule in this subchapter.

(2589) *Director, Vessel Traffic Services* means the Coast Guard officer designated by the Commandant to command a Vessel Traffic Service (VTS) as described in part 161 of this chapter.

(2590) *District Commander* means the Coast Guard officer designated by the Commandant to command a Coast Guard District as described in part 3 of this chapter.

(2591) *ETA* means estimated time of arrival.

(2592) *Length of Tow* means, when towing with a hawser, the length in feet from the stern of the towing vessel to the stern of the last vessel in tow. When pushing ahead or towing alongside, length of tow means the tandem length in feet of the vessels in tow excluding the length of the towing vessel.

(2593) *Person* means an individual, firm, corporation, association, partnership, or governmental entity.

(2594) *State* means each of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Trust Territories of the Pacific Islands, the Commonwealth of the Northern Marianas Islands, and any other commonwealth, territory, or possession of the United States.

(2595) *Tanker* means a self-propelled tank vessel constructed or adapted primarily to carry oil or hazardous materials in bulk in the cargo spaces.

(2596) *Tank Vessel* means a vessel that is constructed or adapted to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue.

(2597) *Vehicle* means every type of conveyance capable of being used as a means of transportation on land.

(2598) *Vessel* means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water.

(2599) *Vessel Traffic Services (VTS)* means a service implemented under part 161 of this chapter by the United States Coast Guard designed to improve the safety and efficiency of vessel traffic and to protect the environment. The VTS has the capability to interact with marine traffic and respond to traffic situations developing in the VTS area.

(2600) *Vessel Traffic Service Area* or *VTS Area* means the geographical area encompassing a specific VTS area of service as described in part 161 of this chapter. This area of service may be subdivided into sectors for the purpose of allocating responsibility to individual Vessel Traffic Centers or to identify different operating requirements.

(2601) **Note:** Although regulatory jurisdiction is limited to the navigable waters of the United States, certain vessels will be encouraged or may be required, as a condition of port entry, to report beyond this area to facilitate traffic management within the VTS area.

(2602) *VTS Special Area* means a waterway within a VTS area in which special operating requirements apply.

(2603)

§160.5 Delegations.

(2604) (a) District Commanders and Captains of the Ports are delegated the authority to establish safety zones.

(2605) (b) Under the provisions of **33 CFR 6.04-1** and **6.04-6**, District Commanders and Captains of the Ports have been delegated authority to establish security zones.

(2606) (c) Under the provisions **33 CFR §1.05-1**, District Commanders have been delegated authority to establish regulated navigation areas.

(2607) (d) Subject to the supervision of the cognizant Captain of the Port and District Commander, Directors, Vessel Traffic Services are delegated authority under **33 CFR 1.01-30** to discharge the duties of the Captain of the Port that involve directing the operation, movement and anchorage of vessels within a Vessel Traffic Service area including management of vessel traffic within anchorages, regulated navigation areas and safety zones, and to enforce Vessel Traffic Service and ports and waterways safety regulations. This authority may be exercised by Vessel Traffic Center personnel. The Vessel Traffic Center may, within the Vessel Traffic Service area, provide information, make recommendations, or to a vessel required under part 161 of this chapter to participate in a Vessel Traffic Service, issue an order, including an order to operate or anchor as directed; require the vessel to comply with orders issued; specify times of entry, movement or departure; restrict operations as necessary for safe operation under the circumstances; or take other action necessary for control of the vessel and the safety of the port or of the marine environment.

(2608)

§160.7 Appeals.

(2609) (a) Any person directly affected by a safety zone or an order or direction issued under this subchapter may request reconsideration by the official who issued it or in whose name it was issued. This request may be made orally or in writing, and the decision of the official receiving the request may be rendered orally or in writing.

(2610) (b) Any person directly affected by the establishment of a safety zone or by an order or direction issued by, or on behalf of, a Captain of the Port may appeal to the District Commander through the Captain of the Port. The appeal must be in writing, except as allowed under paragraph (e) of this section, and shall contain complete supporting documentation and evidence which the appellant wishes to have considered. Upon receipt of the appeal, the District Commander may direct a representative to gather and submit documentation or other evidence which would be necessary or helpful to a resolution of the appeal. A copy of this documentation and evidence is made available to the appellant. The appellant is afforded five working days from the date of receipt to submit rebuttal materials. Following submission of all materials, the District Commander issues a ruling, in writing, on the appeal. Prior to issuing the ruling, the District Commander may, as a matter of discretion, allow oral presentation on the issues.

(2611) (c) Any person directly affected by the establishment of a safety zone or by an order or direction issued by, or on behalf of, a District Commander, or who receives an unfavorable ruling on an appeal taken under paragraph (b) of this section may appeal to the Area Commander through the District Commander. The appeal must be in writing, except as allowed under paragraph (e) of this section, and shall contain complete supporting documentation and evidence which the appellant wishes to have considered. Upon receipt of the appeal, the Area Commander may direct a representative to gather and submit documentation or other evidence which would be necessary or helpful to a resolution of the appeal. A copy of this documentation and evidence is made available to the appellant. The appellant is afforded five working days from the date of receipt to submit rebuttal materials. Following submission of all materials, the Area Commander issues a ruling, in writing, on the appeal. Prior to issuing the ruling, the Area Commander may, as a matter of discretion, allow oral presentation on the issues.

(2612) (d) Any person who receives an unfavorable ruling on an appeal taken under paragraph (c) of this section, may appeal to the Commandant (CG–5P), Attn: Assistant Commandant for Prevention, U.S. Coast Guard Stop 7501, 2703 Martin Luther King Jr. Avenue SE., Washington, DC 20593–7501. The appeal must be in writing, except as allowed under paragraph (e) of this section. The Area Commander forwards the appeal, all the documents and evidence which formed the record upon which the order or direction was issued or the ruling under paragraph (c) of this section was made, and any comments which might be relevant, to the Assistant Commandant for Prevention. A copy of this documentation and evidence is made available to the appellant. The appellant is afforded 5 working days from the date of receipt to submit rebuttal materials to the Assistant Commandant for Prevention. The decision of the Assistant Commandant for Prevention is based upon the materials submitted, without oral argument or presentation. The decision of the Assistant Commandant for Prevention is issued in writing and constitutes final agency action.

(2613) (e) If the delay in presenting a written appeal would have significant adverse impact on the appellant, the appeal under paragraphs (b) and (c) of this section may initially be presented orally. If an initial presentation of the appeal is made orally, the appellant must submit the appeal in writing within five days of the oral presentation to the Coast Guard official to whom the presentation was made. The written appeal must contain, at a minimum,

the basis for the appeal and a summary of the material presented orally. If requested, the official to whom the appeal is directed may stay the effect of the action while the ruling is being appealed.

(2614)

Subpart B–Control of Vessel and Facility Operations

(2615)

§160.101 Purpose.

(2616) This subpart describes the authority exercised by District Commanders and Captains of the Ports to insure the safety of vessels and waterfront facilities, and the protection of the navigable waters and the resources therein. The controls described in this subpart are directed to specific situations and hazards.

(2617)

§160.103 Applicability.

(2618) (a) This subpart applies to any-

(2619) (1) Vessel on the navigable waters of the United States, except as provided in paragraphs (b) and (c) of this section;

(2620) (2) Bridge or other structure on or in the navigable waters of the United States; and

(2621) (3) Land structure or shore area immediately adjacent to the navigable waters of the United States.

(2622) (b) This subpart does not apply to any vessel on the Saint Lawrence Seaway.

(2623) (c) Except pursuant to international treaty, convention, or agreement, to which the United States is a party, this subpart does not apply to any foreign vessel that is not destined for, or departing from, a port or place subject to the jurisdiction of the United States and that is in-

(2624) (1) Innocent passage through the territorial sea of the United States;

(2625) (2) Transit through the navigable waters of the United States which form a part of an international strait.

(2626)

§160.105 Compliance with orders.

(2627) Each person who has notice of the terms of an order issued under this subpart must comply with that order.

(2628)

§160.107 Denial of entry.

(2629) Each District Commander or Captain of the Port, subject to recognized principles of international law, may deny entry into the navigable waters of the United States or to any port or place under the jurisdiction of the United States, and within the district or zone of that District Commander or Captain of the Port, to any vessel not in compliance with the provisions of the Port and Tanker Safety Act (46 U.S.C. chapter 700) or the regulations issued thereunder.

(2630)

§160.109 Waterfront facility safety.

(2631) (a) To prevent damage to, or destruction of, any bridge or other structure on or in the navigable waters of the United States, or any land structure or shore area immediately adjacent to those waters, and to protect the navigable waters and the resources therein from harm resulting from vessel or structure damage, destruction, or loss, each District Commander or Captain of the Port may-

(2632) (1) Direct the handling, loading, unloading, storage, stowage, and movement (including the emergency removal, control, and disposition) of explosives or other dangerous articles and substances, including oil or hazardous material as those terms are defined in 46 U.S.C. 2101 on any structure on or in the navigable waters of the United States, or any land structure or shore area immediately adjacent to those waters; and

(2633) (2) Conduct examinations to assure compliance with the safety equipment requirements for structures.

(2634)

§160.111 Special orders applying to vessel operations.

(2635) Each District Commander or Captain of the Port may order a vessel to operate or anchor in the manner directed when -

(2636) (a) The District Commander or Captain of the Port has reasonable cause to believe that the vessel is not in compliance with any regulation, law or treaty;

(2637) (b) The District Commander or Captain of the Port determines that the vessel does not satisfy the conditions for vessel operation and cargo transfers specified in §160.113; or

(2638) (c) The District Commander or Captain of the Port has determined that such order is justified in the interest of safety by reason of weather, visibility, sea conditions, temporary port congestion, other temporary hazardous circumstances, or the condition of the vessel.

(2639)

§160.113 Prohibition of vessel operation and cargo transfers.

(2640) (a) Each District Commander or Captain of the Port may prohibit any vessel, subject to the provisions of chapter 37 of Title 46, U.S. Code, from operating in the navigable waters of the United States, or from transferring cargo or residue in any port or place under the jurisdiction of the United States, and within the district or zone of that District Commander or Captain of the Port, if the District Commander or the Captain of the Port determines that the vessel's history of accidents, pollution incidents, or serious repair problems creates reason to believe that the vessel may be unsafe or pose a threat to the marine environment.

(2641) (b) The authority to issue orders prohibiting operation of the vessels or transfer of cargo or residue under paragraph (a) of this section also applies if the vessel:

(2642) (1) Fails to comply with any applicable regulation;

(2643) (2) Discharges oil or hazardous material in violation of any law or treaty of the United States;

(2644) (3) Does not comply with applicable vessel traffic service requirements;

(2645) (4) While underway, does not have at least one deck officer on the navigation bridge who is capable of communicating in the English language.

(2646) (c) When a vessel has been prohibited from operating in the navigable waters of the United States under paragraphs (a) or (b) of this section, the District Commander or Captain of the Port may allow provisional entry into the navigable waters of the United States, or into any port or place under the jurisdiction of the United States and within the district or zone of that District Commander or Captain of the Port, if the owner or operator of such vessel proves to the satisfaction of the District Commander or Captain of the Port, that the vessel is not unsafe or does not pose a threat to the marine environment, and that such entry is necessary for the safety of the vessel or the persons on board.

(2647) (d) A vessel which has been prohibited from operating in the navigable waters of the United States, or from transferring cargo or residue in a port or place under the jurisdiction of the United States under the provisions of paragraph (a) or (b)(1), (2), or (3) of this section, may be allowed provisional entry if the owner or operator proves, to the satisfaction of the District Commander or Captain of the Port that has jurisdiction, that the vessel is no longer unsafe or a threat to the environment, and that the condition which gave rise to the prohibition no longer exists.

(2648)

§160.115 Withholding of clearance.

(2649) Each District Commander or Captain of the Port may request the Secretary of the Treasury, or the authorized representative thereof, to withhold or revoke the clearance required by 46 U.S.C. 91 of any vessel, the owner or operator of which is subject to any penalties under 46 U.S.C. 70036.

(2650)

Subpart C–Notification of Arrival, Hazardous Conditions, and Certain Dangerous Cargos

(2651)

§160.201 General.

(2652) This subpart contains requirements and procedures for submitting a notice of arrival (NOA), and a notice of hazardous condition. The sections in this subpart describe:

(2653) (a) Applicability and exemptions from requirements in this subpart;

(2654) (b) Required information in an NOA;

(2655) (c) Required updates to an NOA;

(2656) (d) Methods and times for submission of an NOA, and updates to an NOA;

(2657) (e) How to obtain a waiver; and

(2658) (f) Requirements for submission of the notice of hazardous condition.

(2659) **Note to §160.201**. For notice-of-arrival requirements for the U.S. Outer Continental Shelf, see **33CFR part 146**.

(2660)

§160.202 Definitions.

(2661) Terms in this subpart that are not defined in this section or in §160.3 have the same meaning as those terms in 46 U.S.C. 2101. As used in this subpart—

(2662) *Agent* means any person, partnership, firm, company or corporation engaged by the owner or charterer of a vessel to act in their behalf in matters concerning the vessel.

(2663) *Barge* means a non-self propelled vessel engaged in commerce.

(2664) *Boundary waters* mean the waters from main shore to main shore of the lakes and rivers and connecting waterways, or the portions thereof, along which the international boundary between the United States and the Dominion of Canada passes, including all bays, arms, and inlets thereof, but not including tributary waters which in their natural channels would flow into such lakes, rivers, and waterways, or waters flowing from such lakes, rivers, and waterways, or the waters of rivers flowing across the boundary.

(2665) *Carried in bulk* means a commodity that is loaded or carried on board a vessel without containers or labels and received and handled without mark or count.

(2666) Certain dangerous cargo (CDC) includes any of the following:

(2667) (1) Division 1.1 or 1.2 explosives as defined in **49 CFR 173.50**.

(2668) (2) Division 1.5D blasting agents for which a permit is required under **49 CFR 176.415** or, for which a permit is required as a condition of a Research and Special Programs Administration exemption.

(2669) (3) Division 2.3 "poisonous gas", as listed in **49 CFR 172.101** that is also a "material poisonous by inhalation" as defined in **49 CFR 171.8**, and that is in a quantity in excess of 1 metric ton per vessel.

(2670) (4) Division 5.1 oxidizing materials for which a permit is required under **49 CFR 176.415** or for which a permit is required as a condition of a Research and Special Programs Administration exemption.

(2671) (5) A liquid material that has a primary or subsidiary classification of Division 6.1 "poisonous material" as listed **49 CFR 172.101** that is also a "material poisonous by inhalation," as defined in **49 CFR 171.8** and that is in a bulk packaging, or that is in a quantity in excess of 20 metric tons per vessel when not in a bulk packaging.

(2672) (6) Class 7, "highway route controlled quantity" radioactive material or "fissile material, controlled shipment," as defined in **49 CFR 173.403**.

(2673) (7) All bulk liquefied gas cargo carried under **46 CFR 151.50-31** or listed in **46 CFR 154.7** that is flammable

and/or toxic and that is not carried as certain dangerous cargo residue (CDC residue).

(2674) (8) The following bulk liquids except when carried as CDC residue:

(2675) (i) Acetone cyanohydrin;

(2676) (ii) Allyl alcohol;

(2677) (iii) Chlorosulfonic acid;

(2678) (iv) Crotonaldehyde;

(2679) (v) Ethylene chlorohydrin;

(2680) (vi) Ethylene dibromide;

(2681) (vii) Methacrylonitrile;

(2682) (viii) Oleum (fuming sulfuric acid); and

(2683) (ix) Propylene oxide, alone or mixed with ethylene oxide.

(2684) (9) The following bulk solids:

(2685) (i) Ammonium nitrate listed as Division 5.1 (oxidizing) material in **49 CFR 172.101** except when carried as CDC residue; and

(2686) (ii) Ammonium nitrate based fertilizer listed as a Division 5.1 (oxidizing) material in **49 CFR 172.101** except when carried as CDC residue.

(2687) *Certain dangerous cargo residue (CDC residue)* includes any of the following:

(2688) (1) Ammonium nitrate in bulk or ammonium nitrate based fertilizer in bulk remaining after all saleable cargo is discharged, not exceeding 1,000 pounds in total and not individually accumulated in quantities exceeding two cubic feet.

(2689) (2) For bulk liquids and liquefied gases, the cargo that remains onboard in a cargo system after discharge that is not accessible through normal transfer procedures, with the exception of the following bulk liquefied gas cargoes carried under **46 CFR 151.50-31** or listed in **46 CFR 154.7**:

(2690) (i) Ammonia, anhydrous;

(2691) (ii) Chlorine;

(2692) (iii) Ethane;

(2693) (iv) Ethylene oxide;

(2694) (v) Methane (LNG);

(2695) (vi) Methyl bromide;

(2696) (vii) Sulfur dioxide; and

(2697) (viii) Vinyl chloride.

(2698) *Charterer* means the person or organization that contracts for the majority of the carrying capacity of a ship for the transportation of cargo to a stated port for a specified period. This includes "time charterers" and "voyage charterers."

(2699) *Crewmember* means all persons carried on board the vessel to provide navigation and maintenance of the vessel, its machinery, systems, and arrangements essential for propulsion and safe navigation or to provide services for other persons on board.

(2700) *Embark* means when a crewmember or a person in addition to the crew joins the vessel.

(2701) *Ferry schedule* means a published document that:

(2702) (1) Identifies locations a ferry travels to and from;

(2703) (2) Lists the times of departures and arrivals; and

(2704) (3) Identifies the portion of the year in which the ferry maintains this schedule.

(2705) *Foreign vessel* means a vessel of foreign registry or operated under the authority of a country except the United States.

(2706) *Great Lakes* means Lakes Superior, Michigan, Huron, Erie, and Ontario, their connecting and tributary waters, the Saint Lawrence River as far as Saint Regis, and adjacent port areas.

(2707) *Gross tons* means the tonnage determined by the tonnage authorities of a vessel's flag state in accordance with the national tonnage rules in force before the entry into force of the International Convention on Tonnage Measurement of Ships, 1969 ("Convention"). For a vessel measured only under Annex I of the Convention, gross tons means that tonnage. For a vessel measured under both systems, the higher gross tonnage is the tonnage used for the purposes of the 300-gross-ton threshold.

(2708) *Hazardous condition* means any condition that may adversely affect the safety of any vessel, bridge, structure, or shore area or the environmental quality of any port, harbor, or navigable waterway of the United States. It may, but need not, involve collision, allision, fire, explosion, grounding, leaking, damage, injury or illness of a person aboard, or manning-shortage.

(2709) *Nationality* means the state (nation) in which a person is a citizen or to which a person owes permanent allegiance.

(2710) *Operating exclusivelywithin a single Captain of the Port zone* refers to vessel movements within the boundaries of a single COTP zone, *e.g.*, from one dock to another, one berth to another, one anchorage to another, or any combination of such transits. Once a vessel has arrived in a port in a COPT zone, it would not be considered as departing from a port or place simply because of its movements within that specific port.

(2711) *Operator* means any person including, but not limited to, an owner, a charterer, or another contractor who conducts, or is responsible for, the operation of a vessel.

(2712) *Persons in addition to crewmembers* mean any person onboard the vessel, including passengers, who are not included on the list of crewmembers.

(2713) *Port or place of departure* means any port or place in which a vessel is anchored or moored.

(2714) *Port or place of destination* means any port or place in which a vessel is bound to anchor or moor.

(2715) *Public vessel* means a vessel that is owned or demise-(bareboat) chartered by the government of the United States, by a State or local government, or by the government of a foreign country and that is not engaged in commercial service.

(2716) *Time charterer* means the party who hires a vessel for a specific amount of time. The owner and his crew manage the vessel, but the charterer selects the ports of destination.

(2754)

Table 160.206 – NOA Information Items

Required Information	Vessels neither carrying CDC nor controlling another vessel carrying CDC	Vessels carrying CDC or controlling another vessel carrying CDC
(1) Vessel Information		
(i) Name	X	X
(ii) Name of the registered owner	X	X
(iii) Country of registry	X	X
(iv) Call sign	X	X
(v) International Maritime Organization (IMO) international number or, if vessel does not have an assigned IMO international number, substitute with official number	X	X
(vi) Name of the operator	X	X
(vii) Name of the charterer	X	X
(viii) Name of classification society or recognized organization	X	X
(ix) Maritime Mobile Service Identity (MMSI) number, if applicable	X	X
(x) Whether the vessel is 300 gross tons or less (yes or no)	X	X
(xi) USCG Vessel Response Plan Control Number, if applicable	X	X
(2) Voyage Information		
(i) Names of last five foreign ports or places visited	X	X
(ii) Dates of arrival and departure for last five foreign ports or places visited	X	X
(iii) For the port or place of the United States to be visited, list the names of the receiving facility, the port or place, the city, and the state	X	X
(iv) For the port or place in the United States to be visited, the estimated date and time of arrival	X	X
(v) For the port or place in the United States to be visited, the estimated date and time of departure	X	X
(vi) The location (port or place and country) or position (latitude and longitude or waterway and mile marker) of the vessel at the time of reporting	X	X
(vii) The name and telephone number of a 24-hour point of contact	X	X
(viii) Whether the vessel's voyage time is less than 24 hours (yes or no)	X	X
(ix) Last port or place of departure	X	X
(x) Dates of arrival and departure for last port or place of departure	X	X
(3) Cargo Information		
(i) A general description of cargo, other than CDC, on board the vessel (e.g. grain, container, oil, etc.)	X	X
(ii) Name of each CDC carried, including cargo UN number, if applicable	–	X
(iii) Amount of each CDC carried	–	X
(4) Information for each Crewmember On Board		
(i) Full name	X	X
(ii) Date of birth	X	X
(iii) Nationality	X	X
(iv) Passport* or mariners document number (type of identification and number)	X	X
(v) Position or duties on the vessel	X	X
(vi) Where the crewmembers embarked (list port or place and country)	X	X
(5) Information for each Person On Board in Addition to Crew		
(i) Full name	X	X
(ii) Date of birth	X	X
(iii) Nationality	X	X
(iv) Passport number*	X	X
(v) Where the person embarked (list port or place and country)	X	X
(6) Operational condition of equipment required by 33 CFR part 164 of this chapter (see note to table)	X	X
(7) International Safety Management (ISM) Code Notice		
(i) The date of expiration for the company's Document of Compliance certificate that covers the vessel	X	X
(ii) The date of expiration for the vessel's Safety Management Certificate	X	X
(iii) The name of the Flag Administration, or the recognized organization(s) representing the vessel Flag Administration, that issued those certificates	X	X
(8) International Ship and Port Facility Code (ISPS) Notice		
(i) The date of issuance for the vessel's International Ship Security Certificate (ISSC), if any	X	X
(ii) Whether the ISSC, if any, is an initial Interim ISSC, subsequent and consecutive Interim ISSC, or final ISSC	X	X
(iii) Declaration that the approved ship security plan, if any, is being implemented	X	X
(iv) If a subsequent and consecutive Interim ISSC, the reasons therefore	X	X
(v) The name and 24-hour contact information for the Company Security Officer	X	X
(vi) The name of the Flag Administration, or the recognized security organization(s) representing the vessel Flag Administration that issued the ISSC	X	X

Note to Table 160.206. For items with an asterisk (*), see paragraph (b) of this section. Submitting a response for item 6 indicating that navigation equipment is not operating properly does not serve as notice to the District Commander, Captain of the Port, or Vessel Traffic Center, under **33 CFR 164.53**.

(2717) *Voyage charterer* means the party who hires a vessel for a single voyage. The owner and his crew manage the vessel, but the charterer selects the ports of destination.

(2718)

§160.203 Applicability.

(2719) (a) This subpart applies to the following vessels that are bound for or departing from ports or places within the navigable waters of the United States, as defined in **33 CFR 2.36(a)**, which includes internal waters and the territorial seas of the United States, and any deepwater port as defined in **33 CFR 148.5**:

(2720) (1) U.S. vessels in commercial service, and

(2721) (2) All foreign vessels.

(2722) (b) Unless otherwise specified in this subpart, the owner, agent, master, operator, or person in charge of a vessel regulated by this subpart is responsible for compliance with the requirements in this subpart.

(2723) (c) Towing vessels controlling a barge or barges required to submit an NOA under this subpart must submit only one NOA containing the information required for the towing vessel and each barge under its control.

(2724)

§160.204 Exemptions and exceptions.

(2725) (a) Except for reporting notice of hazardous conditions, the following vessels are exempt from requirements in this subpart:

(2726) (1) A passenger or offshore supply vessel when employed in the exploration for or in the removal of oil, gas, or mineral resources on the continental shelf.

(2727) (2) An oil spill response vessel (OSRV) when engaged in actual spill response operations or during spill response exercises.

(2728) (3) After December 31, 2015, a vessel required by **33 CFR 165.830** or **165.921** to report its movements, its cargo, or the cargo in barges it is towing.

(2729) (4) A United States or Canadian vessel engaged in the salving operations of any property wrecked, or rendering aid and assistance to any vessels wrecked, disabled, or in distress, in waters specified in Article II of the 1908 Treaty of Extradition, Wrecking and Salvage (35 Stat. 2035; Treaty Series 502).

(2730) (5) The following vessels neither carrying certain dangerous cargo nor controlling another vessel carrying certain dangerous cargo:

(2731) (i) A foreign vessel 300 gross tons or less not engaged in commercial service.

(2732) (ii) A vessel operating exclusively within a single Captain of the Port zone. Captain of the Port zones are defined in 33 CFR part 3.

(2733) (iii) A U.S. towing vessel and a U.S. barge operating solely between ports or places of the contiguous 48 states, Alaska, and the District of Columbia.

(2734) (iv) A public vessel.

(2735) (v) Except for a tank vessel, a U.S. vessel operating solely between ports or places of the United States on the Great Lakes.

(2736) (vi) A U.S. vessel 300 gross tons or less, engaged in commercial service not coming from a foreign port or place.

(2737) (vii) Each ferry on a fixed route that is described in an accurate schedule that is submitted by the ferry operator, along with information in paragraphs (a)(5)(vii)(A) through (J) of this section, to the Captain of the Port for each port or place of destination listed in the schedule at least 24 hours in advance of the first date and time of arrival listed on the schedule. At least 24 hours before the first date and time of arrival listed on the ferry schedule, each ferry operator who submits a schedule under paragraph (a)(5)(vii) of this section must also provide the following information to the Captain of the Port for each port or place of destination listed in the schedule for the ferry, and if the schedule or the following submitted information changes, the ferry operator must submit an updated schedule at least 24 hours in advance of the first date and time of arrival listed on the new schedule and updates on the following items whenever the submitted information is no longer accurate:

(2738) (A) Name of the vessel;

(2739) (B) Country of registry of the vessel;

(2740) (C) Call sign of the vessel;

(2741) (D) International Maritime Organization (IMO) international number or, if the vessel does not have an assigned IMO international number, the official number of the vessel;

(2742) (E) Name of the registered owner of the vessel;

(2743) (F) Name of the operator of the vessel;

(2744) (G) Name of the vessel's classification society or recognized organization, if applicable;

(2745) (H) Each port or place of destination;

(2746) (I) Estimated dates and times of arrivals at and departures from these ports or places; and

(2747) (J) Name and telephone number of a 24-hour point of contact.

(2748) (b) A vessel less than 500 gross tons is not required to submit the International Safety Management (ISM) Code Notice (Entry 7 in Table 160.206 of §160.206).

(2749) (c) A U.S. vessel is not required to submit the International Ship and Port Facility Security (ISPS) Code Notice information (Entry 8 in Table 160.206 of §160.206).

(2750)

§160.205 Notices of arrival.

(2751) The owner, agent, Master, operator, or person in charge of a vessel must submit notices of arrival consistent with the requirements in this subpart.

(2752)

§160.206 Information required in an NOA.

(2753) (a) Information required. With the exceptions noted in paragraph (b) of this section, each NOA must contain all of the information items specified in Table 160.206. Vessel owners and operators should protect any personal information they gather in preparing notices for transmittal to the National Vessel Movement Center (NVMC) to

prevent unauthorized disclosure of that information.

(2755) (b) Exceptions. If a crewmember or person on board other than a crewmember is not required to carry a passport for travel, then passport information required in Table 160.206 by items (4)(iv) and (5)(iv) need not be provided for that person.

(2756)

§160.208 Updates to a submitted NOA.

(2757) (a) Unless otherwise specified in this section, whenever events cause NOA information submitted for a vessel to become inaccurate, or the submitter to realize that data submitted was inaccurate, the owner, agent, Master, operator, or person in charge of that vessel must submit an update within the times required in §160.212.

(2758) (b) Changes in the following information need not be reported:

(2759) (1) Changes in arrival or departure times that are less than six (6) hours;

(2760) (2) Changes in vessel location or position of the vessel at the time of reporting (entry (2)(vi) to Table 160.206); and

(2761) (3) Changes to crewmembers' position or duties on the vessel (entry (4)(vii) to Table 160.206).

(2762) (c) When reporting updates, revise and resubmit the NOA.

(2763)

§160.210 Methods for submitting an NOA.

(2764) (a) *National Vessel Movement Center (NVMC)*. Except as otherwise provided in this paragraph or paragraph (b) of this section, vessels must submit NOA information required by §160.206 to the NVMC using methods currently specified at *www.nvmc.uscg.gov*, which includes submission through the NVMC electronic Notice of Arrival and Departure (eNOAD) World Wide Web site, and XML, which includes the Excel Workbook format. These data may also be submitted using other methods that may be added as future options on *www.nvmc.uscg.gov*. XML spreadsheets may be submitted via email to *enoad@ nvmc.uscg.gov*. If a vessel operator must submit an NOA or an update, for a vessel in an area without internet access or when experiencing technical difficulties with an onboard computer, and he or she has no shore-side support available, the vessel operator may fax or phone the submission to the NVMC. Fax at 1–800–547–8724 or 304–264–2684. Workbook available at *www.nvmc.uscg.gov*; or, telephone at 1–800–708–9823 or 304–264–2502.

(2765) (b) *Saint Lawrence Seaway*. Those vessels transiting the Saint Lawrence Seaway inbound, bound for a port or place in the United States, may meet the submission requirements of paragraph (a) of this section by submitting the required information to the Saint Lawrence Seaway Development Corporation and the Saint Lawrence Seaway Management Corporation of Canada using methods specified at *www.nvmc.uscg.gov*.

(2766)

§160.212 When to submit an NOA.

(2767) (a) *Submission of an NOA*. (1) Except as set out in paragraphs (a)(2) and (a)(3) of this section, all vessels must submit NOAs within the times required in paragraph (a)(4) of this section.

(2768) (2) Towing vessels, when in control of a vessel carrying CDC and operating solely between ports or places of the contiguous 48 states, Alaska, and the District of Columbia, must submit an NOA before departure but at least 12 hours before arriving at the port or place of destination.

(2769) (3) U.S. vessels 300 gross tons or less, arriving from a foreign port or place, and whose voyage time is less than 24 hours must submit an NOA at least 60 minutes before departure from the foreign port or place. Also, Canadian vessels 300 gross tons or less, arriving directly from Canada, via boundary waters, to a United States port or place on the Great Lakes, whose voyage time is less than 24 hours must submit an NOA at least 60 minutes before departure from the Canadian port or place.

(2770) (4) Times for submitting NOAs are as follows:

(2771)

If your voyage time is –	Then you must submit an NOA –
(i) 96 hours or more; or	At least 96 hours before arriving at the port or place of destination; or
(ii) Less than 96 hours	Before departure but at least 24 hours before arriving at the port or place of destination.

(2772) (b) *Submission of updates to an NOA*. (1) Except as set out in paragraphs (b)(2) and (b)(3) of this section, vessels must submit updates in NOA information within the times required in paragraph (b)(4) of this section.

(2773) (2) Towing vessels, when in control of a vessel carrying CDC and operating solely between ports or places in the contiguous 48 states, Alaska, and the District of Columbia, must submit updates to an NOA as soon as practicable but at least 6 hours before entering the port or place of destination.

(2774) (3) U.S. vessels 300 gross tons or less, arriving from a foreign port or place, whose voyage time is—

(2775) (i) Less than 24 hours but greater than 6 hours, must submit updates to an NOA as soon as practicable, but at least 6 hours before entering the port or place of destination.

(2776) (ii) Less than or equal to 6 hours, must submit updates to an NOA as soon as practicable, but at least 60 minutes before departure from the foreign port or place.

(2778)

If your remaining voyage time is –	Then you must submit updates to an NOA –
(i) 96 hours or more;	As soon as practicable, but at least 24 hours before arriving at the port or place of destination;
(ii) Less than 96 hours but not less than 24 hours; or	As soon as practicable, but at least 24 hours before arriving at the port or place of destination; or
(iii) Less than 24 hours	As soon as practicable, but at least 12 hours before arriving at the port or place of destination.

(2777) (4) Times for submitting updates to NOAs are as follows:

(2779)

§160.214 Waivers.

(2780) The Captain of the Port may waive, within that Captain of the Port's designated zone, any of the requirements of this subpart for any vessel or class of vessels upon finding that the vessel, route area of operations, conditions of the voyage, or other circumstances are such that application of this subpart is unnecessary or impractical for purposes of safety, environmental protection, or national security.

(2781)

§160.215 Force majeure.

(2782) When a vessel is bound for a port or place of the United States under force majeure, it must comply with the requirements in this section, but not other sections of this subpart. The vessel must report the following information to the nearest Captain of the Port as soon as practicable:

(2783) (a) The vessel Master's intentions;

(2784) (b) Any hazardous conditions as defined in §160.202; and

(2785) (c) If the vessel is carrying certain dangerous cargo or controlling a vessel carrying certain dangerous cargo, the amount and name of each CDC carried, including cargo UN number if applicable.

(2786)

§160.216 Notice of hazardous conditions.

(2787) (a) Whenever there is a hazardous condition either on board a vessel or caused by a vessel or its operation, the owner, agent, master, operator, or person in charge must immediately notify the nearest Coast Guard Sector Office or Group Office, and in addition submit any report required by **46 CFR 4.05-10**.

(2788) (b) When the hazardous condition involves cargo loss or jettisoning as described in **33 CFR 97.115**, the notification required by paragraph (a) of this section must include–

(2789) (1) What was lost, including a description of cargo, substances involved, and types of packages;

(2790) (2) How many were lost, including the number of packages and quantity of substances they represent;

(2791) (3) When the incident occurred, including the time of the incident or period of time over which the incident occurred;

(2792) (4) Where the incident occurred, including the exact or estimated location of the incident, the route the ship was taking, and the weather (wind and sea) conditions at the time or approximate time of the incident; and

(2793) (5) How the incident occurred, including the circumstances of the incident, the type of securing equipment that was used, and any other material failures that may have contributed to the incident.

(2794)

Part 161–Vessel Traffic Management

(2795)

Subpart A–Vessel Traffic Services

(2796)

General Rules

(2797)

§161.1 Purpose and Intent.

(2798) (a) The purpose of this part is to promulgate regulations implementing and enforcing certain sections of the 46 U.S.C. Chapter 700 Ports and Waterways Safety setting up a national system of Vessel Traffic Services that will enhance navigation, vessel safety, and marine environmental protection and promote safe vessel movement by reducing the potential for collisions, rammings, and groundings, and the loss of lives and property associated with these incidents within VTS areas established hereunder.

(2799) (b) Vessel Traffic Services provide the mariner with information related to the safe navigation of a waterway. This information, coupled with the mariner's compliance with the provisions set forth in this part, enhances the safe routing of vessels through congested waterways or waterways of particular hazard. Under certain circumstances, a VTS may issue directions to control the movement of vessels in order to minimize the risk of collision between vessels, or damage to property or the environment.

(2800) (c) The owner, operator, charterer, master, or person directing the movement of a vessel remains at all times responsible for the manner in which the vessel is operated and maneuvered, and is responsible for the safe navigation of the vessel under all circumstances. Compliance with these rules or with a direction of the VTS is at all times contingent upon the exigencies of safe navigation.

(2801) (d) Nothing in this part is intended to relieve any vessel, owner, operator, charterer, master, or person directing the movement of a vessel from the consequences of any neglect to comply with this part or any other applicable law or regulations (e.g., the International Regulations for Prevention of Collisions at Sea, 1972 (72 COLREGS) or the Inland Navigation Rules) or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

(2802)

§161.2 Definitions.

(2803) For the purposes of this part:

(2804) *Center* means a Vessel Traffic Center or Vessel Movement Center.

(2805) *Cooperative Vessel Traffic Services (CVTS)* means the system of vessel traffic management established and jointly operated by the United States and Canada within adjoining waters. In addition, CVTS facilitates

traffic movement and anchorages, avoids jurisdictional disputes, and renders assistance in emergencies in adjoining United States and Canadian waters.

(2806) *Hazardous Vessel Operating Condition* means any condition related to a vessel's ability to safely navigate or maneuver, and includes, but is not limited to:

(2807) (1) The absence or malfunction of vessel operating equipment, such as propulsion machinery, steering gear, radar system, gyrocompass, depth sounding device, automatic radar plotting aid (ARPA), radiotelephone, Automatic Identification System equipment, navigational lighting, sound signaling devices or similar equipment.

(2808) (2) Any condition on board the vessel likely to impair navigation, such as lack of current nautical charts and publications, personnel shortage, or similar condition.

(2809) (3) Vessel characteristics that affect or restrict maneuverability, such as cargo or tow arrangement, trim, loaded condition, underkeel or overhead clearance, speed capabilities, power availability, or similar characteristics, which may affect the positive control or safe handling of the vessel or the tow.

(2810) *Navigable waters* means all navigable waters of the United States including the territorial sea of the United States, extending to 12 nautical miles from United States baselines, as described in Presidential Proclamation No. 5928 of December 27, 1988.

(2811) *Precautionary Area* means a routing measure comprising an area within defined limits where vessels must navigate with particular caution and within which the direction of traffic may be recommended.

(2812) *Towing Vessel* means any commercial vessel engaged in towing another vessel astern, alongside, or by pushing ahead.

(2813) *Published* means available in a widely-distributed and publicly available medium (e.g., VTS User's Manual, ferry schedule, Notice to Mariners).

(2814) *Vessel Movement Center (VMC)* means the shore-based facility that operates the vessel tracking system for a Vessel Movement Reporting System (VMRS) area or zone within such an area. The VMC does not necessarily have the capability or qualified personnel to interact with marine traffic, nor does it necessarily respond to traffic situations developing in the area, as does a Vessel Traffic Service (VTS).

(2815) *Vessel Movement Reporting System (VMRS)* means a mandatory reporting system used to monitor and track vessel movements. This is accomplished by a vessel providing information under established procedures as set forth in this part in the areas defined in Table 161.12(c) (VTS and VMRS Centers, Call Signs/MMSI, Designated Frequencies, and Monitoring Areas).

(2816) *Vessel Movement Reporting System (VMRS) User* means a vessel, or an owner, operator, charterer, Master, or person directing the movement of a vessel that is required to participate in a VMRS.

(2817) *Vessel Traffic Center (VTC)* means the shore-based facility that operates the vessel traffic service for the Vessel Traffic Service area or zone within such an area.

(2818) *Vessel Traffic Services (VTS)* means a service implemented by the United States Coast Guard designed to improve the safety and efficiency of vessel traffic and to protect the environment. The VTS has the capability to interact with marine traffic and respond to traffic situations developing in the VTS area.

(2819) *Vessel Traffic Service Area* or *VTS Area* means the geographical area encompassing a specific VTS area of service. This area of service may be subdivided into zones for the purpose of allocating responsibility to individual Vessel Traffic Centers or to identify different operating requirements.

(2820) **Note:** Although regulatory jurisdiction is limited to the navigable waters of the United States, certain vessels will be encouraged or may be required, as a condition of port entry, to report beyond this area to facilitate traffic management within the VTS area.

(2821) VTS Special Area means a waterway within a VTS area in which special operating requirements apply.

(2822) *VTS User* means a vessel or an owner, operator, charterer, Master, or person directing the movement of a vessel within a VTS Area that is:

(2823) (1) Subject to the Vessel Bridge-to-Bridge Radiotelephone Act;

(2824) (2) Required to participate in a VMRS; or

(2825) (3) Equipped with a required Coast Guard type-approved Automatic Identification System (AIS).

(2826) *VTS User's Manual* means the manual established and distributed by the VTS to provide the mariner with a description of the services offered and rules in force for that VTS. Additionally, the manual may include chartlets showing the area and zone boundaries, general navigational information about the area, and procedures, radio frequencies, reporting provisions and other information which may assist the mariner while in the VTS area.

(2827)

§161.3 Applicability.

(2828) The provisions of this subpart shall apply to each VTS User and may also apply to any vessel while underway or at anchor on the navigable waters of the United States within a VTS area, to the extent the VTS considers necessary.

(2829)

§161.4 Requirement to carry the rules.

(2830) Each VTS User shall carry on board and maintain for ready reference a copy of these rules.

(2831) **Note 1 to § 161.4**: These rules are contained in the applicable U.S. Coast Pilot, the VTS User's Manual which may be obtained by contacting the appropriate VTS or downloaded from the Coast Guard Navigation Center website (https://www.navcen.uscg.gov).

(2832)

§161.5 Deviations from the rules.

(2833) (a) Requests to deviate from any provision in this part, either for an extended period of time or if anticipated before the start of a transit, must be submitted in writing to

(2861)

TABLE to §161.12(c)-VTS and VMRS Centers, Call Signs/MMSI, Designated Frequencies, and Monitoring Areas

Center MMSI[1] Call Sign	Designated frequency (Channel designation)—purpose[2]	Monitoring Area [3, 4]
Berwick Bay 003669950 *Berwick Traffic*	156.550 MHz (Ch. 11)	The waters south of 29°45'N, west of 91°10'W, north of 29°37'N, and east of 91°18'W.
Buzzards Bay *Buzzards Bay Control*[5]	156.600 MHz (Ch. 12)	The waters east and north of a line drawn from the southern tangent of Sakonnet Point, Rhode Island, in approximate position latitude 41°27.20′ N., longitude 71°11.70′ W., to the Buzzards Bay Entrance Light in approximate position latitude 41°23.8′ N., longitude 71°02.00′ W., and then to the southwestern tangent of Cuttyhunk Island, Massachusetts, at approximate position latitude 41°24.60′ N., longitude 70°57.00′ W., and including all of the Cape Cod Canal to its eastern entrance, except that the area of New Bedford harbor within the confines (north of) the hurricane barrier, and the passages through the Elizabeth Islands, is not considered to be ''Buzzards Bay''.
Houston-Galveston 003669954		The navigable waters north of 29°00.00′ N., west of 94°20.00′ W., south of 29°49.00′ N., and east of 95°20.00′ W.
Houston Traffic	156.550 MHz (Ch. 11) 156.250 MHz (Ch. 5A) —For sailing plans only	The navigable waters north of a line extending due west from the southern most end of Exxon Dock #1 (20°43.37' N, 95°01.27' W.)
Houston Traffic	156.600 MHz (Ch. 12) 156.250 MHz (Ch. 5A) —For sailing plans only	The navigable waters south of a line extending due west from the southern most end of Exxon Dock #1 (29°43.37' N, 95°01.27' W.).
Los Angeles/Long Beach 03660465 *San Pedro Traffic*	156.700 MHz (Ch. 14)	*Vessel Movement Reporting System Area*: The navigable waters within a 25 nautical mile radius of Point Fermin Light (33°42.30' N, 118°17.60' W.).
Louisville 003669732 *Louisville Traffic*	156.650 MHz (Ch. 13)	The waters of the Ohio River between McAlpine Locks (Mile 606) and Twelve Mile Island (Mile 593), only when the McAlpine upper pool gauge is at approximately 13.0 feet or above.
Lower Mississippi River 0036699952 *New Orleans Traffic*	156.550 MHz (Ch. 11)	The navigable waters of the Lower Mississippi River below 29°55.30' N, 89°55.60' W (Saxonholm Light) at 86.0 miles Above Head of Passes (AHP), extending down river to Southwest Pass, and, within a 12 nautical mile radius around 28°54.30' N, 89°25.70' W (Southwest Pass Entrance Light) at 20.1 miles Below Head of Passes.
New Orleans Traffic	156.600 MHz (Ch. 12)	The navigable waters of the Lower Mississippi River bounded on the north by a line drawn perpendicular on the river at 29°55.50′ N., 90°12.77′ W. (Upper Twelve Mile Point) at 109.0 miles AHP and on the south by a line drawn perpendicularly at 29°55.30′ N., 89°55.60′ W. (Saxonholm Light) at 86.0 miles AHP.
New Orleans Traffic	156.250 MHz (Ch. 05A)	The navigable waters of the Lower Mississippi River below 30°38.70′ N., 91°17.50′ W. (Port Hudson Light) at 254.5 miles AHP bounded on the south by a line drawn perpendicular on the river at 29°55.50′ N., 90°12.77′ W. (Upper Twelve Mile Point) at 109.0 miles AHP.
New York 003669951 *New York Traffic*	156.550 MHz (Ch. 11) —For sailing plans only 156.600 MHz (Ch. 12) —For vessels at anchor	The area consists of the navigable waters of the Lower New York Bay bounded on the east by a line drawn from Norton Point to Breezy Point; on the south by a line connecting the entrance buoys at the Ambrose Channel, Swash Channel, and Sandy Hook Channel to Sandy Hook Point; and on the southeast including the waters of Sandy Hook Bay south to a line drawn at latitude 40°25.00′ N.; then west in the Raritan Bay to the Raritan River Railroad Bridge, then north into waters of the Arthur Kill and Newark Bay to the Lehigh Valley Draw Bridge at latitude 40°41.90′ N.; and then east including the waters of the Kill Van Kull and the Upper New York Bay north to a line drawn east-west from the Holland Tunnel ventilator shaft at latitude 40°43.70′ N., longitude 74°01.60′ W., in the Hudson River; and then continuing east including the waters of the East River to the Throgs Neck Bridge, excluding the Harlem River.
New York Traffic	156.700 MHz (Ch. 14)	The navigable waters of the Lower New York Bay west of a line drawn from Norton Point to Breezy Point; and north of a line connecting the entrance buoys of Ambrose Channel, Swash Channel, and Sandy Hook Channel, to Sandy Hook Point; on the southeast including the waters of the Sandy Hook Bay south to a line drawn at latitude 40°25.00′ N.; then west into the waters of Raritan Bay East Reach to a line drawn from Great Kills Light south through Raritan Bay East Reach LGB #14 to Comfort PT, NJ; then north including the waters of the Upper New York Bay south of 40°42.40′ N. (Brooklyn Bridge) and 40°43.70′ N. (Holland Tunnel Ventilator Shaft); west through the KVK into the Arthur Kill north of 40°38.25′ N. (Arthur Kill Railroad Bridge); then north into the waters of the Newark Bay, south of 40°41.95′ N. (Lehigh Valley Draw Bridge).
New York Traffic	156.600 MHz (Ch. 12)	The navigable waters of the Raritan Bay south to a line drawn at latitude 40°26.00′ N.; then west of a line drawn from Great Kills Light south through the Raritan Bay East Reach LGB #14 to Point Comfort, NJ; then west to the Raritan River Railroad Bridge; and north including the waters of the Arthur Kill to 40°28.25′ N. (Arthur Kill Railroad Bridge); including the waters of the East River north of 40°42.40′ N. (Brooklyn Bridge) to the Throgs Neck Bridge, excluding the Harlem River.

(2862)

TABLE to §161.12(c)-VTS and VMRS Centers, Call Signs/MMSI, Designated Frequencies, and Monitoring Areas

Center MMSI[1] Call Sign	Designated frequency (Channel designation)—purpose[2]	Monitoring Area [3, 4]
Port Arthur 003669955 *Port Arthur Traffic*	156.050 MHz (Ch. 01A)	The navigable waters of the Sabine-Neches Canal south of 29°52.70′ N.; Port Arthur Canal; Sabine Pass Channel; Sabine Bank Channel; Sabine Outer Bar Channel; the offshore safety fairway; and the ICW from High Island to its intersection with the Sabine-Neches Canal.
Port Arthur Traffic	156.275 MHz (Ch. 65A)	The navigable waters of the Neches River; Sabine River; and Sabine-Neches Waterway north of 29°52.70′ N.; and the ICW from its intersection with the Sabine River to MM 260.
Port Arthur Traffic	156.675 MHz (Ch. 73)[6]	The navigable waters of the Calcasieu Channel; Calcasieu River Channel; and the ICW from MM 260 to MM 191.
Prince William Sound 003669958 *Valdez Traffic*	156.650 MHz (Ch. 13)	The navigable waters south of 61°05.00′ N., east of 147°20.00′ W., north of 60°00.00′ N., and west of 146°30.00′ W.; and, all navigable waters in Port Valdez.
Puget Sound[7] *Seattle Traffic* 003669957	156.700 MHz (Ch. 14)	The waters of Puget Sound, Hood Canal and adjacent waters south of a line connecting Nodule Point and Bush Point in Admiralty Inlet and south of a line drawn due east from the southernmost tip of Possession Point on Whidbey Island to the shoreline.
Seattle Traffic 003669957	156.250 MHz (Ch. 5A)	The waters of the Salish Sea east of 124°40.00′ W. excluding the waters in the central portion of the Salish Sea north and east of Race Rocks; the navigable waters of the Strait of Georgia east of 122°52.00′ W.; the San Juan Island Archipelago, Rosario Strait, Bellingham Bay; Admiralty Inlet north of a line connecting Nodule Point and Bush Point and all waters east of Whidbey Island north of a line drawn due east from the southernmost tip of Possession Point on Whidbey Island to the shoreline.
Tofino Traffic 003160012	156.725 MHz (Ch. 74)	The waters west of 124°40.00′ W. within 50 nautical miles of the coast of Vancouver Island including the waters north of 48°00.00′ N., and east of 127°00.00′ W.
Victoria Traffic 003160010	156.550 MHz (Ch. 11)	The waters of the Strait of Georgia west of 122°52.00′ W., the navigable waters of the central Salish Sea north and east of Race Rocks, including the Gulf Island Archipelago, Boundary Pass and Haro Strait.
San Francisco 003669956 *San Francisco Traffic*	156.700 MHz (Ch. 14)	The navigable waters of the San Francisco Offshore Precautionary Area, the navigable waters shoreward of the San Francisco Offshore Precautionary Area east of 122°42.00′ W. and north of 37°40.00′ N. extending eastward through the Golden Gate, and the navigable waters of San Francisco Bay and as far east as the port of Stockton on the San Joaquin River, as far north as the port of Sacramento on the Sacramento River.
San Francisco Traffic	156.600 MHz (Ch. 12)	The navigable waters within a 38 nautical mile radius of Mount Tamalpais (37°55.80′ N., 122°34.60′ W.) west of 122°42.00′ W. and south of 37°40.00′ N. and excluding the San Francisco Offshore Precautionary Area.
St. Marys River 003669953 *Soo Traffic*	156.600 MHz (Ch. 12)	The waters of the St. Marys River and lower Whitefish Bay from 45°57.00′ N. (De Tour Reef Light) to the south, to 46°38.70′ N. (Ile Parisienne Light) to the north, except the waters of the St. Marys Falls Canal and to the east along a line from La Pointe to Sims Point, within Potagannissing Bay and Worsley Bay.

Notes:

[1] Maritime Mobile Service Identifier (MMSI) is a unique nine-digit number assigned that identifies ship stations, ship earth stations, coast stations, coast earth stations, and group calls for use by a digital selective calling (DSC) radio, an INMARSAT ship earth station or AIS. AIS requirements are set forth in §§161.21 and 164.46 of this subchapter. The requirements set forth in §161.21 of this subchapter apply in those areas denoted with an MMSI number, except for Louisville and Los Angeles/Long Beach.

[2] In the event of a communication failure, difficulties or other safety factors, the Center may direct or permit a user to monitor and report on any other designated monitoring frequency or the bridge-to-bridge navigational frequency, 156.650 MHz (Channel 13) or 156.375 MHz (Ch. 67), to the extent that doing so provides a level of safety beyond that provided by other means. The bridge-to-bridge navigational frequency, 156.650 MHz (Ch. 13), is used in certain monitoring areas where the level of reporting does not warrant a designated frequency.

[3] All geographic coordinates (latitude and longitude) are expressed in North American Datum of 1983 (NAD 83).

[4] Some monitoring areas extend beyond navigable waters. Although not required, users are strongly encouraged to maintain a listening watch on the designated monitoring frequency in these areas. Otherwise, they are required to maintain watch as stated in 47 CFR 80.148.

[5] In addition to the vessels denoted in Section 161.16 of this chapter, requirements set forth in subpart B of 33 CFR part 161 also apply to any vessel transiting VMRS Buzzards Bay required to carry a bridge-to-bridge radiotelephone by part 26 of this chapter.

[6] Until otherwise directed, full VTS services will not be available in the Calcasieu Channel, Calcasieu River Channel, and the ICW from MM 260 to MM 191. Vessels may contact Port Arthur Traffic on the designated VTS frequency to request advisories, but are not required to monitor the VTS frequency in this zone.

[7] A Cooperative Vessel Traffic Service was established by the United States and Canada within adjoining waters. The appropriate Center administers the rules issued by both nations; however, enforces only its own set of rules within its jurisdiction. Note, the bridge-to-bridge navigational frequency, 156.650 MHz (Ch. 13), is not so designated in Canadian waters, therefore users are encouraged and permitted to make passing arrangements on the designated monitoring frequencies.

the appropriate District Commander. Upon receipt of the written request, the District Commander may authorize a deviation if it is determined that such a deviation provides a level of safety equivalent to that provided by the required measure or is a maneuver considered necessary for safe navigation under the circumstances. An application for an authorized deviation must state the need and fully describe the proposed alternative to the required measure.

(2834) (b) Requests to deviate from any provision in this part due to circumstances that develop during a transit or immediately preceding a transit may be made to the appropriate VTC. Requests to deviate must be made as far in advance as practicable. Upon receipt of the request, the VTC may authorize a deviation if it is determined that, based on vessel handling characteristics, traffic density, radar contacts, environmental conditions and other relevant information, such a deviation provides a level of safety equivalent to that provided by the required measure or is a maneuver considered necessary for safe navigation under the circumstances.

(2835)

§161.6 Preemption.

(2836) The regulations in this part have preemptive impact over State laws or regulations on the same subject matter. The Coast Guard has determined, after considering the factors developed by the Supreme Court in U.S. v. Locke, 529 U.S. 89 (2000), that by enacting 46 U.S.C. Chapter 700 'Ports and Waterways Safety', Congress intended that Coast Guard regulations preempt State laws or regulations regarding vessel traffic services in United States ports and waterways.

(2837)

Services, VTS Measures, and Operating Requirements

(2838)

§161.10 Services.

(2839) To enhance navigation and vessel safety, and to protect the marine environment, a VTS may issue advisories, or respond to vessel requests for information, on reported conditions within the VTS area, such as:

(2840) (a) Hazardous conditions or circumstances;

(2841) (b) Vessel congestion;

(2842) (c) Traffic density;

(2843) (d) Environmental conditions;

(2844) (e) Aids to navigation status;

(2845) (f) Anticipated vessel encounters;

(2846) (g) Another vessel's name, type, position, hazardous vessel operating conditions, if applicable, and intended navigation movements, as reported;

(2847) (h) Temporary measures in effect;

(2848) (i) A description of local harbor operations and conditions, such as ferry routes, dredging, and so forth;

(2849) (j) Anchorage availability; or

(2850) (k) Other information or special circumstances.

(2851)

§161.11 VTS measures.

(2852) (a) A VTS may issue measures or directions to enhance navigation and vessel safety and to protect the marine environment, such as, but not limited to:

(2853) (1) Designating temporary reporting points and procedures;

(2854) (2) Imposing vessel operating requirements; or

(2855) (3) Establishing vessel traffic routing schemes.

(2856) (b) During conditions of vessel congestion, restricted visibility, adverse weather, or other hazardous circumstances, a VTS may control, supervise, or otherwise manage traffic, by specifying times of entry, movement, or departure to, from, or within a VTS area.

(2857)

§161.12 Vessel operating requirements.

(2858) (a) Subject to the exigencies of safe navigation, a VTS User shall comply with all measures established or directions issued by a VTS.

(2859) (b) If, in a specific circumstance, a VTS User is unable to safely comply with a measure or direction issued by the VTS, the VTS User may deviate only to the extent necessary to avoid endangering persons, property or the environment. The deviation shall be reported to the VTS as soon as is practicable.

(2860) (c) When not exchanging voice communications, a VTS User must maintain a listening watch as required by §26.04(e) of this chapter on the VTS frequency designated in Table 161.12(c) (VTS and VMRS Centers, Call Signs/MMSI, Designated Frequencies, and Monitoring Areas). In addition, the VTS User must respond promptly when hailed and communicated in the English language.

(2863) **Note to §161.12(c):** As stated in **47 CFR 80.148(b)**, a very high frequency watch on Channel 16 (156.800 MHz) is not required on vessels subject to the Vessel Bridge-to-Bridge Radiotelephone Act and participating in a Vessel Traffic Service (VTS) system when the watch is maintained on both the vessel bridge-to-bridge frequency and a designated VTS frequency.

(2864) (d) As soon as practicably a VTS User shall notify the VTS of any of the following:

(2865) (1) A marine casualty as defined in **46 CFR 4.05-1**;

(2866) (2) Involvement in the ramming of a fixed or floating object;

(2867) (3) A pollution incident as defined in §151.15 of this chapter:

(2868) (4) A defect or discrepancy in an aid to navigation;

(2869) (5) A hazardous condition as defined in §160.202 of this chapter;

(2870) (6) Improper operation of vessel equipment required by Part 164 of this chapter;

(2871) (7) A situation involving hazardous materials for which a report is required by **49 CFR 176.48**; and

(2872) (8) A hazardous vessel operating condition as defined in §161.2.

(2893)

TABLE 161.18(a) – The IMO Standard Ship Reporting System

A	ALPHA	Ship	Name, call sign or ship station identity, and flag.
B	BRAVO	Dates and time of events	A 6 digit group giving day of month (first two digits), hours and minutes (last four digits). If other than UTC state time zone used.
C	CHARLIE	Position	A 4 digit group giving latitude in degrees and minutes suffixed with N (north) or S (south) and a 5 digit group giving longitude in degrees and minutes suffixed with E (east) or W (west); or
D	DELTA	Position	True bearing (first 3 digits) and distance (state distance) in nautical miles from a clearly identified landmark (state landmark).
E	ECHO	True course	A 3 digit group.
F	FOXTROT	Speed in knots and tenths of knots	A 3 digit group.
G	GOLF	Port of Departure	Name of last port of call.
H	HOTEL	Date, time and point of entry system	Entry time expressed as in (B) and into the entry position expressed as in (C) or (D).
I	INDIA	Destination and expected time of arrival	Name of port and date time group expressed as in (B).
J	JULIET	Pilot	State whether a deep sea or local pilot is on board.
K	KILO	Date, time and point of exit from system	Exit time expressed as in (B) and exit position expressed as in (C) or (D).
L	LIMA	Route information	Intended track.
M	MIKE	Radio	State in full names of communications stations/frequencies guarded.
N	NOVEM-BER	Time of next report	Date time group expressed as in (B).
O	OSCAR	Maximum present static draught in meters	4 digit group giving meters and centimeters.
P	PAPA	Cargo on board	Cargo and brief details of any dangerous cargoes as well as harmful substances and gases that could endanger persons or the environment.
Q	QUEBEC	Defects, damage, deficiencies or limitations	Brief detail of defects, damage, deficiencies or other limitations.
R	ROMEO	Description of pollution or dangerous goods lost	Brief details of type of pollution (oil, chemicals, etc.) or dangerous goods lost overboard; position expressed as in (C) or (D).
S	SIERRA	Weather conditions	Brief details of weather and sea conditions prevailing.
T	TANGO	Ship's representative and/or owner	Details of name and particulars of ship's representative and/or owner for provision of information.
U	UNIFORM	Ship size and type	Details of length, breadth, tonnage, and type, etc., as required.
V	VICTOR	Medical personnel	Doctor, physician's assistant, nurse, no medic.
W	WHISKEY	Total number of persons on board	State number.
X	XRAY	Miscellaneous	Any other information as appropriate. [i.e., a detailed description of a planned operation, which may include: its duration; effective area; any restrictions to navigation; notification procedures for approaching vessels; in addition, for a towing operation: configuration, length of the tow, available horsepower, etc.; for a dredge or floating plant: configuration of pipeline, mooring configuration, number of assist vessels, etc.].

(2873)

§161.13 VTS Special Area Operating Requirements.

(2874) The following operating requirements apply within a VTS Special Area:

(2875) (a) A VTS User shall, if towing astern, do so with as short a hawser as safety and good seamanship permits.

(2876) (b) A VMRS User shall:

(2877) (1) Not enter or get underway in the area without prior approval of the VTS;

(2878) (2) Not enter a VTS Special Area if a hazardous vessel operating condition or circumstance exists;

(2879) (3) Not meet, cross, or overtake any other VMRS User in the area without prior approval of the VTS; and

(2880) (4) Before meeting, crossing, or overtaking any other VMRS User in the area, communicate on the designated vessel bridge-to-bridge radiotelephone frequency, intended navigation movements, and any other information necessary in order to make safe passing arrangements. This requirement does not relieve a vessel of any duty prescribed by the International Regulations for Prevention of Collisions at Sea, 1972 (72 COLREGS) or the Inland Navigation Rules.

(2881)

Subpart B–VesselMovement Reporting System

(2882)

§161.15 Purpose and Intent.

(2883) (a) A Vessel Movement Reporting System (VMRS) is a system used to monitor and track vessel movements within a VTS or VMRS area. This is accomplished by requiring that vessels provide information under established procedures as set forth in this part, or as directed by the Center.

(2884) (b) To avoid imposing an undue reporting burden or unduly congesting radiotelephone frequencies, reports shall be limited to information which is essential to achieve the objectives of the VMRS. These reports are consolidated into three reports (sailing plan, position, and final).

(2938)

TABLE 161.35(b)-VTS HOUSTON/GALVESTON PRECAUTIONARY AREAS			
Precautionary area name	Radius (yards)	Center Points	
		Latitude	Longitude
Bolivar Roads	4000	29°20.9′N	94°47.0′W
Red Fish Bar	4000	29°29.8′N	94°51.9′W
Bayport Channel	4000	29°36.7′N	94°57.2′W
Morgans Point	2000	29°41.0′N	94°59.0′W
Upper San Jacinto Bay	1000	29°42.3′N	95°01.1′W
Baytown	1000	29°43.6′N	95°01.4′W
Lynchburg	1000	29°45.8′N	95°04.8′W
Carpenter Bayou	1000	29°45.3′N	95°05.6′W
Jacintoport	1000	29°44.8′N	95°06.0′W
Greens Bayou	1000	29°44.8′N	95°10.2′W
Hunting Bayou	1000	29°44.3′N	95°12.1′W
Sims Bayou	1000	29°43.2′N	95°14.4′W
Brady Island	1000	29°43.5′N	95°16.4′W
Buffalo Bayou	1000	29°45.0′N	95°17.3′W
Note: Each Precautionary Area encompasses a circular area of the radius denoted.			

TABLE 161.35(c)-VTS HOUSTON/GALVESTON REPORTING POINTS				
Designator	Geographic name	Geographic description	Latitude/Longitude	Notes
1	Galveston Bay Entrance Channel	Galveston Bay Entrance CH Lighted Buoy (LB) “1C”	29°18.2′N, 94°37.6′W	
2	Galveston Bay Entrance Channel	Galveston Bay Entrance Channel LB 11 and 12	29°20.6′N, 94°44.6′W	
E	Bolivar Land Cut	Mile 349 Intracoastal Waterway (ICW)	29°22.5′N, 94°46.9′W	Tows entering HSC also report at HSC LB 25 & 26
W	Pelican Cut	Mile 351 ICW	29°21.4′N, 94°48.5′W	Tows entering HSC also report at HSC LB 25 & 26
G	Galveston Harbor	Galveston Channel Lt. 2	29°20.2′N, 94°46.6′W	Coast Guard Base
T	Texas City Channel	Texas City Channel Lt. 12	29°22.4′N, 94°50.9′W	
X	Houston Ship Channel ICW Intersection	Houston Ship Channel (HSC) LB 25 and 26	29°22.2′N, 94°48.1′W	Tows entering HSC from ICW or Texas Cut only
3	Lower Galveston Bay	HSC LB 31 and LB 32	29°23.8′N, 94°48.9′W	
4	Red Fish Bar	HSC Lt. 53 & 54	29°30.3′N, 94°52.4′W	
P	Bayport Ship Channel	Bayport Ship Channel Lt. 8 and 9	29°36.8′N, 94°59.5′W	Bayport Land Cut
4A	Upper Galveston Bay	HSC Bouys 69 and 70	29°34.7′N, 94°55.8′W	Tows only
5	Morgan’s Point	HSC Lt. 91	29°41.0′N, 94°59.0′W	
6	Exxon	HSC Lt. 109A	29°43.5′N, 95°01.4′W	
7	Lynchburg	Ferry crossing	29°45.8′N, 95°04.8′W	
8	Shell Oil	Boggy crossing	29°44.1′N, 95°08.0′W	
9	Greens Bayou	HSC Lt. 152	29°44.8′N, 95°10.1′W	
10	Hunting Bayou	Hunting Bayou Turning Basin	29°44.4′N, 95°12.1′W	
11	Lyondell	Sims Bayou Turning Basin	29°43.2′N, 95°14.4′W	
12	I–610 Bridge	I–610 Bridge	29°43.5′N, 95°16.0′W	
13	Buffalo Bayou	Houston Turning Basin	29°45.0′N, 95°17.4′W	

(2885)

§161.16 Applicability.

(2886) Unless otherwise stated, the provisions of this subpart apply to the following vessels and VMRS Users:

(2887) (a) Every power-driven vessel of 40 meters (approximately 131 feet) or more in length, while navigating;

(2888) (b) Every towing vessel of 8 meters (approximately 26 feet) or more in length, while navigating; or

(2889) (c) Every vessel certificated to carry 50 or more passengers for hire, when engaged in trade.

(2890)

§161.17 [Removed and Reserved]

(2891)

§161.18 Reporting requirements.

(2892) (a) A Center may: (1) Direct a vessel to provide any of the information set forth in Table 161.18(a) (IMO Standard Ship Reporting System);

(2894) (2) Establish other means of reporting for those vessels unable to report on the designated frequency; or

(2895) (3) Require reports from a vessel in sufficient time to allow advance vessel traffic planning.

(2896) (b) All reports required by this part shall be made as soon as is practicable on the frequency designated in Table 161.12(c) (VTS and VMRS Centers, Call Signs/MMSI, Designated Frequencies, and Monitoring Areas).

(2897) (c) When not exchanging communications, a VMRS User must maintain a listening watch as described in §26.04(e) of this chapter on the frequency designated in Table 161.12(c) (VTS and VMRS Centers, Call Signs/MMSI, Designated Frequencies, and Monitoring Areas). In addition, the VMRS User must respond promptly when hailed and communicate in the English language.

(2898) **Note:** As stated in **47 CFR 80.148(b)**, a VHF watch on Channel 16 (156.800 MHz) is not required on vessels subject to the Vessel Bridge-to-Bridge Radiotelephone Act and participating in a Vessel Traffic Service (VTS) system when the watch is maintained on both the vessel bridge-to-bridge frequency and a designated VTS frequency.

(2899) (d) A vessel must report:

(2900) (1) Any significant deviation from its Sailing Plan, as defined in §161.19, or from previously reported information; or

(2901) (2) Any intention to deviate from a VTS issued measure or vessel traffic routing system.

(2902) (e) When reports required by this part include time information, such information shall be given using the local time zone in effect and the 24-hour military clock system.

(2903)

§161.19 Sailing Plan (SP).

(2904) Unless otherwise stated, at least 15 minutes before navigating a VTS area, a vessel must report the:

(2905) (a) Vessel name and type;

(2906) (b) Position;

(2907) (c) Destination and ETA;

(2908) (d) Intended route;

(2909) (e) Time and point of entry; and

(2910) (f) Certain dangerous cargo on board or in its tow, as defined in §160.204 of this subchapter.

(2911)

§161.20 Position Report (PR).

(2912) A vessel must report its name and position:

(2913) (a) Upon point of entry into a VMRS area;

(2914) (b) At designated points as set forth in Subpart C; or

(2915) (c) When directed by the Center.

(2916)

§161.21 Sailing Plan Deviation Report (DR).

(2917) (a) Unless otherwise directed, vessels equipped with an Automatic Identification System (AIS) are required to make continuous, all stations, AIS broadcasts, in lieu of voice Position Reports, to those Centers denoted in Table 161.12(c) of this part.

(2918) (b) Should an AIS become non-operational, while or prior to navigating a VMRS area, it should be restored to operating condition as soon as possible, and, until restored a vessel must:

(2919) (1) Notify the Center;

(2920) (2) Make voice radio Position Reports at designated reporting points as required by §161.20(b) of this part; and

(2921) (3) Make any other reports as directed by the Center.

(2922)

§161.22 Final Report (FR).

(2923) A vessel must report its name and position:

(2924) (a) On arrival at its destination; or

(2925) (b) When leaving a VTS area.

(2926)

§161.23 Reporting exemptions.

(2927) (a) Unless otherwise directed, the following vessels are exempted from providing Position and Final Reports due to the nature of their operation:

(2928) (1) Vessels on a published schedule and route;

(2929) (2) Vessels operating within an area of a radius of three nautical miles or less; or

(2930) (3) Vessels escorting another vessel or assisting another vessel in maneuvering procedures.

(2931) (b) A vessel described in paragraph (a) of this section must:

(2932) (1) Provide a Sailing Plan at least 5 minutes but not more than 15 minutes before navigating within the VMRS area; and

(2933) (2) If it departs from its promulgated schedule by more than 15 minutes or changes its limited operating area, make the established VMRS reports, or report as directed.

(2934)

Subpart C–Vessel Traffic Service and Vessel

(2945)

TABLE 161.40(c)-VTS Berwick Bay Reporting Points

Designator	Geographic name	Geographic description	Latitude/Longitude	Notes
1	Stouts Pass	Stouts Point Light "1" Mile 113–Atchafalaya River	29°43′47"N, 91°13′25″W	
2	Berwick Lock	Mile 1.9 MC/PA	29°43′10"N, 91°13′28″W	If transiting the Lock
3	Conrad's Point Junction	Buoy "1" Mile 1.5 MC/PA	29°42′32"N, 91°13′14″W	
4	Swift Ships Flat Lake Junction	Mile 3 MC/PA	29°43′26"N, 91°12′22″W	
5	Burlington Northern/Santa Fe Railroad Bridge	Mile 0.3 MC/PA	29°41′34"N, 91°12′44″W	
6	20 Grant Point Junction	Bayou Boeuf-Atchafalaya R. Mile 95.5 ICW	29°41′18"N, 91°12′36″W	
7	ICW	Overhead Power Cable Mile 96.5 ICW	29°40′43"N, 91°13′18″W	
8	Wax Bayou Junction	Light "A" Mile 98.2W ICW	29°39′29"N, 91°14′46″W	
9	Shaffer Junction	ICW-Bayou Shaffer Mile 94.5 ICW	29°41′10"N, 91°11′38″W	

Movement Reporting System Areas and Reporting Points

(2935) **Note:** All geographic coordinates contained in part 161 (latitude and longitude) are expressed in North American Datum of 1983 (NAD 83).

(2936)

§161.35 Vessel Traffic Service Houston/Galveston.

(2937) (a) The VTS area consists of the following major waterways and portions of connecting waterways: Galveston Bay Entrance Channel; Outer Bar Channel; Inner Bar Channel: Bolivar Roads Channel; Galveston Channel; Gulf ICW and Galveston-Freeport Cut-Off from Mile 346 to Mile 352; Texas City Channel; Texas City Turning Basin; Texas City Channel; Texas City Canal Turning Basin; Houston Ship Channel; Bayport Channel; Bayport Turning Basin; Houston Turning Basin: and the following precautionary areas associated with these waterways.

(2939) (b) *Precautionary Areas*. (Table 161.35(b))

(2940) (c) *Reporting Points*. (Table 161.35(c))

(2941)

§161.40 Vessel Traffic Service Berwick Bay.

(2942) (a) The VTS area consists of the navigable waters of the following segments of waterways: the Intracoastal Waterway (ICW) Morgan City to Port Allen Alternate Route from Mile Marker 0 to Mile Marker 5; the ICW from Mile Marker 93 west of Harvey Lock (WHL) to Mile Marker 102 WHL; the Atchafalaya River Route from Mile Marker 113 to Mile Marker 122; from Bayou Shaffer Junction (ICM Mile Marker 94.5 WHL) south one statute mile along Bayou Shaffer; and from Berwick Lock northwest one statute mile along the Lower Atchafalaya River.

(2943) (b) *VTS Special Area*. The Berwick Bay VTS Special Area consists of those waters within a 1000 yard radius of the Burlington Northern/Santa Fe Railroad Bridge located at Mile .03 MC/PA.

(2944) (c) *Reporting Points*. (Table 161.40(c))

(2946)

§161.65 Vessel Traffic Service Lower Mississippi River.

(2947) (a) The Vessel Traffic Service (VTS) area consists of navigable waters of the Lower Mississippi River (LMR) below 30°38.7'N., 91°17.5'W. (Port Hudson Light at 254.5 miles Above Head of Passes (AHP)), the Southwest Pass, and those within a 12-nautical mile radius around 28°54.3'N., 89°25.7'W. (Southwest Pass Entrance Light at 20.1 miles Below Head of Passes).

(2948) (b) The Algiers Point VTS Special Area consists of the navigable waters of the LMR bounded on the north by a line drawn from

(2949) 29°57.62'N., 90°02.61'W. to

(2950) 29°57.34'N., 90°02.60'W. and on the south by a line drawn from

(2951) 29°56.89'N., 90°03.72'W. to

(2952) 29°56.93'N., 90°03.34'W. (95.0 and 93.5 miles AHP) during periods of high water-that is, when the Carrolton Gage reads 8.0 feet or above on a rising stage or 9.0 feet or above on falling stage, or under any other water conditions the Captain of the Port (COTP) deems necessary.

(2953) (c) *Additional Algiers Point VTS Special Area Operating Requirements*. The following additional requirements are applicable in the Algiers Point VTS Special Area:

(2954) (1) A vessel movement reporting system (VMRS) user must abide by the signals of the Governor Nicholls Street Wharf,

(2955) 29°57.6'N., 90°03.4'W., Gretna,

(2956) 29°55.5'N., 90°03.7'W., Control Lights (94.3 and 96.6 miles AHP, respectively) in the following manner;

(2957) (i) Green Light–May proceed as intended.

(2958) (ii) Red Light–Do not proceed, unless otherwise directed by the VTS.

(2959) (iii) No Light–Do not proceed, immediately notify VTS and await further directions.

(2960) **Note to §161.65(c)(1)**: To provide advance notification to downbound vessels, a traffic repeater signal

(2969)

TABLE 161.65(f)-VTS LOWER MISSISSIPPI RIVER REPORTING POINTS				
Designator	Geographic name	Geographic description	Latitude/Longitude	Notes
A	Algiers Canal Forebay	88.0 AHB	29°55.40'N, 89°57.7'W	Upbound transiting Algiers Point Special Area
B	Industrial Canal	92.7 AHB	29°57.2'N, 90°01.68'W	Upbound transiting Algiers Point Special Area
C	Crescent Towing Smith Fleet	93.5 AHB	29°57.50'N, 90°02.62'W	Upbound Towing vessels transiting Algiers Point Special Area
D	Marlex Terminal (Naval Ships)	99.0 AHB	29°54.65'N, 90°05.87'W	Downbound transiting Algiers Point Special Area
E	Huey P Long Bridge	106.1 AHB	29°56.6'N, 90°10.1'W	Downbound transiting Algiers Point Special Area

of Gretna Light is located at Westwego, LA, 29°54.8'N., 90°08.3'W. (101.4 miles AHP).

(2961) (2) A vessel awaiting a signal change or VTS directions must keep clear of other vessels transiting the area.

(2962) (d) The Eighty-one Mile Point VTS Special Area consists of navigable waters of the LMR between 167.5 miles AHP and 187.9 miles AHP.

(2963) (e) Additional Eighty-one Mile Point VTS Special Area Operating Requirements. The following additional requirements are applicable in the Eighty-one Mile Point VTS Special Area:

(2964) (1) Prior to proceeding upriver past 167.5 miles AHP, Sunshine Bridge, vessels must contact VTS New Orleans on VHF Channel 5A to check-in. Vessels must provide name and destination, confirm proper operation of their automated identification system (AIS) if required under 33 CFR 164.46, and, if applicable, size of tow and number of loaded and empty barges. At 173.7 miles AHP, Bringier Point Light, ascending vessels must contact VTS New Orleans and provide a follow-on position check. At both check-in and follow-on position check, VTS New Orleans will advise the vessel on traffic approaching Eighty-one Mile Point.

(2965) (2) Prior to proceeding downriver past 187.9 miles AHP COS-MAR Lights, vessels must contact VTS New Orleans on VHF Channel 5A to check-in. Vessels must provide name and destination, confirm proper operation of their AIS if required under 33 CFR 164.46, and, if applicable, size of tow and number of loaded and empty barges. At 183.9 miles AHP, Wyandotte Chemical Dock Lights, descending vessels must contact VTS New Orleans and provide a follow-on position check. At both check-in and follow-on position check, VTS New Orleans will advise the vessel on traffic approaching Eighty-one Mile Point.

(2966) (3) All vessels getting underway between miles 167.5 and 187.9 AHP must check-in with VTS New Orleans on VHF Channel 5A immediately prior to getting underway and must comply with the respective ascending and descending check-in and follow-on points listed in paragraphs (e)(1) and (2) of this section.

(2967) (4) Fleet vessels must check in with VTS New Orleans if they leave their respective fleet or if they move into the main channel. Fleet vessels are not required to check in if they are operating exclusively within their fleet.

(2968) (f) Reporting Points. Table 161.65(f) lists the VTS Lower Mississippi River Reporting Points.

(2970)

§161.70 Vessel Traffic Service Port Arthur.

(2971) (a) The VTS area consists of the navigable waters of the United States to the limits of the territorial seas bound by the following points:

(2972) 30°10.00′N., 92°37.00′W.; then south to

(2973) 29°10.00′N., 92°37.00′W.; then west to

(2974) 29°10.00′N., 93°52.25′W.; then northwest to

(2975) 29°33.70′N., 94°21.25′W.; then north to

(2976) 30°10.00′N., 94°21.25′W.; then east along the

(2977) 30°10′ N. latitude to the origination point.

(2978) **Note:** Although mandatory participation in VTS Port Arthur is limited to the area within the navigable waters of the United States, prospective users are encouraged to report at the safe water marks in order to facilitate vessel traffic management in the VTS Area and to receive advisories or navigational assistance.

(2979) (b) Precautionary areas. (see table)

(2981) (c) Reporting points (Inbound). (see table)

(2982) (d) Reporting points (Outbound). (see table)

(2983) (e) Reporting points (Eastbound). (see table)

(2984) (f) Reporting points (Westbound). (see table)

(2985) (g) Reporting points (Offshore Safety Fairway). (see table)

(2987)

Part 162–Inland Waterways Navigation Regulations

(2988)

§162.1 General.

(2989) Geographic coordinates expressed in terms of latitude or longitude, or both, are not intended for plotting on maps or charts whose referenced horizontal datum is the North American Datum of 1983 (NAD 83), unless such geographic coordinates are expressly labeled NAD 83. Geographic coordinates without the NAD 83 reference may be plotted on maps or charts referenced to NAD 83

(2980)

TABLE 161.70(b)–VTS PORT ARTHUR PRECUTIONARY AREAS			
Precautionary area name	Radius	Center point latitude	Center point longitude
Petco Bend [1]	2000 yards	30°00.80'N.	93°57.60'W.
Black Bayou [1]	2000 yards	30°00.00'N.	93°46.20'W.
Orange Cut [1]	2000 yards	30°03.25'N.	93°43.20'W.
Neches River Intersection [1]	2000 yards	29°58.10'N.	93°51.25'W.
Texaco Island Intersection [1]	2000 yards	29°49.40'N.	93°57.55'W.
Sabine-Neches Waterway	N/A	All waters of the Sabine-Neches Waterway between the Texaco Island Precautionary Area and the Humble Island Precautionary Area.	

[1] Precautionary Area encompasses a circular area of the radius denoted around the center point with the exception of the Sabine-Neches Waterway.

only after application of the appropriate corrections that are published on the particular map or chart being used.

(2990)

§162.5 Definitions.

(2991) The following definition applies to this part:

(2992) *Merchant mariner credential* or *MMC* means the credential issued by the Coast Guard under **46 CFR part 10**. It combines the individual merchant mariner's document, license, and certificate of registry enumerated in 46 U.S.C. subtitle II part E as well as the STCW endorsement into a single credential that serves as the mariner's qualification document, certificate of identification, and certificate of service.

(2993)

§162.65 All waterways tributary to the Atlantic Ocean south of Chesapeake Bay and all waterways tributary to the Gulf of Mexico east and south of St. Marks, FL.

(2994) (a) *Description*. This section applies to the following:

(2995) (1) *Waterways*. All navigable waters of the United States, natural or artificial, including bays, lakes, sounds, rivers, creeks, intracoastal waterways, as well as canals and channels of all types, which are tributary to or connected by other waterways with the Atlantic Ocean south of Chesapeake Bay or with the Gulf of Mexico east and south of St. Marks, FL.

(2996) (2) *United States property*. All river and harbor lands owned by the United States in or along the waterways described in paragraph (a)(1) of this section, including lock sites and all structures thereon, other sites for Government structures and for the accommodation and use of employees of the United States, and rights of way and spoil disposal areas to the extent of Federal interest therein.

(2997) (3) *Vessels and rafts*. The term "vessel" as used in this section includes all floating things moved over these waterways other than rafts.

(2998) (b) *Waterways*-(1) *Fairway*. A clear channel shall at all times be left open to permit free and unobstructed navigation by all types of vessels and rafts that normally use the various waterways or sections thereof. The District Commander may specify the width of the fairway required in the various waterways under his charge.

(2999) (2) *Stoppage in waterway, anchorage or mooring*. (i) No vessels or rafts shall anchor or moor in any of the land cuts or other narrow parts of the waterway, except in case of an emergency. Whenever it becomes necessary for a vessel or raft to stop in any such portions of the waterway it shall be securely fastened to one bank and as close to the bank as possible. This shall be done only at such a place and under such conditions as will not obstruct or prevent the passage of other vessels or craft. Stoppages shall be only for such periods as may be necessary.

(3000) (ii) No vessel or raft will be allowed to use any portion of the fairway as a mooring place except temporarily as authorized above without the written permission from the District Commander.

(3001) (iii) When tied up, all vessels must be moored by bow and stern lines. Rafts and tows shall be secured at sufficiently close intervals to insure their not being drawn away from the bank by winds, currents or the suction of passing vessels. Tow lines shall be shortened so that the different parts of the tow shall be as close together as possible. In narrow sections, no vessel or raft shall be tied abreast of another.

(3002) (iv) Lights shall be displayed in accordance with provisions of the Navigation Rules, (**33 CFR Subchapter E**).

(3003) (v) No vessel, even if fastened to the bank as prescribed in paragraph (b)(2)(i) of this section, shall be left without a sufficient crew to care for it properly.

(3004) (vi) Vessels will not be permitted to load or unload in any of the land cuts except as a regular established landing or wharf without written permission secured in advance from the District Commander.

(3005) (vii) No vessel, regardless of size, shall anchor in a dredged channel or narrow portion of a waterway for the purpose of fishing, if navigation is obstructed, thereby.

(3006) (viii) Except in cases of emergency the dropping of anchors, weights, or other ground tackle, within areas occupied by submarine cable or pipe crossings is prohibited. Such crossings will ordinarily be marked by

(2986)

TABLE 161.70(c)–INBOUND				
Designator	**Geographic name**	**Geographic description**	**Latitude/Longitude**	**Notes**
1	Sabine Bank Channel “SB” Buoy	Sabine Bank Sea Buoy	29°25.00'N, 93°40.00'W	Sailing Plan Report
2	Sabine Pass Buoys “29/30”	Sabine Pass Buoys “29/30”	29°35.90'N, 93°48.20'W	
3	Port Arthur Canal Light “43”	Keith Lake	29°46.50'N, 93°56.47'W	
4	North Forty GIWW Mile 279	North Forty	29°56.40'N, 93°52.10'W	
5	FINA Highline Neches River Light “19”	FINA Highline	29°59.10'N, 93°54.30'W	
6	Ready Reserve Fleet Highline	Channel at Cove Mid-Point	30°00.80'N, 93°59.90'W	
7	Sabine River MM 268	268 Highline	30°02.00'N, 93°44.30'W	

TABLE 161.70(d)–OUTBOUND				
Designator	**Geographic name**	**Geographic description**	**Latitude/Longitude**	**Notes**
1	Sabine River Light “2”	Black Bayou	30°00.00'N, 93°46.25'W	
2	Ready Reserve Fleet Highline	Channel at Cove Mid-Point	30°00.80'N, 93°59.90'W	
3	FINA Highline Neches River Light “19”	FINA Highline	29°59.09'N, 93°54.30'W	
4	GIWW Mile 285	The School House	29°52.70'N, 93°55.55'W	Zone Shift
5	Port Arthur Canal Light “43”	Keith Lake	29°46.50'N, 93°56.47'W	
6	Sabine Pass Buoys “29/30”	Sabine Pass Buoys “29/30”	29°35.90'N, 93°48.20'W	
7	Sabine Bank Channel “SB” Buoy	Sabine Bank Sea Buoy	29°25.00'N, 93°40.00'W	Final Report

TABLE 161.70(e)–EASTBOUND (ICW)				
Designator	**Geographic name**	**Geographic description**	**Latitude/Longitude**	**Notes**
1	GIWW Mile 295	ICW MM 295	29°47.25'N, 94°01.10'W	Sailing Plan Report
2	North Forty GIWW Mile 279	North Forty	29°56.40'N, 93°52.10'W	
3	Sabine River MM 268	268 Highline	30°02.20'N, 93°44.30'W	
4	GIWW Mile 260	260 Highline	30°03.50'N, 93°37.50'W	Final Report

TABLE 161.70(f)–WESTBOUND (ICW)				
Designator	**Geographic name**	**Geographic description**	**Latitude/Longitude**	**Notes**
1	GIWW Mile 260	260 Highline	30°03.50'N, 93°37.50'W	Sailing Plan Report
2	Sabine River Light “2”	Black Bayou	30°00.03'N, 93°46.18'W	
3	GIWW Mile 285	The School House	29°52.71'N, 93°55.55'W	Zone Shift
4	GIWW Mile 295	ICW MM 295	29°46.20'N, 94°02.60'W	Final Report

TABLE 161.70(g)–OFFSHORE SAFETY FAIRWAY				
Designator	**Geographic name**	**Geographic description**	**Latitude/Longitude**	**Notes**
1	Sabine Pass Safety Fairway–East	East Dogleg	29°35.00'N, 93°28.00'W	
2	Sabine Pass Safety Fairway–West	West Dogleg	29°28.00'N, 93°58.00'W	

signboards on each bank of the shore or indicated on coast charts.

(3007) (3) *Speed*. (i) Vessels shall proceed at a speed which will not endanger other vessels or structures and will not interfere with any work in progress incident to maintaining, improving, surveying or marking the channel.

(3008) (ii) Official signs indicating limiting speeds through critical portions of the waterways shall be strictly obeyed.

(3009) (iii) Vessels approaching and passing through a bridge shall so govern their speed as to insure passage through the bridge without damage to the bridge or its fenders.

(3010) (4) Assembly and handling of tows.

(3011) (i) All vessels drawing tows and equipped with rudders shall use two tow lines or a bridle and shorten them to the greatest possible extent so as to have full control at all times. The various parts of a tow shall be securely assembled with the individual units connected by lines as short as practicable. If necessary, as in the case of lengthy or cumbersome tows or tows in restricted channels, the District Commander may require that tows be broken up and may require the installation of a rudder, drag or other approved steering device on the tow in order to avoid obstructing navigation or damaging the property of others, including aids to navigation maintained by the United States or under its authorization, by collision or otherwise.

(3012) (ii) No tow shall be drawn by a vessel that has insufficient power or crew to permit ready maneuverability and safe handling.

(3013) (iii) Tows desiring to pass a bridge shall approach the opening along the axis of the channel so as to pass through without danger of striking the bridge or its fenders. No vessel or tow shall navigate through a drawbridge until the movable span is fully opened.

(3014) (iv) In the event that it is evident to the master of a towing vessel that a tow cannot be safely handled through a bridge, it will be brought to anchor and the towed vessels will be taken through the bridge in small units, or singly if necessary, or the tow will wait until navigation conditions have improved to such an extent that the tow can pass through the bridge without damage.

(3015) (5) *Projections from vessels*. No vessel carrying a deck load which overhangs or projects over the side of said vessel, or whose rigging projects over the side of the vessel so as to endanger passing vessels, wharves or other property, will enter or pass through any of the narrow parts of the waterway.

(3016) (6) *Meeting and passing*. Vessels, on meeting or overtaking, shall give the proper signals and pass in accordance with the Navigation Rules, (**33 CFR Subchapter E**). Rafts shall give to vessels the side demanded by proper signal. All vessels approaching dredges, or other plant engaged on improvements to a waterway, shall give the signal for passing and slow down sufficiently to stop if so ordered or if no answering signal is received. On receiving the answering signal, they shall then proceed to pass at a speed sufficiently slow to insure safe navigation.

(3017) **NOTE.** The Corps of Engineers also has regulations dealing with this section in **33 CFR 207**.

(3018)

§162.75 All waterways tributary to the Gulf of Mexico (except the Mississippi River, its tributaries, South and Southwest Passes and Atchafalaya River) from St. Marks, FL, to the Rio Grande.

(3019) (a) The regulations in this section shall apply to:

(3020) (1) *Waterways*. All navigable waters of the U.S. tributary to or connected by other waterways with the Gulf of Mexico between St. Marks, FL, and the Rio Grande, TX (both inclusive), and the Gulf Intracoastal Waterway; except the Mississippi River, its tributaries, South and Southwest Passes, and the Atchafalaya River above its junction with the Morgan City-Port Allen Route.

(3021) (2) *Bridges, wharves, and other structures*. All bridges, wharves, and other structures in or over these waterways.

(3022) (3) *Vessels*. The term "vessels" as used in this section includes all floating craft other than rafts.

(3023) (b) Waterways:

(3024) (1) A clear channel shall at all times be left open to permit free and unobstructed navigation by all types of vessels and tows normally using the various waterways covered by the regulations of this section.

(3025) (2) Fairway: The District Commander may specify the width of the fairway required in the various waterways under his charge.

(3026) (3) Anchoring or mooring:

(3027) (i) Vessels or tows shall not anchor or moor in any of the land cuts or other narrow parts of the waterway except in an emergency, or with permission of the District Commander. Whenever it becomes necessary for a vessel or tow to stop in any such portions of the waterway, it shall be securely fastened to one bank and as close to the bank as possible. This shall be done only at such a place and under such conditions as will not obstruct or prevent the passage of other vessels or tows. Stoppages shall be only for such periods as may be necessary.

(3028) (ii) When tied up individually, all vessels and tows shall be moored by bow and stern lines. Tows shall be secured at sufficiently frequent intervals to insure their not being drawn away from the bank by winds, currents, or the suction of passing vessels. Lines shall be shortened so that the various barges in a tow will be as close together as possible.

(3029) (iii) Lights shall be displayed in accordance with provisions of the Inland Navigation Rules, (**33 CFR Subchapter E**).

(3030) (iv) Whenever any vessel or tow is moored to the bank (paragraph (b)(3)(i) of this section) at least one crew member shall always remain on board to see that proper signals are displayed and that the vessel or tow is properly moored at all times.

(3031) (v) No vessel, regardless of size, shall anchor in a dredged channel or narrow portion of a waterway for the purpose of fishing if navigation is obstructed thereby:

(3032) (4) Speed: Speeding in narrow sections is prohibited. Official signs indicating limited speeds shall be obeyed. Vessels shall reduce speed sufficiently to prevent damage when passing other vessels or structures in or along the waterway.

(3033) (5) Size, assembly, and handling of tows:

(3034) (i) On waterways 150 feet wide or less, tows which are longer than 1,180 feet, including the towing vessel, but excluding the length of the hawser, or wider than one-half of the bottom width of the channel or 55 feet, whichever is less, will not be allowed, except when the District Commander has given special permission or the waterway has been exempted from these restrictions by the District Commander. Before entering any narrow section of the Gulf Intracoastal Waterway, tows in excess of one-half the channel width, or 55 feet, will be required to stand by until tows which are less than one-half the channel width or 55 feet wide have cleared the channel. When passing is necessary in narrow channels, overwidth tows shall yield to the maximum. Separate permission must be received from the District Commander for each overlength or overwidth movement. In addition, the following exceptions are allowed:

(3035) (ii) Gulf Intracoastal Waterway-Between mile 6.2 EHL (Inner Harbor Navigation Canal Lock) and mile 33.6 EHL tows of 78 feet in width will be allowed.

(3036) (iii) Gulf Intracoastal Waterway-Between mile 33.6 EHL and the Mobile Bay Ship Channel, tows of 108 feet in width will be allowed if under 750 feet in length including the towboat but excluding the length of the hawser.

(3037) (iv) Gulf Intracoastal Waterway-Mobile Bay Ship Channel to St. Marks, FL, for tows made up of empty barges on the off or shallow side, a width of 75 feet will be allowed.

(3038) (v) All vessels pulling tows not equipped with rudders in restricted channels and land cuts shall use two towlines, or a bridle on one towline, shortened as much as safety of the towing vessel permits, so as to have maximum control at all times. The various parts of a tow shall be securely assembled with the individual units connected by lines as short as practicable. In open water, the towlines and fastenings between barges may be lengthened so as to accommodate the wave surge. In the case of lengthy or cumbersome tows, or tows in restricted channels, the District Commander may require that tows be broken up, and may require the installation of a rudder or other approved steering device on the tow in order to avoid obstructing navigation or damaging the property of others. Pushing barges with towing vessel astern, towing barges with towing vessel alongside, or pushing and pulling barges with units of the tow made up both ahead and astern of the towing vessel are permissible provided that adequate power is employed to keep the tows under full control at all times. No tow shall be drawn by a vessel that has insufficient power or crew to permit ready maneuverability and safe handling.

(3039) (vi) All tows navigating the Pass Manchac bridges in Louisiana are limited to no more than two barges, not to exceed a combined tow length of 400 feet (excluding the towboat). Vessel operators for tows exceeding these limits must request and receive permission from the COTP New Orleans prior to navigating the bridges. Requests should be made by telephoning the COTP at 504-365-2200 or 504-365-2545. Any decision made by the COTP is final agency action.

(3040) (6) Projections from vessels: Vessels or tows carrying a deck load which overhangs or projects over the side, or whose rigging projects over the side, so as to endanger passing vessels, wharves, or other property, shall not enter or pass through any of the narrow parts of the waterway without prior approval of the District Commander.

(3041) (7) Meeting and passing: Passing vessels shall give the proper signals and pass in accordance with the Inland Navigation Rules (33 CFR Subchapter E), where applicable. At certain intersections where strong currents may be encountered, sailing directions may be issued through navigation bulletins or signs posted on each side of the intersections.

(3042) **NOTE.** The Corps of Engineers also has regulations dealing with this section in **33 CFR 207**.

(3043)

§162.80 Mississippi River below mouth of Ohio River, including South and Southwest Passes.

(3044) (a) Mooring on Mississippi River between miles 311.5 AHP and 340.0 AHP.

(3045) (1) No vessel or craft shall moor along either bank of the Mississippi River between mile 311.5 AHP and mile 340.0 AHP except in case of an emergency, pursuant to an approved navigation permit, or as authorized by the District Commander. Vessels may be moored any place outside the navigation channel in this reach in case of an emergency and then for only the minimum time required to terminate the emergency. When so moored, all vessels shall be securely tied with bow and stern lines of sufficient strength and fastenings to withstand currents, winds, wave action, suction from passing vessels or any other forces which might cause the vessels to break their moorings. When vessels are so moored, a guard shall be on board at all times to insure that proper signals are displayed and that the vessels are securely and adequately moored.

(3046) (2) Vessels may be moored any time at facilities constructed in accordance with an approved navigation permit or as authorized by the District Commander. When so moored, each vessel shall have sufficient fastenings to prevent the vessels from breaking loose by wind, current, wave action, suction from passing vessels or any other forces which might cause the vessel to break its mooring. The number of vessels in one fleet and the width of the

fleet of vessels tied abreast shall not extend into the fairway or be greater than allowed under the permit.

(3047) (3) Mariners should report immediately by radio or fastest available means to the lockmaster at Old River Lock or to any Government patrol or survey boat in the vicinity any emergency mooring or vessels drifting uncontrolled within the area described in paragraph (a)(1) of this section. It is the responsibility and duty of the master of a towing vessel releasing or mooring a vessel in this reach of the Mississippi River to report such action immediately.

(3048) (b) Mooring on Mississippi River below Baton Rouge, LA, including South and Southwest Passes.

(3049) (1) When tied up individually or in fleets, vessels shall be moored with sufficient lines and shore fastenings to insure their remaining in place and withstanding the action of winds, currents and the suction of passing vessels.

(3050) **NOTE:** The Corps of Engineers also has regulations dealing with this section in **33 CFR 207**.

(3051)

§162.260 Channel leading to San Juan Harbor, P.R.; use, administration, and navigation.

(3052) (a) Steamers passing dredge engaged in improving the channel shall not have a speed greater than 4 miles an hour, and the propelling machinery shall be stopped when crossing the lines to the dredge anchors.

(3053) (b) Vessels using the channel shall pass the dredge on the side designated from the dredge by the signals prescribed in paragraph (c) of this section.

(3054) (c) Dredge shall display the red flag by day and four white lights hung in a vertical line by night to indicate the passing side.

(3055) (d) Vessels shall not anchor on the ranges of stakes or other marks placed for the guidance of the dredge, nor in such a manner as to obstruct the channel for passing vessels.

(3056) (e) Vessels shall not run over or disturb stake, lanterns, or other marks placed for the guidance of the dredge.

(3057) (f) Dredges working in the prosecution of the work shall not obstruct the channel unnecessarily.

(3058) (g) The dredge will slack lines running across the channel from the dredge on the passing side, for passing vessels, when notified by signal, with whistle or horn.

(3059) (h) The position of anchors of the dredge shall be marked by buoys plainly visible to passing vessels.

(3060)

§162.270 Restricted areas in vicinity of Maritime Administration Reserve Fleets.

(3061) (a) The regulations in this section shall govern the use and navigation of waters in the vicinity of the following National Defense Reserve Fleets of the Maritime Administration, Department of Transportation:

(3062) (1) James River Reserve Fleet, Fort Eustis, Virginia.

(3063) (2) Beaumont Reserve Fleet, Neches River near Beaumont, TX.

(3064) (3) Suisun Bay Reserve Fleet near Benicia, CA.

(3065) (b) No vessels or other watercraft, except those owned or controlled by the United States Government, shall cruise or anchor between Reserve Fleet units within 500 feet of the end vessels in each Reserve Fleet unit, or within 500 feet of the extreme units of the fleets, unless specific permission to do so has first been granted in each case by the enforcing agency.

(3066) (c) The regulations in this section shall be enforced by the respective Fleet Superintendents and such agencies as they may designate.

(3067)

Part 164–NavigationSafety Regulations (in part). For a complete description of this part see 33 CFR 164.

(3068)

§164.01 Applicability.

(3069) (a) This part (except as specifically limited by this section) applies to each self-propelled vessel of 1600 or more gross tons (except as provided in paragraph (c) and (d) of this section, or for foreign vessels described in §164.02) when it is operating in the navigable waters of the United States except the St. Lawrence Seaway.

(3070) (b) Sections 164.70 through 164.82 of this part apply to each towing vessel of 12 meters (39.4 feet) or more in length operating in the navigable waters of the United States other than the St. Lawrence Seaway; except that a towing vessel is exempt from the requirements of §164.72 if it is–

(3071) (1) Used solely within a limited geographic area, such as a fleeting-area for barges or a commercial facility, and used solely for restricted service, such as making up or breaking up larger tows;

(3072) (2) Used solely for assistance towing as defined by **46 CFR 10.103**;

(3073) (3) Used solely for pollution response; or

(3074) (4) Any other vessel exempted by the Captain of the Port (COTP). The COTP, upon written request, may, in writing, exempt a vessel from §164.72 for a specified route if he or she decides that exempting it would not allow its unsafe navigation under anticipated conditions.

(3075) (c) Provisions of §§164.11(a)(2) and (c), 164.30, and 164.33, and 164.46 do not apply to warships or other vessels owned, leased, or operated by the United States Government and used only in government noncommercial service when these vessels are equipped with electronic navigation systems that have met the applicable agency regulations regarding navigation safety.

(3076) (d) Provisions of §164.46 apply to some self-propelled vessels of less 1600 gross tonnage.

(3077)

§164.02 Applicability exception for foreign vessels.

(3078) (a) Except for §164.46(c), none of the requirements of this part apply to foreign vessels that:

(3079) (1) Are not destined for, or departing from, a port or place subject to the jurisdiction of the United States; and

(3080) (2) Are in:

(3081) (i) Innocent passage through the territorial sea of the United States; or

(3082) (ii) Transit through navigable waters of the United States which form a part of an international strait.

(3083)

§164.03 Incorporation by reference.

(3084) (a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and **1 CFR part 51**. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of the change in the Federal Register and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For more information on the availability of this material at NARA, call 202–741–6030, or go to: *www.archives.gov/federal-register/cfr/ibr-locations.html*. Also, it is available for inspection at the Commandant (CG–NAV), U.S. Coast Guard Stop 7418, Attn: Office of Navigation Systems, 2703 Martin Luther King Jr. Ave. SE., Washington, DC 20593-7418, telephone 202–372–1565, and is available from the sources listed below.

(3085) (b) American Petroleum Institute (API), 1220 L Street NW., Washington, DC 20005-4070, 202–682–8000, *www.api.org*:

(3086) (1) API Specification 9A, Specification for Wire Rope, Section 3, Properties and Tests for Wire and Wire Rope, May 28, 1984, IBR approved for §164.74.

(3087) (2) [Reserved]

(3088) (c) ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, 610–832–9585, *www.astm.org*:

(3089) (1) ASTM D4268–93, Standard Test Method for Testing Fiber Rope, IBR approved for §164.74.

(3090) (2) [Reserved]

(3091) (d) Cordage Institute, 350 Lincoln Street, Hingham, MA 02043.

(3092) (1) CIA–3, Standard Test Methods for Fiber Rope Including Standard Terminations, Revised, June 1980, IBR approved for §164.74.

(3093) (2) [Reserved]

(3094) (e) International Maritime Organization (IMO), 4 Albert Embankment, London SE1 7SR, United Kingdom, *www.imo.org*:

(3095) (1) IMO Resolution A342(IX), Recommendation on Performance Standards for Automatic Pilots, November 12, 1975, IBR approved for §164.13.

(3096) (2) IMO Resolution A.917(22), Guidelines for the Onboard Operational Use of Shipborne Automatic Identification System (AIS), January 25, 2002, IBR approved for §164.46.

(3097) (3) SN/Circ.227, Guidelines for the Installation of a Shipborne Automatic Identification System (AIS), January 6, 2003, IBR approved for §164.46.

(3098) (4) SN/Circ.244, Guidance on the Use of the UN/LOCODE in the Destination Field in AIS Messages, December 15, 2004, IBR approved for §164.46.

(3099) (5) SN/Circ.245, Amendments to the Guidelines for the Installation of a Shipborne Automatic Identification System (AIS)(SN/Circ.227), December 15, 2004, IBR approved for §164.46.

(3100) (6) SOLAS, International Convention for the Safety of Life at Sea, 1974, and 1988 Protocol relating thereto, 2000 Amendments, effective January and July 2002, (SOLAS 2000 Amendments), IBR approved for §164.46.

(3101) (7) Conference resolution 1, Adoption of amendments to the Annex to the International Convention for the Safety of Life at Sea, 1974, and amendments to Chapter V of SOLAS 1974, adopted on December 12, 2002, IBR approved for §164.46.

(3102) (8) SN.1/Circ.289, Guidance on the Use of AIS Application-Specific Messages, June 2, 2010, IBR approved for §164.46.

(3103) (f) National Marine Electronics Association (NMEA), 7 Riggs Avenue, Severna Park, MD 21146, 800–808–6632, *www.nmea.org*:

(3104) (1) NMEA 0400, Installation Standard for Marine Electronic Equipment used on Moderate-Sized Vessels, Version 3.10, February 2012, IBR approved for §164.46.

(3105) (2) [Reserved]

(3106) (g) Radio Technical Commission for Maritime Services (RTCM), 1611 N. Kent St., Suite 605, Arlington, VA 22209, 703–527–2000, *www.rtcm.org*:

(3107) (1) RTCM Paper 12–78/DO–100, Minimum Performance Standards, Loran C Receiving Equipment, 1977, IBR approved for §164.41.

(3108) (2) RTCM Paper 71–95/SC112–STD, RTCM Recommended Standards for Marine Radar Equipment Installed on Ships of Less Than 300 Tons Gross Tonnage, Version 1.1, October 10, 1995, IBR approved for §164.72.

(3109) (3) RTCM Paper 191–93/SC112–X, RTCM Recommended Standards for Maritime Radar Equipment Installed on Ships of 300 Tons Gross Tonnage and Upwards, Version 1.2, December 20, 1993, IBR approved for §164.72.

(3110) (h) International Electrotechnical Commission (IEC), 3, rue de Varembe, Geneva, Switzerland, +41 22 919 02 11, *http://www.iec.ch/*. Email: info@iec.ch.

(3111) (1) IEC 62065 (IEC 62065 2002–03), Maritime navigation and radiocommunication equipment and systems—Track control systems— Operational and performance requirements, methods of testing and required test results, First Edition, dated 2002, IBR approved for **§ 164.13(d)**.

(3112) (2) IEC 62065 (IEC 62065 2014–02), Maritime navigation and radiocommunication equipment and systems—Track control systems— Operational and performance requirements, methods of testing and required test results, Edition 2.0, dated 2014, IBR approved for **§ 164.13(d)**.

(3113)

§164.11 Navigation under way: General.

(3114) The owner, master, or person in charge of each vessel underway shall ensure that:

(3115) (a) The wheelhouse is constantly manned by persons who –

(3116) (1) Direct and control the movement of the vessel; and

(3117) (2) Fix the vessel's position;

(3118) (b) Each person performing a duty described in paragraph (a) of this section is competent to perform that duty;

(3119) (c) The position of the vessel at each fix is plotted on a chart of the area and the person directing the movement of the vessel is informed of the vessel's position;

(3120) (d) Electronic and other navigational equipment, external fixed aids to navigation, geographic reference points, and hydrographic contours are used when fixing the vessel's position;

(3121) (e) Buoys alone are not used to fix the vessel's position;

(3122) **Note:** Buoys are aids to navigation placed in approximate positions to alert the mariner to hazards to navigation or to indicate the orientation of a channel. Buoys may not maintain an exact position because strong or varying currents, heavy seas, ice, and collisions with vessels can move or sink them or set them adrift. Although buoys may corroborate a position fixed by other means, buoys cannot be used to fix a position: however, if no other aids are available, buoys alone may be used to establish an estimated position.

(3123) (f) The danger of each closing visual or each closing radar contact is evaluated and the person directing the movement of the vessel knows the evaluation;

(3124) (g) Rudder orders are executed as given;

(3125) (h) Engine speed and direction orders are executed as given;

(3126) (i) Magnetic variation and deviation and gyrocompass errors are known and correctly applied by the person directing the movement of the vessel;

(3127) (j) A person whom he has determined is competent to steer the vessel is in the wheelhouse at all times (See also 46 U.S.C. 8702(d), which requires an able seaman at the wheel on U.S. vessels of 100 gross tons or more in narrow or crowded waters or during low visibility.);

(3128) (k) If a pilot other than a member of the vessel's crew is employed, the pilot is informed of the draft, maneuvering characteristics, and peculiarities of the vessel and of any abnormal circumstances on the vessel that may affect its safe navigation.

(3129) (l) Current velocity and direction for the area to be transited are known by the person directing the movement of the vessel;

(3130) (m) Predicted set and drift are known by the person directing movement of the vessel;

(3131) (n) Tidal state for the area to be transited is known by the person directing movement of the vessel;

(3132) (o) The vessel's anchors are ready for letting go;

(3133) (p) The person directing the movement of the vessel sets the vessel's speed with consideration for –

(3134) (1) The prevailing visibility and weather conditions;

(3135) (2) The proximity of the vessel to fixed shore and marine structures;

(3136) (3) The tendency of the vessel underway to squat and suffer impairment of maneuverability when there is small underkeel clearance;

(3137) (4) The comparative proportions of the vessel and the channel;

(3138) (5) The density of marine traffic;

(3139) (6) The damage that might be caused by the vessel's wake;

(3140) (7) The strength and direction of the current; and

(3141) (8) Any local vessel speed limit;

(3142) (q) The tests required by §164.25 are made and recorded in the vessel's log; and

(3143) (r) The equipment required by this part is maintained in operable condition.

(3144) (s) Upon entering U.S. waters, the steering wheel or lever on the navigating bridge is operated to determine if the steering equipment is operating properly under manual control, unless the vessel has been steered under manual control from the navigating bridge within the preceding 2 hours, except when operating on the Great Lakes and their connecting and tributary waters.

(3145) (t) At least two of the steering-gear power units on the vessel are in operation when such units are capable of simultaneous operation, except when the vessel is sailing on the Great Lakes and their connecting and tributary waters, and except as required by paragraph (u) of this section.

(3146) (u) On each passenger vessel meeting the requirements of the International Convention for the Safety of Life at Sea, 1960 (SOLAS 60) and on each cargo vessel meeting the requirements of SOLAS 74 as amended in 1981, the number of steering-gear power units necessary to move the rudder from 35° on either side to 30° on the other in not more than 28 seconds must be in simultaneous operation.

(3147)

§164.13 Navigation underway: tankers.

(3148) (a) As used in this section, "tanker" means a self-propelled tank vessel, including integrated tug barge combinations, constructed or adapted primarily to carry oil or hazardous material in bulk in the cargo spaces and inspected and certificated as a tanker.

(3149) (b) Each tanker must have an engineering watch capable of monitoring the propulsion system, communicating with the bridge, and implementing manual control measures immediately when necessary. The watch must be physically present in the machinery spaces or in the main control space and must consist of at least a licensed engineer.

(3150) (c) Each tanker must navigate with at least two deck officers with an appropriately endorsed license or merchant mainer credential on watch on the bridge,

one of whom may be a pilot. In waters where a pilot is required, the second officer, must be an individual holding an appropriately endorsed license or merchant mariner credential and assigned to the vessel as master, mate, or officer in charge of a navigational watch, who is separate and distinct from the pilot.

(3151) (d) This paragraph (d) has preemptive effect over State or local regulation within the same field. A tanker may navigate using a heading or track control system only if:

(3152) (1) The tanker is at least one-half nautical mile (1,012 yards) beyond the territorial sea baseline, as defined in **33 CFR 2.20**;

(3153) (i) Not within waters specified in **33 CFR part 110** (anchorages), or; (ii) Not within waters specified as precautionary areas in **33 CFR part 167**, and;

(3154) (2) There is a person, competent to steer the vessel, present to assume manual control of the steering station at all times including, but not limited to, the conditions listed in **46 CFR 35.20–45(a)** through **(c)**; and

(3155) (3) The system meets the heading or track control specifications of either IEC 62065 (2002–03) or IEC 62065 (2014–02) (incorporated by reference, see **§ 164.03**).

(3156)

§164.15 Navigation bridge visibility.

(3157) (a) The arrangement of cargo, cargo gear, and trim of all vessels entering or departing from U.S. ports must be such that the field of vision from the navigation bridge conforms as closely as possible to the following requirements:

(3158) (1) From the conning position, the view of the sea surface must not be obscured by more than the lesser of two ship lengths or 500 meters (1,640 feet) from dead ahead to 10 degrees on either side of the vessel. Within this arc of visibility any blind sector caused by cargo, cargo gear, or other permanent obstruction must not exceed 5 degrees.

(3159) (2) From the conning position, the horizontal field of vision must extend over an arc from at least 22.5 degrees abaft the beam on one side of the vessel, through dead ahead, to at least 22.5 degrees abaft the beam on the other side of the vessel. Blind sectors forward of the beam caused by cargo, cargo gear, or other permanent obstruction must not exceed 10 degrees, nor total more than 20 degrees, including any blind sector within the arc of visibility described in paragraph (a)(1) of this section.

(3160) (3) From each bridge wing, the field of vision must extend over an arc from at least 45 degrees on the opposite bow, through dead ahead, to at least dead astern.

(3161) (4) From the main steering position, the field of vision must extend over an arc from dead ahead to at least 60 degrees on either side of the vessel.

(3162) (b) A clear view must be provided through at least two front windows at all times regardless of weather conditions.

(3163)

§164.19 Requirements for vessels at anchor.

(3164) The master or person in charge of each vessel that is anchored shall ensure that –

(3165) (a) A proper anchor watch is maintained;

(3166) (b) Procedures are followed to detect a dragging anchor; and

(3167) (c) Whenever weather, tide, or current conditions are likely to cause the vessel's anchor to drag, action is taken to ensure the safety of the vessel, structures, and other vessels, such as being ready to veer chain, let go a second anchor, or get underway using the vessel's own propulsion or tug assistance.

(3168)

§164.25 Tests before entering or getting underway.

(3169) (a) Except as provided in paragraphs (b) and (c) of this section no person may cause a vessel to enter into or get underway on the navigable waters of the United States unless no more than 12 hours before entering or getting underway, the following equipment has been tested:

(3170) (1) Primary and secondary steering gear. The test procedure includes a visual inspection of the steering gear and its connecting linkage, and, where applicable, the operation of the following:

(3171) (i) Each remote steering gear control system.

(3172) (ii) Each steering position located on the navigating bridge.

(3173) (iii) The main steering gear from the alternative power supply, if installed.

(3174) (iv) Each rudder angle indicator in relation to the actual position of the rudder.

(3175) (v) Each remote steering gear control system power failure alarm.

(3176) (vi) Each remote steering gear power unit failure alarm.

(3177) (vii) The full movement of the rudder to the required capabilities of the steering gear.

(3178) (2) All internal vessel control communications and vessel control alarms.

(3179) (3) Standby or emergency generator, for as long as necessary to show proper functioning, including steady state temperature and pressure readings.

(3180) (4) Storage batteries for emergency lighting and power systems in vessel control and propulsion machinery spaces.

(3181) (5) Main propulsion machinery, ahead and astern.

(3182) (b) Vessels navigating on the Great Lakes and their connecting and tributary waters, having once completed the test requirements of this sub-part, are considered to remain in compliance until arriving at the next port of call on the Great Lakes.

(3183) (c) Vessels entering the Great Lakes from the St. Lawrence Seaway are considered to be in compliance with this sub-part if the required tests are conducted preparatory to or during the passage of the St. Lawrence Seaway or within one hour of passing Wolfe Island.

(3184) (d) No vessel may enter, or be operated on the navigable waters of the United States unless the emergency steering drill described below has been conducted within 48 hours prior to entry and logged in the vessel logbook, unless the drill is conducted and logged on a regular basis at least once every three months. This drill must include at a minimum the following:

(3185) (1) Operation of the main steering gear from within the steering gear compartment.

(3186) (2) Operation of the means of communications between the navigating bridge and the steering compartment.

(3187) (3) Operation of the alternative power supply for the steering gear if the vessel is so equipped.

(3188)

§164.30 Charts, publications, and equipment: General.

(3189) No person may operate or cause the operation of a vessel unless the vessel has the marine charts, publications, and equipment as required by §§164.33 through 164.41 of this part.

(3190)

§164.33 Charts and publications.

(3191) (a) Each vessel must have the following:

(3192) (1) Marine charts of the area to be transited, published by the National Ocean Service, U.S. Army Corps of Engineers, or a river authority that –

(3193) (i) Are of a large enough scale and have enough detail to make safe navigation of the area possible; and

(3194) (ii) Are currently corrected.

(3195) (2) For the area to be transited, a currently corrected copy of, or applicable currently corrected extract from, each of the following publications:

(3196) (i) U.S. Coast Pilot.

(3197) (ii) Coast Guard Light List.

(3198) (3) For the area to be transited, the current edition of, or applicable current extract from:

(3199) (i) Tide tables published by private entities using data provided by the National Ocean Service.

(3200) (ii) Tidal current tables published by private entities using data provided by the National Ocean Service, or river current publication issued by a river authority.

(3201) (b) As an alternative to the requirements for paragraph (a) of this section, a marine chart or publication, or applicable extract, published by a foreign government may be substituted for a U.S. chart and publication required by this section. The chart must be of large enough scale and have enough detail to make safe navigation of the area possible, and must be currently corrected. The publication, or applicable extract, must singly or in combination contain similar information to the U.S. Government publication to make safe navigation of the area possible. The publication, or applicable extract must be currently corrected, with the exceptions of tide and tidal current tables, which must be the current editions.

(3202) (c) As used in this section, "currently corrected" means corrected with changes contained in all Notices to Mariners published by National Geospatial-Intelligence Agency, or an equivalent foreign government publication, reasonably available to the vessel, and that is applicable to the vessel's transit.

(3203)

§164.35 Equipment: All vessels.

(3204) Each vessel must have the following:

(3205) (a) A marine radar system for surface navigation.

(3206) (b) An illuminated magnetic steering compass, mounted in a binnacle, that can be read at the vessel's main steering stand.

(3207) (c) A current magnetic compass deviation table or graph or compass comparison record for the steering compass, in the wheelhouse.

(3208) (d) A gyrocompass.

(3209) (e) An illuminated repeater for the gyrocompass required by paragraph (d) of this section that is at the main steering stand, unless that gyrocompass is illuminated and is at the main steering stand.

(3210) (f) An illuminated rudder angle indicator in the wheelhouse.

(3211) (g) The following maneuvering information prominently displayed on a fact sheet in the wheelhouse:

(3212) (1) A turning circle diagram to port and starboard that shows the time and distance and advance and transfer required to alter course 90 degrees with maximum rudder angle and constant power settings, for either full and half speeds, or for full and slow speeds. For vessels whose turning circles are essentially the same for both directions, a diagram showing a turning circle in one direction, with a note on the diagram stating that turns to port and starboard are essentially the same, may be substituted.

(3213) (2) The time and distance to stop the vessel from either full and half speeds, or from full and slow speeds, while maintaining approximately the initial heading with minimum application of rudder.

(3214) (3) For each vessel with a fixed propeller, a table of shaft revolutions per minute for a representative range of speeds.

(3215) (4) For each vessel with a controllable pitch propeller, a table of control settings for a representative range of speeds.

(3216) (5) For each vessel that is fitted with an auxiliary device to assist in maneuvering, such as a bow thruster, a table of vessel speeds at which the auxiliary device is effective in maneuvering the vessel.

(3217) (6) The maneuvering information for the normal load and normal ballast condition for –

(3218) (i) Calm weather-wind 10 knots or less, calm sea;

(3219) (ii) No current;

(3220) (iii) Deep water conditions-water depth twice the vessel's draft or greater; and

(3221) (iv) Clean hull.

(3222) (7) At the bottom of the fact sheet, the following statement:

(3223)

WARNING

The response of the (name of the vessel) may be different from that listed above if any of the following conditions, upon which the maneuvering information is based, are varied:
(1) Calm weather—wind 10 knots or less, calm sea;
(2) No current;
(3) Water depth twice the vessel's draft or greater;
(4) Clean hull; and
(5) Intermediate drafts or unusual trim.

(3224) (h) An echo depth sounding device.

(3225) (i) A device that can continuously record the depth readings of the vessel's echo depth sounding device, except when operating on the Great Lakes and their connecting and tributary waters.

(3226) (j) Equipment on the bridge for plotting relative motion.

(3227) (k) Simple operating instructions with a block diagram, showing the changeover procedures for remote steering gear control systems and steering gear power units, permanently displayed on the navigating bridge and in the steering gear compartment.

(3228) (l) An indicator readable from the centerline conning position showing the rate of revolution of each propeller, except when operating on the Great Lakes and their connecting and tributary waters.

(3229) (m) If fitted with controllable pitch propellers, an indicator readable from the centerline conning position showing the pitch and operational mode of such propellers, except when operating on the Great Lakes and their connecting and tributary waters.

(3230) (n) If fitted with lateral thrust propellers, an indicator readable from the centerline conning position showing the direction and amount of thrust of such propellers, except when operating on the Great Lakes and their connecting and tributary waters.

(3231) (o) A telephone or other means of communication for relaying headings to the emergency steering station. Also, each vessel of 500 gross tons and over and constructed on or after June 9, 1995 must be provided with arrangements for supplying visual compass-readings to the emergency steering station.

(3232)

§164.37 Equipment: Vessels of 10,000 gross tons or more.

(3233) (a) Each vessel of 10,000 gross tons or more must have, in addition to the radar system under §164.35(a), a second marine radar system that operates independently of the first.

(3234) **Note:** Independent operation means two completely separate systems, from separate branch power supply circuits or distribution panels to antennas, so that failure of any component of one system will not render the other system inoperative.

(3235) (b) On each tanker of 10,000 gross tons or more that is subject to 46 U.S.C. 3708, the dual radar system required by this part must have a short range capability and a long range capability; and each radar must have true north features consisting of a display that is stabilized in azimuth.

(3236)

§164.38 Automatic radar plotting aids (ARPA). (See 33 CFR 164.)

(3237)

§164.39 Steering gear: Foreign tankers.

(3238) (a) This section applies to each foreign tanker of 10,000 gross tons or more, except a public vessel, that–

(3239) (1) Transfers oil at a port or place subject to the jurisdiction of the United States; or

(3240) (2) Otherwise enters or operates in the navigable waters of the United States, except a vessel described by §164.02 of this part.

(3241) (b) *Definitions*. The terms used in this section are as follows:

(3242) *Constructed* means the same as in chapter II-1, Regulations 1.1.2 and 1.1.3.1, of SOLAS 74.

(3243) *Existing tanker* means a tanker –

(3244) (1) For which the building contract is placed on or after June 1, 1979;

(3245) (2) In the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or after January 1, 1980;

(3246) (3) The delivery of which occurs on or after June 1, 1982; or

(3247) (4) That has undergone a major conversion contracted for on or after June 1, 1979; or construction of which was begun on or after January 1, 1980, or completed on or after June 1, 1982.

(3248) *Public vessel, oil, hazardous materials, and foreign vessel* mean the same as in 46 U.S.C. 2101.

(3249) *SOLAS 74* means the International Convention for the Safety of Life at Sea, 1974, as amended.

(3250) *Tanker* means a self-propelled vessel defined as a tanker by 46 U.S.C. 2101(38) or as a tank vessel by 46 U.S.C. 2101(39).

(3251) (c) Each tanker constructed on or after September 1, 1984, must meet the applicable requirements of chapter II-1, Regulations 29 and 30, of SOLAS 74.

(3252) (d) Each tanker constructed before September 1, 1984, must meet the requirements of chapter II-1, Regulation 29.19, of SOLAS 74.

(3253) (e) Each tanker of 40,000 gross tons or more, constructed before September 1, 1984, that does not meet the single-failure criterion of chapter II-1, Regulation 29.16, of SOLAS 74, must meet the requirements of chapter II-1, Regulation 29.20, of SOLAS 74.

(3254) (f) Each tanker constructed before September 1, 1984, must meet the applicable requirements of chapter II-1, Regulations 29.14 and 29.15, of SOLAS 74.

(3255)

§164.40 Devices to indicate speed and distance.

(3256) (a) Each vessel required to be fitted with an Automatic Radar Plotting Aid (ARPA) under §164.38 must be fitted with a device to indicate speed and distance of the vessel either through the water, or over the ground.

(3257) (b) The device must meet the following specifications:

(3258) (1) The display must be easily readable on the bridge by day or night.

(3259) (2) Errors in the indicated speed, when the vessel is operating free from shallow water effect, and from the effects of wind, current, and tide, should not exceed 5 percent of the speed of the vessel, or 0.5 knot, whichever is greater.

(3260) (3) Errors in the indicated distance run, when the vessel is operating free from shallow water effect, and from the effects of wind, current, and tide, should not exceed 5 percent of the distance run of the vessel in one hour or 0.5 nautical mile in each hour, whichever is greater.

(3261)

§164.41 Electronic position fixing devices.

(3262) (a) Each vessel calling at a port in the continental United States, including Alaska south of Cape Prince of Wales, except each vessel owned or bareboat chartered and operated by the United States, or by a state or its political subdivision, or by a foreign nation, and not engaged in commerce, must have a satellite navigation receiver with-

(3263) (1) Automatic acquisition of satellite signals after initial operator settings have been entered; and

(3264) (2) Position updates derived from satellite information during each usable satellite pass.

(3265) (b) A system that is found by the Commandant to meet the intent of the statements of availability, coverage, and accuracy for the U.S. Coastal Confluence Zone (CCZ) contained in the U.S. "Federal Radionavigation Plan" (Report No. DOD-NO 4650.4-P, I or No. DOT-TSC-RSPA-80-16, I). A person desiring a finding by the Commandant under this subparagraph must submit a written application describing the device to the Commandant (CG-DCO-D), Attn: Deputy for Operations Policy and Capabilities, U.S. Coast Guard Stop 7318, 2703 Martin Luther King Jr. Avenue SE., Washington, DC 20593-7318. After reviewing the application, the Commandant may request additional information to establish whether or not the device meets the intent of the Federal Radionavigation Plan.

(3266) **Note:** The Federal Radionavigation Plan is available from the National Technical Information Service, Springfield, Va. 22161, with the following Government Accession Numbers:

(3267) Vol 1, ADA 116468

(3268) Vol 2, ADA 116469

(3269) Vol 3, ADA 116470

(3270) Vol 4, ADA 116471

(3271)

§164.42 Rate of turn indicator.

(3272) Each vessel of 100,000 gross tons or more constructed on or after September 1, 1984, shall be fitted with a rate of turn indicator.

(3273)

§164.43 [Removed]

(3274)

§164.46 Automatic Identification System.

(3275) (a) *Definitions*. As used in this section—Automatic Identification Systems or AIS means a maritime navigation safety communications system standardized by the International Telecommunication Union (ITU), adopted by the International Maritime Organization (IMO), that—

(3276) (1) Provides vessel information, including the vessel's identity, type, position, course, speed, navigational status and other safety-related information automatically to appropriately equipped shore stations, other ships, and aircraft;

(3277) (2) Receives automatically such information from similarly fitted ships, monitors and tracks ships; and

(3278) (3) Exchanges data with shore-based facilities.

(3279) *Gross tonnage* means tonnage as defined under the International Convention on Tonnage Measurement of Ships, 1969.

(3280) *International* voyage means a voyage from a country to which the present International Convention for the Safety of Life at Sea applies to a port outside such country, or conversely.

(3281) *Properly installed, operational* means an Automatic Identification System (AIS) that is installed and operated using the guidelines set forth by the International Maritime Organization (IMO) Resolution A.917(22) and Safety of Navigation Circulars (SN/Circ.) 227, 244, 245, and SN.1/Circ.289; or National Marine Electronics Association (NMEA) Installation Standard 0400–3.10 in lieu of SN/Circ.227 and 245 (incorporated by reference, see §164.03).

(3282) (b) *AIS carriage*—(1) *AIS Class A* device. The following vessels must have on board a properly installed, operational Coast Guard type-approved AIS Class A device:

(3283) (i) A self-propelled vessel of 65 feet or more in length, engaged in commercial service.

(3284) (ii) A towing vessel of 26 feet or more in length and more than 600 horsepower, engaged in commercial service.

(3285) (iii) A self-propelled vessel that is certificated to carry more than 150 passengers.

(3286) (iv) A self-propelled vessel engaged in dredging operations in or near a commercial channel or shipping fairway in a manner likely to restrict or affect navigation of other vessels.

(3287) (v) A self-propelled vessel engaged in the movement of—

(3288) (A) Certain dangerous cargo as defined in subpart C of part 160 of this chapter, or

(3289) (B) Flammable or combustible liquid cargo in bulk that is listed in **46 CFR 30.25–1**, Table 30.25–1.

(3290) (2) *AIS Class B device*. Use of a Coast Guard type-approved AIS Class B device in lieu of an AIS Class A

device is permissible on the following vessels if they are not subject to pilotage by other than the vessel Master or crew:

(3291) (i) Fishing industry vessels;

(3292) (ii) Vessels identified in paragraph (b)(1)(i) of this section that are certificated to carry less than 150 passengers and that—

(3293) (A) Do not operate in a Vessel Traffic Service (VTS) or Vessel Movement Reporting System (VMRS) area defined in Table 161.12(c) of §161.12 of this chapter, and

(3294) (B) Do not operate at speeds in excess of 14 knots; and

(3295) (iii) Vessels identified in paragraph (b)(1)(iv) of this section engaged in dredging operations.

(3296) *Note to paragraph (b)*: Under 33 U.S.C. 1223(b)(3) and **33 CFR 160.111**, a Coast Guard Captain of the Port (COTP) may restrict the operation of a vessel if he or she determines that by reason of weather, visibility, sea conditions, port congestion, other hazardous circumstances, or the condition of such vessel, the restriction is justified in the interest of safety. In certain circumstances, if a COTP is concerned that the operation of a vessel not subject to §164.46 would be unsafe, the COTP may determine that voluntary installation of AIS by the operator would mitigate that concern. Fishing industry vessels include fishing vessels, fish processing vessels, and fish tender vessels as defined in 46 U.S.C. 2101.

(3297) (c) *SOLAS provisions*. The following self-propelled vessels must comply with International Convention for Safety of Life at Sea (SOLAS), as amended, Chapter V, regulation 19.2.1.6 (Positioning System), 19.2.4 (AIS Class A), and 19.2.3.5 (Transmitting Heading Device) or 19.2.5.1 (Gyro Compass) as applicable (Incorporated by reference, see §164.03):

(3298) (1) A vessel of 300 gross tonnage or more, on an international voyage.

(3299) (2) A vessel of 150 gross tonnage or more, when carrying more than 12 passengers on an international voyage.

(3300) (d) *Operations*. The requirements in this paragraph are applicable to any vessel equipped with AIS.

(3301) (1) Use of AIS does not relieve the vessel of the requirements to sound whistle signals or display lights or shapes in accordance with the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS), 28 U.S.T. 3459, T.I.A.S. 8587, or Inland Navigation Rules, **33 CFR part 83**; nor of the radio requirements of the Vessel Bridge-to-Bridge Radiotelephone Act, 33 U.S.C. 1201–1208, part 26 of this chapter, and **47 CFR part 80**.

(3302) (2) AIS must be maintained in effective operating condition, which includes—

(3303) (i) The ability to reinitialize the AIS, which requires access to and knowledge of the AIS power source and password;

(3304) (ii) The ability to access AIS information from the primary conning position of the vessel;

(3305) (iii) The accurate broadcast of a properly assigned Maritime Mobile Service Identity (MMSI) number;

(3306) (iv) The accurate input and upkeep of all AIS data fields and system updates; and

(3307) (v) For those vessels denoted in paragraph (b) of this section, the continual operation of AIS and its associated devices (*e.g.*, positioning system, gyro, converters, displays) at all times while the vessel is underway or at anchor, and, if moored, at least 15 minutes prior to getting underway; except when its operation would compromise the safety or security of the vessel or a security incident is imminent. The AIS should be returned to continuous operation as soon as the compromise has been mitigated or the security incident has passed. The time and reason for the silent period should be recorded in the ship's official log and reported to the nearest Captain of the Port or Vessel Traffic Center (VTC).

(3308) (3) AIS safety-related text messaging must be conducted in English and solely to exchange or communicate pertinent navigation safety information (analogous to a SECURITE broadcast). Although not prohibited, AIS text messaging should not be relied upon as the primary means for broadcasting distress (MAYDAY) or urgent (PAN PAN) communications. (47 CFR 80.1109, Distress, urgency, and safety communications).

(3309) (4) AIS application-specific messaging (ASM) is permissible, but is limited to applications adopted by the International Maritime Organization (such as IMO SN.1/Circ.289) or those denoted in the International Association of Marine Aids to Navigation and Lighthouse Authorities' (IALA) ASM Collection for use in the United States or Canada, and to no more than one ASM per minute.

(3310) *Note 1 to §164.46(d)*: The Coast Guard has developed the "USCG AIS Encoding Guidance" to help ensure consistent and accurate data encoding (input) by AIS users. This Guide is available at our "AIS Frequently Asked Questions" (FAQ #2) World Wide Web page at *www.navcen.uscg.gov/ais-frequently-asked-questions#2*. Although of great benefit, the interfacing or installation of other external devices or displays (*e.g.*, transmitting heading device, gyro, rate of turn indicator, electronic charting systems, and radar), is not currently required except as denoted in §164.46(c). Most application-specific messages require interfacing to an external system that is capable of their portrayal, such as equipment certified to meet Radio Technical Commission for Maritime Services (RTCM) electronic chart system (ECS) standard 10900 series.

(3311) (e) Watchkeeping. AIS is primarily intended for use by the Master or person in charge of the vessel, or by the person designated by the Master or person in charge to pilot or direct the movement of the vessel, who must maintain a periodic watch for AIS information.

(3312) (f) Portable AIS. The use of a portable AIS is permissible only to the extent that electromagnetic interference does not affect the proper function of existing navigation and communication equipment on board and

such that only one AIS device may be transmitting on board a vessel at any one time.

(3313) (g) AIS Pilot Plug. The AIS Pilot Plug on any vessel subject to pilotage by other than the vessel Master or crew must be readily available and easily accessible from the primary conning position of the vessel and permanently affixed (not an extension cord) and adjacent (within 3 feet) to a 120-volt 50/ 60 Hz AC power receptacle (NEMA 5– 15).

(3314) (h) Exceptions. The following vessels may seek up to a 5-year deviation from the AIS requirements of this section by requesting a deviation under §164.55.

(3315) (1) Vessels that operate solely within a very confined area (*e.g.*, less than a 1 nautical-mile radius, shipyard, or barge fleeting facility);

(3316) (2) Vessels that conduct only short voyages (less than 1 nautical mile) on a fixed schedule (*e.g.*, a bank-to-bank river ferry service or a tender vessel);

(3317) (3) Vessels that are not likely to encounter other AIS-equipped vessels;

(3318) (4) Vessels whose design or construction makes it impracticable to operate an AIS device (*e.g.*, those that lack electrical power, have an exposed or open cabin, or are submersible); or

(3319) (5) Vessels denoted in paragraph (b)(2) that seek a deviation from requirements in paragraphs (d)(2)(ii) and (e) of this section because their AIS Class B device lacks a display.

(3320) (i) Prohibition. Except for maritime support stations (see **47 CFR 80.5**) licensed by the Federal Communications Commission (FCC), broadcasts from AIS Class A or B devices on aircraft, non-self propelled vessels or from land are prohibited.

(3321) (j) Implementation date. Those vessels identified in paragraphs (b) and (c) of this section that were not previously subject to AIS carriage must install AIS no later than March 1, 2016.

(3322)

§164.51 Deviations from rules: Emergency.

(3323) Except for the requirements of §164.53(b), in an emergency, any person may deviate from any rule in this part to the extent necessary to avoid endangering persons, property, or the environment.

(3324)

§164.53 Deviations from rules and reporting: Non-operating equipment.

(3325) (a) If during a voyage any equipment required by this part stops operating properly, the person directing the movement of the vessel may continue to the next port of call, subject to the directions of the District Commander or the Captain of the Port, as provided by 33 CFR 160.

(3326) (b) If the vessel's automatic identification system (AIS), radar, radio navigation receivers, gyrocompass, echo depth sounding device, or primary steering gear stops operating properly, the person directing the movement of the vessel must report or cause to be reported that it is not operating properly to the nearest Captain of the Port, District Commander, or, if participating in a Vessel Traffic Service, to the Vessel Traffic Center, as soon as possible.

(3327)

§164.55 Deviations from rules: Continuing operation or period of time.

(3328) The Captain of the Port, upon written application, may authorize a deviation from any rule in this part if he determines that the deviation does not impair the safe navigation of the vessel under anticipated conditions and will not result in a violation of the rules for preventing collisions at sea. The authorization may be issued for vessels operating in the waters under the jurisdiction of the Captain of the Port for any continuing operation or period of time the Captain of the Port specifies.

(3329)

§164.61 Marine casualty reporting and record retention.

(3330) When a vessel is involved in a marine casualty as defined in **46 CFR 4.03-1**, the master or person in charge of the vessel shall–

(3331) (a) Ensure compliance with **46 CFR 4.05**, "Notice of Marine Casualty and Voyage Records," and

(3332) (b) Ensure that the voyage records required by **46 CFR 4.05-15** are retained for–

(3333) (1) 30 days after the casualty if the vessel remains in the navigable waters of the United States; or

(3334) (2) 30 days after the return of the vessel to a United States port if the vessel departs the navigable waters of the United States within 30 days after the marine casualty.

(3335)

§164.70 Definitions.

(3336) For purposes of §§164.72 through 164.82, the term–

(3337) *Current edition* means the most recent published version of a publication, chart, or map required by §164.72.

(3338) *Currently corrected edition* means a current or previous edition of a publication required by §164.72, corrected with changes that come from Notice to Mariners (NTMs) or Notices to Navigation reasonably available and that apply to the vessel's transit. Hand-annotated river maps from U.S. Army Corps of Engineers (USACE) are currently corrected editions if issued within the previous 5 years.

(3339) *Great Lakes* means the Great Lakes and their connecting and tributary waters including the Calumet River as far as the Thomas J. O'Brien Lock and Controlling Works (between miles 326 and 327), the Chicago River as far as the east side of the Ashland Avenue Bridge (between miles 321 and 322), and the Saint Lawrence River as far east as the lower exit of Saint Lambert Lock.

(3340) *Merchant mariner credential or MMC* means the credential issued by the Coast Guard under **46 CFR part 10**. It combines the individual merchant mariner's document, license, and certificate of registry enumerated in 46 U.S.C. subtitle II part E as well as the STCW endorsement into a single credential that serves

as the mariner's qualification document, certificate of identification, and certificate of service.

(3341) *Swing-meter* means an electronic or electric device that indicates that rate of turn of the vessel on board which it is installed.

(3342) *Towing vessel* means a commercial vessel engaged in or intending to engage in pulling, pushing or hauling alongside, or any combination of pulling, pushing, or hauling alongside.

(3343) *Western Rivers* means the Mississippi River, its tributaries, South Pass, and Southwest Pass, to the navigational-demarcation lines dividing the high seas from harbors, rivers, and other inland waters of the United States, and the Port Allen-Morgan City Alternative Route, and that part of the Atchafalaya River above its junction with the Port Allen-Morgan City Alternative Route including the Old River and the Red River and those waters specified by §§89.25 and 89.27 of this chapter, and such other, similar waters as are designated by the COTP.

(3344)

§164.72 Navigational-safety equipment, charts or maps, and publications required on towing vessels.

(3345) (a) Except as provided by §164.01(b), each towing vessel must be equipped with the following navigational-safety equipment:

(3346) (1) *Marine Radar*. By August 2, 1997, a marine radar that meets the following applicable requirements:

(3347) (i) For a vessel of less than 300 tons gross tonnage that engages in towing on navigable waters of the U.S., including Western Rivers, the radar must meet–

(3348) (A) The requirements of the Federal Communications Commission (FCC) specified by **47 CFR part 80**; and

(3349) (B) RTCM Standard for Marine Radar Equipment Installed on Ships of Less Than 300 Tons Gross Tonnage, RTCM Paper-71-95/SC112-STD, Version 1.1, display Category II and stabilization Category Bravo.

(3350) (ii) For a vessel of less than 300 tons gross tonnage that engages in towing seaward of navigable waters of the U.S. or more than three nautical miles from shore on the Great Lakes, the radar must meet–

(3351) (A) The requirements of the FCC specified by 47 CFR part 80; and

(3352) (B) RTCM Standard for Marine Radar Equipment Installed on Ships of Less Than 300 Tons Gross Tonnage, RTCM Paper 71-95/SC112-STD, Version 1.1, display Category I and stabilization Category Alpha.

(3353) (iii) For a vessel of 300 tons gross tonnage or more that engages in towing on navigable waters of the U.S., including Western rivers, the radar must meet–

(3354) (A) The requirements of the Federal Communications Commission (FCC) specified by **47 CFR part 80**; and

(3355) (B) RTCM Recommended Standards for Marine Radar Equipment Installed on Ships of 300 Tons Gross Tonnage and Upwards, RTCM Paper 191-93/SC112-X, Version 1.2 except the requirements for azimuth stabilization in paragraph 3.10.

(3356) (iv) For a vessel of 300 tons gross tonnage or more that engages in towing seaward of navigable waters of the U.S. or more than three nautical miles from shore on the Great Lakes, the radar must meet–

(3357) (A) The requirements of the FCC specified by 47 CFR Part 80; and

(3358) (B) RTCM Recommended Standards for Marine Radar Equipment Installed on Ships of 300 Tons Gross Tonnage and Upwards, RTCM Paper 191-93/SC112-X, Version 1.2.

(3359) (v) A towing vessel with an existing radar must meet the applicable requirements of paragraphs (a)(1) (i) through (iv) of this section by August 2, 1998; except that a towing vessel with an existing radar must meet the display and stabilization requirements of paragraph (a)(1)(ii)(B) of this section by August 2, 2001.

(3360) (2) *Searchlight*. A searchlight, directable from the vessel's main steering station and capable of illuminating objects at a distance of at least two times the length of the tow.

(3361) (3) *VHF-FM Radio*. An installation or multiple installations of VHF-FM radios as prescribed by part 26 of this chapter and **47 CFR part 80**, to maintain a continuous listening watch on the designated calling channel, VHF-FM Channel 13 (except on portions of the Lower Mississippi River, where VHF-FM Channel 67 is the designated calling channel), and to separately monitor the International Distress and Calling Channel, VHF-FM Channel 16, except when transmitting or receiving traffic on other VHF-FM channels or when participating in a Vessel Traffic Service (VTS) or monitoring a channel of a VTS. (Each U.S. towing vessel of 26 feet (about 8 meters) or more in length, except a public vessel, must hold a ship-radio-station license for radio transmitters (including radar and EPIRBs), and each operator must hold a restricted operator's license or higher. To get an application for either license, call 800–418–FORM or 202–418–FORM, or write to the FCC; Wireless Bureau, Licensing Division; 1270 Fairfield Road; Gettysburg, PA 17325-7245.)

(3362) (4) *Magnetic Compass*. Either–

(3363) (i) An illuminated swing-meter or an illuminated card-type magnetic steering compass readable from the vessel's main steering station, if the vessel engages in towing exclusively on Western Rivers; or

(3364) (ii) An illuminated card-type magnetic steering compass readable from the vessel's main steering station.

(3365) (5) *Echo Depth-Sounding Device*. By August 2, 2001, an echo depth-sounding device readable from the vessel's main steering station, unless the vessel engages in towing exclusively on Western Rivers.

(3366) (6) *Electronic Position-Fixing Device*. An electronic position-fixing device, a satellite navigational system such as the Global Positioning System (GPS) as required by §164.41, if the vessel engages in towing seaward of navigable waters of the U.S. or more than three nautical miles from shore on the Great Lakes.

(3386)

TABLE 164.72 – Equipment, Charts or Maps, and Publications of Towing Vessels for 12 Meters or More in Length

	Western Rivers	U.S. Navigable Waters (other than Western Rivers)	Waters seaward of Navigable Waters and 3 NM or more from shore on the Great Lakes
Marine Radar: Towing Vessels of less than 300 GT	RTCM Paper 71-95/SC112-STD Version 1.1 Display Category II[1] Stabilization Category BRAVO	RTCM Paper 71-95/SC112-STD Version 1.1 Display Category II[1] Stabilization Category BRAVO	RTCM Paper 71-95/SC112-STD Version 1.1 Display Category I[2] Stabilization Category ALPHA
Towing Vessels of 300 GT or more	RTCM Paper 191-93/SC112-X Version 1.2 (except the Azimuth stabilization requirement in paragraph 3.10)[1]	RTCM Paper 191-93/SC112-X Version 1.2 (except the Azimuth stabilization requirement in paragraph 3.10)[1]	RTCM Paper 191-93/SC112-X Version 1.2[1]
Searchlight	X	X	X
VHF-FM Radio	X	X	X
Magnetic Compass	X[3]	X	X
Swing Meter	X[3]		
Echo Depth-sounding Device		X	X
Electronic Position Fixing Device			X
Charts or Maps	(1) Large enough scale (2) Current edition or currently corrected edition	(1) Large enough scale (2) Current edition or currently corrected edition	(1) Large enough scale (2) Currently corrected edition
General Publications	(1) U.S. Coast Guard Light List (2) Notices to Navigation or Local Notices to Mariners (3) River-current Tables	(1) U.S. Coast Guard Light List (2) Local Notices to Mariners (3) Tidal-current Tables (4) Tide Tables (5) U.S. Coast Pilot	(1) U.S. Coast Guard Light List (2) Local Notices to Mariners (3) Tidal-current Tables (4) Tide Tables (5) U.S. Coast Pilot

Notes:
[1] Towing vessels with existing radar must meet this requirement by August 2, 1998.
[2] Towing vessels with existing radar must meet this requirement by August 2, 1998 but do not need to meet the display and stabilization requirements until August 2, 2001.
[3] A towing vessel may carry either a swing-meter or a magnetic compass.

(3367) (b) Each towing vessel must carry on board and maintain the following:

(3368) (1) *Charts or maps*. Marine charts or maps of the areas to be transited, published by the National Ocean Service (NOS), the ACOE, or a river authority that satisfy the following requirements.

(3369) (i) The charts or maps must be of a large enough scale and have enough detail to make safe navigation of the areas possible.

(3370) (ii) The charts or maps must be either–

(3371) (A) Current editions or currently corrected editions, if the vessel engages in towing exclusively on navigable waters of the U.S., including Western Rivers; or

(3372) (B) Currently corrected editions, if the vessel engages in towing seaward of navigable waters of the U.S. or more than three nautical miles from shore on the Great Lakes.

(3373) (iii) The charts or maps may be, instead of charts or maps required by paragraphs (b)(1) (i) and (ii) of this section, currently corrected marine charts or maps, or applicable extracts, published by a foreign government. These charts or maps, or applicable extracts, must contain information similar to that on the charts or maps required by paragraphs (b)(1) (i) and (ii) of the section, be of large enough scale, and have enough detail to make safe navigation of the areas possible, and must be currently corrected.

(3374) (2) *General publications*. A currently corrected edition of, or an applicable currently corrected extract from, each of the following publications for the area to be transited:

(3375) (i) If the vessel is engaged in towing exclusively on Western Rivers-

(3376) (A) U.S. Coast Guard Light List;

(3377) (B) Applicable Notices to Navigation published by the ACOE, or Local Notices to Marines (LNMs) published by the Coast Guard, for the area to be transited, when available; and

(3378) (C) River-current tables published by a river authority, if available.

(3379) (ii) if the vessel is engaged other than in towing exclusively on Western Rivers-

(3380) (A) Coast Guard Light List;

(3381) (B) Notices to Mariners published by the National Geospatial-Intelligence Agency, or LNMs published by the Coast Guard;

(3382) (C) Tidal-Current tables published by private entities using data provided by the NOS, or river-current tables published by the ACOE or a river authority;

(3383) (D) Tide tables published by private entities using data provided by the NOS; and

(3384) (E) U.S. Coast Pilot.

(3385) (c) Table 164.72, following, summarizes the navigational-safety equipment, charts or maps, and

publications required for towing vessels of 12 meters or more in length:

(3387)

§164.74 Towline and terminal gear for towing astern.

(3388) (a) *Towline*. The owner, master, or operator of each vessel towing astern shall ensure that the strength of each towline is adequate for its intended service, considering at least the following factors:

(3389) (1) The size and material of each towline must be–

(3390) (i) Appropriate for the horsepower or bollard pull of the vessel;

(3391) (ii) Appropriate for the static loads and dynamic loads expected during the intended service;

(3392) (iii) Appropriate for the sea conditions expected during the intended service;

(3393) (iv) Appropriate for exposure to the marine environment and to any chemicals used or carried on board the vessel;

(3394) (v) Appropriate for the temperatures of normal stowage and service on board the vessel;

(3395) (vi) Compatible with associated navigational-safety equipment; and

(3396) (vii) Appropriate for the likelihood of mechanical damage.

(3397) (2) Each towline as rigged must be–

(3398) (i) Free of knots;

(3399) (ii) Spliced with a thimble, or have a poured socket at its end; and

(3400) (iii) Free of wire clips except for temporary repair, for which the towline must have a thimble and either five wire clips or as many wire clips as the manufacturer specifies for the nominal diameter and construction of the towline, whichever is more.

(3401) (3) The condition of each towline must be monitored through the–

(3402) (i) Keeping on board the towing vessel or in company files of a record of the towline's initial minimum breaking strength as determined by the manufacturer, by a classification ("class") society authorized in §157.04 of this chapter, or by a tensile test that meets API Specifications 9A, Specification for Wire Rope, Section 3; ASTM D 4268, Standard Test Method for Testing Fiber Ropes; or Cordage Institute CIA 3, Standard Test Methods for Fiber Rope Including Standard Terminations;

(3403) (ii) If the towline is purchased from another owner, master, or operator of a vessel with the intent to use it as a towline or if it is retested for any reason, keeping on board the towing vessel or in company files of a record of each retest of the towline's minimum breaking strength as determined by a class society authorized in §157.04 of this chapter or by a tensile test that meets API Specification 9A, Section 3; ASTM D 4268 (incorporated by reference, see §164.03) or Cordage Institute CIA 3, Standard Test Methods;

(3404) (iii) Conducting visual inspections of the towline in accordance with the manufacturer's recommendations, or at least monthly, and whenever the serviceability of the towline is in doubt (the inspections being conducted by the owner, master, or operator, or by a person on whom the owner, master, or operator confers the responsibility to take corrective measures appropriate for the use of the towline);

(3405) (iv) Evaluating the serviceability of the whole towline or any part of the towline, and removing the whole or part from service either as recommended by the manufacturer or a class society authorized in §157.04 of this chapter or in accordance with a replacement schedule developed by the owner, master, or operator that accounts for at least the–

(3406) (A) Nautical miles on, or time in service of, the towline;

(3407) (B) Operating conditions experienced by the towline;

(3408) (C) History of loading of the towline;

(3409) (D) Surface condition, including corrosion and discoloration, of the towline;

(3410) (E) Amount of visible damage to the towline;

(3411) (F) Amount of material deterioration indicated by measurements of diameter and, if applicable, measurements of lay extension of the towline; and

(3412) (G) Point at which a tensile test proves the minimum breaking strength of the towline inadequate by the standards of paragraph (a)(1) of this section, if necessary; and

(3413) (v) Keeping on board the towing vessel or in company files of a record of the material condition of the towline when inspected under paragraphs (a)(3)(iii) and (iv) of this section. Once this record lapses for three months or more, except when a vessel is laid up or out of service or has not deployed its towline, the owner, master, or operator shall retest the towline or remove it from service.

(3414) (b) *Terminal gear*. The owner, master, or operator of each vessel towing astern shall ensure that the gear used to control, protect, and connect each towline meets the following criteria:

(3415) (1) The material and size of the terminal gear are appropriate for the strength and anticipated loading of the towline and for the environment;

(3416) (2) Each connection is secured by at least one nut with at least one cotter pin or other means of preventing its failure;

(3417) (3) The lead of the towline is appropriate to prevent sharp bends in the towline from fairlead blocks, chocks, or tackle;

(3418) (4) There is provided a method, whether mechanical or non-mechanical, that does not endanger operating personnel but that easily releases the towline;

(3419) (5) The towline is protected from abrasion or chafing by chafing gear, lagging, or other means;

(3420) (6) Except on board a vessel towing in ice on Western Rivers or one using a towline of synthetic or natural fiber, there is fitted a winch that evenly spools and tightly winds the towline; and

(3421) (7) If a winch is fitted, there is attached to the main drum a brake that has holding power appropriate for the horsepower or bollard pull of the vessel and can be operated without power to the winch.

(3422)

§164.76 Towline and terminal gear for towing alongside and pushing ahead.

(3423) The owner, master, or operator of each vessel towing alongside or pushing ahead shall ensure the face wires, spring lines, and push gear used–

(3424) (a) Are appropriate for the vessel's horsepower;

(3425) (b) Are appropriate for the arrangement of the tow;

(3426) (c) Are frequently inspected; and

(3427) (d) Remain serviceable.

(3428)

§164.78 Navigation under way: Towing vessels.

(3429) (a) The owner, master, or operator of each vessel towing shall ensure that each person directing and controlling the movement of the vessel–

(3430) (1) Understands the arrangement of the tow and the effects of maneuvering on the vessel towing and on the vessel, barge, or object being towed;

(3431) (2) Can fix the position of the vessel using installed navigational equipment, aids to navigation, geographic reference-points, and hydrographic contours;

(3432) (3) Does not fix the position of the vessel using buoys alone. (Buoys are aids to navigation placed in approximate positions either to alert mariners to hazards to navigation or to indicate the orientation of a channel. They may not maintain exact charted positions, because strong or varying currents, heavy seas, ice and collisions with vessels can move or sink them or set them adrift. Although they may corroborate a position fixed by other means, they cannot fix a position; however, if no other aids are available, buoys alone may establish an estimated position.);

(3433) (4) Evaluates the danger of each closing visual or radar contact;

(3434) (5) Knows and applies the variation and deviation, where a magnetic compass is fitted and where charts or maps have enough detail to enable this type of correction;

(3435) (6) Knows the speed and direction of the current, and the set, drift, and tidal state for the area to be transited;

(3436) (7) Proceeds at a safe speed taking into account the weather, visibility, density of traffic, draft of tow, possibility of wake damage, speed and direction of the current, and local speed-limits; and

(3437) (8) Monitors the voyage plan required by §164.80.

(3438) (b) The owner, master, or operator of each vessel towing shall ensure that the tests and inspections required by §164.80 are conducted and that the results are entered in the log or other record carried on board.

(3439)

§164.80 Tests, inspections, and voyage planning.

(3440) (a) The owner, master, or operator of each towing vessel of less than 1,600 GT shall ensure that the following tests and inspections of gear occur before the vessel embarks on a voyage of more than 24 hours or when each new master or operator assumes command:

(3441) (1) *Steering-systems*. A test of the steering-gear-control system; a test of the main steering gear from the alternative power supply, if installed; a verification of the rudder-angle indicator relative to the actual position of the rudder; and a visual inspection of the steering gear and its linkage.

(3442) (2) *Navigational equipment*. A test of all installed navigational equipment.

(3443) (3) *Communications*. Operation of all internal vessel control communications and vessel-control alarms, if installed.

(3444) (4) *Lights*. Operation of all navigational lights and all searchlights.

(3445) (5) *Terminal gear*. Visual inspection of tackle; of connections of bridle and towing pendant, if applicable; of chafing gear; and the winch brake, if installed.

(3446) (6) *Propulsion systems*. Visual inspection of the spaces for main propulsion machinery, of machinery, and of devices for monitoring machinery.

(3447) (b) The owner, master, or operator of each towing vessel of 1,600 GT or more shall ensure that the following tests of equipment occur at the frequency required by §164.25 and that the following inspections of gear occur before the vessel embarks on a voyage of more than 24 hours or when each new master or operator assumes command:

(3448) (1) *Navigational equipment*. Tests of onboard equipment as required by §164.25.

(3449) (2) *Terminal gear*. Visual inspection of tackle; of connections of bridle and towing pendant, if applicable; of chafing gear; and of the winch brake, if installed.

(3450) (c)(1) The voyage-planning requirements outlined in this section do not apply to you if your towing vessel is–

(3451) (i) Used solely for any of the following services or any combination of these services–

(3452) (A) Within a limited geographic area, such as fleeting-area for barges or a commercial facility, and used for restricted service, such as making up or breaking up larger tows:

(3453) (B) For harbor assist;

(3454) (C) For assistance towing as defined by **46 CFR 10.103**;

(3455) (D) For response to emergency or pollution;

(3456) (ii) A public vessel that is both owned, or demise chartered, and operated by the United States Government or by a government of a foreign country; and that is not engaged in commercial service;

(3457) (iii) A foreign vessel engaged in innocent passage; or

(3458) (iv) Exempted by the Captain of the Port (COTP).

(3459) (2) If you think your towing vessel should be exempt from these voyage planning requirements for a specified route, you should submit a written request to the appropriate COTP. The COTP will provide you with a written response granting or denying your request.

(3460) (3) If any part of a towing vessel's intended voyage is seaward of the baseline (i.e. the shoreward boundary) of the territorial sea of the U.S.,then the owner, master, or operator of the vessel, employed to tow a barge or barges, must ensure that the voyage with the barge or barges is planned, taking into account all pertinent information before the vessel embarks on the voyage. The master must check the planned route for proximity to hazards before the voyage begins. During a voyage, if a decision is made to deviate substantially from the planned route, then the master or mate must plan the new route before deviating from the planned route. The voyage plan must follow company policy and consider the following (related requirements noted in parentheses):

(3461) (i) Applicable information from nautical charts and publication (also see paragraph (b) of section 164.72), including Coast Pilot, Coast Guard Light List, and Coast Guard Local Notice to Mariners for the port of departures, all ports of call, and the destination;

(3462) (ii) Current and forecast weather, including visibility, wind, and sea state for the port of departure, all ports of call, and the destination (also see paragraphs (a)(7) of section 164.78 and (b) of section 164.82);

(3463) (iii) Data on tides and currents for the port of departure, all ports of call, and the destination, and the river staged and forecast, if appropriate;

(3464) (iv) Forward and after drafts of the barge or barges and under-keel and vertical clearances (air-gaps) for all bridges, ports, and berthing areas;

(3465) (v) Pre-departure checklists;

(3466) (vi) Calculated speed and estimated time of arrival at proposed waypoints;

(3467) (vii) Communication contacts at any Vessel Traffic Services, bridges, and facilities, and any port specific requirements for VHF radio;

(3468) (viii) Any master's or operator's standings orders detailing closest points of approach, special conditions, and critical maneuvers; and

(3469) (ix) Whether the towing vessel has sufficient power to control the tow under all foreseeable circumstances.

(3470)

§164.82 Maintenance, failure, and reporting.

(3471) (a) *Maintenance*. The owner, master, or operator or each towing vessel shall maintain operative the navigational-safety equipment required by §164.72.

(3472) (b) *Failure*. If any of the navigational-safety equipment required by §164.72 fails during a voyage, the owner, master, or operator of the towing vessel shall exercise due diligence to repair it at the earliest practicable time. He or she shall enter its failure in the log or other record carried on board. The failure of equipment, in itself, does not constitute a violation of this rule; nor does it constitute unseaworthiness; nor does it obligate an owner, master, or operator to moor or anchor the vessel. However, the owner, master, or operator shall consider the state of the equipment-along with such factors as weather, visibility, traffic, and the dictates of good seamanship-in deciding whether it is safe for the vessel to proceed.

(3473) (c) *Reporting*. The owner, master, or operator of each towing vessel whose equipment is inoperative or otherwise impaired while the vessel is operating within a Vessel Traffic Service (VTS) Area shall report the fact as required by 33 CFR Table 161.18(a) row Q:

(3474) (d) *Deviation and authorization*. The owner, master, or operator of each towing vessel unable to repair within 96 hours an inoperative marine radar required by §164.72(a) shall so notify the Captain of the Port (COTP) and shall seek from the COTP both a deviation from the requirements of this section and an authorization for continued operation in the area to be transited. Failure of redundant navigational-safety equipment, including but not limited to failure of one of two installed radars, where each satisfies §164.72(a), does not necessitate either a deviation or an authorization.

(3475) (1) The initial notice and request for a deviation and an authorization may be spoken, but the request must also be written. The written request must explain why immediate repair is impracticable, and state when and by whom the repair will be made.

(3476) (2) The COTP, upon receiving even a spoken request, may grant a deviation and an authorization from any of the provisions of §§164.70 through 164.82 for a specified time if he or she decides that they would not impair the safe navigation of the vessel under anticipated conditions.

(3477)

Part 165–RegulatedNavigation Areas and Limited Access Areas

(3478)

Subpart A–General

(3479)

§165.1 Purpose of part.

(3480) The purpose of this part is to –

(3481) (a) Prescribe procedures for establishing different types of limited or controlled access areas and regulated navigation areas;

(3482) (b) Prescribe general regulations for different types of limited or controlled access areas and regulated navigation areas;

(3483) (c) Prescribe specific requirements for established areas; and

(3484) (d) List specific areas and their boundaries.

(3485)

§165.3 Definitions.

(3486) The following definitions apply to this part:

(3487) *Credential* means any or all of the following:

(3488) (1) Merchant mariner's document.

(3489) (2) Merchant mariner's license.

(3490) (3) STCW endorsement.

(3491) (4) Certificate of registry.

(3492) (5) Merchant mariner credential.

(3493) *Merchant mariner credential or MMC* means the credential issued by the Coast Guard under 46 CFR part 10. It combines the individual merchant mariner's document, license, and certificate of registry enumerated in 46 U.S.C. subtitle II part E as well as the STCW endorsement into a single credential that serves as the mariner's qualification document, certificate of identification, and certificate of service.

(3494)

§165.5 Establishment procedures.

(3495) (a) A safety zone, security zone, or regulated navigation area may be established on the initiative of any authorized Coast Guard official authorized to issue such an order in accordance with 33 CFR 1.05-1.

(3496) (b) Any person may request that a safety zone, security zone, or regulated navigation area be established. Except as provided in paragraph (c) of this section, each request must be submitted in writing to either the Captain of the Port or District Commander having jurisdiction over the location as described in **33 CFR 3**, and include the following:

(3497) (1) The name of the person submitting the request;

(3498) (2) The location and boundaries of the safety zone, security zone, or regulated navigation area;

(3499) (3) The date, time, and duration that the safety zone, security zone, or regulated navigation area should be established;

(3500) (4) A description of the activities planned for the safety zone, security zone, or regulated navigation area;

(3501) (5) The nature of the restrictions or conditions desired; and

(3502) (6) The reason why the safety zone, security zone, or regulated navigation area is necessary.

(3503) (c) Safety Zones and Security Zones. If, for good cause, the request for a safety zone or security zone is made less than 5 working days before the zone is to be established, the request may be made orally, but it must be followed by a written request within 24 hours.

(3504) (Requests for safety zones, security zones, and regulated navigation areas are approved by the Office of Management and Budget under control number 1625-0020)

(3505)

§165.7 Notification.

(3506) (a) The establishment of these limited access areas and regulated navigation areas is considered rulemaking. The procedures used to notify persons of the establishment of these areas vary depending upon the circumstances and emergency conditions. Notification may be made by marine broadcasts, local notice to mariners, local news media, distribution in leaflet form, and on-scene oral notice, as well as publication in the Federal Register.

(3507) (b) Notification normally contains the physical boundaries of the area, the reasons for the rule, its estimated duration, and the method of obtaining authorization to enter the area, if applicable, and special navigational rules, if applicable.

(3508)

§165.8 Geographic coordinates.

(3509) Geographic coordinates expressed in terms of latitude or longitude, or both, are not intended for plotting on maps or charts whose referenced horizontal datum is the North American Datum of 1983 (NAD 83), unless such geographic coordinates are expressly labeled NAD 83. Geographic coordinates without the NAD 83 reference may be plotted on maps or charts referenced to NAD 83 only after application of the appropriate corrections that are published on the particular map or chart being used.

(3510)

§165.9 Geographic application of limited and controlled access areas and regulated navigation areas.

(3511) (a) *General*. The geographic application of the limited and controlled access areas and regulated navigation areas in this part are determined based on the statutory authority under which each is created.

(3512) (b) *Safety zones and regulated navigation areas*. These zones and areas are created under the authority of 46 U.S.C. 70001–70041. Safety zones established under 46 U.S.C. 70116 and regulated navigation areas may be established in waters subject to the jurisdiction of the United States as defined in §2.38 of this chapter, including the territorial sea to a seaward limit of 12 nautical miles from the baseline.

(3513) (c) *Security zones*. These zones have two sources of authority–46 U.S.C. Chapter 700, and the Act of June 15, 1917, as amended by both the Magnuson Act of August 9, 1950 ("Magnuson Act"), 46 U.S.C. 70051–54, and sec. 104 the Maritime Transportation Security Act of 2002 (Pub. L. 107-295, 116 Stat. 2064). Security zones established under either 46 U.S.C. 70116 or 46 U.S.C. 70051 may be established in waters subject to the jurisdiction of the United States as defined in §2.38 of this chapter, including the territorial sea to a seaward limit of 12 nautical miles from the baseline.

(3514) (d) *Naval vessel protection zones*. These zones are issued under the authority of 14 U.S.C. 503 and 527 and may be established in waters subject to the jurisdiction of the United States as defined in §2.38 of this chapter, including the territorial sea to a seaward limit of 12 nautical miles from the baseline.

(3515)

Subpart B–Regulated Navigation Areas

(3516)

§165.10 Regulated navigation area.

(3517) A regulated navigation area is a water area within a defined boundary for which regulations for vessels navigating within the area have been established under this part.

(3518)

§165.11 Vessel operating requirements (regulations).

(3519) Each District Commander may control vessel traffic in an area which is determined to have hazardous conditions, by issuing regulations–

(3520) (a) Specifying times of vessel entry, movement, or departure to, from, within, or through ports, harbors, or other waters;

(3521) (b) Establishing vessel size, speed, draft limitations, and operating conditions; and

(3522) (c) Restricting vessel operation, in a hazardous area or under hazardous conditions, to vessels which have particular operating characteristics or capabilities which are considered necessary for safe operation under the circumstances.

(3523)

§165.13 General regulations.

(3524) (a) The master of a vessel in a regulated navigation area shall operate the vessel in accordance with the regulations contained in Subpart F.

(3525) (b) No person may cause or authorize the operation of a vessel in a regulated navigation area contrary to the regulations in this Part.

(3526)

Subpart C–Safety Zones

(3527)

§165.20 Safety zones.

(3528) A Safety Zone is a water area, shore area, or water and shore area to which, for safety or environmental purposes, access is limited to authorized persons, vehicles, or vessels. It may be stationary and described by fixed limits or it may be described as a zone around a vessel in motion.

(3529)

§165.23 General regulations.

(3530) Unless otherwise provided in this part –

(3531) (a) No person may enter a safety zone unless authorized by the COTP or the District Commander;

(3532) (b) No person may bring or cause to be brought into a safety zone any vehicle, vessel, or object unless authorized by the COTP or the District Commander;

(3533) (c) No person may remain in a safety zone or allow any vehicle, vessel, or object to remain in a safety zone unless authorized by the COTP or the District Commander; and

(3534) (d) Each person in a safety zone who has notice of a lawful order or direction shall obey the order or direction of the COTP or District Commander issued to carry out the purposes of this subpart.

(3535)

Subpart D–Security Zones

(3536)

§165.30 Security zones.

(3537) (a) A security zone is an area of land, water, or land and water which is so designated by the Captain of the Port or District Commander for such time as is necessary to prevent damage or injury to any vessel or waterfront facility, to safeguard ports, harbors, territories, or waters of the United States or to secure the observance of the rights and obligations of the United States.

(3538) (b) The purpose of a security zone is to safeguard from destruction, loss, or injury from sabotage or other subversive acts, accidents, or other causes of a similar nature –

(3539) (1) Vessels,

(3540) (2) Harbors,

(3541) (3) Ports and

(3542) (4) Waterfront facilities–in the United States and all territory and water, continental or insular, that is subject to the jurisdiction of the United States.

(3543)

§165.33 General regulations.

(3544) Unless otherwise provided in the special regulations in Subpart F of this part –

(3545) (a) No person or vessel may enter or remain in a security zone without the permission of the Captain of the Port;

(3546) (b) Each person and vessel in a security zone shall obey any direction or order of the Captain of the Port;

(3547) (c) The Captain of the Port may take possession and control of any vessel in the security zone;

(3548) (d) The Captain of the Port may remove any person, vessel, article, or thing from a security zone;

(3549) (e) No person may board, or take or place any article or thing on board, any vessel in a security zone without the permission of the Captain of the Port; and

(3550) (f) No person may take or place any article or thing upon any waterfront facility in a security zone without the permission of the Captain of the Port.

(3551)

Subpart E–Restricted Waterfront Areas

(3552)

§165.40 Restricted Waterfront Areas.

(3553) The Commandant, may direct the COTP to prevent access to waterfront facilities, and port and harbor areas, including vessels and harbor craft therein. This section may apply to persons who do not possess the credentials outlined in **33 CFR 125.09** when certain shipping activities are conducted that are outlined in **33 CFR 125.15**.

(3554)

Subpart F–Specific Regulated Navigation Areas and Limited Access Areas

(3555)

§§165.703 Security Zones; Tampa Bay: Big Bend, Boca Grande, Crystal River, East Bay, Hillsborough Bay, MacDill Air Force Base, Manbirtee Key, Old Port Tampa, Port Manatee, Port Tampa, Port St. Petersburg, Port Sutton, Rattlesnake, and Weedon Island, FL.

(3556) (a) *Regulated areas*. The following areas, denoted by coordinates fixed using the North American Datum of 1983 (World Geodetic System 1984) are security zones:

(3557) (1) *Security zones for facilities and structures*—(i) *Rattlesnake, Tampa, FL*. All water, from surface to bottom, in Old Tampa Bay east and south of the waters encompassed within position 27°53.32′N, 082°32.05′W; thence to 27°53.38′N, 082°32.05′W, including on land portions of Chemical Formulators Chlorine Facility, where the fenced area is bounded by a line connecting the following points:

(3558) 27°53.21′N, 082°32.11′W; thence to
(3559) 27°53.22′N, 082°32.23′W; thence to
(3560) 27°53.25′N, 082°32.23′W; thence to
(3561) 27°53.25′N, 082°32.27′W; thence to
(3562) 27°53.29′N, 82°32.25′W; thence to
(3563) 27°53.30′N, 082°32.16′W; thence to
(3564) 27°53.21′N, 082°32.11′W.

(3565) (ii) *Old Port Tampa, Tampa, FL*. All waters, from surface to bottom, in Old Tampa Bay encompassed within the following points: 27°51.62′N, 082°33.14′W; thence to 27°51.71′N, 082°32.5′W; thence to 27°51.76′N, 082°32.5′W; thence to 27°51.73′N, 082°33.16′W; thence to 27°51.62′N, 082°33.14′W, closing off the Old Port Tampa Channel.

(3566) (iii) *Sunshine Skyway Bridge, FL*. All waters in Tampa Bay, from surface to bottom, in Cut "A" channel beneath the bridge's main span encompassed within the following points: 27°37.30′N, 082°39.38′W; 27°37.13′N, 082°39.26′W; and the bridge structure columns, base and dolphins. This zone is specific to the bridge structure and dolphins and does not include waters adjacent to the bridge columns or dolphins outside of the bridge's main span. Any vessel may transit through this zone but, may not loiter, anchor, or conduct operations, including dredging, dive operation, surveying, or maintenance, unless otherwise directed by the Captain of the Port. Anyone wanting to conduct these operations must submit a request via email to WWMTampa@uscg.mil or contact the Sector Command Center after hours at 727–824–7506.

(3567) (iv) *Manbirtee Key, Port of Manatee, FL*. All waters, from surface to bottom, surrounding, surrounding Manbirtee Key, Tampa Bay, FL extending 500 yards from the island's shoreline, in all directions, not to include the Port Manatee Channel.

(3568) (v) *MacDill Air Force Base, Tampa Bay, FL*. All waters encompassed within the following coordinates:

(3569) 27°51.88′N, 082°29.31′W; thence to
(3570) 27°52.01′N, 082°28.85′W; thence to
(3571) 27°51.48′N, 082°28.17′W; thence to
(3572) 27°51.02′N, 082°27.76′W; thence to
(3573) 27°50.72′N, 082°27.61′W; thence to
(3574) 27°50.33′N, 082°27.59′W; thence to
(3575) 27°49.65′N, 082°27.73′W; thence to
(3576) 27°49.34′N, 082°27.79′W; thence to
(3577) 27°49.10′N, 082°27.88′W; thence to
(3578) 27°48.88′N, 082°28.10′W; thence to
(3579) 27°48.76′N, 082°28.54′W; thence to
(3580) 27°48.87′N, 082°29.44′W; thence to
(3581) 27°49.06′N, 082°30.39′W; thence to
(3582) 27°48.75′N, 082°31.17′W; thence to
(3583) 27°49.16′N, 082°32.41′W; thence to
(3584) 27°49.64′N, 082°33.04′W; thence to
(3585) 27°49.95′N, 082°32.75′W; thence to
(3586) 27°50.09′N, 082°32.81′W; thence to
(3587) 27°50.56′N, 082°32.75′W; thence to
(3588) 27°50.71′N, 082°32.18′W.

(3589) (vi) *Piers, seawalls, and facilities, Port of Tampa and Port Sutton, Tampa, FL*. All waters, from surface to bottom, extending 50 yards from the shore, seawall, and piers around facilities in Port Sutton within the Port of Tampa encompassed by a line connecting the following points: 27°54.15′N, 082°26.06′W; thence to; 27°54.46′N, 082°25.71′W; closing off all Port Sutton Channel.

(3590) (vii) *Piers, seawalls, and facilities, Port of Tampa, on the western side of Hooker's Point, Tampa, FL*. All waters, from surface to bottom, extending 50 yards from the shore, seawall, and piers around facilities on Hillsborough Bay northern portion of Cut "D" Channel, Sparkman Channel, Ybor Turning Basin, and Ybor Channel within the Port of Tampa encompassed by a line connecting the following points:

(3591) 27°54.74′N, 082°26.47′W; thence to
(3592) 27°55.25′N, 082°26.73′W; thence to
(3593) 27°55.60′N, 082°26.80′W; thence to
(3594) 27°56.00′N, 082°26.75′W; thence to
(3595) 27°56.58′N, 082°26.53′W; thence to
(3596) 27°57.29′N, 082°26.51′W; thence to
(3597) 27°57.29′N, 082°26.61′W; thence to
(3598) 27°56.65′N, 082°26.63′W; thence to
(3599) 27°56.58′N, 082°26.69′W; thence to
(3600) 27°56.53′N, 082°26.90′W.

(3601) (viii) *St. Petersburg Harbor, FL*. All waters, from surface to bottom, extending 50 yards from the seawall and around all moorings and vessels in St. Petersburg Harbor (Bayboro Harbor), commencing on the north side of the channel at day beacon "10" (LLNR 24995) in approximate position 27°45.56′N, 082°37.55′W, and westward along the seawall to the end of the cruise terminal in approximate position 27°45.72′N, 082°37.97′W. The zone will also include the Coast Guard south moorings in St. Petersburg Harbor. The zone will extend 50 yards around the piers commencing from approximate position

27°45.51′N, 082°37.99′W; to 27°45.52′N, 082°37.57′W. The southern boundary of the zone is shoreward of a line between the entrance to Salt Creek easterly towards day beacon "11" (LLNR 24990).

(3602) (ix) *Crystal River Nuclear Power Plan*t. All waters, from surface to bottom, around the FL, Power Crystal River Nuclear Power Plant located at the end of the Florida Power Corporation Channel, Crystal River, Florida, encompassed by a line connecting the following points: 28°56.87′N, 082°45.17′W; thence to 28°57.37′N, 082°41.92′W; thence to 28°56.79′N, 082°45.13′W; thence to 28°57.32′N, 082°41.92′W.

(3603) (x) Crystal River Demory Gap Channel. All waters, from surface to bottom, in the Demory Gap Channel in Crystal River, Florida, encompassed by the following points: 28°57.61′N, 082°43.42′W thence to; 28°57.55′N, 082°41.88′W thence to; 28°57.58′N, 082°43.42′W thence to; 28°57.51′N, 082°41.88′W.

(3604) (xi) *Big Bend Power Plant, FL*. All waters of Tampa Bay, from surface to bottom, adjacent to the Big Bend Power Facility, and within an area bounded by the following points:

(3605) 27°48.08′N, 082°24.88′W; thence to

(3606) 27°48.15′N, 082°24.96′W; thence to;

(3607) 27°48.10′N, 082°25.00′W; thence to

(3608) 27°47.85′N, 082°25.03′W; thence to

(3609) 27°47.58′N, 082°24.89′W; thence to

(3610) 27°47.58′N, 082°24.06′W; thence to;

(3611) 27°47.62′N, 082°24.04′W; thence to

(3612) 27°47.63′N, 082°24.71′W; thence to

(3613) 27°48.03′N, 082°24.70′W; thence to

(3614) 27°48.08′N, 082°24.88′W, closing off entrance to Big Bend Power Facility and the attached cooling canal.

(3615) (xii) *Weedon Island Power Plant, FL*. All waters of Tampa Bay, from surface to bottom, extending 50 yards from the shore, seawall and piers around the Power Facility at Weedon Island encompassed by the following points: 27°51.52′N, 082°35.82′W; thence along the shore to; 27°51.54′N, 082°35.78′W; thence to 27°51.89′N, 082°35.82′W; thence to 27°51.89′N, 082°36.14′W, closing off the entrance to both canals.

(3616) (2) *Vessel specific security zones*— (i) *Moving security zones for Cruise Ships and vessels carrying Especially Hazardous Cargos*. The following security zones and procedures are established for all waters, from surface to bottom, within a 500-yard radius, as outlined below:

(3617) (A) For inbound vessels commencing at Egmont Channel Lighted Buoys "9" (LLNR 22270) and "10" (LLNR 22275) through to berth.

(3618) (B) For shifting vessels from their departure berth to destination berth.

(3619) (C) For outbound vessels commencing at berth through to Egmont Channel Lighted Buoys "9" (LLNR 22270) and "10" (LLNR 22275).

(3620) (D) All subject vessels operating in the Captain of the Port St. Petersburg Zone shall follow the reporting requirements in **33 CFR part 160**, subpart C.

(3621) (E) Any vessel desiring to enter or transit the security zone shall obtain permission from the Captain of the Port St. Petersburg or a designated representative. If permission is granted, all persons and vessels must comply with any given instructions.

(3622) (ii) Fixed security zones for moored cruise ships and moored vessels carrying especially hazardous cargos. A security zone is established for all waters, from surface to bottom, within a 200-yard radius around moored cruise ships and moored vessels carrying especially hazardous cargos, as outlined below:

(3623) (A) All subject vessels operating in the Captain of the Port St. Petersburg Zone shall follow reporting requirements in **33 CFR part 160**, subpart C.

(3624) (B) Any vessel desiring to enter or transit the security zone shall obtain permission from the Captain of the Port St. Petersburg or a designated representative. If permission is granted, all persons and vessels must comply with any given instructions.

(3625) (C) No vessel may loiter, anchor, or conduct maintenance operations within the security zone, unless otherwise directed by the Captain of the Port St. Petersburg or a designated representative. This includes, but is not limited to dredging operations, dive operations, and surveying. Anyone wanting to conduct these operations must submit a request via email to WWMTampa@uscg.mil or contact the Sector Command Center after hours at 727–824–7506.

(3626) (b) *Definitions*. As used in this section:

(3627) *Ammonium nitrate* means ammonium nitrate and ammonium nitrate based fertilizers listed as Division 5.1 (oxidizing) materials as defined in **33 CFR 172.101** except when carried as CDC residue.

(3628) *Captain of the Port (COTP)* for the purpose of this section means the Commanding Officer of Coast Guard Sector St. Petersburg.

(3629) *Captain of the Port St. Petersburg Zone* as defined in**33 CFR 3.35–35**.

(3630) Certain dangerous cargo includes Division 1.5D blasting agents for which a permit is required under 49 CFR 176.415 or, for which a permit is required as a condition of Research and Special Programs Administration exemption. This includes ammonium nitrate fuel oil mixture.

(3631) *Commercial vessels* means any tank, bulk, container, cargo, cruise ships, pilot vessels, or tugs. This definition excludes fishing vessels, salvage vessels, dead ship tow operations.

(3632) *Cruise Ship* means the same as defined **33 CFR 101.105**.

(3633) *Designated representative* means Coast Guard Patrol Commanders including Coast Guard coxswains, petty officers and other officers operating Coast Guard vessels, and federal, state, and local officers designated by or assisting the COTP, in the enforcement of regulated navigation areas, safety zones, and security zones.

(3634) *Especially hazardous cargo* means anhydrous ammonia, ammonium nitrate, chlorine, liquefied natural

gas, liquefied petroleum gas, and any other substance, material, or group or class in a particular amount and form that the Secretary determines by regulation poses a significant risk of creating a transportation security incident while being transported in maritime commerce.

(3635) (c) *Regulations*. (1) Entry into or remaining on or within the zones described in paragraph (a) of this section is prohibited unless authorized by the Captain of the Port St. Petersburg or a designated representative.

(3636) (2) Any changes to the requirements for these regulated areas will be given by Broadcast Notice to Mariners on VHF–FM Channel 22A.

(3637) **Note to §165.703(c)(2):** A graphical representation of all fixed security zones will be made available through nautical charts via the Coast Pilot.

(3638) (3) The Captain of Port St. Petersburg has provisions for escorting especially hazardous cargos as described in the above sections of this subchapter, but reserves the right to establish additional provisions for any potentially hazardous cargos.

(3639) (4) *Enforcement*. Under **33 CFR 165.33**, no person may authorize the operation of a vessel in the security zones contrary to the provisions of this section.

(3640) (d) The Captain of the Port St. Petersburg may waive any of the requirements of this subpart for any vessel, facility, or structure upon finding that the vessel or class of vessel, operational conditions, or other circumstances are such that application of this subpart is unnecessary or impractical for purposes of port safety and security or environmental safety.

(3641)

§ 165.707 Safety Zone; Hurricanes, Tropical Storms and Other Disasters in Florida Keys.

(3642) (a) *Regulated Areas*. All navigable waters, regulated facilities, and waterfront facilities within the Key West Captain of the Port (COTP) zone, Key West, Florida (as described in 33 CFR 3.35–40).

(3643) (b) *Definitions.* As used in this section:

(3644) *Authorized Law Enforcement Agencies* means Federal, State, and local law enforcement agencies that have received specific authorization from or are operating in concert with the Coast Guard to conduct operations related to the safety, security and stability of the Key West COTP zone.

(3645) *Designated Representative* means Coast Guard Patrol Commanders, including Coast Guard coxswains, petty officers, and other officers operating Coast Guard vessels, and Federal, State, and local officers designated by or assisting the COTP in the enforcement of the regulated areas.

(3646) *Port Condition WHISKEY* means a condition set by the COTP when weather advisories indicate sustained gale force winds (39–54 mph/34–47 knots) from a tropical or hurricane force storm are predicted to make landfall at the port within 72 hours.

(3647) *Port Condition X–RAY* means a condition set by the COTP when weather advisories indicate sustained gale force winds (39–54 mph/34–47 knots) from a tropical or hurricane force storm are predicted to make landfall at the port within 48 hours.

(3648) *Port Condition YANKEE* means a condition set by the COTP when weather advisories indicate that sustained gale force winds (39–54 mph/ 34–47 knots) from a tropical or hurricane force storm are predicted to make landfall at the port within 24 hours.

(3649) *Port Condition ZULU* means a condition set by the COTP when weather advisories indicate that sustained gale force winds (39–54 mph/ 34–47 knots) from a tropical or hurricane force storm are predicted to make landfall at the port within 12 hours.

(3650) *Regulated Facilities* means shoreside facilities regulated by the Coast Guard under the Ports and Waterways Safety Act,6 Maritime Transportation and Security Act,7 Clean Water Act,8 and the Oil Pollution Act of 1990,9 and regulations in 33 CFR parts 105, 154, 156, and 158.

(3651) *Waterfront Facilities* means any land structure or shore area immediately adjacent to the navigable waters of the Key West COTP zone.

(3652) (c) *Regulations*—(1) *Port Condition WHISKEY.* All vessels, regulated facilities, and waterfront facilities within the Key West COTP zone must exercise due diligence in preparation for potential storm impacts. All regulated facilities and waterfront facilities must begin removing all debris and securing potential flying hazards. Oceangoing vessels greater than 300 gross tons (GT) must make plans to depart no later than the setting of Port Condition Yankee unless authorized by the COTP. Oceangoing vessels greater than 300 GT intending to remain in port must contact the COTP prior to the setting port condition X–Ray.

(3653) (2) *Port Condition X–RAY.* All vessels, regulated facilities, and waterfront facilities within the Key West COTP zone must ensure that potential flying debris is removed or secured. Hazardous materials/pollution hazards must be secured in a safe manner and away from waterfront areas. Vessels greater than 300 GT without an approval to remain in port must depart prior to the setting of Port Condition YANKEE. Vessels with the COTP's permission to remain in port must implement their preapproved mooring arrangement. Regulated facilities must prepare to terminate all cargo operations.

(3654) (3) *Port Condition YANKEE*. Affected ports are closed to inbound vessel traffic. All oceangoing vessels greater than 300 GT must have departed designated ports within the Key West COTP zone. Regulated facilities must terminate all cargo operations, not associated with storm preparations, unless specifically authorized by the COTP. All MTSA regulated facilities must continue to operate in accordance with their approved Facility Security Plans and comply with the requirements of the MTSA.

(3655) (4) *Port Condition ZULU.* The port is closed to all vessel traffic except as specifically authorized by the COTP. Regulated facilities must cease all cargo operations, including bunkering and lightering. Waivers

may be granted except for when Cargo of Particular Hazard or Certain Dangerous Cargo are involved.

(3656) (5) *Emergency Restrictions for Other Disasters.* Any natural or other disasters that are anticipated to affect the Key West COTP zone will result in the prohibition of regulated facility operations and vessel traffic transiting or remaining in the affected port.

(3657) (6) *Safety Zones Notice.* Coast Guard Sector Key West will notify the maritime community, to the furthest extent practicable, of the periods during which the safety zone described in paragraph (a) will be subject to enforcement via Broadcast Notice to Mariners or by on-scene designated representatives.

(3658) (7) *Exception.* This regulation does not apply to authorized law enforcement agencies operating within the regulated area.

(3659)

§165.752 [Removed]

(3660)

§165.753 Regulated navigation area; Tampa Bay, FL.

(3661) (a) The following is a regulated navigation area (RNA): All the navigable waters of Tampa Bay, Hillsborough Bay and Old Tampa Bay, including all navigable waterways tributary thereto. Also included are the waters of Egmont Channel, Gulf of Mexico from Tampa Bay, Tampa Bay Entrance, approximate position (27°35.2′ N., 083°00.4′ W.).

(3662) (b) The master, pilot, or person in charge of any vessel of 50 meters or greater shall give a Navigational Advisory Broadcast in accordance with **47 CFR 80.331** on VHF-FM channel 13 at the following broadcast/reporting points:

(3663) (1) Prior to getting underway from any berth or anchorage;

(3664) (2) Prior to entering Egmont Channel from seaward;

(3665) (3) Prior to passing Egmont Key in any direction;

(3666) (4) Prior to transiting the Skyway Bridge in either direction;

(3667) (5) Prior to transiting the intersection of Tampa Bay Cut F Channel, Tampa Bay Cut G Channel, and Gadsden Point Cut Channel;

(3668) (6) Prior to anchoring or approaching a berth for docking;

(3669) (7) Prior to tending hawser;

(3670) (8) Prior to transiting Point Pinellas Channel Light 1 in either direction.

(3671) (c) Each Navigational Advisory required by this section shall be made in the English language and will contain the following information:

(3672) (1) The words "Hello all vessels, a Navigational Advisory follows";

(3673) (2) Name of vessel;

(3674) (3) If engaged in towing, the nature of the tow;

(3675) (4) Direction of Movement;

(3676) (5) Present location; and,

(3677) (6) The nature of any hazardous conditions as defined by **33 CFR 160.202**.

(3678) (d) Nothing in this section shall supersede the Navigational Rules (COLREGS and their associated Annexes and Inland Navigation Rules (33 CFR subchapter E)), as applicable, or relieve the Master or person in charge of the vessel of responsibility for the safe navigation of the vessel.

(3679)

§ 165.754 Safety Zone; San Juan Harbor, San Juan, PR.

(3680) (a) Regulated area. A moving safety zone is established in the following area:

(3681) (1) The waters around liquefied gas (LG) carriers entering San Juan Harbor in an area one half mile around each vessel, beginning one mile north of the Bahia de San Juan Lighted Buoy #3, in approximate position 18°28′17.8″N., 066°07′36.4″W. and continuing until the vessel is moored at the Puma Energy dock, Cataño Oil dock, or Wharf B in approximate position 18°25′47″N., 066°6′32″W. All coordinates are North American Datum 1983.

(3682) (2) The waters around LG carriers in a 50-yard radius around each vessel when moored at the Puma Energy dock, Catano Oil dock, or Wharf B

(3683) (3) The waters around LG carriers departing San Juan Harbor in an area one half mile around each vessel beginning at the Puma Energy Dock, Cataño Oil dock, or Wharf B in approximate position 18°25′47″N., 066°6′32″W., when the vessel gets underway, and continuing until the stern passes the Bahia de San Juan Lighted Buoy #3, in approximate position 18°28′17.8″N., 066°07′36.4″W. All coordinates referenced use datum: NAD 83.

(3684) (b) *Regulations*. (1) No person or vessel may enter, transit or remain in the safety zone unless authorized by the Captain of the Port (COTP), San Juan, Puerto Rico, or a designated Coast Guard commissioned, warrant, or petty officer. Those operating in the safety zone with the COTP's authorization must comply with all lawful orders or directions given to them by the COTP or his designated representative.

(3685) (2) Persons desiring to transit the area of the safety zones may contact the COTP San Juan or his designated representative to seek permission to transit the area. If permission is granted, all persons and vessels must comply with the instructions of the COTP or his designated representative.

(3686) (3) Vessels encountering emergencies, which require transit through the moving safety zone, should contact the Coast Guard patrol craft or Duty Officer on VHF Channel 16. In the event of an emergency, the Coast Guard patrol craft may authorize a vessel to transit through the safety zone with a Coast Guard designated escort.

(3687) (4) The Captain of the Port and the Duty Officer at Sector San Juan, Puerto Rico, can be contacted at telephone number 787–289–2041. The Coast Guard Patrol Commander enforcing the safety zone can be contacted on VHF–FM channels 16 and 22A.

(3688) (5) Coast Guard Sector San Juan will, when necessary and practicable, notify the maritime community of periods during which the safety zones will be in effect by providing advance notice of scheduled arrivals and departure of liquefied gas carriers via a Marine Broadcast Notice to Mariners.

(3689) (6) All persons and vessels must comply with the instructions of onscene patrol personnel. On-scene patrol personnel include commissioned, warrant, or petty officers of the U.S. Coast Guard. Coast Guard Auxiliary and local or state officials may be present to inform vessel operators of the requirements of this section, and other applicable laws.

(3690)

§165.755 Safety Zone; Guayanilla, Puerto Rico.

(3691) (a) The following area is established as a safety zone during the specified conditions:

(3692) (1) A 100 yard radius surrounding a vessel carrying Liquefied Natural Gas (LNG) while transiting north of Latitude 17°56.0'N in the waters of the Caribbean Sea, on approach to or departure from the Eco-Electrica waterfront facility in Guayanilla Bay, Puerto Rico. The safety zone remains in effect until the LNG vessel is docked at the Eco-Electrica waterfront facility or south of latitude 17°56.0'N.

(3693) (2) The waters within 150 feet of a LNG vessel when the vessel is alongside the Eco-Electrica waterfront facility in Guayanilla Bay, at position 17°58.55'N., 066°45.3'W. This safety zone remains in effect while the LNG vessel is docked with product aboard or is transferring liquefied natural gas.

(3694) (b) In accordance with the general regulations in **165.23** of this part, anchoring, mooring or transiting in these zones is prohibited unless authorized by the Coast Guard Captain of the Port.

(3695) (c) Coast Guard Sector San Juan will notify the maritime community of periods during which the safety zones will be in effect by providing advance notice of scheduled arrivals and departure of LNG vessels via a marine broadcast Notice to Mariners.

(3696)

§165.757 Safety Zones; Ports of Ponce, Tallaboa, and Guayanilla, Puerto Rico and Limetree Bay, St. Croix, U.S.V.I.

(3697) (a) *Location*. The following areas are established as a safety zones during the specified conditions:

(3698) (1) *Port of Ponce, Puerto Rico*. A 100-yard radius surrounding all Liquefied Hazardous Gas (LHG) vessels with product aboard while transiting north of Latitude 17°57.0'N in the waters of the Caribbean Sea on approach to or departing from the Port of Ponce, Puerto Rico (NAD 83). The safety zone remains in effect until the LHG vessel is docked.

(3699) (2) *Port of Tallaboa, Puerto Rico*. A 100-yard radius surrounding all Liquefied Hazardous Gas (LHG) vessels with product aboard while transiting north of Latitude 17°56.0'N in the waters of the Caribbean Sea on approach to or departing from the Port of Tallaboa, Puerto Rico (NAD 83). The safety zone remains in effect until the LHG vessel is docked.

(3700) (3) *Port of Guayanilla, Puerto Rico*. A 100-yard radius surrounding all Liquefied Hazardous Gas (LHG) vessels around with product aboard while transiting north of Latitude 17°57.0'N in the waters of the Caribbean Sea on approach to or departing from the Port of Guayanilla, Puerto Rico (NAD 83). The safety zone remains in effect until the LHG vessel is docked.

(3701) (4) *Port of Limetree Bay, St. Croix, U.S.V.I.* A 100-yard radius surrounding all Liquefied Hazardous Gas (LHG) vessels with product aboard while transiting north of Latitude 17°39.0'N in the waters of the Caribbean Sea on approach to or departing from the Port of Limetree Bay, U.S.V.I. (NAD 83). The safety zone remains in effect until the LHG vessel is docked.

(3702) (b) *Regulations*. In accordance with the general regulations in §165.23 of this part, anchoring, mooring or transiting in these zones is prohibited unless authorized by the Coast Guard Captain of the Port, Coast Guard Sector San Juan will notify the maritime community of periods during which these safety zones will be in effect by providing advance notice of scheduled arrivals and departures on LHG carriers via a broadcast notice to mariners on VHF Marine Band Radio, Channel 16 (156.8 MHz).

(3703)

§165.758 Security Zone; San Juan, Puerto Rico.

(3704) (a) *Regulated area*. A moving and fixed security zone is established in the following area:

(3705) (1) The waters within a 200-yard radius around all cruise ships entering, departing, or anchored in the Port of San Juan, Puerto Rico beginning one mile north of the Bahia de San Juan Lighted Buoy #3, in approximate position 18°28′17.8”N., 066°07′36.4”W. and continuing until the vessel passes this buoy on its departure from the port. All coordinates are North American Datum 1983.

(3706) (2) The waters within a 50-yard radius around all cruise ships moored in the Port of San Juan, Puerto Rico.

(3707) (b) *Regulations*. (1) No person or vessel may enter, transit, or remain in the security zone unless authorized by the Captain of the Port San Juan, Puerto Rico, or a designated Coast Guard commissioned, warrant, or petty officer. Those operating in the security zone with the Captain of the Port’s authorization must comply with all lawful orders or directions given to them by the Captain of the Port or a designated representative.

(3708) (2) Vessels encountering emergencies, which require transit through the moving security zone, should contact the Coast Guard patrol craft or Duty Officer on VHF Channel 16. In the event of an emergency, the Coast Guard patrol craft may authorize a vessel to transit through the security zone with a Coast Guard designated escort.

(3709) (3) The Captain of the Port and the Duty Officer at Sector San Juan, Puerto Rico, can be contacted at

telephone number 787–289–2041. The Coast Guard Patrol Commander enforcing the security zone can be contacted on VHF– FM channels 16 and 22A.

(3710) (4) Coast Guard Sector San Juan will, when necessary and practicable, notify the maritime community of periods during which the security zone will be in effect by providing advance notice of scheduled arrivals and departure of cruise ships via a Marine Broadcast Notice to Mariners.

(3711) (5) All persons and vessels must comply with the instructions of onscene patrol personnel. On-scene patrol personnel include commissioned, warrant, or petty officers of the U.S. Coast Guard. Coast Guard Auxiliary and local or state officials may be present to inform vessel operators of the requirements of this section, and other applicable laws.

(3712) (c) *Definition*. As used in this section, cruise ship means a passenger vessel greater than 100 feet in length that is authorized to carry more than 150 passengers for hire, except for a ferry.

(3713)

§165.760 [Reserved]

(3714)

§165.761 Security Zones; Port of Key West, FL.

(3715) (a) *Definitions*. (1) As used in this section, passenger vessel is a vessel greater than 100 feet in length and over 100 gross tons that is authorized to carry more than 12 passengers for hire making voyages lasting more than 24 hours, except for a ferry.

(3716) (2) As used in this section, a vessel carrying cargoes of particular hazard is defined in 33 CFR part 126 and a vessel carrying liquefied hazardous gas (LHG) is defined in 33 CFR part 127.

(3717) (b) *Location*. The following area is a security zone: Fixed and moving security zones around vessels in the Port of Key West, Florida. A moving security zones is established 100 yards around all passenger vessels, vessels carrying cargoes of particular hazard, or vessels carrying liquefied hazardous gas (LHG) during transits entering or departing the Port of Key West, Florida. A moving security zones is activated when the subject vessel passes Key West Entrance Lighted Whistle Buoy KW, at approximate position 24°27′26″ N, 081°48′00″ W. This moving security zone remains active whenever a passenger vessel, vessels carrying cargoes of particular hazard, or vessels carrying LHG is underway westward of the above mentioned buoys. Fixed security zones are established 100 yards around all passenger vessels, vessels carrying cargoes of particular hazard, or vessels carrying LHG, while the vessel is moored in the Port of Key West, Florida.

(3718) (c) *Regulations*. (1) Prior to commencing any movement, the person directing the movement of a passenger vessel, a vessel carrying cargoes of particular hazard, or a vessel carrying LHG, is encouraged to make a security broadcast on VHF Marine Band Radio, Channel 16 (156.8 MHz) to advise mariners of the moving security zone activation and intended transit.

(3719) (2) In accordance with the general regulations §165.33, entry into these zones is prohibited except as authorized by the Captain of the Port of Key West or a designated representative. Vessels such as pilot boats, tug boats, and contracted security vessels may assist the Coast Guard Captain of the Port by monitoring these zones strictly to advise mariners of the restrictions. The Captain of the Port will notify the public of the security zone via signs or by Marine Safety Radio Broadcasts on VHF Marine Band Radio, Channel 16 (156.8 MHz) when applicable.

(3720) (3) Persons and vessels desiring to enter in, transit through, anchor in, or remain within the fixed or moving security zones may contact the Captain of the Port Key West at (305) 292-8727 or on VHF Marine Band Radio Channel 16 (156.8 MHz) to seek permission to transit the area. If permission is granted, all persons and vessels must comply with the instructions of the Captain of the Port or the designated representative.

(3721) (4) The Captain of the Port Key West may waive any of the requirements of this section for any vessel upon finding that the vessel or class of vessel, operational conditions, or other circumstances are such that application of this section is unnecessary or impractical for the purpose of port security, safety, or environmental safety.

(3722)

§165.762 Security Zone; St. Thomas, U.S. Virgin Islands.

(3723) (a) *Location*. Moving and fixed security zones are established 50 yards around all cruise ships entering, departing, moored or anchored in the Port of St. Thomas, U.S. Virgin Islands. The security zone for a cruise ship entering port is activated when the vessel passes: St. Thomas Harbor green lighted buoy 3 in approximate position 18°19'19"N., 64°55'40"W. when entering the port using St. Thomas Channel; red buoy 2 in approximate position 18°19'15"N., 64°55'59"W. when entering the port using East Gregorie Channel; and red lighted buoy 4 in approximate position 18°18'16"N., 64°57'30"W. when entering the port using West Gregorie Channel. These zones are deactivated when the cruise ship passes any of these buoys on its departure from the Port.

(3724) (b) *Regulations*. (1) Under general regulations in §165.33 of this part, entering, anchoring, mooring or transiting in these zones is prohibited unless authorized by the Coast Guard Captain of the Port of San Juan.

(3725) (2) Persons desiring to transit the area of the security zone may contact the Captain of the Port at the Sector San Juan at 787–289–2041 or via VHF radio on Channel 16 to seek permission to transit the area. If permission is granted, all persons and vessels must comply with the instructions of the Captain of the Port or his designated representative.

(3726) (3) Coast Guard Sector San Juan will attempt to notify the maritime community of periods during which these security zones will be in effect by providing advance notice of scheduled arrivals and departures of cruise ships via a broadcast notice to mariners.

(3727) (c) *Definition*. As used in this section, cruise ship means a passenger vessel greater than 100 feet in length that is authorized to carry more than 150 passengers for hire, except for a ferry.

(3728) (d) *Authority*. In Addition to 46 U.S.C. 70034 and 46 U.S.C. 70051, the authority for this section includes 46 U.S.C. 70116.

(3729)

§165.763 Moving and Fixed Security Zone, Port of Fredericksted, Saint Croix, U.S. Virgin Islands.

(3730) (a) *Location*. A moving and fixed security zone is established that surrounds all cruise ships entering, departing, mooring or anchoring in the Port of Fredericksted, Saint Croix, U.S. Virgin Islands. The security zone extends from the cruise ship outward and forms a 50-yard radius around the vessel, from surface to bottom. The security zone for a cruise ship entering port is activated when the vessel is within one nautical mile west of the Fredericksted Pier lights. The security zone for a vessel is deactivated when the cruise ship is beyond one nautical mile west of the Fredericksted Pier lights. The Fredericksted Pier lights are at the following coordinates: 17°42'49"N., 64°53'19"W. All coordinates are North American Datum 1983 (NAD 1983).

(3731) (b) *Regulations*. (1) Under general regulations in §165.33 of this part, entering, anchoring, mooring, or transiting in these zones is prohibited unless authorized by the Coast Guard Captain of the Port San Juan or their designated representative.

(3732) (2) Persons desiring to transit through a security zone may contact the Captain of the Port San Juan who can be reached on VHF Marine Band Radio, Channel 16 (156.8 MHz) or by calling 787–289–2041, 24-hours-a-day, 7 days-a-week. If permission is granted, all persons and vessels must comply with the instructions of the Captain of the Port or designated representative.

(3733) (3) Sector San Juan will attempt to notify the maritime community of periods during which these security zones will be in effect by providing advance notice of scheduled arrivals and departures of cruise ships via a broadcast notice to mariners.

(3734) (c) *Definition*. As used in this section, cruise ship means a passenger vessel greater than 100 feet in length that is authorized to carry more than 150 passengers for hire, except for a ferry.

(3735) (d) *Authority*. In addition to 46 U.S.C. 70034 and 46 U.S.C. 70051, the authority for this section includes 46 U.S.C. 70116.

(3736)

§165.764 [Removed and Reserved]

(3737)

§§165.766-165.768 [Reserved]

(3738)

§ 165.770 Security Zone; Limetree Bay Terminals, St. Croix, U.S. Virgin Islands.

(3739) (a) *Regulated area*. The Coast Guard is establishing a security zone in and around Limetree Bay Terminals on the south coast of St. Croix, U.S. Virgin Islands. This security zone includes all waters from surface to bottom, encompassed by an imaginary line connecting the following points:

(3740) Point 1 in position 17°41′48″N., 064°44′26″W.;

(3741) Point 2 in position 17°40′00″N., 064°43′36″W.;

(3742) Point 3 in position 17°39′36″N., 064°44′48″W.;

(3743) Point 4 in position 17°41′33″N., 064°45′08″W.; then tracing the shoreline along the water's edge to the point of origin.

(3744) These coordinates are based upon North American Datum 1983 (NAD 1983).

(3745) (b) *Regulations*. (1) Under **§165.33**, entry into or remaining within the regulated area in paragraph (a) of this section is prohibited unless authorized by the Coast Guard Captain of the Port San Juan or vessels have a scheduled arrival at Limetree Bay Terminals, St. Croix, in accordance with the Notice of Arrival requirements of **33 CFR part 160**, subpart C.

(3746) (2) Persons desiring to transit the area of the security zone may contact the COTP San Juan or designated representative at telephone number 787–289–2041 or on VHF–FM Channel 16. If permission is granted, all persons and vessels must comply with the instructions of the COTP or designated representative.

(3747)

§165.771 Safety Zone; Bahia de Ponce, PR.

(3748) (a) *Location*. The following area is established as a safety zone during the specified conditions:

(3749) (1) A 100 yard radius around any vessel carrying Liquefied Natural Gas (LNG) cargo while transiting north of 17°54'00"N. in the waters of the Caribbean Sea and the Bahia de Ponce, on approach to or departure from the Puerto de Ponce waterfront facility in Bahia de Ponce.

(3750) (2) The waters within 150 feet of any vessel carrying LNG cargo while moored at the Puerto de Ponce waterfront facility in Bahia de Ponce, between berths 4 and 7 at approximate position 17°58'12"N., 066°37'08"W.

(3751) (b) *Definitions*. The following definitions apply to this section:

(3752) *Designated Representative* means Coast Guard Patrol Commander including Coast Guard coxswains, petty officers and other officers operating Coast Guard vessels and federal, state, and local officers designated by or assisting the COTP San Juan in the enforcement of the safety zone.

(3753) (c) *Regulations*. In accordance with the general regulations in §165.23 of this part, anchoring, mooring

or transiting in these zones is prohibited unless authorized by the Coast Guard Captain of the Port or a designated representative. Persons and vessels desiring to transit the Regulated Area may contact the U.S. Coast Guard Captain of the Port San Juan at telephone number 787–289–2041 or on VHF channel 16 (156.9 MHz).

(3754) (d) *Enforcement periods*. The Coast Guard will notify the maritime community of effective periods via broadcast notice to mariners on VHF Marine Band Radio, Channel 22A (156.8 MHz).

(3755)

§165.775 Safety Zone; Captain of the Port Zone Jacksonville; Offshore Cape Canaveral, FL.

(3756) (a) *Regulated Area*. (1) Zone (A) is defined by four latitude and longitude corner points. Zone A from the baseline at position 28°45.7'N., 080°42.7'W.; then proceeds northeast to 28°50.1'N., 080°29.9'W.; then proceeds southeast to 28°31.3'N., 080°19.6'W.; then proceeds west back to the baseline at position 28°31.3'N., 080°33.4'W.

(3757) (2) Zone (B) is defined by four latitude and longitude corner points. Zone B originates from the baseline at position 28°40.1'N., 080°38.4'W.; then proceeds northeast to 28°48.8'N., 080°28.9'W.; then proceeds southeast to 28°29.7'N., 080°18.9'W.; then proceeds west back to the baseline at position 28°29.7'N., 080°31.6'W.

(3758) (3) Zone (C) is defined by four latitude and longitude corner points. Zone C originates from the baseline at position 28°36.2'N., 080°35.3'W.; then proceeds northeast to 28°45.6'N., 080°25.2'W.; then proceeds south to 28°26'N., 080°20.8'W.; then proceeds west back to the baseline at position 28°26'N., 080°34.4'W.

(3759) (4) Zone (D) is defined by four latitude and longitude corner points. Zone D originates from the baseline at position 28°31.6'N., 080°34'W.; then proceeds east to 28°31.6'N., 080°20.1'W.; then proceeds south to 28°16.7'N., 080°23.3'W.; then proceeds northwest back to the baseline at position 28°21.6'N., 080°36.1'W.

(3760) (b) *Definitions*. The following definitions apply to this section:

(3761) *Designated representative* means Coast Guard Patrol Commanders including Coast Guard coxswains, petty officers and other officers operating Coast Guard vessels, and federal, state, and local officers designated by or assisting the Captain of the Port (COTP) Jacksonville in the enforcement of regulated navigation areas, safety zones and security zones.

(3762) (c) *Regulations*. In accordance with the general regulations in §165.23 of this part, anchoring, mooring or transiting in this zone is prohibited unless authorized by the Coast Guard Captain of the Port Jacksonville or his designated representative.

(3763) (d) *Notice of a Safety Zone*. The proposed safety zones are temporary in nature and will only be enacted and enforced prior to, and just after a successful launch. The COTP will inform the public of the existence or status of the safety zones(s) by Broadcast Notice to Mariners on VHF-FM channel 16, Public Notice, on-scene presence, and by the display of a yellow ball from a 90-foot pole near the shoreline at approximately 28°35'00"N., 080°34'36"W., and from a 90-foot pole near the shoreline at approximately 28°25'18"N., 080°35'00"W. Coast Guard assets or other Federal, State, or local law enforcement assets will be clearly identified by lights, markings, or with agency insignia.

(3764) (e) *Contact Information*. The COTP Jacksonville may be reached by telephone at (904) 564–7513. Any on-scene Coast Guard or designated representative assets may be reached on VHF-FM channel 16.

(3765)

§165.776 Security zone; Coast Guard Base San Juan, San Juan Harbor, PR

(3766) (a) *Location*. The following area is a security zone: All waters from surface to bottom, encompassed by an imaginary line connecting the following points, beginning at

(3767) 18°27'39"N., 66°06'56"W.; then east to

(3768) 18°27'39"N., 66°06'52"W.; then south to

(3769) 18°27'35"N., 66°06'52"W.; then southwest to

(3770) 18°27'30"N., 66°06'59"W.; then northeast to

(3771) 18°27'35"N., 66°07'07"W.; then north to

(3772) 18°27'46"N., 66°07'12"W.; then back to shore at the northwest end of the CG facility at

(3773) 18°27'46"N., 66°07'07"W. These coordinates are based upon North American Datum 1983.

(3774) (b) *Definitions*. As used in this section-

(3775) *Vessels* means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water, except U.S. Coast Guard or U.S. naval vessels.

(3776) (c) *Regulations*. (1) No person or vessel may enter into the security zone described in paragraph (a) of this section unless authorized by the Captain of the Port San Juan.

(3777) (2) Vessel seeking to enter the security zone established in this section may contact the COTP on VHF channel 16 or by telephone at (787) 289–2041 to request permission.

(3778)

§ 165.782 Safety Zone; restricted visibility in Tampa Bay.

(3779) (a) *Regulated areas*. The following areas are established as safety zones during the specified conditions:

(3780) (1) Zone 1 (Interbay) means all navigable waters within a box marked by the following coordinates: 27°52′56″N., 82°29′44″W.; thence to 27°52′50″N., 82°23′41″W.; thence to 27°57′27″N., 82°23′50″W. thence to 27°57′19″N., 82°29′39″W. This encompasses all Navigable waterways North of Hillsborough Cut “C” Channel LB “25” (LLNR 23445) & “26” (LLNR 23450).

(3781) (2) Zone 2 (East Tampa/Big Bend) means all navigable waters within a box marked by the following coordinates: 27°52′50″N., 82°23′41″W.; thence to 27°46′36″N.; 82°24′04″W.; thence to 27°46′29″N.,

82°31′21″W.; thence to 27°52′59″N., 82°31′24″W. This zone encompasses all navigable waterways between Hillsborough Cut "C" Channel LB "25" (LLNR 23445) & "26" (LLNR 23450) to Cut "6F" (LLNR 22830) Channel.

(3782) (3) Zone 3 (Old Tampa Bay) means all navigable waters within a box marked by the following coordinates: 27°46′29″N., 82°31′21″W.; 28°01′58″N., 82°31′39″W.; thence to 28°02′01″N., 82°43′20″W.; thence to 27°46′15″N., 82°43′24″W. This zone encompasses all navigable waterways between all of Old Tampa Bay to Cut "6F" (LLNR 22830) Channel.

(3783) (4) Zone 4 (Middle Tampa Bay) means all navigable waters within a box marked by the following coordinates: 27°46′34″N., 82°34′04″W.; thence to 27°38′40″N., 82°31′54″W.; thence to 27°44′38″N., 82°40′44″W.; thence to 27°46′15″N., 82°40′46″W. This zone encompasses all navigable waterways between Cut "6F" (LLNR 22830) Channel to Tampa Bay "1C" (LLNR 22590).

(3784) (5) Zone 5 (Lower Tampa Bay/Manatee) means all navigable waters within a box marked by the following coordinates: 27°44′33″N., 82°40′37″W.; thence to 27°58′59″N., 82°40′34″W.; thence to 27°36′18″N., 82°38′57″W.; thence to 27°34′10″N., 82°34′50″W.; thence to 27°37′56″N., 82°31′15″W. This zone encompasses all navigable waterways between Tampa Bay "1C" (LLNR 22590) to Sunshine Skyway Bridge.

(3785) (6) Zone 6 (Mullet Key) means all navigable waters within a box marked by the following coordinates: 27°38′59″N., 82°40′35″W.; thence to 27°36′44″N., 82°44′13″W.; thence to 27°32′20″N., 82°44′37″W.; thence to 27°31′18″N., 82°38′59"W.; thence to 27°34′09″N., 82°34′53″W.; thence to 27°36′15″N., 82°39′00″W. This zone encompasses all navigable waterways between the Sunshine Skyway Bridge to Mullet Key Channel LB "21" (LLNR 22365) & "22" (LLNR 22370).

(3786) (7) Zone 7 (Egmont Entrance) means all navigable waters within the area encompassed by the following coordinates: 27°36′27″N., 82°44′14″W.; thence to 27°39′46″N., 82°44′45″W.; thence to 27°39′36″N., 83°05′10″W.; thence to 27°32′29″N., 83°04′50″W.; thence to 27°32′21″ N., 82°44′42″ W. This zone includes the fairway anchorages.

(3787) (8) All coordinates are North American Datum 1983.

(3788) (b) *Definition*. (1) Designated Representative means Coast Guard Patrol Commanders including Coast Guard coxswains, petty officers and other officers operating Coast Guard vessels, and federal, state, and local officers designated by or assisting the COTP, in the enforcement of regulated navigation areas, safety zones, and security zones.

(3789) (2) [Reserved]

(3790) (c) *Regulations*. (1) Vessel should not commence an inbound, shift, or outbound transit during periods where visibility is less than one nautical mile due to fog or inclement weather.

(3791) (2) The COTP may open or close Tampa Bay or specific zones to vessel traffic described in the regulated areas section of this chapter.

(3792)

§ 165.787 Safety Zones; Vieques Unexploded Ordnance Operations, East Vieques; Vieques, Puerto Rico.

(3793) (a) *Regulated area*. The following regulated areas are established as a safety zones:

(3794) (1) All waters of East Vieques, Vieques, Puerto Rico encompassed within the following points: starting at Point 1 in position 18°08′56.48"N., 065°20′10.69"W.; thence north to point 2 in position 18°09′10.72"N., 065°20′04.11"W.; thence east to Point 3 in position 18°08′50.19"N., 065°17′05.78"W.; thence south to Point 4 in position 18°08′05.79"N., 065°16′16.70"W.

(3795) (2) All waters of East Vieques, Vieques, Puerto Rico encompassed within the following points: starting at Point 1 in position 18 07′38.60"N., 065°17′45.95"W.; thence south to point 2 in position 18°07′23.73"N., 065°17′58.34"W.; thence west to Point 3 in position 18°07′18.77"N., 065°18′29.64"W.; thence north to Point 4 in position 18°07′34.47"N., 065°18′31.82"W.

(3796) (b) *Regulations*. (1) No person or vessel may anchor, dredge, or trawl in the safety zones unless authorized by the Captain of the Port (COTP), San Juan, Puerto Rico, or a designated Coast Guard commissioned, warrant, or petty officer. Those in the safety zones must comply with all lawful orders or directions given to them by the COTP or the designated Coast Guard commissioned, warrant, or petty officer.

(3797) (2) No person or vessel may enter, transit or remain in the safety zones during unexploded ordnance clearance operations, unless authorized by the Captain of the Port San Juan or a designated representative.

(3798) (3) Vessels encountering emergencies, which require transit through the safety zones, should contact the Coast Guard patrol craft or Duty Officer on VHF Channel 16. In the event of an emergency, the Coast Guard patrol craft may authorize a vessel to transit through the safety zones with a Coast Guard designated escort.

(3799) (4) The Captain of the Port and the Duty Officer at Sector San Juan, Puerto Rico, can be contacted at telephone number 787–289–2041. The Coast Guard Patrol Commander enforcing the safety zones can be contacted on VHF– FM channels 16 and 22A.

(3800) (5) Coast Guard Sector San Juan will notify the marine community of periods during which these safety zones will be in effect by providing notice to mariners in accordance with **§165.7**.

(3801) (6) All persons and vessels must comply with the instructions of onscene patrol personnel. On-scene patrol personnel include commissioned, warrant, or petty officers of the U.S. Coast Guard. Coast Guard Auxiliary and local or state officials may be present to inform vessel operators of the requirements of this section, and other applicable laws.

(3802)

§ 165.788 Safety Zone; Bahia de San Juan, Ponce, Puerto Rico.

(3803) (a) *Regulated area*. A safety zone is established in the following area: The waters around liquefied gas carriers conducting ship-to-ship liquefied gas transfer operations in an area 100-yards around each vessel in the approximate position 17°54′20″N., 066°35′6″W. All coordinates are North American Datum 1983.

(3804) (b) *Regulations*. (1) No person or vessel may enter, transit or remain in the safety zone unless authorized by the Captain of the Port, San Juan, Puerto Rico, or a designated Coast Guard commissioned, warrant, or petty officer. Those in the safety zone must comply with all lawful orders or directions given to them by the Captain of the Port or the designated Coast Guard commissioned, warrant, or petty officer.

(3805) (2) Vessels encountering emergencies, which require transit through the safety zone, should contact the Coast Guard patrol craft or Duty Officer on VHF Channel 16. In the event of an emergency, the Coast Guard patrol craft may authorize a vessel to transit through the safety zone with a Coast Guard designated escort.

(3806) (3) The Captain of the Port and the Duty Officer at Sector San Juan, Puerto Rico, can be contacted at telephone number 787–289–2041. The Coast Guard Patrol Commander enforcing the safety zone can be contacted on VHF–FM channels 16 and 22A.

(3807) (4) Coast Guard Sector San Juan will, when necessary and practicable, notify the maritime community of periods during which the safety zones will be in effect by providing advance notice of scheduled ship-to-ship liquefied gas transfer operations of liquefied gas carriers via a Marine Broadcast Notice to Mariners.

(3808) (5) All persons and vessels must comply with the instructions of onscene patrol personnel. On-scene patrol personnel include commissioned, warrant, or petty officers of the U.S. Coast Guard. Coast Guard Auxiliary and local or state officials may be present to inform vessel operators of the requirements of this section, and other applicable laws.

(3809)

§165.789 Safety Zone; Christiansted Harbor, St. Croix, USVI.

(3810) (a) *Regulated area*. (1) A moving safety zone is established on the waters around liquefied gas carriers entering Christiansted Harbor in an area one-half mile around each vessel, beginning one mile north of the Christiansted Harbor Lighted Buoy #1, in approximate position 17°46′48”N., 064°41′48”W., and continuing until the vessel is moored at the Virgin Island Water and Power Authority (WAPA) dock in approximate position 17°45′06”N., 064°42′50”W. All coordinates are North American Datum 1983.

(3811) (2) The waters around liquefied gas carriers in a 50-yard radius around each vessel when moored at the WAPA dock.

(3812) (3) A moving safety zone is established on the waters around liquefied gas carriers departing Christiansted Harbor in an area one-half mile around each vessel beginning at the WAPA dock in approximate position 17°45′06”N., 064°42′50”W., when the vessel gets underway, and continuing until the stern passes the Christiansted Harbor Lighted Buoy #1, in approximate position 17°45′48”N., 064°41′48”W.

(3813) (b) *Regulations*. (1) No person or vessel may enter, transit, or remain in the safety zone unless authorized by the Captain of the Port San Juan, Puerto Rico, or a designated Coast Guard commissioned, warrant, or petty officer. Those operating in the safety zone with the Captain of the Port’s authorization must comply with all lawful orders or directions given to them by the Captain of the Port or a designated representative.

(3814) (2) Vessels encountering emergencies, which require transit through the safety zones, should contact the Coast Guard patrol craft or Duty Officer on VHF Channel 16. In the event of an emergency, the Coast Guard patrol craft may authorize a vessel to transit through the safety zones with a Coast Guard designated escort.

(3815) (3) The Captain of the Port and the Duty Officer at Sector San Juan, Puerto Rico, can be contacted at telephone number 787–289–2041. The Coast Guard Patrol Commander enforcing the safety zones can be contacted on VHF– FM channels 16 and 22A.

(3816) (4) Coast Guard Sector San Juan will, when necessary and practicable, notify the maritime community of periods during which the safety zone will be in effect by providing advance notice of scheduled arrivals and departure of cruise ships via a Marine Broadcast Notice to Mariners.

(3817) (5) All persons and vessels must comply with the instructions of onscene patrol personnel. On-scene patrol personnel include commissioned, warrant, or petty officers of the U.S. Coast Guard. Coast Guard Auxiliary and local or state officials may be present to inform vessel operators of the requirements of this section, and other applicable laws.

(3818)

§165.802 Lower Mississippi River vicinity of Old River Control Structure-Safety Zone.

(3819) (a) The area enclosed by the following boundary is a safety zone-from the Black Hawk Point Light, mile 316.1 AHP LMR to a point opposite Ft. Adams Light, mile 311.5 AHP along the low water reference plane above the right descending bank; thence to the levee on a line perpendicular to the channel centerline; thence along the levee to the upstream end of the Old River Overbank structure; thence along a line to the Black Hawk Point Light.

(3820) (b) Any vessel desiring to enter this safety zone must first obtain permission from the Captain of the Port, New Orleans. The resident engineer at Old River Control Structure (WUG-424) is delegated the authority to permit entry into this safety zone.

(3821)

§165.803 Mississippi River-regulated navigation area.

(3822) The following is a Regulated Navigation Area–The waters of the Mississippi River between miles 88 and 240 above Head of Passes.

(3823) (a) *Definitions*. As used in this section:

(3824) (1) *Breakaway* means a barge that is adrift and is not under the control of a towing vessel.

(3825) (2) *COTP* means the Captain of the Port, New Orleans.

(3826) (3) Fleet includes one or more tiers.

(3827) (4) *Fleeting facility* means the geographic area along or near a river bank at which a barge mooring service, either for hire or not for hire, is established.

(3828) (5) *Mooring barge* or *spar barge* means a barge moored to mooring devices and to which other barges may be moored.

(3829) (6) Mooring device includes a deadman, anchor, pile or other reliable holding apparatus.

(3830) (7) Person in charge includes any owner, agent, pilot, master, officer, operator, crewmember, supervisor, dispatcher or other person navigating, controlling, directing or otherwise responsible for the movement, action, securing, or security of any vessel, barge, tier, fleet or fleeting facility subject to the regulations in this section.

(3831) (8) *Tier* means barges moored interdependently in rows or groups.

(3832) (b) Waivers:

(3833) (1) The COTP may, upon written request, except as allowed in paragraph (3) of this subsection, waive any regulation in this section if it is found that the proposed operation can be conducted safely under the terms of that waiver.

(3834) (2) Each written request for a waiver must state the need for the waiver and describe the proposed operation.

(3835) (3) Under unusual circumstances due to time constraints, the person in charge may orally request an immediate waiver from the COTP. The written request for a waiver must be submitted within five working days after the oral request.

(3836) (4) The COTP may, at any time, terminate any waiver issued under this subsection.

(3837) (c) *Emergencies*. In an emergency, a person may depart from any regulation in this section to the extent necessary to avoid immediate danger to persons, property or the environment.

(3838) (d) Mooring: general.

(3839) (1) No person may secure a barge to trees or to other vegetation.

(3840) (2) No person may allow a barge to be moored with unraveled or frayed lines or other defective or worn mooring.

(3841) (3) No person may moor barges side to side unless they are secured to each other from fittings as close to each corner of abutting sides as practicable.

(3842) (4) No person may moor barges end to end unless they are secured to each other from fittings as close to each corner of abutting ends as practicable.

(3843) (e) Mooring to a mooring device.

(3844) (1) A barge may be moored to mooring devices if the upstream end of that barge is secured to at least one mooring device and the downstream end is secured to at least one other mooring device, except that from mile 127 to mile 240 a barge may be moored to mooring devices if the upstream end of that barge is secured to at least one mooring device.

(3845) (2) Barges moored in tiers may be shifted to mooring devices if the shoreward barge at the upstream end of the tier is secured to at least one mooring device, and the shoreward barge at the downstream end of the tier is secured to at least one other mooring device, except that from mile 127 to mile 240 barges moored in tiers may be shifted to mooring devices if the shoreward barge at the upstream end of the tier is secured to at least one mooring device.

(3846) (3) Each wire rope used between the upstream end of a barge and a mooring device must have at least a diameter of 1¼ inch. Chain or line used between the upstream end of a barge and a mooring device must be at least equivalent in strength to 1¼ inch diameter wire rope.

(3847) (4) Each wire rope used between the downstream end of a barge and a mooring device must have at least a diameter of 7/8 inch. Chain or line used between the downstream end of a barge and a mooring device must be of at least equivalent strength of 7/8 inch diameter wire rope.

(3848) (f) Moorings: barge-to-barge; barge-to-vessel; barge-to-wharf or pier. The person in charge shall ensure that a barge moored to another barge, a mooring or spar barge, a vessel, a wharf, or a pier, is secured as near as practicable to each abutting corner of the barge being moored by –

(3849) (1) Three parts of wire rope of at least 7/8 inch diameter with an eye at each end of the rope passed around the timberhead, caval, or button;

(3850) (2) A mooring of natural or synthetic fiber rope that has at least 75 percent of the breaking strength of three parts of 7/8 inch diameter wire rope; or

(3851) (3) Fixed rigging that is at least equivalent to three parts of 7/8 inch diameter wire rope.

(3852) (g) Mooring: person in charge.

(3853) (1) The person in charge of a barge, tier, fleet or fleeting facility shall ensure that the barge, tier, fleet or fleeting facility meets the requirements in paragraphs (d) and (e) of this section.

(3854) (2) The person in charge shall ensure that all mooring devices, wires, chains, lines and connecting gear are of sufficient strength and in sufficient number to withstand forces that may be exerted on them by moored barges.

(3855) (h) Fleeting facility: inspection of moorings.

(3856) (1) The person in charge of a fleeting facility shall assign a person to inspect moorings in accordance with the requirements in paragraph (h)(2) of this section.

(3857) (2) The person assigned to inspect moorings shall inspect:

(3858) (i) At least twice each day during periods that are six hours or more apart, each mooring wire, chain, line and connecting gear between mooring devices and each wire, line and connecting equipment used to moor each barge; and

(3859) (ii) After a towboat adds barges to, withdraws barges from, or moves barges at a fleeting facility, each mooring wire, line, and connecting equipment of each barge within each tier affected by that operation.

(3860) (3) The person who inspects moorings shall take immediate action to correct each deficiency.

(3861) (i) Fleeting facility: records. The person in charge of a fleeting facility shall maintain, and make available to the Coast Guard, records containing the following information:

(3862) (1) The time of commencement and termination of each inspection required in paragraph (h)(2) of this section.

(3863) (2) The name of each person who makes the inspection required in paragraph (h)(2) of this section.

(3864) (3) The identification of each barge entering and departing the fleeting facility, along with the following information:

(3865) (i) Date and time of entry and departure; and

(3866) (ii) The names of any hazardous cargo which the barge is carrying.

(3867)

Note

(3868) The requirements in paragraph (i)(3) of this section for the listing of hazardous cargo refer to cargoes regulated by Subchapters D and O of Chapter I, Title 46, Code of Federal Regulations.

(3869) (j) Fleeting facility: Surveillance.

(3870) (1) The person in charge of a fleeting facility shall assign a person to be in continuous surveillance and to observe the barges in the fleeting facility. Joint use of this person by adjacent facilities may be considered upon submission of a detailed proposal for a waiver to the COTP.

(3871) (2) The person who observes the barges shall:

(3872) (i) Inspect for movements that are unusual for properly secured barges; and

(3873) (ii) Take immediate action to correct each deficiency.

(3874) (k) Fleeting facility: person in charge. The person in charge of a fleeting facility shall ensure that each deficiency found under the requirements of paragraphs (h) or (j) of this section is corrected.

(3875) (1) Securing breakaways. The person in charge shall take immediate action to:

(3876) (1) Secure each breakaway; and

(3877) (2) Report each breakaway as soon as possible to the COTP by telephone, radio or other means of rapid communication.

(3878) (m) High water.

(3879) (1) This subsection applies to barges on the Mississippi River between miles 88 and 240 above Head of Passes when:

(3880) (i) The Carrollton gage stands 12 feet or more; or

(3881) (ii) The Carrollton gage stands 10 feet, the U.S. Army Corps of Engineers forecasts the Mississippi River is rising to 12 feet, and the District Commander determines these circumstances to be especially hazardous and issues orders directing that paragraph (m)(2) and (3) of this section are in effect.

(3882) (2) During high water, the person in charge of a fleeting facility shall ensure compliance with the following requirements:

(3883) (i) Each fleet consisting of eight or more barges must be attended by at least one radar-equipped towboat for each 100 barges or less. Joint use of this towboat by adjacent facilities may be considered upon submission of a detailed proposal for a waiver.

(3884) (ii) Each fleet must have two or more towboats in attendance when:

(3885) (A) Barges are withdrawn from or moved within the fleet and the fleet at the start of the operation contains eight or more barges; or

(3886) (B) Barges are added to the fleet and the number of barges being added plus the fleet at the start of the operation total eight or more.

(3887) (iii) Each towboat required in paragraphs (m)(2)(i) and (2)(ii) of this section must be:

(3888) (A) Capable of safely withdrawing, moving or adding each barge in the fleet;

(3889) (B) Immediately operational;

(3890) (C) Radio-equipped;

(3891) (D) Within 500 yards of the barges; and

(3892) (iv) The person in charge of each towboat required in paragraphs (m)(2)(i) and (2)(ii) of this section shall maintain:

(3893) (A) A continuous guard on the frequency specified by current Federal Communications Commission regulations found in Part 83 of Title 47, Code of Federal Regulations; and

(3894) (B) When moored, a continuous watch on the barges in the fleeting facility.

(3895) (v) During periods when visibility is less than 200 yards, the person in charge of each towboat required in paragraph (m)(2)(i) of this subsection shall maintain, when moored, a continuous radar surveillance of the barges moored in the fleeting facility.

(3896) (3) During high water when visibility is reduced to less than 200 yards:

(3897) (i) Tows may not be assembled or disassembled;

(3898) (ii) No barge may be added to, withdrawn from or moved within a fleet except:

(3899) (A) A single barge may be added to or withdrawn from the channelward or downstream end of the fleet; and

(3900) (B) Barges made up in a tow may depart a fleet from the channelward or downstream end of the fleet; and

(3901) (iii) No person in charge of a tow arriving in this regulated navigation area may moor unless the COTP is notified prior to arrival in the regulated navigation area.

(3902)

§165.804 Safety Zone; Hurricanes, Tropical Storms and Other Disasters in Southeast Texas and Southwest Louisiana.

(3903) (a) *Regulated areas*. All navigable waters within the Port Arthur Captain of the Port (COTP) Zone, MSU Port Arthur, TX, as described in 33 CFR 3.40–28(b), during specified conditions.

(3904) (b) *Definitions*. (1) Designated representative means Coast Guard Patrol Commanders, including Coast Guard coxswains, petty officers, and other officers operating Coast Guard vessels, and Federal, state, and local officers designated by or assisting the COTP Port Arthur, in the enforcement of the regulated areas.

(3905) (2) *Port Condition WHISKEY* means a condition set by the COTP when weather advisories indicate sustained gale force winds (39–54 mph/34–47 knots) from a tropical or hurricane force storm are predicted to make landfall at the port within 72 hours.

(3906) (3) *Port Condition X–RAY* means a condition set by the COTP when weather advisories indicate sustained gale force winds (39–54 mph/34–47 knots) from a tropical or hurricane force storm are predicted to make landfall at the port within 48 hours.

(3907) (4) *Port Condition YANKEE* means a condition set by the COTP when weather advisories indicate that sustained gale force winds (39–54 mph/ 34–47 knots) from a tropical or hurricane force storm are predicted to make landfall at the port within 24 hours.

(3908) (5) *Port Condition ZULU* means a condition set by the COTP when weather advisories indicate that sustained gale force winds (39–54 mph/ 34–47 knots) from a tropical or hurricane force storm are predicted to make landfall at the port within 12 hours.

(3909) (6) *Port Condition RECOVERY* means the condition set when weather advisories indicate that sustained gale force winds from a tropical hurricane force storm are no longer predicted for the designated area. This port condition remains in effect until the regulated areas are safe and reopened to normal operations.

(3910) (c) *Regulations* (1) *Port Condition WHISKEY*. All vessels and port facilities in designated areas must exercise due diligence in preparation for potential storm impacts. Ports and waterfront facilities must begin removing all debris and securing potential flying hazards. Oceangoing vessels 500 gross tons (GT) and above must make plans to depart no later than the setting of Port Condition Yankee unless authorized by the COTP. Vessels wishing to remain in port are required to submit a Notice of Intent to Remain In Port to the COTP prior to setting Port Condition X-Ray.

(3911) (2) *Port Condition X–RAY*. All vessels and port facilities in designated areas must ensure that potential flying debris is removed or secured. Hazardous materials/ pollution hazards must be secured in a safe manner and away from waterfront areas. Vessels over 500GT without an approval to remain in port must depart prior to the setting of Port Condition YANKEE. Vessels with the COTP's permission to remain in port must implement their pre-approved mooring arrangement. Terminal operators must prepare to terminate all cargo operations. The COTP may require additional precautions to ensure the safety of the ports and waterways.

(3912) (3) *Port Condition YANKEE*. Affected ports are closed to inbound vessel traffic. All oceangoing vessels greater than 500 Gross Tons must depart designated ports prior to the setting of Port Condition ZULU. Terminal operators must terminate all cargo operations not associated with storm preparations. Cargo operations associated with storm preparations include moving cargo within or off the port for securing purposes, port/facility equipment preparations, and similar activities, but do not include moving cargo onto the port or vessel loading/ discharging operations unless specifically authorized by the COTP. All facilities must continue to operate in accordance with approved Facility Security Plans and comply with the requirements of the Maritime Transportation Security Act.

(3913) (4) *Port Condition ZULU*. Designated areas are closed to all vessel traffic except those specifically authorized by the COTP. Cargo operations are suspended, including bunkering and lightering. Waivers may be granted unless Cargo of Particular Hazard or Certain Dangerous Cargo is involved.

(3914) (5) *Port Condition RECOVERY*. Designated areas are closed to all commercial traffic and recreational vessels 65-feet in length and greater. Based on assessments of channel conditions, navigability concerns, and hazards to navigation, the COTP may permit vessel movements with restrictions. Restrictions may include, but are not limited to, preventing vessel movements, imposing draft, speed, size, horsepower, or daylight restrictions, or directing the use of specific routes. Vessels permitted to transit the regulated area shall comply with the lawful orders or directions given by the COTP or designated representative.

(3915) (6) *Safety zones notice*. The Coast Guard COTP will notify the maritime community of periods during which these safety zones will be in effect via Broadcast Notice to Mariners and Marine Safety Information Bulletin or by on-scene designated representatives.

(3916) (7) *Regulated area notice*. The Coast Guard will provide notice of the designated ports and/or waterways within the regulated area covered by each Port Condition via Broadcast Notice to Mariners, Marine Safety Information Bulletin or by on-scene designated representatives.

(3917) (8) *Exception*. This section does not apply to authorized law enforcement agencies operating within the regulated area.

(3918)

§165.805 Security Zones; Calcasieu River and Ship Channel, LA.

(3919) (a) *Location*. (1) The following areas are designated as fixed security zones (all coordinates are based upon North American Datum of 1983 [NAD 83]):

(3920) (i) *Trunkline LNG basin*. All waters encompassed by a line connecting the following points, beginning at

(3921) 30°06'36"N., 93°17'36"W., south to a point

(3922) 30°06'33"N., 93°17'36"W., east to a point

(3923) 30°06'30"N., 93°17'02"W., north to a point

(3924) 30°06'33"N., 93°17'01"W., then tracing the shoreline along the water's edge to the point of origin.

(3925) (ii) *Cameron LNG basin*. All waters encompassed by a line connecting the following points, beginning at

(3926) 30°02'33"N., 93°19'53"W., east to a point at

(3927) 30°02'34"N., 93°19'50"W., south to a point at

(3928) 30°02'10"N., 93°19'52"W. and west to a point at

(3929) 30°02'10"N., 93°19'59"W., then tracing the shoreline along the water's edge to the point of origin.

(3930) (iii) *PPG Industries basin*. All waters encompassed by a line connecting the following points: Beginning at

(3931) 30°13'29"N., 93°16'34"W., southwest to a point at

(3932) 30°13'11"N., 93°16'51"W., then proceeding southerly following 100 feet off the shoreline to a point at

(3933) 30°12'57.2"N., 93°16'53.2"W., then east to a point at

(3934) 30°12'57.2"N., 93°16'50.6"W. then southerly to a point at

(3935) 30°12'47.7"N., 93°16'50.3"W. then west to the shoreline and then following along the water's edge to the point of origin.

(3936) (2) The following areas are moving security zones: All waters within the Captain of the Port, Port Arthur zone commencing at U.S. territorial waters and extending channel edge to channel edge on the Calcasieu Channel and shoreline to shoreline on the Calcasieu River, 2 miles ahead and 1 mile astern of certain designated vessels while in transit. Meeting, crossing or overtaking situations are not permitted within the security zone unless specifically authorized by the Captain of the Port. Coast Guard patrol assets will be on scene with flashing blue lights energized when the moving security zones are in effect.

(3937) (b) *Regulations*. (1) Entry into or remaining in a fixed zone described in paragraph (a)(1) of this section is prohibited for all vessels except:

(3938) (i) Commercial vessels operating at waterfront facilities within these zones;

(3939) (ii) Commercial vessels transiting directly to or from waterfront facilities within these zones;

(3940) (iii) Vessels providing direct operational or logistical support to commercial vessels within these zones;

(3941) (iv) Vessels operated by the appropriate port authority or by facilities located within these zones; and

(3942) (v) Vessels operated by federal, state, county, or municipal agencies.

(3943) (2) Entry into or remaining in moving zones described in paragraph (a)(2) of this section is prohibited for all vessels except:

(3944) (i) Moored vessels or vessels anchored in a designated anchorage area. A moored or an anchored vessel in a security zone described in paragraph (a)(2) of this section must remain moored or anchored unless it obtains permission from the Captain of the Port to do otherwise;

(3945) (ii) Commercial vessels operating at waterfront facilities located within the zone;

(3946) (iii) Vessels providing direct operational support to commercial vessels within a moving security zone;

(3947) (iv) Vessels operated by federal, state, county, or municipal agencies.

(3948) (3) Other persons or vessels requiring entry into security zones described in this section must request permission from the Captain of the Port, Port Arthur or designated representatives.

(3949) (4) To request permission as required by these regulations, contact Marine Safety Unit Lake Charles at 337–491–7800 or the on scene patrol vessel.

(3950) (5) All persons and vessels within a security zone described in this section must comply with the instructions of the Captain of the Port, Port Arthur, designated on-scene U.S. Coast Guard patrol personnel or other designated representatives. On-scene U.S. Coast Guard patrol personnel include commissioned, warrant, and petty officers of the U.S. Coast Guard. Designated representatives include federal, state, local and municipal law enforcement agencies.

(3951) (c) *Informational Broadcasts*: The Captain of the Port, Port Arthur will inform the public when moving security zones have been established around vessels via Broadcast Notices to Mariners and written notice provided by escort vessels.

(3952)

§165.806 Sabine Neches Waterway, Texas–Regulated Navigation Area.

(3953) (a) The following is a regulated navigation area-The Sabine Neches Waterway which includes the following waters: Sabine Pass Channel, Port Arthur Canal, Sabine-Neches Canal, Neches River, Sabine River and all navigable waterways tributary thereto.

(3954) (b) Unless otherwise authorized by the Captain of the Port, Port Arthur, Texas, tows on a hawser of 1,000 gross tons or greater transiting the Sabine-Neches Waterway are prohibited unless such tows have a tug of sufficient horsepower made up to the tow in such a manner as to ensure that complete and effective control is maintained throughout the transit. Inbound vessels only, may shift the tow or pick up an additional tug within 100 yards inside the entrance jetties provided that such action is necessary for reasons of prudent seamanship.

(3955)

§165.807 Calcasieu River, LA–Regulated Navigation Area.

(3956) (a) The following is a regulated navigation area– The Calcasieu River from the Calcasieu jetties up to and including the Port of Lake Charles.

(3957) (b) Unless otherwise authorized by the Captain of the Port, Port Arthur, Texas, tows on a hawser of 1,000 gross tons or greater transiting the Calcasieu River are prohibited unless such tows have a tug of sufficient horsepower made up to the tow in such a manner as to ensure that complete and effective control is maintained at all times. Inbound vessels only, may shift the tow or pick up an additional tug within 100 yards inside the entrance jetties provided that such action is necessary for reasons of prudent seamanship.

(3958)

§165.808 Corpus Christi Ship Channel, Corpus Christi, TX, safety zone.

(3959) (a) The following areas are established as Safety Zones during specified conditions:

(3960) (1) For incoming tank vessels loaded with Liquefied Petroleum Gas, the waters within a 500 yard radius of the LPG carrier while the vessel transits the Corpus Christi Ship Channel to the LPG receiving facility. The Safety Zone remains in effect until the LPG vessel is moored at the LPG receiving facility.

(3961) (2) For outgoing tank vessels loaded with LPG, the waters within a 500 yard radius of the LPG carrier while the vessel departs the LPG facility and transits the Corpus Christi Ship Channel. The Safety Zone remains in effect until the LPG vessel passes the seaward extremity of the Aransas Pass Jetties.

(3962) (b) The general regulations governing safety zones contained in **33 CFR 165.23** apply.

(3963) (c) The Captain of the Port will notify the maritime community of periods during which this safety zone will be in effect by providing advance notice of scheduled arrivals and departures of loaded LPG vessels via a Marine Safety Information Broadcast Notice to Mariners.

(3964)

§165.809 Security Zone; Port of Corpus Christi Inner Harbor, Corpus Christi, TX.

(3965) (a) *Location*. The following area is designated as a security zone: All waters of the Corpus Christi Inner Harbor from the Inner Harbor Bridge (U.S. Hwy 181) to, and including the Viola Turning Basin.

(3966) (b) *Regulations*. (1) No recreational vessels, passenger vessels, or commercial fishing vessels may enter the security zone unless specifically authorized by the Captain of the Port Corpus Christi or a designated representative.

(3967) (2) Recreational vessels, passenger vessels and commercial fishing vessels requiring entry into the security zone must contact the Captain of the Port Corpus Christi or a designated representative. The Captain of the Port may be contacted via VHF Channel 16 or via telephone at (361) 888–3162 to seek permission to transit the area. If permission is granted, all persons and vessels must comply with the instructions of the Captain of the Port, Corpus Christi or a designated representative.

(3968) (3) Designated representatives include U.S. Coast Guard commissioned, warrant, and petty officers.

(3969) (c) *Authority*. In addition to 46 U.S.C. 70034, the authority for this section includes 46 U.S.C. 70116.

(3970)

§165.810 Mississippi River, LA-regulated navigation area.

(3971) (a) *Purpose and applicability*. This section prescribes rules for all vessels operating in the Lower Mississippi River below mile 233.9 above Head of Passes including South Pass and Southwest Pass, to assist in the prevention of allisions; collisions and groundings so as to ensure port safety and protect the navigable waters of the Mississippi River from environmental harm resulting from those incidents, and to enhance the safety of passenger vessels moored or anchored in the Mississippi River.

(3972) (b) Lower Mississippi River below mile 233.9 above Head of Passes including South and Southwest Passes:

(3973) (1) *Supervision*. The use, administration, and navigation of the waterways to which this paragraph applies shall be under the supervision of the District Commander, Eighth Coast Guard District.

(3974) (2) *Speed; high-water precautions*. When passing another vessel (in motion, anchored, or tied up), a wharf or other structure, work under construction, plant engaged in river and harbor improvement, levees withstanding flood waters, building partially or wholly submerged by high water, or any other structure liable to damage by collision, suction or wave action, vessels shall give as much leeway as circumstances permit and reduce their speed sufficiently to preclude causing damages to the vessel or structure being passed. Since this subparagraph pertains directly to the manner in which vessels are operated, masters of vessels shall be held responsible for strict observance and full compliance therewith. During high river stages, floods, or other emergencies, the District Commander may prescribe by navigation bulletins or other means the limiting speed in land miles per hour deemed necessary for the public safety for the entire section or any part of the waterways covered by this paragraph, and such limiting speed shall be strictly observed.

(3975) (3) *Towing*. Towing in any formation by a vessel with insufficient power to permit ready maneuverability and safe handling is prohibited.

(3976) (c) [Reserved]

(3977) (d) Navigation of South and Southwest Passes.

(3978) (1) No vessel, except small craft and towboats and tugs without tows, shall enter South Pass or Southwest Pass the Gulf until after any descending vessel which has approached within two and one-half (2½) miles of the outer end of the jetties and visible to the ascending vessel shall have passed to sea.

(3979) (2) No vessel having a speed of less than ten mph shall enter South Pass from the Gulf when the stage of the Mississippi River exceeds 15 feet on the Carrollton Gage at New Orleans. This paragraph does not apply when Southwest Pass is closed to navigation.

(3980) (3) No vessel, except small craft and towboats and tugs without tows, ascending South Pass shall pass Franks Crossing Light until after a descending vessel shall have passed Depot Point Light.

(3981) (4) No vessel, except small craft and towboats and tugs without tows, shall enter the channel at the head of South Pass until after an ascending vessel which has reached Franks Crossing Light shall have passed through into the river.

(3982) (5) When navigating South Pass during periods of darkness no tow shall consist of more than one towed vessel other than small craft, and during daylight hours no tow shall consist of more than two towed vessels other than small craft. Tows may be in any formation. When towing on a hawser, the hawser shall be as short as practicable to provide full control at all times.

(3983) (6) When towing in Southwest Pass during periods of darkness no tow shall consist of more than two towed vessels other than small craft, and during daylight hours no tow shall consist of more than three towed vessels other than small craft.

(3984) (e) Watch requirements for anchored and moored passenger vessels.

(3985) (1) *Passenger vessels*. Except as provided in paragraph (e)(2) of this section, each passenger vessel with one or more passengers on board, must–

(3986) (i) Keep a continuously manned pilothouse; and

(3987) (ii) Monitor river activities and marine VHF, emergency and working frequencies of the port, so as to be immediately available to take necessary action to protect the vessel, crew, and passengers if an emergency radio broadcast, danger signal, or visual or other indication of a problem is received or detected.

(3988) (2) Each ferryboat, and each small passenger vessel to which **46 CFR 175.110** applies, may monitor river activities using a portable radio from a vantage point other than the pilothouse.

(3989) (f) Each self propelled vessel of 1,600 or more gross tons subject to **33 CFR part 164** shall also comply with the following:

(3990) (1) While underway in the RNA, each vessel must have an engineering watch capable of monitoring the propulsion system, communicating with the bridge, and implementing manual-control measures immediately when necessary. The watch must be physically present in the machinery spaces or in the machinery-control spaces and must consist of at least an appropriately licensed or credentialed engineer officer.

(3991) (2) Before embarking a pilot when entering or getting underway in the RNA, the master of each vessel shall ensure that the vessel is in compliance with **33 CFR part 164**.

(3992) (3) The master shall ensure that the chief engineer has certified that the following additional operating conditions will be satisfied so long as the vessel is underway within the RNA:

(3993) (i) The main propulsion plant is in all respects ready for operations including the main-propulsion air-start systems, fuel systems, lubricating systems, cooling systems, and automation systems;

(3994) (ii) Cooling, lubricating, and fuel-oil systems are at proper operating temperatures;

(3995) (iii) Main propulsion machinery is available to immediately respond to the full range of maneuvering commands any load-limiting programs or automatic acceleration-limiting programs that would limit the speed of response to engine orders beyond that needed to prevent immediate damage to the propulsion machinery are capable of being overridden immediately.

(3996) (iv) Main-propulsion standby systems are ready to be immediately placed in service.

(3997) (g) [Reserved]

(3998) **Note to §165.810:** Control Light provisions (previously referenced in paragraph (c) of this section) used to mange vessel traffic during periods of high waters in the vicinity of Algiers Point are located in 33 CFR 161.65(c). The special operating requirements (previously referenced in paragraph (g) of this section) used to manage vessel traffic in the vicinity of Eight-one Mile Point are located in 33 CFR 161.65(e).

(3999)

§165.811 Atchafalaya River, Berwick Bay, LA-regulated navigation area.

(4000) (a) The following is a regulated navigation area: the waters of the Atchafalaya River in Berwick Bay bounded on the northside from 2,000 yards north of the U.S. 90 Highway Bridge and on the southside from 4,000 yards south of the Southern Pacific Railroad (SPRR) Bridge.

(4001) (b) Within the regulated navigation area described in paragraph (a) of this section, §161.40 of this chapter establishes a VTS Special Area for waters within a 1000 yard radius of the SPRR Bridge.

(4002) (c) When the Morgan City River gauge reads 3.0 feet or above mean sea level, in addition to the requirements set forth in §161.13 of this chapter, the requirements of paragraph (d) and (e) of this section apply to a towing vessel which will navigate:

(4003) (1) under the lift span of the SPRR Bridge; or

(4004) (2) through the navigational opening of the U.S. 90 Highway Bridge; or

(4005) (3) through the navigational opening of the Highway 182 Bridge.

(4006) (d) *Towing requirements*. (1) Towing on a hawser is not authorized, except that one self-propelled vessel may tow one other vessel without barges upbound;

(4007) (2) A towing vessel and barges must be arranged in tandem, except that one vessel may tow one other vessel alongside;

(4008) (3) Length of tow must not exceed 1,180 feet; and

(4009) (4) Tows with a box end in the lead must not exceed 400 feet in length.

(4010) **Note:** The variation in the draft and the beam of the barges in a multi-barge tow should be minimized in order to avoid unnecessary strain on coupling wires.

(4011) (e) *Horsepower Requirement*. (1) The following requirements apply to a towing vessel of 3,000 hp or less:

(4012)

TABLE 165.811(e)
Minimum Available Horsepower Requirements
[The greater value listed]

Direction of Tow	Daytime (sunrise to sunset)	Nightime (sunrise to sunset)
Upbound	400 hp or (length of tow–300ft) x 3	600 hp or (length of tow–200ft) x 3
Downbound	600 hp or (length of tow–200ft) x 3	600 hp or (length of tow) x 3
Note: A 5% variance from the available horsepower is authorized		

(4013) (2) All tows carrying cargoes of particular hazard as defined in §160.202 of this chapter must have available horsepower of at least 600 hp or three times the length of tow, whichever is greater.

(4014) (f) *Notice of Requirements*. Notice that these rules are anticipated to be put into effect, or are in effect, will be given by:

(4015) (1) Marine information broadcasts;

(4016) (2) Notices to mariners;

(4017) (3) Vessel Traffic Center advisories or upon vessel information request.

(4018)

§165.812 Security Zones: Lower Mississippi River, Southwest Pass Sea Buoy to Mile Marker 96.0, New Orleans, LA.

(4019) (a) *Location*. Within the Lower Mississippi River and Southwest Pass, moving security zones are established around all cruise ships between the Southwest Pass Entrance Lighted Buoy "SW", at approximate position 28°52'42"N., 89°25'54"W. [NAD 83] and Lower Mississippi River mile marker 96.0 in New Orleans, LA. These moving security zones encompass all waters within 500 yards of a cruise ship. These zones remain in effect during the entire transit of the vessel and continue while the cruise ship is moored or anchored.

(4020) (b) *Regulations*. (1) Entry of persons and vessels into these zones is prohibited unless authorized as follows.

(4021) (i) Vessels may enter within 500 yards but not closer than 100 feet of a cruise ship provided they operate at the minimum speed necessary to maintain a safe course.

(4022) (ii) No person or vessel may enter within 100 feet of a cruise ship unless expressly authorized by the Coast Guard Captain of the Port New Orleans or his designated representative.

(4023) (iii) Moored vessels or vessels anchored in a designated anchorage area are permitted to remain within 100 feet of a cruise ship while it is transit.

(4024) (2) Vessels requiring entry within 500 yards of a cruise ship that cannot slow to the minimum speed necessary to maintain a safe course must request express permission to proceed from the Captain of the Port New Orleans or his designated representative.

(4025) (3) For the purpose of this rule the term "cruise ship" is defined as a passenger vessel over 100 gross tons, carrying more than 12 passengers for hire, making a voyage lasting more than 24 hours, any part of which is on high seas, and for which passengers are embarked or disembarked in the United States or its territories.

(4026) (4) The Captain of the Port New Orleans will inform the public of the moving security zones around cruise ships via Marine Safety Information Broadcasts.

(4027) (5) To request permission as required by these regulations contact "New Orleans Traffic" via VHF Channels 13/67 or via phone at 504–589–2780 or 504–589–6261.

(4028) (6) All persons and vessels within the moving security zones shall comply with the instructions of the Captain of the Port New Orleans and designated on-scene U.S. Coast Guard patrol personnel. On-scene U.S. Coast Guard patrol personnel include commissioned, warrant, and petty officers of the U.S. Coast Guard.

(4029) (c) *Authority*. In addition to 46 U.S.C. 70034, the authority for this section includes 46 U.S.C. 70116.

(4030)

§165.813 Security Zones; Ports of Houston and Galveston, TX.

(4031) (a) *Location*. Within the Ports of Houston and Galveston, TX, moving security zones are established encompassing all waters with 500 yards of a cruise ship between Galveston Bay Approach Lighted Buoy "GB", at approximate position 29°14'44"N., 94°32'41"W. [NAD 83] and up to, and including, Barbours Cut. These zones remain in effect during the inbound and outbound entire transit of the cruise ship and continues while the cruise ship is moored or anchored.

(4032) (b) *Regulations.* (1) Entry of vessels or persons into these zones is prohibited unless authorized as follows.

(4033) (i) Vessels may enter within 500 yards but not closer than 100 yards of a cruise ship provided they operate at the minimum speed necessary to maintain a safe course.

(4034) (ii) No person or vessel may enter within 100 yards of a cruise ship unless expressly authorized by the Coast Guard Captain of the Port Houston-Galveston. Where the Houston Ship Channel narrows to 400 feet or less between Houston Ship Channel Entrance Lighted Bell Buoy "18", light list nos. 23900/36055 at approximately 29°21'04"N., 094°47'00"W. [NAD 83] and Barbours Cut, the Captain of the Port Houston-Galveston may permit vessels that must transit the navigable channel between these points to enter within 100 yards of a cruise ship.

(4035) (iii) Moored vessels or vessels anchored in a designated anchorage area are permitted to remain within 100 yards of a cruise ship while it is in transit.

(4036) (2) Vessels requiring entry within 500 yards of a cruise ship that cannot slow to the minimum speed necessary to maintain a safe course must request express

permission to proceed from the Captain of the Port Houston-Galveston, or his designated representative.

(4037) (3) For the purpose of this section the term "cruise ship" is defined as a passenger vessel over 100 gross tons, carrying more than 12 passengers for hire, making a voyage lasting more than 24 hours, any part of which is on the high seas, and for which passengers are embarked or disembarked in the United States or its territories.

(4038) (4) The Captain of the Port Houston-Galveston will inform the public of the moving security zones around cruise ships via Marine Safety Information Broadcasts.

(4039) (5) To request permission as required by these regulations contact "Houston Traffic" via VHF Channels 11/12 or via phone at 281–464–4837.

(4040) (6) All persons and vessels within the moving security zone shall comply with the instructions of the Captain of the Port Houston-Galveston and designated on-scene U.S. Coast Guard patrol personnel. On-scene U.S. Coast Guard patrol personnel include commissioned, warrant, and petty officers of the U.S. Coast Guard.

(4041) (c) *Authority*. In addition to 46 U.S.C. 70034, the authority for this section includes 46 U.S.C. 70116.

(4042)

§165.814 Security Zones; Captain of the Port Houston-Galveston Zone.

(4043) (a) *Location*. The following areas are designated as security zones:

(4044) (1) *Houston, TX*. The Houston Ship Channel and all associated turning basins, bounded by a line drawn between geographic positions 29°45'14"N., 095°05'47"W. to 29°45'04"N., 095°05'33"W. west to the T & N Rail Road Swing Bridge at the entrance to Buffalo Bayou, including all waters adjacent to the ship channel from shoreline to shoreline and the first 200 yards of connecting waterways.

(4045) (2) *Morgan's Point, TX*. The Barbours Cut Ship Channel and Turning Basin containing all waters west of a line drawn between Barbours Cut Junction Light "BC" 29°41'12"N., 094°59'10"W. (LLNR–24750), and Houston Ship Channel Light 91, 29°40'58"N., 094°58'59"W. (LLNR–24595) (NAD 1983).

(4046) (3) *Bayport, TX*. The Port of Bayport, Bayport Ship Channel and Bayport Turning Basin containing all waters south of latitude 29°36'45"N. and west of position 29°36'45"N., 094°59'31"W. (NAD 1983).

(4047) (4) *Texas City, TX*. The Port of Texas City Channel, Turning Basin and Industrial Canal containing all waters bounded by the area south and west of a line drawn from Texas City Channel Light 19 (LLNR 26160) through Texas City Cut B Inner Range Front Light (LLNR 26110) and terminating on land in position 29°23'16"N., 094°53'15"W. (NAD 1983).

(4048) (5) *Freeport, Texas*. (i) The Dow Barge Canal, containing all waters of the Dow Barge Canal north of a line drawn between

(4049) 28°56.81′N., 095°18.33′W. and

(4050) 28°56.63′N., 095°18.54′W. (NAD 1983).

(4051) (ii) The Brazos Harbor, containing all waters west of a line drawn between

(4052) 28°56.45′N., 095°20.00′W. and

(4053) 28°56.15′N., 095°20.00′W. (NAD 1983) at its junction with the Old Brazos River.

(4054) (iii) The Dow Chemical plant, containing all waters of the Brazos Point Turning Basin within 100' of the north shore and bounded on the east by the longitude line drawn through

(4055) 28°56.58′N., 095°18.64′W. and on the west by the longitude line drawn through

(4056) 28°56.64′N., 095°19.13′W. (NAD 1983).

(4057) (iv) The Seaway Teppco Facility, containing all waters of the Brazos Port Turning Basin bounded on the south by the shore, the north by the Federal Channel, on the east by the longitude line running through

(4058) 28°56.44′ N., 095°18.83′W. and

(4059) 28°56.48′N., 095°18.83′W. and on the west by the longitude line running through

(4060) 28°56.12′N., 095°19.27′W. and

(4061) 28°56.11′N., 095°19.34′W. (NAD 1983).

(4062) (v) The Conoco Phillips Facility docks, containing all waters within 100' of a line drawn from a point on shore at

(4063) 28°55.96′ N., 095°19.77′W. extending west to a point on shore at

(4064) 28°56.19′N., 095°20.07′W. (NAD 1983).

(4065) (vi) The Freeport LNG Basin containing all waters shoreward of a line drawn between the eastern point at

(4066) 28°56'25"N., 95°18'13"W., and the western point at

(4067) 28°56'28"N., 95°18'31"W., east towards the jetties.

(4068) (b) *Regulations*. (1) Entry of into these zones is prohibited except for the following:

(4069) (i) Commercial vessels operating at waterfront facilities within these zones;

(4070) (ii) Commercial vessels transiting directly to or from waterfront facilities within these zones;

(4071) (iii) Vessels providing direct operational/logistic support to commercial vessels within these zones;

(4072) (iv) Vessels operated by the appropriate port authority or by facilities located within these zones; and

(4073) (v) Vessels operated by federal, state, county, or municipal agencies.

(4074) (2) Other persons or vessels requiring entry into a zone described in this section must request express permission to enter from the Captain of the Port Houston-Galveston, or designated representative. The Captain of the Port Houston-Galveston's designated representatives are any personnel granted authority by the Captain of the Port Houston-Galveston to receive, evaluate, and issue written security zone entry permits, or the designated on-scene U.S. Coast Guard patrol personnel described in paragraph (b)(4).

(4075) (3) To request permission as required by these regulations contact "Houston Traffic" via VHF Channels 11/12 or by phone at 281–464–4837.

(4076) (4) All persons and vessels shall comply with the instructions of the Captain of the Port Houston-Galveston

and designated on-scene U.S. Coast Guard patrol personnel. On-scene U.S. Coast Guard patrol personnel include commissioned, warrant, and petty officers of the U.S. Coast Guard.

(4077)

§165.818 Moving Security Zones, for Certain Vessels in Freeport Entrance Channel, Freeport, Texas.

(4078) (a) *Location*. The following areas are security zones: All waters within the Captain of the Port Houston-Galveston Zone commencing at U.S. territorial waters through the Freeport Entrance Channel, from surface to bottom, one thousand (1000) yards ahead and astern and five hundred (500) yards on each side of any vessel that has a moving security zone established around it.

(4079) (b) *Regulations*. Entry into or remaining in the zones described in paragraph (a) of this section is prohibited unless authorized as follows:

(4080) (1) Moored vessels or vessels anchored in a designated anchorage area are permitted to remain moored or anchored if they come within a security zone described in paragraph (a) of this section. A moored or an anchored vessel in a security zone must remain moored or anchored unless it obtains permission from the Captain of the Port to do otherwise.

(4081) (2) Commercial vessels operating at the waterfront facilities within these zones.

(4082) (3) Commercial vessel transiting directly to or from waterfront facilities within these zones.

(4083) (4) Vessels providing direct operational/logistic support to commercial vessels within these zones.

(4084) (5) Vessels operated by the port authority or by facilities located within these zones.

(4085) (6) Vessels operated by Federal, State, county, or municipal agencies.

(4086) (7) All persons and vessels within the moving security zone must comply with the instructions of the Captain of the Port Houston-Galveston and designated on-scene U.S. Coast Guard patrol personnel. On-scene U.S. Coast Guard patrol personnel include commissioned, warrant, and petty officers of the U.S. Coast Guard.

(4087) (8) To request permission as required by these regulations, contact the Sector Houston-Galveston Command Center by telephone at 713–671–5113. In Freeport, vessels should contact the Captain of the Port's designated on-scene representative for the moving security zone on VHF Channel 16, or by telephone at 979–233–7551.

(4088) (c) *Certain vessel definition*. For the purposes of this section, certain vessel means any vessel within the 12 nautical mile U.S. Territorial Waters and bound for the Port of Freeport that is deemed to be in need of a moving security zone by the Captain of the Port, Houston-Galveston for security reasons. In making this determination, the Captain of the Port considers all relevant security factors, including but not limited to the presence of unusually harmful or hazardous substances and the risk to population or infrastructure.

(4089) (d) *Informational broadcasts*. The Captain of the Port Houston-Galveston will inform the public when moving security zones have been established around certain vessels via Broadcast Notice to Mariners on VHF channel 16 and 13. Vessels that have a moving security zone in place around them will display the international signal flag or pennant number five.

(4090) (e) *Authority*. In addition to 46 U.S.C. 70034 and 46 U.S.C. 70051, the authority for this section includes 46 U.S.C. 70116.

(4091)

§165.819 Security Zone; Sabine Bank Channel, Sabine Pass Channel and Sabine-Neches Waterway, TX.

(4092) (a) *Location*. (1) The following LNG facility mooring basins are designated as fixed security zones whenever LNG carriers are moored within them:

(4093) (i) *Golden Pass LNG, Sabine TX*: All mooring basin waters south of a line connecting the following points–beginning at

(4094) 29°45'58"N., 093°55'40"W.; then east to a point at

(4095) 29°45'52.8"N., 093°55'20.8"W.; then bearing **120°** T to the shoreline at

(4096) 29°45'50"N., 093°55'17"W.

(4097) (ii) *Sabine Pass LNG, Cameron Parish, LA*:

(4098) (A) All mooring basin waters shoreward of a line connecting the following points–beginning at the shoreline in position

(4099) 29°44'34.7"N., 093°52'29"W.; then to a point at

(4100) 29°44'31.4"N., 093°52'26.4"W.; then to a point at

(4101) 29°44'25.2"N, 093°52'14.6"W.; then to the shoreline at

(4102) 29°44'24.4"N., 093°52’11.4″ W (WGS84).

(4103) (B) All mooring basin waters shoreward of a line connecting the following points—beginning at the shoreline in position

(4104) 29°44′23.4″ N, 093°52′10.3″ W; then to a point at

(4105) 29°44′22.3″ N, 093°52′9.8″ W; then to a point at

(4106) 29°44′18″ N, 093°52′3.6″ W; then to the shoreline at

(4107) 29°44′17.4″ N, 093°52′2.3″ W (WGS84).

(4108) (2) The following areas are designated as moving security zones: All waters of the Captain of the Port, Port Arthur Zone commencing at U.S. territorial waters and extending from the surface to the bottom, channel edge to channel edge on the Sabine Bank and Sabine Pass Channels and shoreline to shoreline on the Sabine-Neches Waterway, 2 miles ahead and 1 mile astern of certain designated vessels while in transit within in the Captain of the Port, Port Arthur zone. Mariners would be notified of designated vessels by Broadcast Notice to Mariners and the presence of escort vessels displaying flashing blue law enforcement lights.

(4109) (b) *Regulations*. (1) Entry into or remaining in a fixed security zone described in paragraph (a)(1) of this section is prohibited for all vessels except:

(4110) (i) Commercial vessels operating at waterfront facilities within these zones;

(4111) (ii) Commercial vessels transiting directly to or from waterfront facilities within these zones;

(4112) (iii) Vessels providing direct operational or logistical support to commercial vessels within these zones;

(4113) (iv) Vessels operated by the appropriate port authority or by facilities located within these zones; and

(4114) (v) Vessels operated by Federal, State, county, or municipal law enforcement agencies.

(4115) (2) Entry into or remaining in a moving security zone described in paragraph (a)(2) of this section is prohibited for all vessels except:

(4116) (i) Moored vessels or vessels anchored in a designated anchorage area. A moored or an anchored vessel in a security zone described in paragraph (a)(2) of this section must remain moored or anchored unless it obtains permission from the Captain of the Port to do otherwise;

(4117) (ii) Commercial vessels operating at waterfront facilities located within the zone;

(4118) (iii) Vessels providing direct operational support to commercial vessels within a moving security zone;

(4119) (iv) Vessels operated by Federal, State, county, or municipal law enforcement agencies.

(4120) (3) Meeting, crossing or overtaking situations are not permitted within the security zone described in paragraph (a)(2) of this section unless specifically authorized by the Captain of the Port.

(4121) (4) Other persons or vessels requiring entry into security zones described in this section must request permission from the Captain of the Port, Port Arthur or designated representative.

(4122) (5) To request permission to enter a security zone described in this section, contact Vessel Traffic Service Port Arthur on VHF Channel 01A or 65A; by telephone at 409–719–5070; by fax at 409–719–5090; or contact the Captain of the Port's designated on-scene patrol vessel on VHF channel 13 or 16.

(4123) (6) All persons and vessels within a security zone described in this section must comply with the instructions of the Captain of the Port, Port Arthur, designated on-scene U.S. Coast Guard patrol personnel or other designated representatives. Designated on-scene U.S. Coast Guard patrol personnel include commissioned, warrant, and petty officers of the U.S. Coast Guard. Designated representatives include Federal, State, local and municipal law enforcement agencies.

(4124)

§165.827 Regulated Navigation Area; Galveston Channel, TX.

(4125) (a) *Location*. The following area is a regulated navigation area: All waters of the Galveston Channel within the area from

(4126) 29°20'19"N., 94°46'36"W., east to

(4127) 29°20'06"N., 94°46'15"W., south to

(4128) 29°19'47"N., 94°46'27"W., west to

(4129) 29°19'51"N., 94°46'45"W., and north to

(4130) 29°20'19"N., 94°46'36"W.

(4131) (b) *Regulations*. (1) Vessels navigating this area must do so at a minimum safe speed so as to not cause any wake.

(4132) (2) Vessels may proceed at greater than a minimum safe speed with permission of the Captain of the Port Houston-Galveston or a designated representative.

(4133) (3) To request permission as required by these regulations, contact the Sector Houston-Galveston Command Center by telephone at 713–671–5113.

(4134)

§165.836 Security Zone; Escorted Vessels, Mobile, Alabama, Captain of the Port.

(4135) (a) *Definitions*. The following definitions apply to this section:

(4136) *COTP* means Captain of the Port Mobile, AL.

(4137) *Designated representatives* means Coast Guard Patrol Commanders including Coast Guard coxswains, petty officers and other officers operating Coast Guard vessels, and Federal, State, and local officers designated by or assisting the COTP, in the enforcement of the security zone.

(4138) *Escorted vessel* means a vessel, other than a large U.S. naval as defined in **33 CFR 165.2015**, that is accompanied by one or more Coast Guard assets or other Federal, State or local law enforcement agency assets clearly identifiable by flashing lights, vessel markings, or with agency insignia as follows: Coast Guard surface or air asset displaying the Coast Guard insignia. State and/or local law enforcement asset displaying the applicable agency markings and/or equipment associated with the agency. Escorted vessel also means a moored or anchored vessel that was escorted by Coast Guard assets or other Federal, State or local law enforcement agency assets to its present location and some or all of those properly marked assets remain on-scene to continue to enforce the security zone.

(4139) *Minimum safe speed* means the speed at which a vessel proceeds when it is fully off plane, completely settled in the water and not creating excessive wake or surge. Due to the different speeds at which vessels of different sizes and configurations may travel while in compliance with this definition, no specific speed is assigned to minimum safe speed. In no instance should minimum safe speed be interpreted as speed less than required for a particular vessel to maintain steerageway. A vessel is not proceeding at minimum safe speed if it is:

(4140) (1) On a plane;

(4141) (2) In the process of coming up onto or coming off a plane; or

(4142) (3) Creating an excessive wake or surge.

(4143) (b) *Regulated area*. All navigable waters, as defined in **33 CFR 2.36**, within the Captain of the Port Zone, Mobile, Alabama, as described in **33 CFR 3.40-10**.

(4144) (c) *Security zone*. A 500-yard security zone is established around each escorted vessel within the regulated area described in paragraph (b) of this section. This is a moving security zone when the escorted vessel

is in transit and becomes a fixed zone when the escorted vessel is anchored or moored. A security zone will not extend beyond the boundary of the regulated area described in paragraph (b) of this section.

(4145) (d) *Regulations*. (1) The general regulations for security zones contained in §165.33 applies to this section.

(4146) (2) A vessel may request the permission of the COTP Mobile or a designated reprehensive to enter the security zone described in paragraph (c) of this section. If permitted to enter the security zone, a vessel must proceed at a minimum safe speed and must comply with the orders of the COTP or a designated representative.

(4147) (e) *Notice of security zone*. The COTP will inform the public of the existence or status of security zones around escorted vessels in the regulated area by broadcast notices to mariners, normally issued at 30-minute intervals while the security zones remains in effect. Escorted vessels will be identified by the presence of Coast Guard assets or other Federal, State or local law enforcement agency assets.

(4148) (f) *Contact information*. The COTP Mobile may be reached via phone at 251–441–6211. Any on scene Coast Guard or designated representative assets may be reached via VHF-FM channel 16.

(4149)

§165.838 Regulated Navigation Area; Gulf Intracoastal Waterway, Inner Harbor Navigation Canal, New Orleans, LA.

(4150) (a) *Location*. The following is a regulated navigation area (RNA):

(4151) (1) The Gulf Intracoastal Waterway (GIWW) from Mile Marker (MM) 22 East of Harvey Locks (EHL), west on the GIWW, including the Michoud Canal and the Inner Harbor Navigation Canal (IHNC), extending North ½ mile from the Seabrook Flood Gate Complex out into Lake Pontchartrain and South to the IHNC Lock.

(4152) (2) The Harvey Canal, between the Lapalco Boulevard Bridge and the confluence of the Harvey Canal and the Algiers Canal;

(4153) (3) The Algiers Canal, from the Algiers Lock to the confluence of the Algiers Canal and the Harvey Canal;

(4154) (4) The GIWW from the confluence of Harvey Canal and Algiers Canal to MM 7.5 West of Harvey Locks (WHL)

(4155) (b) *Definitions*. As used in this section:

(4156) (1) *Breakaway* means a floating vessel that is adrift and that is not under its own power or the control of a towboat, or secured to its moorings.

(4157) (2) *COTP* means the Captain of the Port, New Orleans;

(4158) (3) *Facility* means a fleeting, mooring, industrial facility or marina along the shoreline at which vessels are or can be moored and which owns, possesses, moors, or leases vessels located in the areas described in paragraph (a) of this section.

(4159) (3) Fleet includes one or more tiers of barges.

(4160) (4) *Fleeting or mooring facility* means the area along the shoreline at which vessels are or can be moored.

(4161) (5) *Floating vessel* means any floating vessel to which 46 U.S.C. Chapter 700 applies.

(4162) (6) *Mooring barge or spar barge* means a barge moored to mooring devices or secured to the ground by spuds, and to which other barges may be moored.

(4163) (7) Mooring device includes a deadman, anchor, pile or other reliable holding apparatus.

(4164) (8) Navigational structures are the Seabrook Floodgate Complex, the IHNC Lake Borgne Surge Barrier, and the West Closure Complex components of the Hurricane and Storm Damage Risk Reduction System (HSDRRS).

(4165) (9) Person in charge includes any owner, agent, pilot, master, officer, operator, crewmember, supervisor, dispatcher or other person navigating, controlling, directing or otherwise responsible for the movement, action, securing, or security of any vessel, barge, tier, fleet or fleeting or mooring facility subject to the regulations in this section.

(4166) (10) *Tier* means barges moored interdependently in rows or groups.

(4167) (11) *Port Coordination Team* is a body of public and private port stakeholders led by the COTP whose purpose is to share information, establish priorities, recommend and implement actions to address risks to ports and waterways during incidents and events.

(4168) (12) *Tropical Event* means the time period immediately preceding, during, and immediately following the expected impact of heavy weather from a tropical cyclone.

(4169) (c) *Enforcement*. (1) The provisions of paragraph (d) of this section will be enforced during a tropical event beginning 24 hours in advance of the predicted closure of the IHNC Lake Borgne Surge Barrier structure within the HSDRRS (IHNC & GIWW) in the area defined in paragraph (a)(1) of this section.

(4170) (2) The provisions of paragraph (d) of this section will be enforced beginning 24 hours in advance of the predicted closure of the West Closure Complex within the HSDRRS (Harvey & Algiers Canals) in the area defined in paragraphs (a)(2) through (4) of this section.

(4171) (3) If the Coast Guard receives notice of a closure less than 24 hours before closure, the provisions of paragraph (d) of this section will be enforced upon the COTP receiving the notice of predicted closing.

(4172) (4) In the event that a particularly dangerous storm is predicted, the COTP, in consultation with the Port Coordination Team, may require all floating vessels to evacuate the RNA beginning as early as 72 hours before predicted closure of any navigational structure or upon notice that particularly dangerous storm conditions are approaching, whichever is less.

(4173) (5) The COTP will notify the maritime community of the enforcement periods for this RNA through Marine Safety Information Bulletins and Safety Broadcast Notices to Mariners.

(4174) (d) *Regulations*. During the period that the RNA is enforced and before closure of the navigational structures, all floating vessels must depart the RNA except as follows:

(4175) (1) Floating vessels may remain in the Harvey and Algiers Canals, provided they are moored sufficiently to prevent a breakaway and meet the minimum mooring requirements and conditions set forth in paragraphs (f) and (g) of this section.

(4176) (2) Floating vessels may remain in the Michoud Canal at least ¼ mile north of the intersection of the Michoud Canal and the GIWW, the GIWW from MM 15 EHL to MM 10 EHL, provided they are moored sufficiently to prevent a breakaway and meet the minimum mooring requirements and conditions set forth in paragraphs (f) and (g) of this section.

(4177) (3) During the period that the RNA is enforced and before closure of the navigational structures, vessels may transit through the RNA en route to a destination outside of the RNA given there is sufficient time to transit prior to the closure of a navigational structure, or they may transit to a facility within the RNA with which they have a prearranged agreement. These vessel movements and time critical decisions will be made by the COTP in consultation with the Port Coordination Team.

(4178) (4) The COTP may review, on a case-by-case basis, alternatives to minimum mooring requirements and conditions set forth in paragraphs (f) and (g) of this section and may approve a deviation to these requirements and conditions should they provide an equivalent level of safety.

(4179) (e) *Special Requirements for Facilities*. In addition to the mooring and towboat requirements discussed in paragraph (f) and (g) of this section, Facilities within the area described in paragraph (a) of this section that wish to deviate from these restrictions because they have vessels intending to remain within the areas allowed in paragraphs (d)(1) and (2) of this section shall comply with the below documentation and maintenance requirements in order to obtain the COTP's approval for their vessel(s) to remain in the closed RNA.

(4180) (1) *Annual Hurricane Operations Plan*. All facilities that have vessels intending to deviate from this RNA and remain within the areas allowed in paragraphs (d)(1) and (2) of this section shall develop an operations plan. The operations plan shall be readily available by May 1st of each calendar year for review by the COTP. The Annual Hurricane Operations Plan shall include:

(4181) (i) A description of the maximum number of vessels the facility intends to have remaining at any one time during hurricane season.

(4182) (ii) A detailed plan for any vessel(s) that are intended to be sunk/grounded in place when the RNA is enforced if evacuation is not possible.

(4183) (iii) A diagram of the waterfront facility and fleeting area.

(4184) (iv) Name, call sign, official number, and operational status of machinery on board (i.e., engines, generators, fire fighting pumps, bilge pumps, anchors, mooring machinery, etc.) each standby towboat.

(4185) (v) Characteristics for each vessel remaining at the fleeting or mooring facility, as applicable (length, breadth, draft, air draft, gross tonnage, hull type, horsepower, single or twin screw);

(4186) (vi) Details of mooring arrangements in accordance with mooring requirements and conditions set forth in paragraphs (g) and (h) of this section or COTP case-by-case approved deviations;

(4187) (vii) Certification by a professional engineer that the mooring arrangements are able to withstand winds of up to 140 mph, a surge water level of eleven feet, a current of four mph and a wave height of three feet within the canal basin in the area defined in paragraph (a)(1) of this section and a surge water level of eight feet, a current of four mph, and a wave height of two and a half feet within the canal basin in the area defined in paragraphs (a)(2) through (4) of this section;

(4188) (viii) Emergency contact information for the owner/operator, and/or agent of the facility/property.

(4189) (ix) 24-hour emergency contact information for qualified individuals empowered in writing by the owners/operators to make on-site decisions and authorize expenditures for any required pollution response or salvage.

(4190) (x) Full insurance disclosure to the COTP. Vessels moored to a facility shall provide insurance information to the facility.

(4191) (2) *Storm Specific Verification Report*. 72 hrs prior to predicted closure of the navigational structures, those facilities which have vessels that intend to remain within the RNA shall submit a Storm Specific Verification Report to the COTP New Orleans. The requirements for this Storm Specific Verification Report are located in the Canal Hurricane Operations Plan, which is Enclosure Six to the Sector New Orleans Maritime Hurricane Contingency Port Plan, *http://homeport.uscg.mil/nola*. The report shall include:

(4192) (i) Updated contact information, including names of manned towboat(s) and individuals remaining on the towboat(s).

(4193) (ii) Number of vessels currently moored and mooring configurations if less than stated in Annual Hurricane Operations Plan.

(4194) (iii) If the number of vessels exceeds the amount listed in the Annual Hurricane Operations Plan, describe process and timeframe for evacuating vessels to bring total number of vessels into alignment with the Annual Hurricane Operations Plan.

(4195) (3) The person in charge of a facility shall inspect each mooring wire, chain, line and connecting gear between mooring devices and each wire, line and connecting equipment used to moor each vessel, and each mooring device. Inspections shall be performed according to the following timelines and guidance:

(4196) (i) Annually between May 1 and June 1 of each calendar year; and

(4197) (ii) After vessels are added to, withdrawn from, or moved at a facility, each mooring wire, line, and connecting equipment of each barge within each tier affected by that operation; and

(4198) (iii) At least weekly between June 1 and November 30; and

(4199) (iv) 72 hrs prior to predicted closure of the navigation structures within this RNA; or within 6 hrs of the predicted closure, if the notice of predicted closure is less than 72 hrs.

(4200) (4) The person who inspects moorings shall take immediate action to correct any deficiency.

(4201) (5) *Facility Records*. The person in charge of a fleeting or mooring facility shall maintain, and make available to the COTP, records containing the following information:

(4202) (i) The time of commencement and termination of each inspection.

(4203) (ii) The name of each person who makes the inspection.

(4204) (iii) The identification of each vessel, barge entering or departing the fleeting or mooring facility, along with the following information:

(4205) (A) Date and time of entry and departure; and

(4206) (B) The names of any hazardous cargo which the vessel is carrying.

(4207) (6) The person in charge of a facility shall ensure continuous visual surveillance of all vessels at the facility.

(4208) (7) The person who observes the vessels shall:

(4209) (i) Inspect for movements that are unusual for properly secured vessels; and

(4210) (ii) Take immediate action to correct each deficiency.

(4211) (f) *Mooring Requirements*. Facility owners shall consider all requirements within this section as minimum standards. Title **33 CFR 165.803**, United Facilities Criteria (UFC) 4–159 and American Society of the Civil Engineers (ASCE)7 should be utilized by Professional Engineers in the certification of the Annual Hurricane Operations Plan.

(4212) (1) No person may secure a vessel to trees or to other vegetation.

(4213) (2) No person may allow a vessel to be moored with unraveled or frayed lines or other defective or worn mooring.

(4214) (3) No person may moor barges side to side unless they are secured to each other from fittings as close to each corner of abutting sides as practicable.

(4215) (4) No person may moor barges end to end unless they are secured to each other from fittings as close to each corner of abutting ends as practicable.

(4216) (5) A vessel may be moored to mooring devices if both ends of that vessel are secured to mooring devices.

(4217) (6) Barges may be moored in tiers if each shoreward barge is secured to mooring devices at each end.

(4218) (7) A vessel must be secured as near as practicable to each abutting corner by:

(4219) (i) Three parts of wire rope of at least 1¼ inch diameter with an eye at each end of the rope passed around the timberhead, caval, or button;

(4220) (ii) A mooring of natural or synthetic fiber rope that has at least the breaking strength of three parts of 1¼ inch diameter wire rope; or

(4221) (iii) Fixed rigging that is at least equivalent to three parts of 1¼ inch diameter wire rope.

(4222) (8) The person in charge shall ensure that all mooring devices, wires, chains, lines and connecting gear are of sufficient strength and in sufficient number to withstand forces that may be exerted on them by moored vessels/barges.

(4223) (g) *Towboat Requirements*. The person in charge of a fleeting or mooring facility must ensure:

(4224) (1) Each facility consisting of eight or more vessels that are not under their own power must be attended by at least one radar-equipped towboat for every 50 vessels.

(4225) (2) Each towboat required must be:

(4226) (i) Able to secure any breakaways;

(4227) (ii) Capable of safely withdrawing or moving any vessel at the fleeting or mooring facility;

(4228) (iii) Immediately operational;

(4229) (iv) Radio-equipped;

(4230) (v) No less than 800 horsepower;

(4231) (vi) Within 500 yards of the vessels.

(4232) (3) The person in charge of each towboat required must maintain a continuous guard on the frequency specified by current Federal Communications Commission regulations found in **47 CFR part 83**; a continuous watch on the vessels moored at facility; and report any breakaway as soon as possible to the COTP via telephone, radio or other means of rapid communication.

(4233) (h) Transient vessels will not be permitted to seek safe haven in the RNA except in accordance with a prearranged agreement between the vessel and a facility within the RNA.

(4234) (i) *Penalties*. Failure to comply with this section may result in civil or criminal penalties pursuant to 46 U.S.C. 70036 and 70041.

(4235)

§165.839 Safety Zone; Large Cruise Ships; Lower Mississippi River, Southwest Pass Sea Buoy to Mile Marker 96.0, New Orleans, LA.

(4236) (a) *Location*. Within the Lower Mississippi River and Southwest Pass, moving safety zones are established around all large cruise ships transiting between the Southwest Pass Entrance Lighted Buoy "SW", at approximate position 28°52′42″N, 89°25′54″W [NAD 83] and Lower Mississippi River mile marker 96.0 in New Orleans, Louisiana. The moving safety zone extends bank to bank, encompassing all waters one-mile ahead and one-mile astern of a large cruise ship. The zone remains in effect during the entire transit of the large cruise ship.

(4237) (b) *Definitions*. As used in this section the term ''large cruise ship'' is defined as a vessel over 100 feet

in length, carrying more than 500 passengers for hire, making a voyage lasting more than 24 hours, any part of which is on the high seas, and for which passengers are embarked or disembarked in the United States or its territories.

(4238) (c) *Regulations*. (1) In accordance with the general regulations in **33 CFR Part 165**, Subpart C, no person or vessel may enter or remain in the Safety Zone except for vessels authorized by the Captain of the Port or Designated Representatives, except as provided for in paragraph (c)(3) of this section.

(4239) (2) For this section the Pilot directing the movement of the large cruise ship under the authority of the master has the authority to allow other vessels to enter the safety zone when necessary.

(4240) (3) All vessels are prohibited from entering this safety zone unless authorized as follows:

(4241) (i) Vessels that have made suitable passing or overtaking arrangements with the pilot onboard the large cruise ship may enter into this safety zone in accordance with those agreed upon arrangements.

(4242) (ii) Moored vessels or vessels anchored in a designated anchorage area may remain in their current moored or anchored position while the large cruise ship transits the area.

(4243) (iii) Barge Fleets or vessels working a fleet may continue their current operations while the large cruise ship transits the area.

(4244) (4) Vessels requiring a deviation from this rule must request permission from the Captain of the Port New Orleans. The Captain of the Port New Orleans may be contacted at 504–365–2210.

(4245)

§165.840 Regulated Navigation Area, Gulf of Mexico: Mississippi Canyon Block 20, South of New Orleans, LA.

(4246) (a) *Location*. The following area is a Regulated Navigation Area: A 300-foot diameter area at the water surface centered on the following coordinates: 28°56′12.619″N, 008°10.303″W, and extending the entire water column from the surface to the seabed.

(4247) (b) *Regulations.*

(4248) (1) In accordance with the general regulations in §165.11 of this part, all vessels are prohibited from anchoring, mooring, fishing, or otherwise loitering in the above described area except as authorized by the Captain of the Port, New Orleans.

(4249) (2) Persons or vessels requiring deviations from this rule must request permission from the Captain of the Port New Orleans. The Captain of the Port New Orleans may be contacted by telephone at 504–365–2200.

(4250)

§165.845 Safety Zone; Lower Mississippi River, mile markers 94 to 97 above Head of Passes, New Orleans, LA.

(4251) (a) *Location*. The following area is a safety zone: All navigable waters of the Lower Mississippi River, New Orleans, LA from mile marker (MM) 94 (29°57'32"N, 90°03'05"W) to MM 97 (29°55'19"N, 90°04'00"W), NAD83 datum, on the Lower Mississippi River, above Head of Passes.

(4252) (b) *Enforcement period*. The safety zone established by this section will be enforced only upon notice of the Captain of the Port Sector New Orleans (COTP). In accordance with **33 CFR 165.7**, for each enforcement of a safety zone established under this section, the COTP will publish a notice of enforcement in the Federal Register as early as practicable. In addition, the COTP will also inform the public of the enforcement area and times of this section as indicated in paragraph (d) of this section.

(4253) (c) *Regulations*. (1) In accordance with the general regulations in §165.23 of this part, entry into this zone is prohibited to all vessels and persons except vessels authorized by the COTP or designated representative. A designated representative means any Coast Guard commissioned, warrant, or petty officer of the U.S. Coast Guard assigned to units under the operational control of Sector New Orleans.

(4254) (2) Persons and vessels requiring entry into this safety zone must request permission from the COTP or a designated representative. They may be contacted on VHF-FM Channel 16 or 67 or by telephone at (504) 365–2200.

(4255) (3) Persons and vessels permitted to enter this safety zone must transit at their slowest safe speed and comply with all lawful directions issued by the COTP or the designated representative.

(4256) (d) *Information broadcasts*. The COTP or a designated representative will inform the public of the enforcement period of this safety zone through Vessel Traffic Service Advisories, Broadcast Notices to Mariners (BNMs), Local Notice to Mariners (LNMs), and/or Marine Safety Information Bulletins (MSIBs) as appropriate.

(4257) **§165.846 Security Zone; Lower Mississippi River, Mile Marker 94 to 97 Above Head of Passes, New Orleans, LA.**

(4258) (a) *Location*. The following area is a security zone: All navigable waters of Lower Mississippi River from mile marker (MM) 94 (29°57′32″N, 90°03′05″W) to MM 97 (29°55′19″N, 90°04′00″W), NAD83 datum, Above Head of Passes in New Orleans, LA.

(4259) (b) *Enforcement period*. The security zone established by this section will be enforced only upon notice of the Captain of the Port New Orleans (COTP). In accordance with subpart A of this part, for each enforcement of the security zone established under this section, the COTP will publish a notice of enforcement in the **Federal Register** as early as is practicable. In addition, the COTP will also inform the public of the enforcement area and times of this section as indicated in paragraph (d) of this section.

(4260) (c) *Regulations*. (1) Under the general security zone regulations in subpart D of this part, no person or vessel may enter the security zone described in paragraph (a) of this section unless authorized by the COTP or a

designated representative. A designated representative means any Coast Guard commissioned, warrant, or petty officer of the U.S. Coast Guard assigned to units under the operational control of Sector New Orleans; to include a Federal, State, and/or local officer designated by or assisting the Captain of the Port New Orleans (COTP) in the enforcement of the security zone.

(4261) (2) To seek permission to enter, contact the COTP or a designated representative by telephone at (504) 365–2545 or VHF–FM Channel 16 or 67. Those in the security zone must transit at their slowest speed and comply with all lawful orders or directions given to them by the COTP or a designated representative.

(4262) (d) *Information broadcasts*. The COTP or a designated representative will inform the public of the enforcement period of this security zone through Vessel Traffic Service Advisories, Broadcast Notices to Mariners (BNMs), Local Notice to Mariners (LNMs), and/ or Marine Safety Information Bulletins (MSIBs) as appropriate.

(4263)

Subpart G-Protection of Naval Vessels

(4264)

§165.2010 Purpose.

(4265) This subpart establishes the geographic parameters of naval vessel protection zones surrounding U.S. naval vessels in the navigable waters of the United States. This subpart also establishes when the U.S. Navy will take enforcement action in accordance with the statutory guideline of 14 U.S.C. 91. Nothing in the rules and regulations contained in this subpart shall relieve any vessel, including U.S. naval vessels, from the observance of the Navigation Rules. The rules and regulations contained in this subpart supplement, but do not replace or supercede, any other regulation pertaining to the safety or security of U.S. naval vessels.

(4266)

§165.2015 Definitions.

(4267) The following definitions apply to this subpart:

(4268) *Atlantic Area* means that area described in **33 CFR 3.04–1** Atlantic Area.

(4269) *Large U.S. naval vessel* means any U.S. naval vessel greater than 100 feet in length overall.

(4270) *Naval defensive sea area* means those areas described in **32 CFR part 761**.

(4271) Naval vessel protection zone is a 500-yard regulated area of water surrounding large U.S. naval vessels that is necessary to provide for the safety or security of these U.S. naval vessels.

(4272) *Navigable waters of the United States* means those waters defined as such in **33 CFR part 2**.

(4273) *Navigation rules* means the Navigation Rules, International-Inland.

(4274) *Official patrol* means those personnel designated and supervised by a senior naval officer present in command and tasked to monitor a naval vessel protection zone, permit entry into the zone, give legally enforceable orders to persons or vessels within the zone, and take other actions authorized by the U.S. Navy.

(4275) *Pacific Area* means that area described in **33 CFR 3.04–3** Pacific Area.

(4276) *Restricted area* means those areas established by the Army Corps of Engineers and set out in **33 CFR part 334**.

(4277) Senior naval officer present in command is, unless otherwise designated by competent authority, the senior line officer of the U.S. Navy on active duty, eligible for command at sea, who is present and in command of any part of the Department of Navy in the area.

(4278) *U.S. naval vessel* means any vessel owned, operated, chartered, or leased by the U.S. Navy; any pre-commissioned vessel under construction for the U.S. Navy, once launched into the water; and any vessel under the operational control of the U.S. Navy or a Combatant Command.

(4279) *Vessel* means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water, except U.S. Coast Guard or U.S. naval vessels.

(4280)

§165.2020 Enforcement authority.

(4281) (a) *Coast Guard*. Any Coast Guard commissioned, warrant or petty officer may enforce the rules and regulations contained in this subpart.

(4282) (b) *Senior naval officer present in command*. In the navigable waters of the United States, when immediate action is required and representatives of the Coast Guard are not present or not present in sufficient force to exercise effective control in the vicinity of large U.S. naval vessels, the senior naval officer present in command is responsible for the enforcement of the rules and regulations contained in this subpart to ensure the safety and security of all large naval vessels present. In meeting this responsibility, the senior naval officer present in command may directly assist any Coast Guard enforcement personnel who are present.

(4283)

§165.2025 Atlantic Area.

(4284) (a) This section applies to any vessel or person in the navigable waters of the United States within the boundaries of the U.S. Coast Guard Atlantic Area, which includes the First Fifth, Seventh, Eighth and Ninth U.S. Coast Guard Districts.

(4285) **Note to §165.2025 paragraph (a):** The boundaries of the U.S. Coast Guard Atlantic Area and the First, Fifth, Seventh, Eighth and Ninth U.S. Coast Guard Districts are set out in **33 CFR part 3**.

(4286) (b) A naval vessel protection zone exists around U.S. naval vessels greater than 100 feet in length overall at all times in the navigable waters of the United States, whether the large U.S. naval vessel is underway, anchored, moored, or within a floating drydock, except

when the large naval vessel is moored or anchored within a restricted area or within a naval defensive sea area.

(4287) (c) The Navigation Rules shall apply at all times within a naval vessel protection zone.

(4288) (d) When within a naval vessel protection zone, all vessels shall operate at the minimum speed necessary to maintain a safe course, unless required to maintain speed by the Navigation Rules, and shall proceed as directed by the Coast Guard, the senior naval officer present in command, or the official patrol. When within a naval vessel protection zone, no vessel or person is allowed within 100 yards of a large U.S. naval vessel unless authorized by the Coast Guard, the senior naval officer present in command, or official patrol.

(4289) (e) To request authorization to operate within 100 yards of a large U.S. naval vessel, contact the Coast Guard, the senior naval officer present in command, or the official patrol on VHF-FM channel 16.

(4290) (f) When conditions permit, the Coast Guard, senior naval officer present in command, or the official patrol should:

(4291) (1) Give advance notice on VHF-FM channel 16 of all large U.S. naval vessel movements; and

(4292) (2) Permit vessels constrained by their navigational draft or restricted in their ability to maneuver to pass within 100 yards of a large U.S. naval vessel in order to ensure a safe passage in accordance with the Navigation Rules; and

(4293) (3) Permit commercial vessels anchored in a designated anchorage area to remain at anchor when within 100 yards of passing large U.S. naval vessels; and

(4294) (4) Permit vessels that must transit via a navigable channel or waterway to pass within 100 yards of a moored or anchored large U.S. naval vessel with minimal delay consistent with security.

(4295) **Note to §165.2025 paragraph (f):** The listed actions are discretionary and do not create any additional right to appeal or otherwise dispute a decision of the Coast Guard, the senior naval officer present in command, or the official patrol.

(4296)

Part 166–ShippingSafety Fairways

(4297)

Subpart A–General

(4298)

§166.100 Purpose.

(4299) The purpose of these regulations is to establish and designate shipping safety fairways and fairway anchorages to provide unobstructed approaches for vessels using U.S. ports.

(4300)

§166.103 Geographic coordinates.

(4301) Geographic coordinates expressed in terms of latitude or longitude, or both, are not intended for plotting on maps or charts whose referenced horizontal datum is the North American Datum of 1983 (NAD 83), unless such geographic coordinates are expressly labeled NAD 83. Geographic coordinates without the NAD 83 reference may be plotted on maps or charts referenced to NAD 83 only after application of the appropriate corrections that are published on the particular map or chart being used.

(4302)

§166.105 Definitions.

(4303) (a) *Shipping safety fairway* or *fairway* means a lane or corridor in which no artificial island or fixed structure, whether temporary or permanent, will be permitted. Temporary underwater obstacles may be permitted under certain conditions described for specific areas in Subpart B. Aids to navigation approved by the U.S. Coast Guard may be established in a fairway.

(4304) (b) *Fairway anchorage* means an anchorage area contiguous to and associated with a fairway, in which fixed structures may be permitted within certain spacing limitations, as described for specific areas in Subpart B.

(4305)

§166.110 Modification of areas.

(4306) Fairways and fairway anchorages are subject to modification in accordance with 46 U.S.C. 70003.

(4307)

Subpart B–Designations of Fairways and Fairway Anchorages

(4308)

§166.200 Shipping safety fairways and anchorage areas, Gulf of Mexico.

(4309) (a) *Purpose*. Fairways and anchorage areas as described in this section are established to control the erection of structures therein to provide safe approaches through oil fields in the Gulf of Mexico to entrances to the major ports along the Gulf Coast.

(4310) (b) *Special Conditions for Fairways in the Gulf of Mexico*. Temporary anchors and attendant cables or chains attached to floating or semisubmersible drilling rigs outside a fairway may be placed within a fairway described in this section for the Gulf of Mexico, provided the following conditions are met:

(4311) (1) Anchors installed within fairways to stabilize semisubmersible drilling rigs shall be allowed to remain 120 days. This period may be extended by the Army Corps of Engineers, as provided by **33CFR 209.135(b)**.

(4312) (2) Drilling rigs must be outside of any fairway boundary to whatever distance is necessary to ensure that the minimum depth of water over an anchor line within a fairway is 125 feet.

(4313) (3) No anchor buoys or floats or related rigging will be allowed on the surface of the water or to a depth of at least 125 feet from the surface, within a fairway.

(4314) (4) Aids to Navigation or danger markings must be installed as required by **33 CFR** subchapter C.

(4315) (c) *Special Conditions for Fairway Anchorages in the Gulf of Mexico*. Structures may be placed within an area designated as a fairway anchorage, but the number of structures will be limited by spacing as follows:

(4316) (1) The center of a structure to be erected shall not be less than two (2) nautical miles from the center of any existing structure.

(4317) (2) In a drilling or production complex, associated structures connected by walkways shall be considered one structure for purposes of spacing, and shall be as close together as practicable having due consideration for the safety factors involved.

(4318) (3) A vessel fixed in place by moorings and used in conjunction with the associated structures of a drilling or production complex, shall be considered an attendant vessel and the extent of the complex shall include the vessel and its moorings.

(4319) (4) When a drilling or production complex extends more than five hundred (500) yards from the center, a new structure shall not be erected closer than two (2) nautical miles from the outer limit of the complex.

(4320) (5) An underwater completion installation in an anchorage area shall be considered a structure and shall be marked with a lighted buoy approved by the United States Coast Guard under **33 CFR Part 66.01**.

(4321) **Note: Where the areas have already been charted, coordinates have been omitted and reference made to the chart(s) showing the fairways and anchorages.**

(4322) (d) *Designated Areas*.

(4323) (1) Brazos Santiago Pass Safety Fairway. See charts 11300 and 11301.

(4324) (2) *Brazos Santiago Pass Anchorage Areas*. See charts 11300 and 11301.

(4325) (3) *Port Mansfield Safety Fairway*. See chart 11300.

(4326) (4) *Aransas Pass Safety Fairway*. See charts 11300 and 11307.

(4327) (5) *Aransas Pass Anchorage Areas*. See charts 11300 and 11307.

(4328) (6) *Matagorda Entrance Safety Fairway*. See chart 11300.

(4329) (7) *Matagorda Entrance Anchorage Areas*. See chart 11300.

(4330) (8) *Freeport Harbor Safety Fairway*. See charts 11300 and 11321.

(4331) (9) *Freeport Harbor Anchorage Areas*. See charts 11300 and 11321.

(4332) (10) *Galveston Entrance Safety Fairways*. See charts 11340 and 11323.

(4333) (11) *Galveston Entrance Anchorage Areas*. See charts 11340 and 11323.

(4334) (12) *Sabine Pass Safety Fairway*. See chart 11340.

(4335) (13) *Sabine Pass Anchorage Areas*-(i) *Sabine Pass Inshore Anchorage Area*. The area enclosed by rhumb lines joining points at:

(4336) 29°37'32"N., 93°48'02"W.

(4337) 29°37'32"N., 93°21'25"W.

(4338) 29°32'52"N., 93°43'00"W.

(4339) 29°36'28"N., 93°47'14"W.

(4340) (ii) *Sabine Bank Offshore (North) Anchorage Area*. The area enclosed by rhumb lines joining points at:

(4341) 29°26'06"N., 93°43'00"W.

(4342) 29°26'06"N., 93°41'08"W.

(4343) 29°24'06"N., 93°41'08"W.

(4344) 29°24'06"N., 93°43'00"W.

(4345) (iii) *Sabine Bank Offshore (South) Anchorage Area*. The area enclosed by rhumb lines joining points at:

(4346) 29°16'55"N., 93°43'00"W.

(4347) 29°16'55"N., 93°41'08"W.

(4348) 29°14'29"N., 93°41'08"W.

(4349) 29°14'29"N., 93°43'00"W.

(4350) (iv) *Sabine Bank Offshore (East) Anchorage Area*. The area enclosed by rhumb lines joining points at:

(4351) 29°26'06"N., 93°38'52"W.

(4352) 29°26'06"N., 93°37'00"W.

(4353) 29°24'06"N., 93°37'00"W.

(4354) 29°24'06"N., 93°38'52"W.

(4355) (14) *Coastwise Safety Fairway*. (i) *Brazos Santiago Pass to Aransas Pass*. See charts 11300, 11301, and 11307.

(4356) (ii) *Aransas Pass to Calcasieu Pass*. See charts 11300, 11340, 11323.

(4357) (15) *Calcasieu Pass Safety Fairway*. See chart 11340.

(4358) (16) *Calcasieu Pass Anchorage Areas*-(i) *Calcasieu Pass North Anchorage Area*. The area enclosed by rhumb lines joining points at:

(4359) 29°41'12"N., 93°19'37"W.

(4360) 29°41'12"N., 93°12'28"W.

(4361) 29°31'16"N., 93°12'16"W.

(4362) 29°37'30"N., 93°18'15"W.

(4363) (ii) *Calcasieu Pass South Anchorage Area*. The area enclosed by rhumb lines joining points at:

(4364) 28°59'30"N., 93°16'30"W.

(4365) 28°59'30"N., 93°14'00"W.

(4366) 28°56'00"N., 93°14'00"W.

(4367) 28°56'00"N., 93°16'30"W.

(4368) (17) *Lower Mud Lake Safety Fairway*. The area enclosed by rhumb lines joining points at:

(4369) 29°43'24"N., 93°00'18"W.

(4370) 29°42'00"N., 93'00'18"W. and rhumb lines joining points at:

(4371) 29°43'33"N., 93°00'48"W.

(4372) 29°42'00"N., 93°00'48"W.

(4373) (18) *Freshwater Bayou Safety Fairway*. See charts 11340 and 11349.

(4374) (19) *Southwest Pass Safety Fairway*. See charts 11340 and 11349.

(4375) (20) *Atchafalaya Pass Safety Fairway*. See charts 11340 and 11351.

(4376) (21) *Bayou Grand Caillou Safety Fairway*. See chart 11340.

(4377) (22) *Cat Island Pass Safety Fairway*. See charts 11340, and 11357.

(4378) (23) *Belle Pass Safety Fairway*. See charts 11340 and 11357.

(4379) (24) *Barataria Pass Safety Fairway*. See charts 11340 and 11358.

(4380) (25) *Grand Bayou Pass Safety Fairway*. See charts 11340 and 11358.

(4381) (26) *Empire to the Gulf Safety Fairway*. See charts 11340 and 11358.

(4382) (27) *Gulf Safety Fairway. Aransas Pass Safety Fairway to Southwest Pass Safety Fairway*. See charts 11300 and 11340.

(4383) (28) *Southwest Pass (Mississippi River) Safety Fairway*. (i) Southwest Pass (Mississippi River) to Gulf Safety Fairway. The area enclosed by rhumb lines joining points at:

(4384) 28°54'33"N., 89°26'07"W.

(4385) 28°52'42"N., 89°27'06"W.

(4386) 28°50'00"N., 89°27'06"W.

(4387) 28°02'32"N., 90°09'28"W. and rhumb lines joining points at:

(4388) 28°54'18"N., 89°25'46"W.

(4389) 28°53'30"N., 89°25'18"W.

(4390) 28°53'30"N., 89°23'48"W.

(4391) 28°50'40"N., 89°24'48"W.

(4392) 28°48'48"N., 89°24'48"W.

(4393) 28°47'24"N., 89°26'30"W.

(4394) 28°00'36"N., 90°08'18"W.

(4395) (ii) *Southwest Pass (Mississippi River) to Sea Safety Fairway*. The area enclosed by rhumb lines joining points at:

(4396) 28°54'33"N., 89°26'07"W.

(4397) 28°52'42"N., 89°27'06"W.

(4398) 28°50'00"N., 89°27'06"W.

(4399) 28°47'24"N., 89°26'30"W.

(4400) 28°36'28"N., 89°18'45"W. and rhumb lines joining points at:

(4401) 28°54'18"N., 89°25'46"W.

(4402) 28°53'30"N., 89°25'18"W.

(4403) 28°53'30"N., 89°23'48"W.

(4404) 28°50'40"N., 89°24'48"W.

(4405) 28°48'48"N., 89°24'48"W.

(4406) 28°45'06"N., 89°22'12"W.

(4407) 28°43'27"N., 89°21'01"W.

(4408) 28°37'54"N., 89°17'06"W.

(4409) (iii) *Southwest Pass (Mississippi River) to South Pass (Mississippi River) Safety Fairway*. See chart 11360.

(4410) (29) *Southwest Pass (Mississippi River) Anchorage*. The area enclosed by rhumb lines joining points at:

(4411) 28°53'30"N., 89°23'48"W.

(4412) 28°53'30"N., 89°21'48"W.

(4413) 28°55'06"N., 89°21'48"W.

(4414) 28°55'06"N., 89°19'18"W.

(4415) 28°52'41"N., 89°17'30"W.

(4416) 28°50'40"N., 89°21'14"W.

(4417) 28°50'40"N., 89°24'48"W.

(4418) (30) *South Pass (Mississippi River) Safety Fairways*. (i) *South Pass to Sea Safety Fairway*. See chart 11360.

(4419) (ii) *South Pass (Mississippi River) to Mississippi River-Gulf Outlet Channel Safety Fairway*. See chart 11360.

(4420) (31) *South Pass (Mississippi River) Anchorage*. See chart 11360.

(4421) (32) *Mississippi River-Gulf Outlet Safety Fairway*. (i) See chart 11360.

(4422) (ii) *Mississippi River-Gulf Outlet Channel to Mobile Ship Channel Safety Fairway*. See chart 11360.

(4423) (33) *Mississippi River-Gulf Outlet Anchorage*. See chart 11360.

(4424) (34) *Gulfport Safety Fairway*. See charts 11360 and 11373.

(4425) (35) *Biloxi Safety Fairway*. See charts 11360 and 11373.

(4426) (36) *Ship Island Pass to Horn Island Pass Safety Fairway*. See charts 11360 and 11373.

(4427) (37) *Pascagoula Safety Fairway*. See charts 11360 and 11373.

(4428) (38) *Horn Island Pass to Mobile Ship Channel Safety Fairway*. See charts 11360, 11373, and 11376.

(4429) (39) *Mobile Safety Fairway*-(i) *Mobile Ship Channel Safety Fairway*. The areas between rhumb lines joining points at:

(4430) 30°38'46"N., 88°03'24"W.

(4431) 30°38'14"N., 88°02'42"W.

(4432) 30°31'59"N., 88°02'00"W.

(4433) 30°31'59"N., 88°04'59"W. and rhumb lines joining points at:

(4434) 30°31'00"N., 88°05'30"W.

(4435) 30°31'00"N., 88°01'54"W.

(4436) 30°26'55"N., 88°01'26"W.

(4437) 30°16'35"N., 88°02'45"W.

(4438) 30°14'09"N., 88°03'24"W.

(4439) 30°10'36"N., 88°03'53"W.

(4440) 30°08'10"N., 88°04'40"W.

(4441) 30°07'15"N., 88°06'54"W. and rhumb lines joining points at:

(4442) 30°39'55"N., 88°01'15"W.

(4443) 30°37'06"N., 88°01'23"W.

(4444) 30°26'11"N., 88°00'11"W.

(4445) 30°16'18"N., 88°01'35"W.

(4446) 30°13'52"N., 88°01'12"W.

(4447) 30°13'14"N., 88°01'12"W.

(4448) 30°10'36"N., 88°01'35"W.

(4449) 30°08'04"N., 88°00'36"W.

(4450) (ii) *Mobile Ship Channel to Sea Safety Fairway*. See charts 11360 and 11376.

(4451) (iii) *Mobile to Pensacola Safety Fairway*. See charts 11360, 11340, and 11382.

(4452) (40) *Mobile Anchorage*. See chart 11360.

(4453) (41) *Pensacola Safety Fairway*. See charts 11360 and 11382.

(4454) (42) *Pensacola Anchorage*. See charts 11360 and 11382.

(4455) (43) *Pensacola to Panama City Safety Fairway*. See charts 11360, 11389, and 11382.

(4456) (44) *Panama City Safety Fairways*. See charts 11360 and 11389.

(4457) (45) *Panama City Anchorage*. See charts 11360 and 11389.

(4458) (46) *Port St. Joe Fairway to Panama City Safety Fairway*. See charts 11360 and 11389.

(4459) (47) *Port St. Joe Anchorage*. See charts 11360 and 11389.

(4460) (48) *Tampa Safety Fairways*. See charts 11412, 11420, and 11400.

(4461) (49) *Tampa Anchorages*-(i) *Eastern Tampa Fairway Anchorage*. The area enclosed by rhumb lines (North American Datum of 1927 (NAD-27)) joining points at:

(4462) 27°36'48"N., 83°00'00"W.

(4463) 27°39'00"N., 83°00'00"W.

(4464) 27°39'00"N., 82°55'54"W.

(4465) 27°36'48"N., 82°55'54"W.

(4466) (ii) *Western Tampa Fairway Anchorage*. The area enclosed by rhumb lines (North American Datum of 1927 (NAD-27)) joining points at:

(4467) 27°36'48"N., 83°05'06"W.

(4468) 27°39'00"N., 83°05'06"W.

(4469) 27°39'00"N., 83°01'00"W.

(4470) 27°36'48"N., 83°01'00"W.

(4471) (50) *Charlotte Safety Fairway*. See charts 11426 and 11420.

(4472) (51) *Charlotte Anchorage*. See charts 11426 and 11420.

(4473) (52) *Louisiana Offshore Oil Port (LOOP) Shipping Safety Fairway to Safety Zone*. (i) *North of Gulf Safety Fairway*. The 2-mile wide area enclosed by rhumb lines joining points at:

(4474) 28°48'36"N., 89°55'00"W.;

(4475) 28°48'14"N., 89°54'17"W.;

(4476) 28°45'47"N., 89°54'19"W.;

(4477) 28°36'06"N., 89°55'44"W.;

(4478) 28°18'30"N., 89°55'15"W.;

(4479) 28°20'58"N., 89°53'03"W.;

(4480) 28°36'09"N., 89°53'28"W.;

(4481) 28°49'07"N., 89°51'30"W.;

(4482) 28°50'20"N., 89°53'51"W.

(4483) (ii) *South of Gulf Safety Fairway*. The 2-mile wide area enclosed by rhumb lines joining points at:

(4484) 28°15'20"N., 89°55'10"W.;

(4485) 27°46'29"N., 89°54'23"W.;

(4486) 27°46'32"N., 89°52'08"W.;

(4487) 28°17'48"N., 89°52'58"W.

(4488) (53) *Heald Bank Cutoff Safety Fairway*. The area enclosed by rhumb lines, (North American Datum of 1927 (NAD-27)), joining points at:

(4489) 28°57'15"N., 94°23'55"W.;

(4490) 28°51'30"N., 93°56'30"W.;

(4491) 28°48'30"N., 93°51'45"W.;

(4492) 28°55'15"N., 94°23'55"W.

(4493)

Part 167–OffshoreTraffic Separation Schemes

(4494)

Subpart A–General

(4495)

§167.1 Purpose.

(4496) The purpose of the regulations in this part is to establish and designate traffic separation schemes and precautionary areas to provide access routes for vessels proceeding to and from U.S. ports.

(4497)

§167.5 Definitions.

(4498) (a) *Area to be avoided* means a routing measure comprising an area within defined limits in which either navigation is particularly hazardous or it is exceptionally important to avoid casualties and which should be avoided by all ships or certain classes of ships.

(4499) (b) *Traffic separation scheme (TSS)* means a designated routing measure which is aimed at the separation of opposing streams of traffic by appropriate means and by the establishment of traffic lanes.

(4500) (c) *Traffic lane* means an area within defined limits in which one-way traffic is established. Natural obstacles, including those forming separation zones, may constitute a boundary.

(4501) (d) *Separation zone* or *line* means a zone or line separating the traffic lanes in which ships are proceeding in opposite or nearly opposite directions; or separating a traffic lane from the adjacent sea area; or separating traffic lanes designated for particular classes of ships proceeding in the same direction.

(4502) (e) *Precautionary area* means a routing measure comprising an area within defined limits where ships must navigate with particular caution and within which the direction of traffic flow may be recommended.

(4503) (f) *Deep-water route* means an internationally recognized routing measure primarily intended for use by ships that, because of their draft in relation to the available depth of water in the area concerned, require the use of such a route.

(4504) (g) *Two-way route* means a route within defined limits inside which two-way traffic is established, aimed at providing safe passage of ships through waters where navigation is difficult or dangerous.

(4505)

§167.10 Operating rules.

(4506) The operator of a vessel in a TSS shall comply with Rule 10 of the International Regulations for Preventing Collisions at Sea, 1972, as amended.

(4507)

§167.15 Modification of schemes.

(4508) (a) A traffic separation scheme or precautionary area described in this part may be permanently amended in

accordance with 46 U.S.C. 70003, and with international agreements.

(4509) (b) A traffic separation scheme or precautionary area in this Part may be temporarily adjusted by the Commandant of the Coast Guard in an emergency, or to accommodate operations which would create an undue hazard for vessels using the scheme or which would contravene Rule 10 of the International Regulations for Preventing Collisions at Sea, 1972. Adjustment may be in the form of a temporary traffic lane shift, a temporary suspension of a section of the scheme, a temporary precautionary area overlaying a lane, or other appropriate measure. Adjustments will only be made where, in the judgment of the Coast Guard, there is no reasonable alternative means of conducting an operation and navigation safety will not be jeopardized by the adjustment. Notice of adjustments will be made in the appropriate Notice to Mariners and in the **FEDERAL REGISTER**. Requests by members of the public for temporary adjustments to traffic separation schemes must be submitted 150 days prior to the time the adjustment is desired. Such Requests, describing the interference that would otherwise occur to a TSS, should be submitted to the District Commander of the Coast Guard District in which the TSS is located.

(4510)

Subpart B–Description of Traffic Separation Schemes and Precautionary Areas

(4511)

§167.350 In the approaches to Galveston Bay Traffic Separation Scheme and precautionary areas.

(4512) (a) An inshore precautionary area bounded by a line connecting the following geographical positions:

(4513) (1) 29°18.10'N., 94°39.20'W.

(4514) (2) 29°16.10'N., 94°37.00'W.

(4515) (3) 28°18.00'N., 94°34.90'W.

(4516) (4) 29°19.40'N., 94°37.10'W.

(4517) (5) 29°19.80'N., 94°38.10'W.

(4518) (b) A traffic separation zone bounded by a line connecting the following geographical positions:

(4519) (6) 29°17.13'N., 94°35.86'W.

(4520) (7) 29°09.55'N., 94°25.80'W.

(4521) (8) 29°09.41'N., 94°25.95'W.

(4522) (9) 29°17.00'N., 94°36.00'W.

(4523) (c) A traffic lane for inbound (northwesterly heading) traffic is established between the separation zone and a line connecting the following geographical positions:

(4524) (3) 29°18.00'N., 94°34.90'W.

(4525) (10) 29°11.20'N., 94°24.00'W.

(4526) (d) A traffic lane for outbound (southeasterly heading) traffic is established between the separation zone and line connecting the following geographical positions:

(4527) (2) 29°16.10'N., 94°37.00'W.

(4528) (11) 29°07.70'N., 94°27.80'W.

(4529) (e) An offshore precautionary area bounded by a line connecting the following geographical positions:

(4530) (11) 29°07.70'N., 94°27.80'W.

(4531) (12) 29°06.40'N., 94°26.20'W.

(4532) (13) 29°06.40'N., 94°23.90'W.

(4533) (14) 29°09.10'N., 94°20.60'W.

(4534) (10) 29°11.20'N., 94°24.00'W.

(4535)

Note

(4536) A pilot boarding area is located near the center of the inshore precautionary area. Due to heavy vessel traffic, mariners are advised not to anchor or linger in this precautionary area except to pick up or disembark a pilot.

(4537)

Part 169–ShipReporting Systems

(4538)

Subpart A-General

(4539)

§169.1 What is the purpose of this part?

(4540) This subpart prescribes the requirements for mandatory ship reporting systems. Ship reporting systems are used to provide, gather, or exchange information through radio reports. The information is used to provide data for many purposes including, but not limited to: navigation safety, maritime security and domain awareness, environmental protection, vessel traffic services, search and rescue, weather forecasting and prevention of marine pollution.

(4541)

§169.5 How are terms used in this part defined?

(4542) As used in this part–

(4543) *Administration* means the Government of the State whose flag the ship is entitled to fly.

(4544) *Cargo ship* means any ship which is not a passenger ship.

(4545) *Flag Administration* means the Government of a State whose flag the ship is entitled to fly.

(4546) *Gross tonnage* means tonnage as defined under the International Convention on Tonnage Measurement of Ships, 1969 (Incorporated by reference, see §169.15).

(4547) *Gross tons* means vessel tonnage measured in accordance with the method utilized by the flag state administration of that vessel.

(4548) *High speed craft* means a craft that is operable on or above the water and is capable of a maximum speed equal to or exceeding V=3.7xdispl.1667, where "V" is the maximum speed and "displ" is the vessel displacement corresponding to the design waterline in cubic meters.

(4549) *High speed passenger craft* means a high speed craft carrying more than 12 passengers.

(4550) *International voyage* means a voyage from a country to which the present International Convention for the Safety of Life at Sea (SOLAS), 1974 applies to a port

outside such country, or conversely. For U.S. ships, such voyages will be considered to originate at a port in the United States, regardless of when the voyage actually began. Such voyages for U.S. ships will continue until the ship returns to the United States from its last foreign port.

(4551) *Long range identification and tracking (LRIT) information* or *position report* means report containing the following information:

(4552) (1) The identity of the ship;

(4553) (2) The position of the ship (latitude and longitude); and

(4554) (3) The date and time of the position provided.

(4555) *LRIT Data Center* means a center established by a SOLAS Contracting Government or a group of Contracting Governments, or in the case of International Data Center, by IMO, to request, receive, process, and archive LRIT information. An LRIT Data Center may be National, Regional, Co-operative or International.

(4556) *Mandatory ship reporting system* means a ship reporting system that requires the participation of specified vessels or classes of vessels, and that is established by a government or governments after adoption of a proposed system by the International Maritime Organization (IMO) as complying with all requirements of regulation V/8-1 of the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS), except paragraph (e) thereof.

(4557) *Mobile offshore drilling unit* means a self-propelled vessel capable of engaging in drilling operations for the exploration or exploitation of subsea resources.

(4558) *Passenger ship* means a ship that carries more than 12 passengers.

(4559) *Self-propelled ships* means ships propelled by mechanical means.

(4560) *Shore-based authority* means the government appointed office or offices that will receive the reports made by ships entering each of the mandatary ship reporting systems. The office or offices will be responsible for the management and coordination of the system, interaction with participating ships, and the safe and effective operation of the system. Such an authority may or may not be an authority in charge of a vessel traffic service.

(4561) *United States* means the States of the United States, the District of Columbia, Guam, Puerto Rico, the Virgin Islands, American Samoa, the Northern Mariana Islands, and any other territory or possession of the United States.

(4562)

§169.10 What geographic coordinates are used?

(4563) Geographic coordinates expressed in terms of latitude or longitude, or both, are not intended for plotting on maps or charts where the referenced horizontal datum is the North American Datum of 1983 (NAD 83), unless such geographic coordinates are expressly labeled NAD 83. Geographic coordinates without the NAD 83 reference may be plotted on maps or charts referenced to NAD 83 only after application of the appropriate corrections that are published on the particular map or chart being used.

(4564)

§169.15 Incorporation by reference: Where can I get a copy of the publications mentioned in this part?

(4565) (a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to http://www.archives.gov/federal_register/code _of_federal_regulations/ibr_locations.html. Also, it is available for inspection at the Coast Guard Headquarters. Contact Commandant (CG-NAV), Attn: Office of Navigation Systems, 2703 Martin Luther King Jr. Avenue SE., Stop 7418, Washington, DC 20593-7418, and is available from the sources indicated in this section.

(4566) (b) International Electrotechnical Commission (IEC) Bureau Central de la Commission Electrotechnique Internationale, 3 rue de Varembé, P.O. Box 131, 1211 Geneva 20, Switzerland.

(4567) (1) IEC 60945, Fourth edition 2002-08, Maritime navigation and radiocommunication equipment and systems–General requirements–Methods of testing and required test results, incorporation by reference approved for §169.215.

(4568) (2) [Reserved]

(4569) (c) International Maritime Organization (IMO), 4 Albert Embankment, London SE1 7SR, U.K.

(4570) (1) IMO Resolution MSC.202(81), adopted on May 19, 2006, Adoption of Amendments to the International Convention for the Safety of Life at Sea, 1974, as Amended, incorporation by reference approved for §160.240.

(4571) (2) IMO Resolution MSC. 210(81), adopted on May 19, 2006, Performance Standards and Functional Requirements for the Long-Range Identification and Tracking of Ships, incorporation by reference approved for §§169.215 and 169.240.

(4572) (3) IMO Resolution MSC.254(83), adopted on October 12, 2007, Adoption of Amendments to the Performance Standards and Functional Requirements for the Long-Range Identification and Tracking of Ships, incorporation by reference approved for §§169.215 and 169.240.

(4573) (4) IMO Resolution A.694(17), adopted on November 6, 1991, General Requirements for Shipborne Radio Equipment Forming Part of the Global Maritime Distress and Safety System (GMDSS) and for Electronic Navigational Aids, incorporation by reference approved for §165.215.

(4574) (5) International Convention on Tonnage Measurement of Ships, 1969, incorporation by reference approved for §169.5.

(4575)

Subpart C–Transmission of Long Range Identification and Tracking Information

(4576)

§169.200 What is the purpose of this subpart?

(4577) This subpart implements Regulation 19-1 of SOLAS Chapter V (SOLAS V/19-1) and requires certain ships engaged on an international voyage to transmit vessel identification and position information electronically. This requirement enables the Coast Guard to obtain long range identification and tracking (LRIT) information and thus heightens our overall maritime domain awareness, enhances our search and rescue operations, and increases our ability to detect anomalies and deter transportation security incidents.

(4578)

§169.205 What types of ships are required to transmit LRIT information (position reports)?

(4579) The following ships, while engaged on an international voyage, are required to transmit position reports:

(4580) (a) A passenger ship, including high speed passenger craft.

(4581) (b) A cargo ship, including high speed craft, of 300 gross tonnage or more.

(4582) (c) A mobile offshore drilling unit while underway and not engaged in drilling operations.

(4583)

§169.210 Where during its international voyage must a ship transmit position reports?

(4584) The requirements for the transmission of position reports, imposed by the United States, vary depending on the relationship of the United States to a ship identified in §169.205.

(4585) (a) *Flag State relationship*. A U.S. flag ship engaged on an international voyage must transmit position reports wherever they are located.

(4586) (b) *Port State relationship*. A foreign flag ship engaged on an international voyage must transmit position reports after the ship has announced its intention to enter a U.S. port or place under requirements in 33 CFR part 160, subpart C.

(4587) (c) *Coastal State relationship*. A foreign flag ship engaged on an international voyage must transmit position reports when the ship is within 1,000 nautical miles of the baseline of the United States, unless their Flag Administration, under authority of SOLAS V/19-1.9.1, has directed them not to do so.

(4588)

§169.215 How must a ship transmit position reports?

(4589) A ship must transmit position reports using Long Range Identification and Tracking (LRIT) equipment that has been type-approved by their Administration. To be type-approved by the Coast Guard, LRIT equipment must meet the requirements of IMO Resolutions A.694(17), MSC.210(81), and MSC.254(83), and IEC standard IEC 60945 (Incorporated by reference, see §169.15).

(4590)

§169.220 When must a ship be fitted with LRIT equipment?

(4591) A ship identified in §169.205 must be equipped with LRIT equipment–

(4592) (a) Before getting underway, if the ship is constructed on or after December 31, 2008.

(4593) (b) By the first survey of the radio installation after December 31, 2008, if the ship is–

(4594) (1) Constructed before December 31, 2008, and

(4595) (2) Operates within–

(4596) (i) One hundred (100) nautical miles of the United States baseline, or

(4597) (ii) Range of an Inmarsat geostationary satellite, or other Application Service Provider recognized by the Administration, with continuous alerting is available.

(4598) (c) By the first survey of the radio installation after July 1, 2009, if the ship is–

(4599) (1) Constructed before December 31, 2008, and

(4600) (2) Operates within the area or range specified in paragraph (b)(2) of this section as well as outside the range of an Inmarsat geostationary satellite with which continuous alerting is available. While operating in the area or range specified in paragraph (b)(2) of this section, however, a ship must install LRIT equipment by the first survey of the radio installation after December 31, 2008.

(4601)

§169.225 Which Application Service Providers may a ship use?

(4602) A ship may use an application Service Provider (ASP) recognized by its administration. Some Communication Service Providers may also serve as an ASP.

(4603)

§169.230 How often must a ship transmit position reports?

(4604) A ship's LRIT equipment must transmit position reports at 6-hour intervals unless a more frequent interval is requested remotely by an LRIT Data Center.

(4605)

§169.235 What exemptions are there from reporting?

(4606) A ship is exempt from this subpart if it is–

(4607) (a) Fitted with an operating automatic identification system (AIS), under **33 CFR 164.46**, and operates only within 20 nautical miles of the United States baseline,

(4608) (b) A warship, naval auxiliaries or other ship owned or operated by a SOLAS Contracting Government and used only on Government non-commercial service, or

(4609) (c) A ship solely navigating the Great Lakes of North America and their connecting and tributary waters as far east as the lower exit of the St. Lambert Lock at Montreal in the Province of Quebec, Canada.

(4610)

§169.240 When may LRIT equipment be switched off?

(4611) A ship engaged on an international voyage may switch off its LRIT equipment only when it is permitted by its Flag Administration, in circumstances detailed in SOLAS V/19-1.7, or in paragraph 4.4.1, of resolution MSC.210(81), as amended by resolution MSC.254(83) (Incorporated by reference, see §169.15).

(4612)

§169.245 What must a ship master do if LRIT equipment is switched off or fails to operate?

(4613) (a) If a ship's LRIT equipment is switched off or fails to operate, the ship's master must inform his or her Flag Administration without undue delay.

(4614) (b) The master must also make an entry in the ship's logbook that states–

(4615) (1) His or her reason for switching the LRIT equipment off, or an entry that the equipment has failed to operate, and

(4616) (2) The period during which the LRIT equipment was switched off or non-operational.

(4617) **Note to §169.245:** for U.S. vessels, the U.S. Coast Guard serves as the Flag Administration for purposes of this section. All LRIT notifications for the U.S. Flag administration, in addition to requests or questions about LRIT, should be communicated to the U.S. Coast Guard by e-mail addressed to LRIT@uscg.mil.

(4618)

Part 207–NavigationRegulations

(4619)

§207.160 All waterways tributary to the Atlantic Ocean south of Chesapeake Bay and all waterways tributary to the Gulf of Mexico east and south of St. Marks, FL; use, administration, and navigation.

(4620) (a) *Description*. This section applies to the following:

(4621) (1) *Waterways*. All navigable waters of the United States, natural or artificial, including bays, lakes, sounds, rivers, creeks, intracoastal waterways, as well as canals and channels of all types, which are tributary to or connected by other waterways with the Atlantic Ocean south of Chesapeake Bay or with the Gulf of Mexico east and south of St. Marks, FL.

(4622) (2) *Locks*. All Government owned or operated locks and hurricane gate chambers and appurtenant structures in any of the waterways described in paragraph (a)(1) of this section.

(4623) (3) *United States property*. All river and harbor lands owned by the United States in or along the waterways described in paragraph (a)(1) of this section, including lock sites and all structures thereon, other sites for Government structures and for the accommodation and use of employees of the United States, and rights of way and spoil disposal areas to the extent of Federal interest therein.

(4624) (4) *Vessels and rafts*. The term "vessel" as used in this section includes all floating things moved over these waterways other than rafts.

(4625) (b) *Authority of District Engineers*. The use, administration, and navigation of these waterways, Federal locks and hurricane gate chambers shall be under the direction of the officers of the Corps of Engineers, United States Army, detailed in charge of the respective sections, and their authorized assistants. The cities in which the U.S. District Engineers are located are as follows:

(4626) U.S. District Engineer, Norfolk, VA.

(4627) U.S. District Engineer, Wilmington, NC.

(4628) U.S. District Engineer, Charleston, SC.

(4629) U.S. District Engineer, Savannah, GA.

(4630) U.S. District Engineer, Jacksonville, FL.

(4631) (c) (Reserved)

(4632) (d) *Bridges*. (For regulations governing the operation of bridges, see **33 CFR 117.1**, **117.240** and **117.245**.)

(4633) (e) *Locks*-(1) *Authority of Lockmasters*

(4634) (i) *Locks Staffed with Government Personnel*. The provisions of this subparagraph apply to all waterways in this Section except for the segment of the Atlantic Intracoastal Waterway identified in (e)(1)(ii). The lockmaster shall be charged with the immediate control and management of the lock, and of the area set aside as the lock area, including the lock approach channels. He/she shall see that all laws, rules and regulations for the use of the lock and lock area are duly complied with, to which end he/she is authorized to give all necessary orders and directions in accordance therewith, both to employees of the Government and to any and every person within the limits of the lock and lock area, whether navigating the lock or not. No one shall cause any movement of any vessel, boat, or other floating thing in the lock or approaches except by or under the direction of the lockmaster or his/her assistants.

(4635) (ii) *Locks Staffed with contract personnel*. The provisions of this subparagraph apply to the segment of the Atlantic Intracoastal Waterway comprising the Albemarle and Chesapeake Canal and the Dismal Swamp Canal including Great Bridge Lock, Chesapeake, Virginia; Deep Creek Lock, Chesapeake, Virginia; and South Mills Lock, North Carolina. Contract personnel shall give all necessary orders and directions for operation of the locks. No one shall cause any movement of any vessel, boat or other floating thing in the locks or approaches except by or under the direction of the contract lock operator. All duties and responsibilities of the lockmaster set forth in this Section shall be performed by the contract lock

operator except that the responsibility for enforcing all laws, rules and regulations shall be vested in a government employee designated by the Norfolk District Engineer. The District Engineer will notify waterway users and the general public through appropriate notices and media concerning the location and identify of the designated government employee.

(4636) (2) *Signals*. Vessels desiring lockage in either direction shall give notice to the lockmaster at not more than three-quarters of a mile nor less than one-quarter of a mile from the lock, by two long and two short blasts of a whistle. When the lock is available, a green light, semaphore or flag will be displayed; when not available, a red light, semaphore or flag will be displayed. No vessel or rafts shall approach within 300 feet of any lock entrance unless signalled to do so by the lockmaster.

(4637) (3) *Precedence at locks*. (i) The vessel arriving first at a lock shall be first to lock through; but precedence shall be given to vessels belonging to the United States and to commercial vessels in the order named. Arrival posts or markers may be established ashore above or below the locks. Vessels arriving at or opposite such posts or markers will be considered as having arrived at the locks within the meaning of this paragraph.

(4638) (ii) The lockage of pleasure boats, house boats or like craft shall be expedited by locking them through with commercial craft (other than barges carrying petroleum products or highly hazardous materials) in order to utilize the capacity of the lock to its maximum. If, after the arrival of such craft, no separate or combined lockage can be accomplished within a reasonable time not to exceed the time required for three other lockages, then separate lockage shall be made.

(4639) (4) *Entrance to and exit from locks*. No vessel or raft shall enter or leave the locks before being signalled to do so. While waiting their turns, vessels or rafts must not obstruct traffic and must remain at a safe distance from the lock. They shall take position in rear of any vessels or rafts that may precede them, and there arrange the tow for locking in sections if necessary. Masters and pilots of vessels or in charge of rafts shall cause no undue delay in entering or leaving the lock, and will be held to a strict accountability that the approaches are not at any time unnecessarily obstructed by parts of a tow awaiting lockage or already passed through. They shall provide sufficient men to move through the lock promptly without damage to the structures. Vessels or tows that fail to enter the locks with reasonable promptness after being signalled to do so will lose their turn.

(4640) (5) *Lockage of vessels*. (i) Vessels must enter and leave the locks carefully at slow speed, must be provided with suitable lines and fenders, must always use fenders to protect the walls and gates, and when locking at night must be provided with suitable lights and use them as directed.

(4641) (ii) Vessels which do not draw at least six inches less than the depth on miter sills or breast walls, or which have projections or sharp corners liable to damage gates or walls, shall not enter a lock or approaches.

(4642) (iii) No vessel having chains or lines either hanging over the sides or ends, or dragging on the bottom, for steering or other purposes, will be permitted to pass a lock or dam.

(4643) (iv) Power vessels must accompany tows through the locks when so directed by the lockmaster.

(4644) (v) No vessel whose cargo projects beyond its sides will be admitted to lockage.

(4645) (vi) Vessels in a sinking condition shall not enter a lock or approaches.

(4646) (vii) The passing of coal from flats or barges to steamers while in locks is prohibited.

(4647) (viii) Where special regulations for safeguarding human life and property are desirable for special situations, the same may be indicated by printed signs, and in such cases such signs will have the same force as other regulations in this section.

(4648) (ix) The lockmaster may refuse to lock vessels which, in his judgment, fail to comply with this paragraph.

(4649) (6) *Lockage of rafts*. Rafts shall be locked through in sections as directed by the lockmaster. No raft will be locked that is not constructed in accordance with the requirements stated in paragraph (g) of this section. The party in charge of a raft desiring lockage shall register with the lockmaster immediately upon arriving at the lock and receive instructions for locking.

(4650) (7) *Number of lockages*. Tows or rafts locking in sections will generally be allowed only two consecutive lockages if one or more single vessels are waiting for lockage, but may be allowed more in special cases. If tows or rafts are waiting above and below a lock for lockage, sections will be locked both ways alternately whenever practicable. When there are two or more tows or rafts awaiting lockage in the same direction, no part of one shall pass the lock until the whole of the one preceding it shall have passed.

(4651) (8) *Mooring*. (i) Vessels and rafts when in the lock shall be moored where directed by the lockmaster by bow, stern and spring lines to the snubbing posts or hooks provided for that purpose, and lines shall not be let go until signal is given for vessel or raft to leave. Tying boats to the lock ladders is prohibited.

(4652) (ii) The mooring of vessels or rafts near the approaches to locks except while waiting for lockage, or at other places in the pools where such mooring interferes with general navigation of the waterway is prohibited.

(4653) (9) *Maneuvering locks*. The lock gates, valves, and accessories will be moved only under the direction of the lockmaster; but if required, all vessels and rafts using the locks must furnish ample help on the lock walls for handling lines and maneuvering the various parts of the lock under the direction of the lockmaster.

(4654) (f) [Reserved]

(4655) (g) *Rafts, logging*. (1) Rafts will be permitted to navigate a waterway only if properly and securely assembled. The passage of “bag” or “sack” rafts, “dog”

rafts, or of loose logs over any portion of a waterway, is prohibited. Each section of a raft will be secured within itself in such a manner as to prevent the sinking of any log, and so fastened or tied with chains or wire rope that it cannot be separated or bag out so as to materially change its shape. All dogs, chains and other means used in assembling rafts shall be in good condition and of ample size and strength to accomplish their purposes.

(4656) (2) No section of a raft will be permitted to be towed over any portion of a waterway unless the logs float sufficiently high in the water to make it evident that the section will not sink en route.

(4657) (3) Frequent inspections will be made by the person in charge of each raft to insure that all fastenings remain secure, and when any one is found to have loosened, it shall be repaired at once. Should any log or section be lost from a raft, the fact must be promptly reported to the District Engineer, giving as definitely as possible the exact point at which the loss occurred. In all cases the owner of the lost log or section will take steps immediately to remove the same from the waterway.

(4658) (4) The length and width of rafts shall not exceed such maximum dimensions as may be prescribed by the District Engineer.

(4659) (5) All rafts shall carry sufficient men to enable them to be managed properly, and to keep them from being an obstruction to other craft using the waterway. To permit safe passage in a narrow channel rafts will, if necessary, stop and tie up alongside the bank. Care must be exercised both in towing and mooring rafts to avoid the possibility of damage to aids to navigation maintained by the United States or under its authorization.

(4660) (6) When rafts are left for any reason with no one in attendance, they must be securely tied at each end and at as many intermediate points as may be necessary to keep the timbers from bagging into the stream, and must be moored so as to conform to the shape of the bank. Rafts moored to the bank shall have lights at 500-foot intervals along their entire length. Rafts must not be moored at prominent projections of the bank, or at critical sections.

(4661) (7) Logs may be stored in certain tributary streams provided a clear channel at least one-half the width of the channel be left clear for navigation along the tributary. Such storage spaces must be protected by booms and, if necessary to maintain an open channel, piling should also be used. Authority for placing these booms and piling must be obtained by written permit from the District Engineer.

(4662) (8) The building, assembling, or breaking up of a raft in a waterway will be permitted only upon special authority obtained from the District Engineer, and under such conditions as he may prescribe.

(4663) (h) *Dumping of refuse or oil in waterway, obstructions*. Attention is invited to the provisions of sections 13 and 20 of the River and Harbor Act of March 3, 1899 (30 Stat. 1152, 1154; 33 U.S.C. 407, 415), and of sections 2, 3, and 4 of the Oil Pollution Act of June 7, 1924 (43 Stat. 604, 605; 33 U.S.C. 432-434), which prohibit the depositing of any refuse matter in these waterways or along their banks where liable to be washed into the waters; authorize the immediate removal or destruction of any sunken vessel, craft, raft, or other similar obstruction, which stops or endangers navigation; and prohibit the discharge of oil from vessels into the coastal navigable waters of the United States.

(4664) (i) *Damage*. Masters and owners of vessels using the waterways are responsible for any damage caused by their operations to canal revetments, lock piers and walls, bridges, hurricane gate chambers, spillways, or approaches thereto, or other Government structures, and for displacing or damaging of buoys, stakes, spars, range lights or other aids to navigation. Should any part of a revetment, lock, bridge, hurricane gate chamber, spillway or approach thereto, be damaged, they shall report the fact, and furnish a clear statement of how the damage occurred, to the nearest Government lockmaster or bridge tender, and by mail to the District Engineer, U.S. Engineer Office, in local charge of the waterway in which the damage occurred. Should any aid to navigation be damaged, they shall report that fact immediately to the the Superintendent of Lighthouses at Norfolk, Virginia, if north of New River Inlet, North Carolina; to the Superintendent of Lighthouses at Charleston, South Carolina, if between New River Inlet, North Carolina, and St. Lucie Inlet, Florida; to the Superintendent of Lighthouses at Key West, Florida, if between St. Lucie Inlet and Suwanee River, Florida; and to the Superintendent of Lighthouses, New Orleans, Louisiana, if between Suwanee River and St. Marks, Florida.

(4665) (j) *Trespass on property of the United States*. Trespass on waterway property or injury to the banks, locks, bridges, piers, fences, trees, houses, shops or any other property of the United States pertaining to the waterway, is strictly prohibited. No business, trading or landing of freight or baggage will be allowed on or over Government piers, bridges, or lock walls.

(4666) (k) *Copies of regulations*. Copies of the regulations in this section will be furnished free of charge upon application to the nearest District Engineer.

(4667)

§207.175a Carlson's Landing Dam navigation lock, Withlacoochee River, FL; use, administration and navigation.

(4668) (a) The owner of or agency controlling the lock shall not be required to operate the navigation lock except from 7 a.m. to 12 noon, and from 1 p.m. to 7 p.m., during the period of February 15 through October 15 each year; and from 8 a.m. to 12 noon, and from 1 p.m. to 6 p.m., during the remaining months of each year. During the above hours and periods the lock shall be opened upon demand for the passage of vessels.

(4669) (b) The owner of or agency controlling the lock shall place signs, of such size and description as may be designated by the District Engineer, U.S. Army Engineer

District, Jacksonville, FL, at each side of the lock indicating the nature of the regulations in this section.

(4670)

§207.180 All waterways tributary to the Gulf of Mexico (except the Mississippi River, its tributaries, South and Southwest Passes and the Atchafalaya River) from St. Marks, FL, to the Rio Grande; use, administration, and navigation.

(4671) (a) The regulations in this section shall apply to:

(4672) (1) *Waterways*. All navigable waters of the U.S. tributary to or connected by other waterways with the Gulf of Mexico between St. Marks, FL, and the Rio Grande TX (both inclusive), and the Gulf Intracoastal Waterway; except the Mississippi River, its tributaries, South and Southwest Passes, and the Atchafalaya River above its junction with the Morgan City-Port Allen Route.

(4673) (2) *Locks and floodgates*. All locks, floodgates, and appurtenant structures in the waterways described in paragraph (a)(1) of this section.

(4674) (3) *Bridges, wharves, and other structures*. All bridges, wharves, and other structures in or over these waterways.

(4675) (4) *Vessels*. The term "vessels" as used in this section includes all floating craft other than rafts.

(4676) (5) *Rafts*. The term "raft" as used in this section includes any and all types of assemblages of floating logs or timber fastened together for support or conveyance.

(4677) (b) *Authority of District Engineers.* The use, administration, and navigation of the waterways and structures to which this section applies shall be under the direction of the officers of the Corps of Engineers, U.S. Army, in charge of the respective districts, and their authorized assistants. The location of these Engineer Districts, and the limits of their jurisdiction, are as follows:

(4678) (1) *U.S. District Engineer, Mobile, AL*. The St. Marks River, FL, to the Pearl River, Mississippi and Louisiana; and the Gulf Intracoastal Waterway from Apalachee Bay, FL, to mile 36.4 east of Harvey Lock.

(4679) (2) *U.S. District Engineer, Vicksburg, MS*. The Pearl River and its tributaries, Mississippi and Louisiana.

(4680) (3) *U.S. District Engineer, New Orleans, LA*. From Pearl River, Mississippi and Louisiana, to Sabine River, LA and Texas; and the Gulf Intracoastal Waterway from mile 36.4 east of Harvey Lock, to mile 266 west of Harvey Lock.

(4681) (4) *U.S. District Engineer, Galveston, TX*. The Sabine River, LA and Texas, to the Rio Grande, TX; and the Gulf Intracoastal Waterway from mile 266 west of Harvey Lock, to Brownsville, TX.

(4682) (c) [Reserved]

(4683) (d) *Locks and floodgates*. (1) The term "lock" as used in this section shall include locks, floodgates, and appurtenant structures, and the area designated as the lock area including the lock approach channels.

(4684) (2) *Authority of lockmasters.* The term "lockmaster" as used in this section means the official in charge of operating a lock or floodgate. The lockmaster is responsible for the immediate management and control of the lock and lock area and for the enforcement of all laws, rules, and regulations for the use of the lock. He is authorized to give all necessary and appropriate orders and instructions to every person in the lock area, whether navigating the lock or not; and no one shall cause any movement of any vessel within the lock area unless instructed to do so by the lockmaster or his duly authorized assistants. The lockmaster may refuse passage through the lock to any vessel which, in his judgment, fails to comply with the regulations of this section.

(4685) (3) *Sound signals.* Vessels desiring passage through a lock shall notify the lockmaster by three long and distinct blasts of a horn, whistle, or calls through a megaphone, when within a reasonable distance from the lock. When the lock is ready for entrance, the lockmaster shall reply with three long blasts of a horn, whistle, or calls through a megaphone. When the lock is not ready for entrance, the lockmaster shall reply by four or more short, distinct blasts of a horn, whistle, or calls through a megaphone (danger signal). Permission to leave the lock shall be indicated by the lockmaster by one long blast.

(4686) (4) *Visual signals.* Signal lights and discs shall be displayed at all locks as follows:

(4687) (i) *From sunset to sunrise.* One green light shall indicate the lock is open to approaching navigation; one red light shall indicate the lock is closed to approaching navigation.

(4688) (ii) *From sunrise to sunset.* Large discs, identical in color and number to the light signals prescribed in paragraph (d)(4)(i) of this section will be displayed from a mast on or near the lock wall.

(4689) (5) *Radiophone.* Locks will monitor continuously VHF-Channel 14 ("Safety and Calling" Channel) and/or AM-2738 kHz for initial communication with vessels. Upon arrival at a lock, a vessel equipped with a radiophone will immediately advise the lock by radio of its arrival so that the vessel may be placed on proper turn. Information transmitted or received in these communications shall in no way affect the requirements for use of sound signals or display of visual signals, as provided in paragraphs (d)(3) and (4) of this section.

(4690) (6) *Precedence at locks.* The order of precedence for locking is:

(4691) (i) U.S. Government vessels, passenger vessels, commercial vessels, rafts, and pleasure craft.

(4692) (ii) The vessel arriving first at a lock will be locked through first. When vessels approach simultaneously from opposite directions, the vessel approaching at the same elevation as the water in the lock chamber will be locked through first. In order to achieve the most efficient utilization of the lock, the lockmaster is authorized to depart from the normal order of locking precedence, stated in paragraph (d)(6)(i) of this section, as in his judgment is warranted.

(4693) (iii) The lockage of pleasure boats, houseboats, or like craft may be expedited by locking them through with commercial craft (other than vessels carrying dangerous

cargoes, as described in 46 CFR Part 146). If, after the arrival of such craft, no combined lockage can be made within reasonable time, not to exceed three other lockages, then separate lockage shall be made.

(4694) (7) *Entrance to and exits from locks.* No vessel or tow shall enter or exit from a lock before being signaled to do so. While awaiting turn, vessels or tows must not obstruct navigation and must remain at a safe distance from the lock, taking position to the rear of any vessel or tows that precede them; and rearranging the tow for locking in sections, if necessary. Masters and pilots of vessels or tows shall enter or exit from a lock with reasonable promptness after receiving the proper signal. Appropriate action will be taken to insure that the lock approaches are not obstructed by sections of a tow either awaiting lockage or already locked through. Masters of vessels shall provide sufficient men to assist in the locking operation when deemed necessary by the lockmaster. Care shall be taken to insure prompt and safe passage of the vessel without damage to the structure.

(4695) (8) *Lockage and passage of vessels.* Vessels or tows shall enter and exit from locks under sufficient control to prevent damage to the lock, gates, guide walls, fenders, or other parts of the structure. Vessels shall be equipped with and use suitable fenders and adequate lines to protect the lock and to insure safe mooring during the locking operation. Vessels shall not meet or pass anywhere between the gate walls or fender system or in the approaches to locks.

(4696) (9) *Vessels prohibited from locks.* The following vessels shall not be permitted to enter locks or approach channels:

(4697) (i) Vessels in a sinking condition.

(4698) (ii) Vessels leaking or spilling cargo.

(4699) (iii) Vessels not having a draft of at least three (3) inches less than the depth over the sills or breast walls.

(4700) (iv) Vessels having projection or cargo loaded in such a manner that is liable to damage the structure.

(4701) (v) Vessels having chains, links, or drags either hanging over the sides or ends or dragging on the bottom for steering or other purposes.

(4702) (vi) Vessels containing flammable or dangerous cargo must have the hatch covers in place and securely fastened.

(4703) (10) *Number of lockages.* Tows locking in sections will generally be allowed only two consecutive lockages if other vessels are waiting for lockage unless otherwise decided by the lockmaster. If other tows are waiting above and below a lock, lockages will be made both ways alternately whenever practicable.

(4704) (11) *Mooring in locks*. (i) When in a lock, vessels and tows shall be moored where directed by the lockmaster by bow, stern, and spring lines to the snubbing posts or hooks provided for that purpose, and lines shall not be let go until the signal is given for the vessel to exit. Tying to the lock ladders is prohibited.

(4705) (ii) Mooring near the approaches to locks is prohibited except when the vessels or tows are awaiting lockage.

(4706) (12) *Lock operating personnel*. Vessels and tows using the locks may be required to furnish personnel to assist in locking through; however, the operation of the structure is the responsibility of the lockmaster, and personnel assisting in the lockage of the vessels and tows will follow the direction of the appropriate official on duty at the lock. No gates, valves or other accessories or controls will be operated unless under his direction.

(4707) (13) [Reserved]

(4708) (14) *Lockage of rafts.* Rafts shall be locked through as directed by the lockmaster. No raft will be locked that is not constructed in accordance with the requirements stated in paragraph (f) of this section. The person in charge of a raft desiring lockage shall register with the lockmaster immediately upon arriving at the lock and receive instructions for locking.

(4709) (e) *Waterways*. (1)–(5)(i) [Reserved]

(4710) (ii) Algiers Canal between the Mississippi River and Bayou Barataria, LA, and on Harvey Canal, Gulf Intracoastal Waterway, mile 0 to mile 6 WHL, tows 74 feet in width will be allowed. Tows in excess of 55 feet wide desiring to move over Algiers Canal or Harvey Canal will obtain clearance from the lockmaster at Algiers Lock or Harvey Lock, respectively, before entering the canal. Overwidth tows will report clearing Algiers or Harvey Canal to the respective lockmaster and will rearrange tows to conform to prescribed dimensions immediately upon leaving the canal. The lockmaster will withhold permission for additional tows over 55 feet wide until all previously authorized tows moving in the opposite direction have cleared the waterway.

(4711) (iii)–(vi) [Reserved]

(4712) (vii) Vessels or tows shall not navigate through a drawbridge until the movable span is fully opened.

(4713) (6) *Projections from vessels.* Vessels or tows carrying a deck load which overhangs or projects over the side, or whose rigging projects over the side, so as to endanger passing vessels, wharves, or other property, shall not enter or pass through any of the narrow parts of the waterway without prior approval of the District Engineer.

(4714) (7) *Meeting and passing.* Passing vessels shall give the proper signals and pass in accordance with the Federal Rules of the Road. At certain intersections where strong currents may be encountered, sailing directions may be issued through navigation bulletins or signs posted on each side of the intersection.

(4715) (f) *Rafts*. The navigation regulations in this paragraph shall apply fully to the movement of rafts.

(4716) (1) Rafts will be permitted to navigate a waterway only if properly and securely assembled. Each raft shall be so secured as to prevent the loss or sinking of logs.

(4717) (2) All rafts shall carry sufficient men to enable them to be managed properly. It will be the responsibility of

the owner to remove logs from the waterway that have broken loose from the raft.

(4718) (3) Building, assembling, or breaking up of a raft within a waterway may be permitted; however, the work must be done in an area that will not restrict the use of the waterway by other users. The work area must be cleared of loose logs so that they will not enter the waterway and become a hazard to navigation.

(4719) (g) *Damage.* Should any damage be done to a revetment, lock, floodgates, bridge, or other federally owned or operated structure, the master of the vessel shall report the accident to the nearest lockmaster or bridgetender as soon as possible after the accident. Damage to aids to navigation and to nonfederally owned bridges must be reported to the Commander, Eighth Coast Guard District, New Orleans, LA.

(4720) (h) *Marine accidents.* Masters, mates, pilots, owners, or other persons using the waterways covered by this section shall report to the District Engineer at the earliest possible date any accident on the waterway which causes any vessel to become an obstruction to navigation. The information to be furnished the District Engineer shall include the name of the vessel, its location, and the name and address of the owner. The owner of a sunken vessel shall properly mark the vessel as soon as practicable after sinking.

(4721) (i) *Trespass on U.S. property.* (1) Trespass on or injury to waterway property of the United States is prohibited. No business, trading, or landing of freight, will be allowed on Government property without permission of the District Engineer.

(4722) (2) The District Engineer may establish policy pertaining to mooring, exchanging crews, loading and unloading supplies, and making emergency repairs in the vicinity of locks so long as navigation is not impeded thereby.

(4723) (j) *Liability.* The regulations of this section will not affect the liability of the owners and operators of vessels for any damage caused by their operations to the waterway or to the structures therein.

(4724)

§207.185 Taylors Bayou, TX, Beaumont Navigation District Lock; use, administration and navigation.

(4725) (a) Between March 15 and September 15 each year, pleasure boats, houseboats, and other craft not employed for commercial purposes, will be locked through only at 6:00 and 11:45 a.m., and 6:30 p.m., except in cases of emergency; but whenever a lockage is made for a commercial boat, other craft may likewise pass through if there is room in the lock. At all other times lockages shall be made in accordance with §207.180.

(4726) (b) The lock tender or one in charge of the lock shall be the judge as to whether the boat presenting itself for lockage is a commercial or pleasure boat.

(4727)

§207.187 Gulf Intracoastal Waterway, TX; special floodgate, lock and navigation regulations.

(4728) (a) *Application*. The regulations in this section shall apply to the operation of the Brazos River Floodgates and the Colorado River Locks at Mile 400.8 and Mile 441.5, respectively, west of Harvey Lock, LA, on the Gulf Intracoastal Waterway, and navigation of the tributary Colorado River Channel in the vicinity of said locks.

(4729) (b) *Definitions*. The term *current* means the velocity of flow of water in the river. It is expressed in statute miles per hour. The term "head differential" means the difference measured in feet between the water level in the river and that in the waterway when the floodgates or lock gates are closed. The term "Lockmaster" means the official in charge of the floodgates or locks.

(4730) (c) *Operation of floodgates and locks*–(1) *Unlimited passage*. The floodgates and locks shall be opened for the passage of single vessels and towboats with single or multiple barges when the current in the river is less than 2 miles per hour and the head differential is less than 0.7 foot. When the head differential is less than 0.7 foot, the Colorado River Locks shall normally be operated as floodgates, using only the riverside gates of each lock.

(4731) (2) *Limited passage*. When the current in either river exceeds 2 miles per hour or the head differential at the Brazos River Floodgates is between the limits of 0.7 foot and 1.8 feet, both inclusive, or the head differential at the Colorado River locks is 0.7 foot or greater, passage shall be afforded only for single vessels or towboats with single loaded barges or two empty barges. When two barges are rigidly assembled abreast of each other and the combined width of both together is 55 feet or less, they shall be considered as one barge. Each section of an integrated barge shall be considered as one barge, except when it is necessary to attach a rake section to a single box section to facilitate passage, the two sections shall be considered as one barge. It shall be the responsibility of the master, pilot or other person in charge of a vessel to determine whether a safe passage can be effected, give due consideration to the vessel's power and maneuverability, and the prevailing current velocity, head differential, weather and visibility. If conditions are not favorable, passage shall be delayed until conditions improve and a safe crossing is assured.

(4732) (3) *Gate closures*. The Brazos River Floodgates shall be closed to navigation when the head differential exceeds 1.8 feet. The Colorado River Locks shall be closed to navigation when the current in the river exceeds a critical velocity as determined by the District Engineer, U.S. Army Engineer District, Galveston, TX. The Brazos River Floodgates or the Colorado River Locks shall be closed to navigation when in the opinion of said District Engineer it is required for the protection of life and property, or it is to the advantage of the Government to permit uninterrupted emergency or maintenance operations, including dredging.

(4733) (4) *Mooring facilities*. Mooring facilities located on both banks of the Gulf Intracoastal Waterway on

the approaches to the floodgates and locks are for the mooring of vessels when the floodgates or locks are closed to navigation or tows are limited to single barges. Vessels awaiting passage shall be moored parallel to the bank and as close to the bank as possible. Barges shall be moored fore and aft with two lines, each to a separate mooring facility. Beaching of vessels in lieu of mooring them is prohibited. The mooring facilities are numbered and vessels making fast to them shall notify the Lockmaster giving the number of each facility being used.

(4734) (5) [Reserved]

(4735) (6) *Communication*–(i) *Radio*. The floodgates and locks are equipped with short wave radio equipment transmitting and receiving on VHF-FM Channels 12, 13, 14, and 16. Call letters for the floodgates are WUI 411 and for the locks are WUI 412.

(4736) (ii) *Telephone*. The floodgates and locks are equipped with telephone facilities. The floodgates may be reached by phoning Freeport, TX, 713–233–1251; the locks may be reached by phoning Matagorda, TX, 713–863–7842.

(4737) (7) *Arrival posts*. Arrival posts 10 feet high and 10 inches in diameter have been established on the approaches to the locks and floodgates. They are painted with alternate horizontal bands of red and white 3 inches wide. Arrival at the floodgates or locks shall be determined as provided in paragraph (d)(4) of §207.180.

(4738) (d) *Navigation of the Colorado River Channel*–(1) *Traffic signals*. (i) Light and sound signals directed both upstream and downstream on the Colorado River are mounted on top of a galvanized skeleton steel tower 85 feet high located on the northeast point of land at the Gulf Intracoastal Waterway crossing of the river. They will be operated from the control house of the East Lock of the Colorado River Locks to direct the interchange of traffic in the Colorado River and the Gulf Intracoastal Waterway.

(4739) (ii) Vessels navigating the Colorado River and desiring passage either upstream or downstream through the crossing, or into the crossing and through a lock into the Gulf Intracoastal Waterway, shall give notice to the Lockmaster by two long and distinct blasts of a whistle or horn when within a distance of not more than one-half mile nor less than one-fourth mile from the Gulf Intracoastal Waterway crossing. When the locks and the crossing are clear of vessels, the Lockmaster shall reply by two long and distinct blasts of a whistle or horn and display a green light from the signal tower indicating that the vessel in the river may proceed across the crossing or into the main stem of the Gulf Intracoastal Waterway either eastbound or westbound. When there are vessels in the river crossing or in the locks, the Lockmaster shall reply by four or more short blasts of a whistle or horn (danger signal) and display a red light from the signal tower indicating the vessel in the river shall wait at least a quarter of a mile from the crossing for clearance. When the locks and crossing are clear of vessels, the lockmaster shall indicate to the waiting vessel by two long and distinct blasts of a whistle or horn and display of a green light from the signal tower indicating that the vessel may proceed across the crossing or into the main stem of the Gulf Intracoastal Waterway either eastbound or westbound. During periods when the red light may be obscured by fog, mist, or rain, an audible signal consisting of a long blast followed by a short blast of a whistle or horn, repeated every 30 seconds, shall be sounded from the signal tower as an adjunct to the red light.

(4740) (2) *Signs*. Large signs with silver reflective background and stop sign red letters are erected one-fourth mile upstream and downstream from the Gulf Intracoastal Waterway on the Colorado River. The legend states "DO NOT PROCEED BEYOND THIS POINT WHEN SIGNAL TOWER LIGHT IS RED." These signs must be obeyed.

(4741) NOTE: The foregoing regulations are supplementary to the regulations in §207.180.

(4742)

§207.200 Mississippi River below mouth of Ohio River, including South and Southwest Passes; use, administration, and navigation.

(4743) (a) *Mississippi River bank protection works provided by United States*. Except in case of great emergency, no vessel or craft shall anchor over revetted banks of the river, and no floating plant other than launches and similar small craft shall land against banks protected by revetment except at regular commercial landings. In all cases, every precaution to avoid damage to the revetment works shall be exercised. The construction of log rafts along mattressed or paved banks or the tying up and landing of log rafts against such banks shall be performed in such a manner as to cause no damage to the mattress work or bank paving. Generally, mattress work extends out into the river 600 feet from the low water line. Information as to the location of revetted areas may be obtained from, and will be published from time to time by, the District Engineers, Corps of Engineers, New Orleans, LA, Vicksburg, MS, and Memphis, TN, and the President, Mississippi River Commission, Vicksburg, MS.

(4744) (b) *Mississippi River below Baton Rouge, LA, including South and Southwest Passes*–(1) *Supervision*. The use, administration, and navigation of the waterways to which this paragraph applies shall be under the supervision of the District Engineer, Corps of Engineers, New Orleans, LA.

(4745) (2)–(3) [(Reserved]

(4746) (4) *Cable and pipeline crossings*. Any cable or pipeline crossing or extending into the waterways shall be marked by large signs with 12-inch black letters on a white background readable from the waterway side, placed on each side of the river near the point where the cable or pipeline enters the water, and at a sufficient height to be readable above any obstructions normally to be expected at the locality such as weeds or moored vessels.

(4747) (5) *Marine accidents*. Masters, mates, pilots, owners, or other persons using the waterway to which this paragraph applies shall notify the District Engineer by the most expeditious means available of all marine accidents, such as fire, collision, sinking, or stranding, where there is possible obstruction of the channel or interference with navigation or where damage to Government property is involved, furnishing a clear statement as to the name, address, and ownership of the vessel or vessels involved, the time and place, and the action taken. In all cases, the owner of the sunken vessel shall take immediate steps properly to mark the wreck.

(4748)

§207.800 Collection of navigation statistics.

(4749) (a) *Definitions*. For the purpose of this regulation the following terms are defined:

(4750) (1) *Navigable waters of the United States* means those waters of the United States that are subject to the ebb and flow of the tide shoreward to the mean high water mark, and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce. (See **33 CFR part 329** for a more complete definition of this term.)

(4751) (2) *Offenses and Violations mean*:

(4752) (i) Failure to submit a required report.

(4753) (ii) Failure to provide a timely, accurate, and complete report.

(4754) (iii) Failure to submit monthly listings of idle vessels or vessels in transit.

(4755) (iv) Failure to submit a report required by the lockmaster or canal operator.

(4756) (3) *Leased or chartered vessel* means a vessel that is leased or chartered when the owner relinquishes control of the vessel through a contractual agreement with a second party for a specified period of time and/or for specified remuneration from the lessee. Commercial movements on an affreightment basis are not considered a lease or charter of a particular vessel.

(4757) (4) *Person or entity* means an individual, corporation, partnership, or company.

(4758) (5) *Timely* means vessel and commodity movement data must be received by the Waterborne Commerce Statistics Center within 30 days after the close of the month in which the vessel movement or nonmovement takes place.

(4759) (6) *Commercial vessel* means a vessel used in transporting by water, either merchandise or passengers for compensation or hire, or in the course of business of the owner, lessee, or operator of the vessel.

(4760) (7) *Reporting situation* means a vessel movement by an operator that is required to be reported. Typical examples are listed in the instructions on the various ENG Forms. Five typical movements that are required to be reported by vessel operating companies include the following examples: Company A is the barge owner, and the barge transports corn from Minneapolis, MN to New Orleans, LA with fleeting at Cairo, IL.

(4761) (i) *Lease/Charter*: If Company A leases or charters the barge to Company B, then Company B is responsible for reporting the movements of the barge until the lease/charter expires.

(4762) (ii) *Interline movement*: A barge is towed from Minneapolis to Cairo by Company A, and from Cairo to New Orleans by Company B. Since Company A is the barge owner, and the barge is not leased. Company A reports the entire movement of the barge with an origin of Minneapolis and a destination of New Orleans.

(4763) (iii) *Vessel swap/trade*: Company A swaps barge with Company B to allow company B to meet a delivery commitment to New Orleans. Since Company A has not leased/chartered the barge, Company A is responsible for filing the report. Company B is responsible for filing the report on the barge which is traded to Company A. The swap or trade will not affect the primary responsibility for reporting the individual vessel movements.

(4764) (iv) *Re-Consignment*: Barge is reconsigned to Mobile, AL. Company A reports the movements as originating in Minneapolis and terminating in Mobile. The point from which barge is reconsigned is not reported, only points of loading and unloading.

(4765) (v) *Fleeting*: Barge is deposited at a New Orleans Fleeting area by Company A and towed by Company B from fleeting area to New Orleans area dock for unloading. Company A, as barge owner, reports entire movements from Minneapolis to the unloading dock in New Orleans. Company B does not report any barge movements.

(4766) (b) Implementation of the waterborne commerce statistics provisions of the River and Harbor Act of 1922, as amended by the Water Resources Development Act of 1988 (Pub. L. 99-662), mandates the following.

(4767) (1) *Filing requirements*. Except as provided in paragraph (b)(2) of this section, the person or entity receiving remuneration for the movement of vessels or for the transportation of goods or passengers on the navigable waters is responsible for assuring that the activity report of commercial vessels is timely filed.

(4768) (i) For vessels under lease/charter agreements, the lessee or charterer of any commercial vessel engaged in commercial transportation will be responsible for the filing of said reports until the lease/charter expires.

(4769) (ii) The vessel owner, or his designated agent, is always the responsible party for ensuring that all commercial activity of the vessel is timely reported.

(4770) (2) The following Vessel Information Reports are to be filed with the Army Corps of Engineers, at the address specified on the ENG Form, and are to include:

(4771) (i) *Monthly reports*. These reports shall be made on ENG Forms furnished upon written request of the vessel operating companies to the Army Corps of Engineers. The forms are available at the following address: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, Post Office Box 61280, New Orleans, LA 70161-1280.

(4772) (A) All movements of domestic waterborne commercial vessels shall be reported, including but not

limited to: Dry cargo ship and tanker moves, loaded and empty barge moves, towboat moves, with or without barges in tow, fishing vessels, movements of crew boats and supply boats to offshore locations, tugboat moves and movements of newly constructed vessels from the shipyard to the point of delivery.

(4773) (B) Vessels idle during the month must also be reported.

(4774) (C) Notwithstanding the above requirements, the following waterborne vessel movements need not be reported:

(4775) *(1)* Movements of recreational vessels.

(4776) *(2)* Movements of fire, police, and patrol vessels.

(4777) *(3)* Movements of vessels exclusively engaged in construction (e.g., piledrivers and crane barges). Note: however, that movements of supplies, materials, and crews to or from the construction site must be timely reported.

(4778) *(4)* Movements of dredges to or from the dredging site. However, vessel movements of dredged material from the dredging site to the disposal site must be reported.

(4779) *(5)* Specific movements granted exemption in writing by the Waterborne Commerce Statistics Center.

(4780) (D) ENG Forms 3925 and 3925b shall be completed and filed by vessel operating companies each month for all voyages or vessel movements completed during the month. Vessels that did not complete a move during the month shall be reported as idle or in transit.

(4781) (E) The vessel operating company may request a waiver from the Army Corps of Engineers, and upon written approval by the Waterborne Commerce Center, the company may be allowed to provide the requisite information of above paragraph (D), on computer printouts, magnetic tape, diskettes, or alternate medium approved by the Center.

(4782) (F) Harbor Maintenance Tax information is required on ENG Form 3925 for cargo movements into or out of ports that are subject to the provisions of section 1402 of the Water Resources Development Act of 1986 (Pub. L. 99-662).

(4783) *(1)* The name of the shipper of the commodity, and the shipper's Internal Revenue Service number or Social Security number, must be reported on the form.

(4784) *(2)* If a specific exemption applies to the shipper, the shipper should list the appropriate exemption code. The specific exemption codes are listed in the directions for ENG Forms 3925.

(4785) *(3)* Refer to **19 CFR part 24** for detailed information on exemptions and ports subject to the Harbor Maintenance Tax.

(4786) (ii) *Annual reports*. Annually an inventory of vessels available for commercial carriage of domestic commerce and vessel characteristics must be filed on ENG Forms 3931 and 3932.

(4787) (iii) *Transaction reports*. The sale, charter, or lease of vessels to other companies must also be reported to assure that proper decisions are made regarding each company's duty for reporting vessel movements during the year. In the absence of notification of the transaction, the former company of record remains responsible until proper notice is received by the Corps.

(4788) (iv) *Reports to lockmasters and canal operators*. Masters of self-propelled non-recreational vessels which pass through locks and canals operated by the Army Corps of Engineers will provide the data specified on ENG Forms 3102b, 3102c, and/or 3102d to the lockmaster, canal operator, or his designated representative in the manner and detail dictated.

(4789) (c) *Penalties for noncompliance*. The following penalties for noncompliance can be assessed for offenses and violations.

(4790) (1) *Criminal penalties*. Every person or violating the provisions of this regulation shall, for each and every offenses, be liable to a fine of not more than $5,000, or imprisonment not exceeding two months, to be enforced in any district court in the United States within whose territorial jurisdiction such offense may have been committed.

(4791) (2) In addition, any person or entity that fails to provide timely, accurate, and complete statements or reports required to be submitted by the regulation in this section may also be assessed a civil penalty of up to $6,270 per violation under 33 U.S.C. 555, as amended.

(4792) (3) *Denial of passage*. In addition to these fines, penalties, and imprisonments, the lockmaster or canal operator can refuse to allow vessel passage.

(4793) (d) *Enforcement policy*. Every means at the disposal of the Army Corps of Engineers will be utilized to monitor and enforce these regulations.

(4794) (1) To identify vessel operating companies that should be reporting waterborne commerce data, The Corps will make use of, but it not limited to, the following sources.

(4795) (i) Data on purchase and sale of vessels.

(4796) (ii) U.S. Coast Guard vessel documentation and reports.

(4797) (iii) Data collected at Locks, Canals, and other facilities operated by the Corps.

(4798) (iv) Data provided by terminals on ENG Form 3926.

(4799) (v) Data provided by the other Federal agencies including the Internal Revenue Service, Customs Service, Maritime Administration Department of Transportation, and Department of Commerce.

(4800) (vi) Data provided by ports, local facilities, and State or local governments.

(4801) (vii) Data from trade journals and publications.

(4802) (viii) Site visits and inspections.

(4803) (2) *Notice of violation*. Once a reporting violation is determined to have occurred, the Chief of the Waterborne Commerce Statistics Center will notify the responsible party and allow 30 days for the reports to be filed after the fact. If the reports are not filed within this 30-day notice period. then appropriate civil or criminal actions will be undertaken by the Army Corps of Engineers, including the proposal of civil or criminal penalties for

noncompliance. Typical cases for criminal or civil action include, but are not limited to, those violations which are willful, repeated, or have a substantial impact in the opinion of the Chief of the Waterborne Commerce Statistics Center.

(4804) (3) *Administrative assessment of civil penalties*. Civil penalties may be assessed in the following manner.

(4805) (i) *Authorization*. If the Chief of the Waterborne Commerce Statistics Center finds that a person or entity has failed to comply with any of the provisions specified herein, he is authorized to assess a civil penalty in accordance with the Class I penalty provisions of **33 CFR part 326**. Provided, however, that the procedures in **33 CFR part 326** specifically implementing the Clean Water Act (33 U.S.C. 1319(g)(4)), public notice, comment period, and state coordination, shall not apply.

(4806) (ii) *Initiation*. The Chief of the Waterborne Commerce Statistics Center will prepare and process a proposed civil penalty order which shall state the amount of the penalty to be assessed, describe by reasonable specificity the nature of the violation, and indicate the applicable provisions of **33 CFR part 326**.

(4807) (iii) *Hearing requests*. Recipients of a proposed civil penalty order may file a written request for a hearing or other proceeding. This request shall be as specified in **33 CFR part 326** and shall be addressed to the Director of the Water Resources Support Center, Casey Building, Fort Belvoir, VA 22060-5586, who will provide the requesting person or entity with a reasonable opportunity to present evidence regarding the issuance, modification, or revocation of the proposed order. Thereafter, the Director of the Water Resources Center shall issue a final order.

(4808) (4) *Additional remedies*. Appropriate cases may also be referred to the local U.S. Attorney for prosecution, penalty collection, injunctive, and other relief by the Chief of the Waterborne Commerce Statistics Center.

(4809)

Part 334–Danger Zone and Restricted Area Regulations

(4810)

§334.1 Purpose.

(4811) The purpose of this part is to:

(4812) (a) Prescribe procedures for establishing, amending and disestablishing danger zones and restricted areas;

(4813) (b) List the specific danger zones and restricted areas and their boundaries; and

(4814) (c) Prescribe specific requirements, access limitations and controlled activities within the danger zones and restricted areas.

(4815)

§334.2 Definitions.

(4816) (a) *Danger zone*. A defined water area (or areas) used for target practice, bombing, rocket firing or other especially hazardous operations, normally for the armed forces. The danger zones may be closed to the public on a full-time or intermittent basis, as stated in the regulations.

(4817) (b) *Restricted area*. A defined water area for the purpose of prohibiting or limiting public access to the area. Restricted areas generally provide security for Government property and/or protection to the public from the risks of damage or injury arising from the Government's use of that area.

(4818)

§334.3 Special policies.

(4819) (a) *General*. The general regulatory policies stated in **33 CFR part 320** will be followed as appropriate. In addition, danger zone and restricted area regulations shall provide for public access to the area to the maximum extent practicable.

(4820) (b) *Food fishing industry*. The authority to prescribe danger zone and restricted area regulations must be exercised so as not to unreasonably interfere with or restrict the food fishing industry. Whenever the proposed establishment of a danger zone or restricted area may affect fishing operations, the District engineer will consult with the Regional Director, U.S. Fish and Wildlife Service, Department of the Interior and the Regional Director, National Marine Fisheries Service, National Oceanic & Atmospheric Administration (NOAA).

(4821) (c) *Temporary, occasional or intermittent use*. If the use of the water area is desired for a short period of time, not to exceed thirty days in duration, and that planned operations can be conducted safely without imposing unreasonable restrictions on navigation, and without promulgating restricted area regulations in accordance with the regulations in this section, applicants may be informed that formal regulations are not required. Activities of this type shall not reoccur more often than biennially (every other year), unless danger zone/restricted area rules are promulgated under this part. Proper notices for mariners requesting that vessels avoid the area will be issued by the Agency requesting such use of the water area, or if appropriate, by the District Engineer, to all known interested persons. Copies will also be sent to appropriate State agencies, the Commandant, U.S. Coast Guard, Washington, DC 20590, and Director, National Geospatial-Intelligence Agency, Washington, DC 20390, ATTN: Code NS 12, Notification to all parties and Agencies shall be made at least two weeks prior to the planned event, or earlier, if required for distribution of Local Notice to Mariners by the Coast Guard.

(4822)

§334.4 Establishment and amendment procedures.

(4823) (a) *Application*. Any request for the establishment, amendment or revocation of a danger zone or restricted area must contain sufficient information for the District Engineer to issue a public notice, and as minimum must contain the following:

(4824) (1) Name, address and telephone number of requestor including the identity of the command and DoD facility and the identity of a point of contact with phone number.

(4825) (2) Name of waterway and if a small tributary, the name of a larger connecting waterbody.

(4826) (3) Name of closest city or town, country/parish and state.

(4827) (4) Location of proposed or existing danger zone or restricted area with a map showing the location, if possible.

(4828) (5) A brief statement of the need for the area, its intended use and detailed description of the times, dates and extent of restriction.

(4829) (b) *Public notice*. (1) The Corps will normally publish public notices and **FEDERAL REGISTER** documents concurrently. Upon receipt of a request for the establishment, amendment or revocation of a danger zone or restricted area, the District Engineer should forward a copy of the request with his/her recommendation, a copy of the draft public notice and a draft **FEDERAL REGISTER** document to the Office of the Chief of Engineers, ATTN: CECW-OR. The Chief of Engineers will publish the proposal in the **FEDERAL REGISTER** concurrent with the public notice issued by the District Engineer.

(4830) (2) *Content*. The public notice and **FEDERAL REGISTER** documents must include sufficient information to give a clear understanding of the proposed action and should include the following items of information:

(4831) (i) Applicable statutory authority or authorities; (40 Stat. 266; 33 U.S.C. 1) and (40 Stat. 892; 33 U.S.C. 3)

(4832) (ii) A reasonable comment period. The public notice should fix a limiting date within which comments will be received, normally a period not less than 30 days after publication of the notice.

(4833) (iii) The address of the District Engineer as the recipient of any comments received.

(4834) (iv) The identity of the applicant/proponent;

(4835) (v) The name or title, address and telephone number of the Corps employee from whom additional information concerning the proposal may be obtained;

(4836) (vi) The location of the proposed activity accompanied by a map of sufficient detail to show the boundaries of the area(s) and its relationship to the surrounding area.

(4837) (3) *Distribution*. Public notice will be distributed in accordance with **33 CFR 325.3(d)(1)**. In addition to this general distribution, public notices will be sent to the following Agencies:

(4838) (i) The Federal Aviation Administration (FAA) where the use of airspace is involved.

(4839) (ii) The Commander, Service Force, U.S. Atlantic Fleet, if a proposed action involves a danger zone off the U.S. Atlantic coast.

(4840) (iii) Proposed danger zones on the U.S. Pacific coast must be coordinated with the applicable commands as follows:

(4841) Alaska, Oregon and Washington:

(4842) Commander, Naval Base, Seattle, CA:

(4843) Commander, Naval Base, San Diego, Hawaii, and Trust Territories:

(4844) Commander, Naval Base, Pearl Harbor

(4845) (c) *Public hearing*. The District Engineer may conduct a public hearing in accordance with **33 CFR part 327**.

(4846) (d) *Environmental documentation*. The District Engineer shall prepare environmental documentation in accordance with appendix B to **33 CFR part 325**.

(4847) (e) *District Engineer's recommendation*. After closure of the comment period, and upon completion of the District Engineer's review he/she shall forward the case through channels to the Office of the Chief of Engineers, ATTN: CECW-OR with a recommendation of whether or not the danger zone or restricted area regulation should be promulgated. The District Engineer shall include a copy of environmental documentation prepared in accordance with appendix B to **33 CFR part 325**, the record of any public hearings, if held, a summary of any comments received and a response thereto, and a draft of the regulation as it is to appear in the **FEDERAL REGISTER**.

(4848) (f) *Final decision*. The Chief of Engineers will notify the District Engineer of the final decision to either approve or disapprove the regulations. The District Engineer will notify the applicant/proponent and publish a public notice of the final decision. Concurrent with issuance of the public notice the Office of the Chief of Engineers will publish the final decision in the **FEDERAL REGISTER** and either withdraw the proposed regulation or issue the final regulation, as appropriate. The final rule shall become effective no sooner than 30 days after publication in the **FEDERAL REGISTER** unless the Chief of Engineers finds that sufficient cause exists and publishes that rationale with the regulations.

(4849)

§334.5 Disestablishment of a danger zone.

(4850) (a) Upon receipt of a request from any agency for the disestablishment of a danger zone, the District Engineer shall notify that agency of its responsibility for returning the area to a condition suitable for use by the public. The agency must either certify that it has not used the area for a purpose that requires cleanup or that it has removed all hazardous materials and munitions, before the Corps will disestablish the area. The agency will remain responsible for the enforcement of the danger zone regulations to prevent unauthorized entry into the area until the area is deemed safe for use by the public and the area is disestablished by the Corps.

(4851) (b) Upon receipt of the certification required in paragraph (a) of this section, the District shall forward the request for disestablishment of the danger zone through channels to CECW-OR, with its recommendations. Notice of proposed rulemaking and public procedures as outlined in §334.4 are not normally required before publication of the final rule revoking a restricted area or danger zone regulation. The disestablishment/revocation of the danger zone or restricted area regulation removes a restriction on a waterway.

(4852)

§334.6 Datum.

(4853) (a) Geographic coordinates expressed in terms of latitude or longitude, or both, are not intended for plotting on maps or charts whose reference horizontal datum is the North American Datum of 1983 (NAD 83), unless such geographic coordinates are expressly labeled NAD 83. Geographic coordinates without the NAD 83 reference may be plotted on maps or charts referenced to NAD 83 only after application of the appropriate corrections that are published on the particular map or chart being used.

(4854) (b) For further information on NAD 83 and National Service nautical charts please contact: Director, Coast Survey (N/CG2), National Ocean Service, NOAA, 1315 East-West Highway, Station 6417, Silver Spring, MD 20910-3282.

(4855)

§334.610 Key West Harbor, at U.S. Naval Base, Key West, FL; naval restricted areas and danger zone.

(4856) (a) *The areas*. (1) All waters within 100 yards of the south shoreline of the Harry S. Truman Annex, beginning at a point on the shore at

(4857) 24°32'45.3"N., 81°47'51"W.; thence to a point 100 yards due south of the south end of Whitehead Street of

(4858) 24°32'42.3"N., 81°47'51"W.; thence extending westerly, paralleling the southerly shoreline of the Harry S. Truman Annex, to

(4859) 24°32'37.6"N., 81°48'32"W.; thence northerly to the shore at

(4860) 24°32'41"N., 81°48'31"W. (Area #1).

(4861) (2) All waters within 100 yards of the westerly shoreline of the Harry S. Truman Annex and all waters within a portion of the Truman Annex Harbor, as defined by a line beginning on the shore at

(4862) 24°33'00"N., 81°48'41.7"W.; thence to a point 100 yards due west at

(4863) 24°33'00"N., 81°48'45"W.; thence northerly, paralleling the westerly shoreline of the Harry S. Truman Annex, including a portion of the Truman Annex Harbor entrance, to

(4864) 24°33'23"N., 81°48'37"W.; thence southeasterly to the shore (sea wall) at

(4865) 24°33'19.3"N., 81°48'28.7"W. (Area #2).

(4866) (3) All waters within 100 yards of the U.S. Coast Guard Station and the westerly end of Trumbo Point Annex beginning at the shore at

(4867) 24°33'47.6"N., 81°47'55.6"W.; thence westerly to

(4868) 24°33'48"N., 81°48'00.9"W.; thence due south to

(4869) 24°33'45.8"N., 81°48'00.9"W.; thence westerly to

(4870) 24°33'47"N., 81°48'12"W.; thence northerly to

(4871) 24°34'06.2"N., 81°48'10"W.; thence easterly to a point joining the restricted area around Fleming Key at

(4872) 24°34'03.3"N., 81°47'55"W. (Area #3).

(4873) (4) Beginning at the last point designated in area 3 at 24°34.0550'N., 81°47.9166'W.; proceed in a northwesterly direction to a point at

(4874) 24°34.2725'N., 81°48.1304'W.; thence proceed in a northeasterly direction to a point at

(4875) 24°34.3562'N., 81°48.0192'W.; thence proceed in a northwesterly direction to a point at

(4876) 24°34.4506'N., 81°48.1444'W.; thence proceed in a northwesterly direction to a point at

(4877) 24°34.5619'N., 81°48.1873'W.; thence proceed in a northeasterly direction to a point at

(4878) 24°34.9084'N., 81°48.0945'W.; thence proceed in a northeasterly direction to a point at

(4879) 24°34.9809'N., 81°47.9400'W.; proceed in a general northerly direction maintaining a distance of 100 yards from the shoreline of Fleming Key, continue around Fleming Key to a point easterly of the southeast corner of Fleming Key at

(4880) 24°34.0133'N., 81°47.6250'W.; thence easterly to 24°33.9600'N., 81°47.3333'W.; thence southerly to a point on the shore at

(4881) 24°33.9117'N., 81°47.3450'W. The Department of the Navy plans to install buoys along that portion of the restricted area boundary which marks the outer edge of the explosive hazard safety distance requirements.

(4882) (5) All waters contiguous to the southwesterly shoreline of Boca Chica Key beginning at a point on the southwest shoreline at

(4883) 24°33'24"N., 81°42'30"W.; proceed due south 100 yards to

(4884) 24°33'20.4"N., 81°42'30"W.; thence, maintaining a distance 100 yards from the shoreline, proceed westerly and northerly to

(4885) 24°34'03"N., 81°42'47"W.; thence due north to a point at the easterly end of the U.S. Highway 1 (Boca Chica Channel) bridge at

(4886) 24°34'39"N., 81°42'47"W. (Area #5).

(4887) (6) *Danger zone*. All waters within an area along the northeast side of the Naval Air Station on Boca Chica Key defined by a line beginning at

(4888) 24°35.472'N., 81°41.824'W.; thence proceed in a northerly direction to a point at

(4889) 24°36.289'N., 81°41.437'W.; thence proceed westerly to a point at

(4890) 24°36.392'N., 81°41.970'W.; thence to a point on shore at

(4891) 24°35.698'N., 81°41.981'W.

(4892) (b) *The Regulations*: (1) Entering or crossing Restricted Areas #1 and #4 and the Danger Zone (Area #6) described in Paragraph (a) of this section is prohibited.

(4893) (2) Privately owned vessels, properly registered and bearing identification in accordance with Federal and/or State laws and regulations may transit the following portions of restricted areas #2, #3 and #5. NOTE: All vessels entering the areas at night must display lights as required by Federal laws and Coast Guard regulations or, if no constant lights are required, then the vessel must display a bright white light showing all around the horizon,

(4894) (i) The channel, approximately 75 yards in width, extending from the northwest corner of Pier D-3 of

Trumbo Point Annex, eastward beneath the Fleming Key bridge and along the north shore of Trumbo Point Annex (area #3).

(4895) (ii) A channel of 150 feet in width which extends easterly from the main ship channel into Key West Bight, the northerly edge of which channel passes 25 feet south of the Trumbo Point Annex piers on the north side of the Bight. While the legitimate access of privately owned vessels to facilities of Key West Bight is unimpeded, it is prohibited to moor, anchor, or fish within 50 feet of any U.S. Government-owned pier or craft (area #3).

(4896) (iii) The dredged portion of Boca Chica channel from its seaward end to a point due south of the east end of the Boca Chica Bridge (area #5).

(4897) (iv) All of the portion of Restricted Area No. 2 that lies between the Truman Annex Mole and the Key West Harbor Range Channel. The transit zone extends to the northeasterly corner of the Truman Annex Mole, thence to the northwesterly end of the breakwater at 24°33'21.3"N., 81°48'32.7"W.

(4898) (3) Stopping or landing by other than Government-owed vessels and specifically authorized private craft in any of the restricted areas or danger zone described in paragraph (a) of this section is prohibited.

(4899) (4) Vessels using the restricted channel areas described in paragraph (b)(2) (i), (ii), (iii), and (iv) of this section shall proceed at speeds commensurate with minimum wake.

(4900) (c) The regulations in this section shall be enforced by the Commanding Officer, Naval Air Station, Key West, FL, and such agencies as he/she may designate.

(4901)

§334.620 Straits of Florida and Florida Bay in vicinity of Key West, FL; operational training area, aerial gunnery range, and bombing and strafing target areas, Naval Air Station, Key West, FL

(4902) (a) *The danger zones*.–(1) Operational training area. Waters of the Straits of Florida and Gulf of Mexico southwest, west and northwest of Key West bounded as follows: Beginning at

(4903) 25°45'00"N., 82°07'00"W.; thence southeast to

(4904) 24°49'00"N., 81°55'00"W.; thence southwest to

(4905) 24°37'30"N., 82°00'30"W.; thence westerly to

(4906) 24°37'30"N., 82°06'00"W.; thence southerly to

(4907) 24°38'30"N., 82°06'00"W.; thence southerly to

(4908) 24°25'00"N., 82°06'30"W.; thence easterly to

(4909) 24°25'00"N., 81°57'00"W.; thence southwesterly to

(4910) 23°30'00"N., 82°19'00"W.; thence westerly to

(4911) 23°30'00"N., 82°46'00"W.; thence northwesterly to

(4912) 23°52'30"N., 83°11'00"W.; thence northerly to

(4913) 24°25'00"N., 83°11'00"W.; thence easterly to

(4914) 24°25'00"N., 83°08'00"W.; thence clockwise along the arc of a circle with a radius of 92 miles centered at

(4915) 24°35'00"N., 81°41'15"W. to

(4916) 25°45'05"N., 82°23'30"W.; thence east to point of beginning.

(4917) (2) Bombing and strafing target areas.

(4918) (i) A circular area immediately west of Marquesas Keys with a radius of two nautical miles having its center at latitude 24°33.4'N., and longitude 82°10.9'W., not to include land area and area within Marquesas Keys. The target located within this area, a grounded LSIL will be used for bombing and aircraft rocket exercises.

(4919) (ii) A circular area located directly west of Marquesas Keys with a radius of three statute miles having its center at

(4920) 24°35.6'N., 82°11.6'W., not to include land area within Marquesas Keys. The targets located within this area, pile-mounted platforms, will be used as high altitude horizontal bombing range utilizing live ordnance up to and including 1,800 pounds of high explosives. In general, these explosives will be of an air-burst type, above 1,500 feet.

(4921) (iii) A circular area located west of Marquesas Keys with a radius of two nautical miles having its center at

(4922) 24°34'30"N., 82°14'00"W.

(4923) (b) *The regulations*. (1) In advance of scheduled air or surface operations which, in the opinion of the enforcing agency, may be dangerous to watercraft, appropriate warnings will be issued to navigation interests through official government and civilian channels or in such other manner as the District Engineer, Corps of Engineers, Jacksonville, FL, may direct. Such warnings will specify the location, type, time, and duration of operations, and give such other pertinent information as may be required in the interests of safety.

(4924) (2) Watercraft shall not be prohibited from passing through the operational training area except when the operations being conducted are of such nature that the exclusion of watercraft is required in the interest of safety or for accomplishment of the mission, or is considered important to the national security.

(4925) (3) When the warning to navigation interests states that bombing and strafing operations will take place over the designated target areas or that other operations hazardous to watercraft are proposed to be conducted in a specifically described portion of the overall area, all watercraft will be excluded from the target area or otherwise described zone of operations and no vessel shall enter or remain therein during the period operations are in progress.

(4926) (4) Aircraft and naval vessels conducting operations in any part of the operational training area will exercise caution in order not to endanger watercraft. Operations which may be dangerous to watercraft will not be conducted without first ascertaining that the zone of operations is clear. Any vessel in the zone of operations will be warned to leave and upon being so warned the vessel shall leave immediately.

(4927) (5) The regulations in this section shall be enforced by the Commandant, Sixth Naval District, Charleston, S.C., and such agencies as he may designate.

(4928)

§334.630 Tampa Bay south of MacDill Air Force

Base, FL; small arms firing range and aircraft jettison, United States Air Force, MacDill Air Force Base.

(4929) (a) *The danger zone*. Shoreward of a line beginning at

(4930) 27°49'27.38"N., 82°29'35.83"W.; thence to

(4931) 27°49'20.14"N., 82°29'42.78"W.; thence to

(4932) 27°48'44.82"N., 82°31'10.00"W.; thence to

(4933) 27°49'09.35"N., 82°32'24.56"W.; thence to

(4934) 27°49'38.62"N., 82°33'02.44"W.; thence to a point on the shore line of MacDill Air Force Base at

(4935) 27°50'28.57"N., 82°32'15.00"W. The area will be marked by suitable boundary signs or buoys.

(4936) (b) *The regulations*. (1) All persons, vessels and other watercraft are prohibited from entering to danger zone at all times.

(4937) (2) Advance notice will be given of the date on which the first firing practice shall begin. At intervals of not more than three months thereafter, notice will be sent out that firing practice is continuing. Such notices will appear in local newspapers and in "Notice to Mariners."

(4938) (3) The regulations in the section shall be enforced by the proper Air Force Authority at MacDill Air Force Base.

(4939)

§334.635 Hillsborough Bay and waters contiguous to MacDill Air Force Base, FL; restricted area.

(4940) (a) *The area*. The restricted area shall encompass all navigable waters of the United States, as defined at 33 CFR 329, within the following boundaries. Commencing from the shoreline at the northeast portion of the base at

(4941) 27°51'52.901"N., 82°29'18.329"W., thence directly to

(4942) 27°52'00.672"N., 82°28'51.196"W., thence directly to

(4943) 27°51'28.859"N., 82°28'10.412"W., thence directly to

(4944) 27°51'01.067"N., 82°27'45.355"W., thence directly to

(4945) 27°50'43.248"N., 82°27'36.491"W., thence directly to

(4946) 27°50'19.817"N., 82°27'35.466"W., thence directly to

(4947) 27°49'38.865"N., 82°27'43.642"W., thence directly to

(4948) 27°49'20.204"N., 82°27'47.517"W., thence directly to

(4949) 27°49'06.112"N., 82°27'52.750"W., thence directly to

(4950) 27°48'52.791"N., 82°28'05.943"W., thence directly to

(4951) 27°48'45.406"N., 82°28'32.309"W., thence directly to

(4952) 27°48'52.162"N., 82°29'26.672"W., thence directly to

(4953) 27°49'03.600"N., 82°30'23.629"W., thence directly to

(4954) 27°48'44.820"N., 82°31'10.000"W., thence directly to

(4955) 27°49'09.350"N., 82°32'24.556"W., thence directly to

(4956) 27°49'38.620"N., 82°33'02.444"W., thence directly to

(4957) 27°49'56.963"N., 82°32'45.023"W., thence directly to

(4958) 27°50'05.447"N., 82°32'48.734"W., thence directly to

(4959) 27°50'33.715"N., 82°32'45.220"W., thence directly to a point on the western shore of the base at

(4960) 27°50'42.836"N., 82°32'10.972"W. The restricted area will encompass an existing Danger Zone (§334.630).

(4961) (b) *The regulations*. (1) All persons, vessels, and other craft are prohibited from entering, transiting, anchoring, or drifting within the area described in paragraph (a) of this section for any reason without the permission of the Commander, MacDill Air Force Base, Florida, or his/her authorized representative.

(4962) (2) The restriction noted in paragraph (b)(1) of this section is in effect 24 hours a day, 7 days a week.

(4963) (c) *Enforcement*. The regulations in this section shall be enforced by the Commander, MacDill Air Force Base, FL, and/or such persons or agencies as he/she may designate.

(4964)

§334.640 Gulf of Mexico south of Apalachee Bay, FL; Air Force rocket firing range.

(4965) (a) *The danger zone*. An area about 45 statute miles wide and 60 statute miles long, approximately parallel to and about 30 miles off the west coast of Florida, south of Apalachee Bay. The area is bounded as follows: Beginning at

(4966) 29°42'30"N., 84°40'00"W.; thence east along

(4967) 29°42'30"N., 84°00'00"W.; thence southeast to

(4968) 28°56'00"N., 83°31'00"W.; thence southwest to

(4969) 28°37'00"N., 84°11'00"W.; thence northwest to

(4970) 29°17'30"N., 84°40'00"W.; thence northwest to

(4971) 29°32'00"N., 85°00'00"W.; thence northeast along a line three miles off the meanderings of the shore to the point of beginning.

(4972) (b) *The regulations*. (1) The fact that aerial rocket firing will be conducted over the danger zone will be advertised to the public through the usual media for the dissemination of information. Inasmuch as such firing is likely to be conducted during the day or night throughout the year without regard to season, such advertising of firing will be repeated at intervals not exceeding three months and at more frequent intervals when in the opinion of the enforcing agency, repetition is necessary in the interest of public safety.

(4973) (2) Prior to the conduct of rocket firing, the area will be patrolled by surface patrol boat and/or patrol aircraft to insure that no persons or watercraft are within the danger zone and to warn any such persons or watercraft seen in the vicinity that rocket firing is about to take place in the

area. When aircraft is used to patrol the area, low flight of the aircraft across the bow will be used as a signal or warning.

(4974) (3) Any such person or watercraft shall, upon being so warned, immediately leave the area, and until the conclusion of the firing shall remain at such a distance that they will be safe from the fallout resulting from such rocket firing.

(4975) (4) The regulations in this section shall not deny access to or egress from harbors contiguous to the danger zone in the case of regular passenger or cargo carrying vessels proceeding to or from such harbors. In the case of the presence of any such vessel in the danger zone the officer in charge shall cause the cessation or postponement of fire until the vessel shall have cleared that part of the area in which it might be endangered by the fallout. The vessel shall proceed on its normal course and shall not delay its progress unnecessarily. Masters are requested to avoid the danger zone whenever possible so that interference with firing training may be minimized.

(4976) (c) The regulations in this section shall be enforced by the Commander, Moody Air Force Base, Valdosta, Georgia, and such agencies as he may designate.

(4977)

§334.650 Gulf of Mexico, south of St. George Island, FL; test firing range.

(4978) (a) *The danger zone*. A fanshaped area bounded as follows:

(4979) NW corner (29°35'15"N., 85°03'12"W.)

(4980) SW corner (29°31'18"N., 85°07'31"W.)

(4981) SE corner (29°30'18"N., 84°59'18"W.)

(4982) NE corner (29°35'09"N., 85°01'53"W.)

(4983) The seaward end of the area is an arc with a 10,500 meter radius with its center located on the south shore line of St. George Island 1,500 feet east of Cape St. George Light.

(4984) (b) *The regulations*. (1) The area shall be used from sunrise to sunset daily Mondays through Fridays for test firing helicopter armament.

(4985) (2) During firing, the entire area plus 5 miles beyond in all directions shall be kept under surveillance by one control helicopter equipped with FM and UHF communications to the Safety Office at range control to insure cease fire if an aircraft or surface vessel is observed approaching the area.

(4986) (3) The regulations in this section shall be enforced by the Commanding Officer, U.S. Army Aviation Test Board, Fort Rucker, AL, and such agencies as he may designate.

(4987)

§334.660 Gulf of Mexico and Apalachicola Bay south of Apalachicola, FL, Drone Recovery Area, Tyndall Air Force Base, Florida.

(4988) (a) *The restricted area*. A rectangular area excluding St. George Island with the eastern boundary of the area west of the channel through St. George Island within the following co-ordinates: Beginning at a point designated as the northeast corner.

(4989) 29°38'20"N., 84°58'30"W.; thence southeast to

(4990) 29°35'23"N., 84°56'54"W.; thence southwest to

(4991) 29°34'15"N., 85°00'35"W.; thence northwest to

(4992) 29°37'10"N., 85°02'00"W.; thence northeast to point of beginning.

(4993) (b) *The regulations*. (1) The area will be used twice daily and during usage will be restricted to navigation for a period of one hour. It may be used freely at all other times.

(4994) (2) Patrol boats and aircraft will warn all persons and navigation out of the area before each testing period.

(4995) (3) The federal regulations in this section shall be enforced by the Installation Commander, Tyndall Air Force Base, Florida, and such other agencies as he/she may designate.

(4996)

§334.665 East Bay, St. Andrew Bay and St. Andrew Sound, enhanced threat restricted area, Tyndall Air Force Base, Florida.

(4997) (a) *The area*. (1) The coordinates provided herein are approximations obtained using a commercial mapping program which utilizes simple cylindrical projection with a WGS84 datum for its imagery base and imagery dated February 15 and May 3, 2014.

(4998) (2) Each portion of the temporary restricted area described in paragraphs (a)(4)(i) through (xxiii) of this section shall encompass all navigable waters of the United States as defined at **33 CFR part 329** within the area described and includes all contiguous inland navigable waters which lie within the land boundaries of Tyndall Air Force Base (AFB).

(4999) (3) Because of the dynamic nature of these geographic features near barrier islands, the coordinate points provided may not reflect the current situation regarding the location of a point at the mean high water line or 500 feet waterward of the mean high water line. Even if the landform has shifted through erosion or accretion, the intent of the area description will be enforced from the existing point at the mean high water line that is closest to the shoreline point provided herein out to a point located 500 feet waterward of the mean high water line.

(5000) (4) The restricted area will be partitioned using 23 pairs of coordinates to facilitate quick geographic recognition. The first point in each pair of coordinates is located on the shoreline, and the second point is a point 500 feet waterward of the shoreline. From the first point in each pair of coordinates, a line meanders irregularly following the shoreline and connects to the first point in the next pair of coordinates. From the second point in each pair of coordinates, a line beginning 500 feet waterward of the shoreline meanders irregularly following the shoreline at a distance of 500 feet waterward of the shoreline and connects to the second point in the next pair of coordinates. The restricted area shall encompass all navigable waters of the United States as defined at

33 CFR part 329 within the area bounded by lines connecting each of the following pairs of coordinates:

(5001) (i) *Farmdale Bayou*: 30°1.156′ N., 85°26.915′ W. to 30°1.238′ N., 85°26.915′ W.

(5002) (ii) *Baker Bayou*: 30°1.325′ N., 85°29.008′ W. to 30°1.402′ N., 85°28.977′ W.

(5003) (iii) *Blind Alligator Bayou*: 30°2.094′ N., 85°29.933′ W. to 30°2.151′ N., 85°29.864′ W.

(5004) (iv) *Little Oyster Bay Point*: 30°3.071′ N., 85°30.629′ W. to 30°3.133′ N., 85°30.568′ W.

(5005) (v) *Goose Point South*: 30°3.764′ N., 85°31.874′ W. to 30°3.719′ N., 85°31.795′ W.

(5006) (vi) *Goose Point North*: 30°4.599′ N., 85°31.577′ W. to 30°4.650′ N., 85°31.503′ W.

(5007) (vii) *Little Cedar Bayou*: 30°4.974′ N., 85°33.476′ W. to 30°5.024′ N., 85°33.401′ W.

(5008) (viii) *Chatters on Bayou*: 30°5.729′ N., 85°34.632′ W. to 30°5.811′ N., 85°34.625′ W.

(5009) (ix) *Fred Bayou*: 30°5.992′ N., 85°35.296′ W. to 30°6.071′ N., 85°35.325′ W.

(5010) (x) *Pearl Bayou*: 30°6.039′ N., 85°36.651′ W. to 30°6.043′ N., 85°36.557′ W.

(5011) (xi) *Military Point*: 30°7.394′ N., 85°37.153′ W. to 30°7.459′ N., 85°37.096′ W.

(5012) (xii) *Freshwater Bayou*: 30°7.425′ N., 85°38.655′ W. to 30°7.473′ N., 85°38.578′ W.

(5013) (xiii) *Smack Bayou*: 30°7.826′ N., 85°39.654′ W. to 30°7.838′ N., 85°39.560′ W.

(5014) (xiv) *Redfish Point*: 30°8.521′ N., 85°40.147′ W. to 30°8.598′ N., 85°40.113′ W.

(5015) (xv) *Davis Point*: 30°7.348′ N., 85°41.224′ W. to 30°7.364′ N., 85°41.317′ W.

(5016) (xvi) *Tyndall Marina*: 30°5.827′ N., 85°39.125′ W. to 30°5.762′ N., 85°39.184′ W.

(5017) (xvii) *Heritage Bayou*: 30°3.683′ N., 85°35.823′ W. to 30°3.743′ N., 85°35.887′ W.

(5018) (xviii) *NCO Beach North*: 30°4.209′ N., 85°37.430′ W. to 30°4.272′ N., 85°37.368′ W. The restricted Area will end on the west side of the land bridge that extends into Shell Island. The Restricted Area resumes on the east side of the land bridge that extends into St. Andrew Sound.

(5019) (xix) *St. Andrew Sound west*: 30°1.327′ N., 85°33.756′ W. to 30°1.377′ N., 85°33.681′ W.

(5020) (xx) *St. Andrew Sound northwest*: 30°1.921′ N., 85°33.244′ W. to 30°1.869′ N., 85°33.317′ W.

(5021) (xxi) *St. Andrew Sound northeast*: 30°0.514′ N., 85°31.558′ W. to 30°0.452′ N., 85°31.619′ W.

(5022) (xxii) *Wild Goose Lagoon*: 29°59.395′ N., 85°30.178′ W. to 29°59.319′ N., 85°30.216′ W.

(5023) (xxiii) *Crooked Island North*: 29°59.003′ N., 85°30.396′ W. to 29°59.082′ N., 85°30.371′ W.

(5024) (b) *The regulations*. (1) Unless one or more portions of the restricted area identified in paragraphs (a)(4)(i) through (xxiii) of this section is activated, all persons, vessels and other craft are permitted access to all of the navigable waters described in paragraph (a) of this section.

(5025) (2) During times when the restricted area defined in paragraphs (a)(4)(i) through (xxiii) of this section is not active, U.S. Air Force boat patrols may operate in the waters adjacent to Tyndall AFB's shoreline to observe the shoreline in order to identify any threats to the installation or personnel. U.S. Air Force personnel will not have any authority to enforce federal, state, or local laws on the water.

(5026) (3) Due to the nature of security threats, restricted area activation may occur with little advance notice. Activation will be based on local or national intelligence information related to threats against military installations and/or resources common to Tyndall AFB in concert with evaluations conducted by the Tyndall AFB Threat Working Group and upon direction of the Installation Commander, Tyndall AFB. The Installation Commander activates only those portions of the restricted area identified in paragraphs (a)(4)(i) through (xxiii) of this section that are necessary to provide the level of security required in response to the specific and credible threat(s) triggering the activation. The duration of activation for any portion(s) of the restricted area defined in paragraph (a) of this section, singularly or in combination, will be limited to those periods where it is warranted or required by security threats. Activated portions of the restricted area will be reevaluated every 48 hours to determine if the threat(s) triggering the activation or related threats warrant continued activation. The activated portion(s) of the restricted area expire if no reevaluation occurs or if the Installation Commander determines that activation is no longer warranted.

(5027) (4) Public notification of a temporary waterway restricted area activation by the Installation Commander will be made by the 325 Fighter Wing Public Affairs office using all available mediums (marine VHF broadcasts [channels 13 and 16], local notices to mariners, local news media releases, social media postings on both the Tyndall official Web page [*www.tyndall.af.mil*] and Facebook [*www.facebook.com/325FWTyndall*], radio beepers through locally broadcasting stations, and the Tyndall Straight Talk [recorded telephone line 1–478–222–0011]). These mediums will be updated should the waterway restriction be extended beyond the initial 48 hour activation and/or terminated upon direction of the Installation Commander.

(5028) (5) During times when the Installation Commander activates any portion(s) of the temporary restricted area defined in paragraph (a) of this section all entry, transit, drifting, anchoring or attaching any object to the submerged sea-bottom within the activated portion(s) of the restricted area is not allowed without the written permission of the Installation Commander, Tyndall AFB, Florida or his/her authorized representative. Previously affixed mooring balls established to support watercraft during intense weather conditions (i.e., tropical storms, hurricanes, etc.) may remain within the activated portion(s) of the restricted area, however watercraft should not be anchored to the mooring balls without the

permission of the Installation Commander, Tyndall AFB, Florida or his/her authorized representative.

(5029) (c) *Enforcement*. The regulations in this section shall be enforced by the Installation Commander, Tyndall AFB and/or such persons or agencies as he/she may designate.

(5030)

§334.670 Gulf of Mexico south and west of Apalachicola, San Blas, and St. Joseph Bays; air-to-air firing practice range, Tyndall Air Force Base, FL

(5031) (a) *The danger zone*. Beginning at

(5032) 29°40'00", 85°21'30", in the vicinity of Cape San Blas; thence southeasterly to

(5033) 29°23'00", 84°39'00"; thence southwesterly to

(5034) 28°39'00", 84°49'00"; thence northwesterly to

(5035) 29°43'00", 85°53'00"; thence northeasterly to

(5036) 29°56'30", 85°38'30"; and thence southeasterly to the point of beginning.

(5037) (b) *The regulations*. (1) Air-to-air firing practice will ordinarily take place in the area during the hours of daylight, seven days per week. During periods of firing, passage through the area will not be denied to cargo-carrying or passenger-carrying vessels or tows proceeding on established routes. In case any such vessel is within the danger area, the officer in charge of firing practice operations will cause the cessation or postponement of fire until the vessel has cleared that part of the area within range of the weapons being used. The vessel shall proceed on its normal course and not delay its progress.

(5038) (2) All persons and vessels will be warned to leave the danger area during firing practice by surface patrol boat and/or patrol aircraft. When aircraft is used to patrol the area, low flight of the aircraft overhead and/or across the bow will be used as a signal or warning. Upon being so warned all persons and vessels shall clear the area immediately.

(5039) (3) The area will be open to all vessels whenever firing practice is not being conducted.

(5040) (4) The regulations in this section shall be enforced by the Commanding Officer, Tyndall Air Force Base, Florida, and such agencies as he may designate.

(5041)

§334.680 Gulf of Mexico, southeast of St. Andrew Bay East Entrance, Small Arms Firing Range, Tyndall Air Force Base, FL

(5042) (a)–*The Danger Zones*–(1) *Area No. 1*. The waters of the Gulf of Mexico, southeast of St. Andrew Bay East Entrance within a rectangular area beginning at a point on shore at

(5043) 30°04'32"N., 85°37'07"W.; thence to

(5044) 30°03'03"N., 85°38'42"W.; thence to

(5045) 30°02'14"N., 85°37'15"W.; thence to a point on shore at

(5046) 30°04'13"N., 85°36'47"W.; thence along the shoreline to the point of beginning.

(5047) (2) *Area No. 2*. The waters of the Gulf of Mexico and St. Andrew Sound within an area described as follows, but excluding Crooked Island: Beginning at a point on shore at

(5048) 30°02'56"N., 85°34'35"W.; thence to

(5049) 30°02'18"N., 85°36'18"W.; thence to

(5050) 30°01'24"N., 85°35'40"W.; thence to

(5051) 30°00'45"N., 85°34'41"W.; thence to a point on shore at

(5052) 30°02'10"N., 85°33'42"W.; thence along the shore line to the point of beginning.

(5053) (b) *The regulations*. (1) No person, vessel or other watercraft shall enter or remain in the areas during periods of firing. Area No. 1 will be used for firing practice between 6:30 a.m. and 5:00 p.m., as scheduled, Monday through Friday, with possibly some sporadic firings on Saturdays and Sundays. A 10' x 18' red flag will be displayed on a pole at the shoreline whenever firing is in progress.

(5054) (2) *Area No. 2* will be operated on a sporadic schedule, with firings likely each day including Saturdays, Sundays, and holidays, between the hours of 6:00 a.m. and 5:00 p.m. A 10' x 18' red flag will be displayed on a pole at the shore line whenever firing is in progress.

(5055) (3) The regulations in this section shall be enforced by the Commanding Officer, Tyndall Air Force Base, Florida, and such agencies as he may designate.

(5056)

§334.700 Choctawhatchee Bay, aerial gunnery ranges, Air Armament Center, Eglin Air Force Base, FL.

(5057) (a) *The danger zones*. (1) Aerial gunnery range in west part of Choctawhatchee Bay. The danger zone shall encompass all navigable waters of the United States as defined at 33 CFR part 329, including the waters of Choctawhatchee Bay within an area bounded by a line connecting the following coordinates, excluding that part of the area included within the aerial gunnery range along the north shore of Choctawhatchee Bay as described in paragraph (a)(2) of this section: Commencing at the northeast shore at

(5058) 30°28'09.11"N., 086°29'02.30"W.; thence to

(5059) 30°25'30"N., 086°21'30"W.; thence to

(5060) 30°23'34.72"N., 086°23'00.22"W.; then following the shoreline at the mean high water line to

(5061) 30°24'09.45"N., 086°25'00.08"W.; thence to the southwest shore at

(5062) 30°27'54.18"N., 086°29'18.32"W.; then following the shoreline at the mean high water line easterly to point of origin.

(5063) (2) *Aerial gunnery range along north shore of Choctawhatchee Bay*. The danger zone shall encompass all navigable waters of the United States as defined at 33 CFR part 329, including the waters of Choctawhatchee Bay within an area bounded by a line connecting the following coordinates: Commencing at the northwest shore at

(5064) 30°27'26"N., 086°25'30"W.; thence to

(5065) 30°26'00"N., 086°25'30"W.; thence to

(5066) 30°26'57"N., 086°20'35"W.; thence to

(5067) 30°26'12"N., 086°20'35"W.; thence to

(5068) 30°26'29"N., 086°15'00"W.; thence to the northeast shore at

(5069) 30°29'08.7"N., 086°15'00"W.; then following the shoreline at the mean high water line easterly to point of origin.

(5070) (b) *The regulations*. (1) Aerial gunnery range in west part of Choctawhatchee Bay. The aerial gunnery range in the west part of Choctawhatchee Bay (as described in paragraph (a)(1) of this section) may be used by persons and watercraft except during periods when firing is conducted. Use of the area will be advertised in advance by Eglin AFB Public Affairs. During periods of firing, traverse of this area shall not be denied to regular cargo-carrying or passenger-carrying vessels or tows proceeding on established routes. In case any such vessel is within the area, the officer in charge of gunnery operations will cause the cessation or postponement of fire until the vessel has cleared that part of the area within the range of the weapons being used. The vessel shall proceed on its normal course and shall not delay its progress.

(5071) (2) *Aerial gunnery range along north shore of Choctawhatchee Bay*. No person, vessel or other craft shall enter or remain within the aerial gunnery range along the north shore of Choctawhatchee Bay (as described in paragraph (a)(2) of this section) during times the area is active. Activation of the area will be advertised in advance by Eglin AFB Public Affairs.

(5072) (c) *Enforcement.* (1) The regulations in this section shall be enforced by the Commander, 96 Air Base Wing, Eglin AFB, Florida and such agencies as he/she may designate.

(5073) (2) Enforcement of the regulations in this section will be accomplished in accordance with the active security level as defined by the Department of Defense Force Protection Condition (FPCON) System.

(5074)

§334.710 The Narrows and Gulf of Mexico adjacent to Santa Rosa Island, Headquarters Air Armament Center, Eglin Air Force Base, FL.

(5075) (a) *The restricted area*. The restricted area shall encompass all navigable waters of the United States as defined at 33 CFR part 329, including the waters of The Narrows and the Gulf of Mexico easterly of the periphery of a circular area five nautical miles in radius, centered at

(5076) 30°23'10.074"N., 086°48'25.433"W. (USC&GS Station Tuck 3), within the segment of a circle, three nautical miles in radius, centered at

(5077) 30°24'00"N., 086°41'47"W.

(5078) (b) *The regulations*. The area will be used intermittently during daylight hours. During periods of use the entry into the area will be prohibited to all persons and navigation. Notifications will be via Eglin AFB water patrol and published in local news media in advance.

(5079) (c) *Enforcement*. (1) The regulations in this section shall be enforced by the Commander, 96 Air Base Wing, Eglin AFB, Florida and such agencies as he/she may designate.

(5080) (2) Enforcement of the regulations in this section will be accomplished in accordance with the active security level as defined by the Department of Defense Force Protection Condition (FPCON) System.

(5081)

§334.720 Gulf of Mexico, south from Choctawhatchee Bay; Missile test area.

(5082) (a) *The danger zone*. The danger zone shall encompass all navigable waters of the United States as defined at 33 CFR part 329, including the waters of the Gulf of Mexico south from Choctawhatchee Bay within an area described as follows: Beginning at a point five nautical miles southeasterly from USC&GS Station Tuck 3, at

(5083) 30°23'10.074"N., 086°48'25.433"W., three nautical miles offshore of Santa Rosa Island; thence easterly three nautical miles offshore and parallel to shore, to a point south of Apalachicola Bay, Florida at

(5084) 29°32'00"N., 085°00'00"W.; thence southeasterly to

(5085) 29°17'30"N., 084°40'00"W.; thence southwesterly to

(5086) 28°40'00"N., 084°49'00"W.; thence southeasterly to

(5087) 28°10'00"N., 084°30'00"W.; thence 270° true to 086°48'00"W.; thence due north along 086°48'00"W to the intersection of the line with a circle of five nautical miles radius centered on USC&GS Station Tuck 3, at

(5088) 30°23'10.074"N., 086°48'25.433"W., thence northeasterly along the arc of the circle to the point of beginning.

(5089) (b) *The regulations*. (1) The area will be used intermittently during daylight hours for a week or 10 days at a time. Firing will take place once or twice a day for periods ordinarily of not more than one hour. Advance notice of such firings will be published in local newspapers.

(5090) (2) During periods of firing, passage through the area will not be denied to cargo-carrying or passenger-carrying vessels or tows proceeding on established routes. In case any such vessel is within the danger zone, the officer in charge of firing operations will cause the cessation or postponement of fire until the vessel has cleared the portion of the danger area involved. The entire area involved will be under constant observation of both surface patrol vessels and air patrol planes prior to and during periods of firing and notice will be given to vessels and tows of intention to fire by buzzing low over the vessel, upon which signal vessels and tows shall proceed on their established course promptly and clear the area as soon as possible.

(5091) (3) All persons and vessels, except those identified in paragraph (b)(2) of this section, will be warned to leave the immediate danger area during firing periods by surface patrol craft. Upon being so warned, such persons and vessels shall clear the area immediately. Such periods normally will not exceed two hours.

(5092) (c) *Enforcement.* (1) The regulations in this section shall be enforced by the Commander, 96 Air Base Wing, Eglin AFB, Florida and such agencies as he/ she may designate.

(5093) (2) Enforcement of the regulations in this section will be accomplished in accordance with the active security level as defined by the Department of Defense Force Protection Condition (FPCON) System.

(5094)

§334.730 Waters of Santa Rosa Sound and Gulf of Mexico adjacent to Santa Rosa Island, Armament Center, Eglin Air Force Base, FL.

(5095) (a) *The areas*. (1) *The danger zone*. The danger zone shall encompass all navigable waters of the United States as defined at **33 CFR part 329**, including the waters of Santa Rosa Sound and Gulf of Mexico within a circle one nautical mile in radius, centered at 30°23'10.074"N., 086°48'25.433"W (USC&GS Station Tuck 3). The portion of the area in Santa Rosa Sound includes the Gulf Intracoastal Waterway between miles 209.6 and 211.4 as measured from the Harvey Lock, LA, "zero mile" location.

(5096) (2) *The restricted areas*. (i) *Area 1*. The restricted area shall encompass all navigable waters of the United States as defined at **33 CFR part 329**, including the waters of Santa Rosa Sound and Gulf of Mexico, surrounding the danger zone described in paragraph (a)(1) of this section, within a circle five nautical miles in radius centered at 30°23'10.074"N., 086°48'25.433"W (USC&GS Station Tuck 3). The portion of the area in Santa Rosa Sound includes the Gulf Intracoastal Waterway between mile designation 204.6 and 216.4 as measured from the Harvey Lock, LA, "zero mile" location.

(5097) (ii) *Area 2. Santa Rosa Island, North Side*. The restricted area shall encompass all navigable waters of the United States as defined at **33 CFR part 329** within the area bounded by a line connecting the following coordinates: Commencing from the shoreline at

(5098) 30°24'06.58"N., 086°40'25.00"W.; thence to

(5099) 30°24'08.08"N., 086°40'25.00"W.; then the line meanders irregularly, following the shoreline at a distance of 150 feet seaward from the mean high water line to a point at

(5100) 30°23'12.34"N., 086°50'57.62"W., thence proceeding directly to a point on the shoreline at

(5101) 30°23'10.85"N., 086°50'57.62"W. The area also includes all contiguous inland navigable waters which lie within the land boundaries of Eglin AFB.

(5102) (iii) *Area 3. Choctawhatchee Bay, North side-Hurlburt Field*. The restricted area shall encompass all navigable waters of the United States as defined at **33 CFR part 329** within the area bounded by a line connecting the following coordinates: Commencing from the shoreline at

(5103) 30°24'28.30"N., 086°40'54.91"W.; thence to

(5104) 30°24'26.32"N., 086°40'54.91"W.; then the line meanders irregularly, following the shoreline at a distance of 200 feet seaward from the mean high water line to a point at

(5105) 30°24'20.92"N., 086°41'45.96"W.; thence directly to

(5106) 30°24'23.31"N., 086°42'00.20"W.; thence directly to

(5107) 30°24'28.83"N., 086°42'07.42"W.; thence directly to

(5108) 30°24'25.98"N., 086°42'17.12"W.; thence directly to

(5109) 30°24'26.31"N., 086°42'19.82"W.; then the line meanders irregularly following the shoreline at a distance of 200 feet seaward from the mean high water line to a point at

(5110) 30°24'28.80"N., 086°42'53.83"W., thence proceeding directly to a point on the shoreline at

(5111) 30°24'30.79"N., 086°42'53.83"W.

(5112) (b) *The regulations*. (1) *The danger zone*. (i) Experimental test operations will be conducted by the U.S. Air Force (USAF) within the danger zone. During periods when experimental test operations are underway, no person, vessel or other watercraft shall enter or navigate the waters of the danger zone.

(5113) (ii) The area identified in paragraph (a)(1) of this section and the associated restrictions described in paragraph (b)(1)(i) of this section are in effect 24 hours a day, 7 days a week. The area is used on an intermittent basis and, generally, any test operations shall not exceed one hour and shall not occur more than twice weekly.

(5114) (2) *The restricted areas*. (i) All persons, vessels and other craft are permitted access to the restricted areas described in paragraph (a)(2) of this section. Any person or vessel within the restricted areas will be subject to identification checks by USAF patrol boats. During times of high security threats against Eglin AFB or Hurlburt Field, all entry, transit, anchoring or drifting within the restricted areas described in paragraph (a)(2) of this section for any reason is not allowed without permission of Eglin AFB or the Hurlburt Field Commander or his/ her authorized representative, except to navigate the Gulf Intracoastal Waterway. Such vessels and other watercraft shall confine their movements to the waters within the limits of the Intracoastal Waterway and shall make the passage as promptly as possible under normal vessel speed.

(5115) (ii) The areas identified in paragraph (a)(2) of this section and the associated restrictions described in paragraph (b)(2)(i) of this section are in effect 24 hours a day, 7 days a week.

(5116) (c) *Enforcement.* (1) The regulations in this section shall be enforced by the Commander, 96 Air Base Wing, Eglin AFB, Florida and such agencies as he/she may designate.

(5117) (2) Enforcement of the regulations in this section will be accomplished in accordance with the active security level as defined by the Department of Defense Force Protection Condition (FPCON) System.

(5118)

§334.740 North Shore Choctawhatchee Bay, Eglin Air Force Base, FL.

(5119) (a) *The area*. The restricted area shall encompass all navigable waters of the United States as defined at 33 CFR part 329 within the area bounded by a line connecting the following coordinates: Commencing from the shoreline at

(5120) 30°28'59.90"N., 086°29'08.88"W.; thence to

(5121) 30°28'59.61"N., 086°29'01.81"W.; thence to

(5122) 30°29'08.01"N., 086°28'47.78"W.; then following the mean high water line at a distance of 1,000 feet to a point at

(5123) 30°26'48.60"N., 086°32'31.95"W., thence proceeding directly to a point on the shoreline at

(5124) 30°26'53.58"N., 086°32'41.81"W. The area also includes all contiguous inland navigable waters that lie within the land boundaries of Eglin AFB.

(5125) (b) *The regulations*. (1) All persons, vessels and other craft are permitted access to the restricted area described in paragraph (a) of this section. Any person or vessel within the restricted area will be subject to identification checks by U.S. Air Force patrol boats. During times of high security threats against Eglin AFB, all entry, transit, anchoring or drifting within the restricted area described in paragraph (a) of this section for any reason is not allowed without the permission of the Commander, 96 Air Base Wing, Eglin AFB, and his/her authorized representative.

(5126) (2) The area identified in paragraph (a) of this section and the associated restrictions described in paragraph (b) (1) of this section are in effect 24 hours a day, 7 days a week.

(5127) (c) *Enforcement.* (1) The regulations in this section shall be enforced by the Commander, 96 Air Base Wing, Eglin AFB, Florida and such agencies as he/she may designate.

(5128) (2) Enforcement of the regulations in this section will be accomplished in accordance with the active security level as defined by the Department of Defense Force Protection Condition (FPCON) System.

(5129)

§334.742 Eglin Camp Pinchot, FL, at Eglin Air Force Base, FL; Restricted Area.

(5130) (a) *The area*. The restricted area shall encompass all navigable waters of the United States, as defined at **33 CFR part 329**, within the area bounded by a line connecting the following coordinates: Commencing from the shoreline at

(5131) 30°28'18.68"N., 086°35'38.66"W.; thence to

(5132) 30°28'20.80"N., 086°35'36.25"W.; then the line meanders irregularly, following the shoreline at a distance of 300 feet seaward from the mean high water line to a point at

(5133) 30°28'06.02"N., 086°35'39.18"W., thence proceeding directly to a point on the shoreline at

(5134) 30°28'07.47"N., 086°35'42.17"W.

(5135) (b) *The regulations*. (1) All persons, vessels and other craft are permitted access to the restricted area described in paragraph (a) of this section. Any person or vessel within the restricted area will be subject to identification checks by U.S. Air Force patrol boats. During times of high security threats against Eglin AFB, all entry, transit, anchoring or drifting within the restricted area described in paragraph (a) of this section for any reason is not allowed without the permission of the Commander, Eglin AFB, Florida, or his/ her authorized representative.

(5136) (2) The area identified in paragraph (a) of this section and the associated restrictions described in paragraph (b) (1) of this section are in effect 24 hours a day, 7 days a week.

(5137) (c) *Enforcement*. (1) The regulations in this section shall be enforced by the Commander, 96 Air Base Wing, Eglin AFB, Florida and such agencies as he/she may designate.

(5138) (2) Enforcement of the regulations in this section will be accomplished in accordance with the active security level as defined by the Department of Defense Force Protection Condition (FPCON) System.

(5139)

§334.744 Eglin Poquito Housing at Eglin Air Force Base, FL; Restricted Area.

(5140) (a) *The area*. The restricted area shall encompass all navigable waters of the United States, as defined at **33 CFR part 329**, within the area bounded by a line connecting the following coordinates: Commencing from the shoreline at

(5141) 30°27'11.68"N., 086°34'32.87"W.; thence to

(5142) 30°27'11.86"N., 086°34'34.59"W.; then the line meanders irregularly, following the shoreline at a distance of 150 feet seaward from the mean high water line to a point at

(5143) 30°27'31.25"N., 086°34'38.56"W., thence proceeding directly to a point on the shoreline at

(5144) 30°27'34.07"N., 086°34'35.67"W.

(5145) (b) *The regulations*. (1) All persons, vessels and other craft are permitted access to the restricted area described in paragraph (a) of this section. Any person or vessel within the restricted area will be subject to identification checks by U.S. Air Force patrol boats. During times of high security threats against Eglin AFB, all entry, transit, anchoring or drifting within the restricted area described in paragraph (a) of this section for any reason is not allowed without the permission of the Commander, Eglin AFB, Florida, or his/ her authorized representative.

(5146) (2) The area identified in paragraph (a) of this section and the associated restrictions described in paragraph (b) (1) of this section are in effect 24 hours a day, 7 days a week.

(5147) (c) *Enforcement*. (1) The regulations in this section shall be enforced by the Commander, 96 Air Base Wing, Eglin AFB, Florida and such agencies as he/ she may designate.

(5148) (2) Enforcement of the regulations in this section will be accomplished in accordance with the active security level as defined by the Department of Defense Force Protection Condition (FPCON) System.

(5149)

§334.746 U.S. Coast Guard, Destin Station at Eglin Air Force Base, FL; Restricted Area.

(5150) (a) *The area*. The restricted area shall encompass all navigable waters of the United States, as defined at 33 CFR part 329, within the area bounded by a line connecting the following coordinates: Commencing from the shoreline at

(5151) 30°23'33.45"N., 86°31'37.51"W.; thence to

(5152) 30°23'35.67"N., 86°31'37.31"W.; thence to

(5153) 30°23'33.68"N., 86°31'30.98"W.; thence to

(5154) 30°23'32.00"N., 86°31'28.80"W.; thence proceeding directly to a point on the shoreline at

(5155) 30°23'30.14"N., 86°31'30.21"W.

(5156) (b) *The regulations*. (1) No person or vessel shall enter the area without the permission of the Commander, U.S. Coast Guard, Destin Station, Florida, or his/her authorized representative.

(5157) (2) The area identified in paragraph (a) of this section and the associated restrictions described in paragraph (b)(1) of this section are in effect 24 hours a day, 7 days a week.

(5158) (c) *Enforcement.* The regulations in this section shall be enforced by the Commander, U.S. Coast Guard, Destin Station, and such agencies as he/she may designate.

(5159)

§334.748 Wynnhaven Beach, FL, at Eglin AFB; Restricted Area.

(5160) (a) *The area*. The restricted area shall encompass all navigable waters of the United States, as defined at **33 CFR part 329**, within the area bounded by a line connecting the following coordinates: Commencing from the shoreline at

(5161) 30°24'35.06"N., 086°46'20.31"W.; thence to

(5162) 30°24'33.57"N., 086°46'20.31"W.; then the line meanders irregularly, following the shoreline at a distance of 150 feet seaward from the mean high water line to a point at

(5163) 30°24'34.81"N., 086°46'09.19"W., thence proceeding directly to a point on the shoreline at

(5164) 30°24'36.30"N., 086°46'09.19"W.

(5165) (b) *The regulations*. (1) All persons, vessels and other craft are permitted access to the restricted area described in paragraph (a) of this section. Any person or vessel within the restricted area will be subject to identification checks by U.S. Air Force patrol boats. During times of high security threats against Eglin AFB, all entry, transit, anchoring or drifting within the restricted area described in paragraph (a) of this section for any reason is not allowed without the permission of the Commander, Eglin AFB, Florida, or his/ her authorized representative.

(5166) (2) The area identified in paragraph (a) of this section and the associated restrictions described in paragraph (b)(1) of this section are in effect 24 hours a day, 7 days a week.

(5167) (c) *Enforcement*. (1) The regulations in this section shall be enforced by the Commander, 96 Air Base Wing, Eglin AFB, Florida and such agencies as he/she may designate.

(5168) (2) Enforcement of the regulations in this section will be accomplished in accordance with the active security level as defined by the Department of Defense Force Protection Condition (FPCON) System.

(5169)

§334.760 Naval Support Activity Panama City and Alligator Bayou, a tributary of St. Andrew Bay, FL; naval restricted area.

(5170) (a) *The area*. The waters within an area beginning at a point located along the shore at the southern end of the facility designated by latitude 30°09'45.6"N., longitude 85°44'20.6"W.; thence proceed 100 feet waterward of the mean high water line directly to a point at latitude 30°09'46.8"N., longitude 85°44'20.6"W. From this position the line meanders irregularly, following the shoreline at a minimum distance of 100 feet from the mean high water line to a point at latitude 30°10'16.7"N., longitude 85°45'01.2"W. located east of the south side of the entrance to Alligator Bayou; thence directly across the entrance to a point at latitude 30°10'23.4"N., longitude 85°45'05.7"W. located east of the north side of the entrance to Alligator Bayou; thence continuing the northerly meandering, following the shoreline at a minimum distance of 100 feet from the mean high water line to a point at latitude 30°11'11.3"N., longitude 85°45'02.8"W.; thence directly to the shoreline to a point at latitude 30°11'12.3"N., longitude 85°45'03.2"W. This encompasses an area reaching from the southern extent described to the northern extent described and extending from the mean high water line waterward a minimum distance of approximately 100 feet.

(5171) (b) *The regulations*. (1) No vessel, person, or other craft shall enter, transit, anchor, drift or otherwise navigate within the area described in paragraph (a) of this section for any reason without written permission from the Officer in Charge, Naval Support Activity Panama City, Panama City Beach, FL, or his/her authorized representative.

(5172) (2) The restriction noted in paragraph (b)(1) of this section is in effect 24 hours a day, 7 days a week.

(5173) (3) The regulations in this section shall be enforced by the Officer in Charge, Naval Support Activity Panama City, Panama City Beach Florida, and such agencies as he/she may designate.

(5174)

§334.761 Naval Support Activity Panama City; St. Andrews Bay; restricted areas.

(5175) *The areas*. (1) *Area AP-1*. The area is bounded by a line connecting the following coordinates (listed by latitude, then longitude):

(5176) Northwest point–30°10'00"N., 085°44'17"W.;

(5177) Northeast point–30°10'00"N., 085°43'17"W.;
(5178) Southeast point–30°09'51"N., 085°43'17"W.;
(5179) Southwest point–30°09'50"N., 085°44'32"W.;
(5180) following mean high waterline to 30°09'57.5"N., 085°44'37"W.; then northerly to point of origin.
(5181) (2) *Area BA-1*. The area is bounded by a line directly connecting the following coordinates (listed by latitude, then longitude):
(5182) Northwest point–30°11'14"N., 085°44'59"W.;
(5183) Northeast point–30°11'13"N., 085°44'32"W.;
(5184) Southeast point–30°10'31"N., 085°44'32"W.;
(5185) Southwest point–30°10'32"N., 085°44'59"W.; then northerly to point of origin.
(5186) (3) *Area BA-2*. The area is bounded by a line directly connecting the following coordinates (listed by latitude, then longitude):
(5187) Northwest point–30°11'13"N., 085°44'32"W.;
(5188) Northeast point–30°11'07"N., 085°44'01"W.;
(5189) Southeast point–30°10'32"N., 085°44'00"W.;
(5190) Southwest point-30°10'32"N., 085°44'32"W., then northerly to point of origin.
(5191) (4) *Area BA-3*. The area is bounded by a line directly connecting the following coordinates (listed by latitude, then longitude):
(5192) Northwest point–30°10'32"N., 085°44'59"W.;
(5193) Northeast point–30°10'32"N., 085°44'09"W.;
(5194) Southeast point–30°10'01"N., 085°44'41"W., then northerly to point to point of origin.
(5195) (5) *Area BA-4*. The area is bounded by a line connecting the following coordinates (listed by latitude, then longitude):
(5196) Northwest point–30°10'32"N., 085°44'09"W.;
(5197) Northeast point–30°10'32"N., 085°42'35"W.;
(5198) Southeast point–30°10'00"N., 085°42'35"W.;
(5199) Southwest point–30°10'00"N., 085°44'09"W.; then northerly to point of origin.
(5200) (6) *Area BA-5*. The area is bounded by a line connecting the following coordinates (listed by latitude, then longitude):
(5201) North point–30°08'41"N., 085°41'25"W.;
(5202) East point–30°08'08"N., 085°40'48"W.;
(5203) South point–30°07'00"N., 085°42'29"W.;
(5204) West point–30°07'31"N., 085°43'09"W.; then northerly to point of origin.
(5205) (b) *The restrictions*. (1) For the purposes of this section, "military security zones" are specific portion/s within any of the restricted areas identified in this section that are defined by the safety vessels accompanying each training exercise. The mission of the safety vessels is to maximize safety conditions for both military and civilian personnel during exercises conducted within the restricted area by intercepting any waterbased activity occurring within the active military security zone/s and offering navigational advice to ensure the activity remains clear of the exercise.
(5206) (2) All areas identified in this section have the potential to be active at any time. The normal/routine activation of any area will be noticed to the public via a General Local Notice to Mariners. Activation of any area for significant exercises and training events will be noticed, in advance and during the event, to the public via Notice to Mariners and Broadcast Notice to Mariners.
(5207) (3) *Area AP-1*. All persons, vessels, and other craft are prohibited from entering, transiting, anchoring, or drifting within the military security zone/s established in the restricted area during training events.
(5208) (4) *Areas BA-1 through BA-5*. All persons, vessels, and other craft are prohibited from entering, transiting, anchoring, or drifting within the military security zone/s established in the restricted area during training events.
(5209) (c) *Enforcement*. The regulations in this section shall be enforced by the Commanding Officer, Naval Support Activity, Panama City Florida, and such agencies as he/she may designate.

(5210)

§334.762 Naval Support Activity Panama City; North Bay and West Bay; restricted areas.

(5211) (a) *The areas*. (1) *Area NB-1*. The area is bounded by a line directly connecting the following coordinates (listed by latitude, then longitude):
(5212) Northwest point–30°12'16"N., 085°44'14"W.;
(5213) Northeast point–30°12'16"N., 085°43'01"W.;
(5214) Southeast point–30°11'16"N., 085°44'14"W.;
(5215) Southwest point–30°11'17"N., 085°44'49"W.; then northerly to point of origin.
(5216) (2) *Area NB-2*. The area is bounded by a line directly connecting the following coordinates (listed by latitude, then longitude):
(5217) Northwest point-30°14'00"N., 085°44'14"W.;
(5218) Northeast point-30°14'00"N., 085°41'51"W.;
(5219) Southeast point-30°12'16"N., 085°43'01"W.;
(5220) Southwest point-30°12'16"N., 085°44'14"W.; then northerly to point of origin.
(5221) (3) *Area NB-3*. The area is bounded by a line directly connecting the following coordinates (listed by latitude, then longitude):
(5222) North point–30°17'02"N., 085°45'34"W.;
(5223) East point–30°14'56"N., 085°43'45"W.;
(5224) South point–30°14'01"N., 085°44'59"W.;
(5225) West point–30°16'10"N., 085°46'52"W.; then northerly to point of origin.
(5226) (b) *The restrictions*. (1) For the purposes of this section, “military security zones” are specific portion/s within any of the restricted areas identified in this section that are defined by the safety vessels accompanying each training exercise. The mission of the safety vessels is to maximize safety conditions for both military and civilian personnel during exercises conducted within the restricted area by intercepting any waterbased activity occurring within the active military security zone/s and offering navigational advice to ensure the activity remains clear of the exercise.
(5227) (2) All areas identified in this section have the potential to be active at any time. The normal/routine activation of any area will be noticed to the public via

a General Local Notice to Mariners. Activation of any area for significant exercises and training events will be noticed, in advance and during the event, to the public via Notice to Mariners and Broadcast Notice to Mariners.

(5228) (c) *Enforcement*. The regulations in this section shall be enforced by the Commanding Officer, Naval Support Activity, Panama City Florida, and such agencies as he/she may designate.

(5229)

§334.763 Naval Support Activity Panama City; Gulf of Mexico; restricted area.

(5230) (a) *The area*. The area is bounded by a line directly connecting the following coordinates (listed by latitude, then longitude):

(5231) North point–30°10'29"N., 085°48'20"W.;

(5232) East point–30°07'58"N., 085°44'44"W.;

(5233) South point–30°05'24"N., 085°47'29"W.;

(5234) West point–30°07'55"N., 085°51'05"W.; then northerly to point of origin.

(5235) (b) *The restrictions*. (1) For the purposes of this section, "military security zones" are specific portion/s within any of the restricted areas identified in this section that are defined by the safety vessels accompanying each training exercise. The mission of the safety vessels is to maximize safety conditions for both military and civilian personnel during exercises conducted within the restricted area by intercepting any waterbased activity occurring within the active military security zone/s and offering navigational advice to ensure the activity remains clear of the exercise.

(5236) (2) All areas identified in this section have the potential to be active at any time. The normal/routine activation of any area will be noticed to the public via a General Local Notice to Mariners. Activation of any area for significant exercises and training events will be noticed, in advance and during the event, to the public via Notice to Mariners and Broadcast Notice to Mariners.

(5237) (c) *Enforcement*. The regulations in this section shall be enforced by the Commanding Officer, Naval Support Activity, Panama City Florida, and such agencies as he/she may designate.

(5238)

§334.770 Gulf of Mexico and St Andrew Sound, south of East Bay, FL, Tyndall Drone Launch Corridor, Tyndall Air Force Base, FL, Restricted Area.

(5239) (a) *The area*. The waters of the Gulf of Mexico and St. Andrew Sound within an area described as follows, including Crooked Island: Beginning at a point on shore at

(5240) 30°01'30"N., 85°32'30"W., thence to

(5241) 30°00'58"N., 85°33'38"W., thence to

(5242) 29°56'38"N., 85°33'38"W., thence to

(5243) 29°55'15"N., 85°31'21"W., thence to a point on shore at

(5244) 30°00'58"N., 85°31'21"W., thence northwest to the point of beginning. This area will be referred to as the "Tyndall Drone Launch Corridor."

(5245) (b) *The regulations*. (1) Military usage of areas is Monday through Friday between the hours of 7 a.m. and 5 p.m.

(5246) (2) Vessels are allowed to enter and remain in this area provided they have operational communication equipment capable of monitoring VHF Marine frequency Channel 16, (156.80 MHZ). In the event the Marine radio equipment is not installed on the vessel, CB equipment with Channel 13 (27.115 MHZ) will be used as an alternate means of communications. Warnings will be broadcast by the Air Force on Channel 16 (156.80 MHZ) and Channel 13 (27.115 MHZ) using the following sequence:

(5247) (i) Announcement 90 minutes prior to drone launch.

(5248) (ii) Announcement 60 minutes prior to drone launch.

(5249) (iii) Announcement of drone launch or drone canceled, and the expected time of the drone launch. Upon receipt of the drone warning on either Channel 16 (156.80 MHZ) or Channel 13 (27.115 MHZ), vessels will take the necessary action to vacate the drone launch corridor not later than 60 minutes prior to expected drone launch.

(5250) (3) Vessels are authorized direct movement without stopping through this area at any time unless warned by helicopter or patrol boat.

(5251) (4) The area will be patrolled by helicopter/vessels during periods of hazardous military activity. Verbal warnings or instructions issued by these craft will be strictly adhered to.

(5252) (5) The regulations in this section shall be enforced by the Commanding Officer, Tyndall Air Force Base, FL, and such agencies as he may designate.

(5253)

§334.775 Naval Air Station Pensacola, Pensacola Bay, Pensacola and Gulf Breeze, FL; naval restricted area.

(5254) (a) *The areas*. (1) Bounded by a line drawn in the direction of 180°T from the position latitude 30°20'44"N., longitude 87°17'18"W. (near the Naval Air Station, due south of the Officer's Club) to position latitude 30°20'09"N., longitude 87°17'18"W. thence 94°T to position latitude 30°20'07"N., longitude 87°16'41"W., thence 49°T to position latitude 30°20'37"N., longitude 87°16'01"W. (southwest end of Lexington finger pier), thence along the shoreline to point of origin.

(5255) (2) The waters within an area enclosed by the following points: Beginning at latitude 30°21.58'N., longitude 87°12.49'W.; thence to latitude 30°20.25'N., longitude 87°11.00'W.; thence to latitude 30°20.28'N., longitude 87°14.27'W.; thence to the point of beginning. This encompasses a large triangular area north of Santa Rosa Island and west of the land area between Fair Point and Deer Point.

(5256) (b) *The restrictions*. (1) The area described in paragraph (a)(1) of this section will normally be in use Monday through Wednesday between 8 a.m. and 4 p.m. and one evening from 4 p.m. until 8 p.m., every other week.

(5257) (2) The area described in paragraph (a)(2) of this section will normally be utilized Wednesday through Friday between 8 a.m. and 4 p.m. for parasail operations.

(5258) (3) During those times that specific missions, exercises, or training operations are being conducted, the U.S. Navy vessels and/or crafts designated as essential to the operation(s) by proper U.S. Navy authority shall have the rights-of-way. All other vessels and crafts are required to keep clear of and remain 300 yards from all naval vessels engaged in said operations. Approaching within 300 yards of vessels and/or crafts while they are engaged in operations and/or training exercises is prohibited.

(5259) (4) Vessel traffic through the restricted area will remain open during operations and/or exercises; however, mariners shall exercise extreme caution and be on the lookout for swimmers, small craft and helicopters when transiting the area. It should be presumed by all mariners that Navy operations and/or exercises are being conducted whenever military craft and/or helicopters are operating within the restricted area.

(5260) (5) Any problems encountered regarding Navy operations/exercises within the restricted area should be addressed to "Navy Pensacola Command" on Channel 16 (156.6 MHZ) for resolution and/or clarification.

(5261) (6) The regulations in this section shall be enforced by the Commander of the Naval Air Station, Pensacola, FL, and such agencies as he/she may designate.

(5262)

§334.778 Pensacola Bay and waters contiguous to the Naval Air Station, Pensacola, FL; restricted area

(5263) (a) *The area*: Beginning at a point on the northerly shoreline of Grande (Big) Lagoon at Point 1,

(5264) 30°19'42"N., 87°21'06"W., proceed southeasterly to Point 2,

(5265) 30°19'27"N., 87°21'03"W.; thence, northeasterly, paralleling the shoreline at a minimum distance of 500 feet offshore, to Point 3,

(5266) 30°19'48"N., 87°19'35"W.; thence, maintaining a minimum distance of 500 feet offshore or along the northerly edge of the Gulf Intracoastal Waterway Channel (whichever is less), continue to Point 4,

(5267) 30°20'00"N., 87°19'03"W.; thence, maintaining a minimum distance of 500 feet offshore for the remainder of the area to: PT 5,

(5268) 30°20'31"N., 87°16'01"W.; thence to PT 6,

(5269) 30°21'11"N., 87°15'29"W.; thence to PT 7,

(5270) 30°22'26"N., 87°15'43"W.; thence to PT 8,

(5271) 30°22'39"N., 87°16'08"W.; thence to PT 9,

(5272) 30°22'17"N., 87°16'09"W.; thence to PT 10,

(5273) 30°22'18"N., 87°16'35"W.; thence to PT 11,

(5274) 30°22'09"N., 87°17'10"W.; thence to PT 12,

(5275) 30°22'15"N., 87°17'19"W.; thence to PT 13,

(5276) 30°22'07"N., 87°17'48"W.; thence to PT 14,

(5277) 30°22'25"N., 87°17'53"W.; thence to PT 15,

(5278) 30°22'13"N., 87°18'54"W.; thence to PT 16,

(5279) 30°21'57"N., 87°19'22"W.; thence to PT 17,

(5280) 30°21'57"N., 87°19'37"W.; thence to PT 18,

(5281) 30°21'49"N., 87°19'49"W. (a point on the southerly shoreline of Bayou Grande).

(5282) (b) *The regulations*. (1) All persons, vessels, and other craft are prohibited from entering the waters described in paragraph (a) of this section for any reason. All vessels and craft, including pleasure vessels and craft (sailing, motorized, and/or rowed or self-propelled), private and commercial fishing vessels, other commercial vessels, barges, and all other vessels and craft, except vessels owned or operated by the United States and/or a Federal, State, or local law enforcement agency are restricted from transiting, anchoring, or drifting within the above described area, or within 500 feet of any quay, pier, wharf, or levee along the Naval Air Station Pensacola shoreline abutting, nor may such vessels or crafts or persons approach within 500 feet of any United States owned or operated vessel transiting, anchored, or moored within the waters described in paragraph (a) of this section. The Commanding Officer, Naval Air Station Pensacola, or his/her designee, or the Commanding Officer of a vessel of the United States operating within the said area, may grant special permission to a person, vessel, or craft to enter upon the waters subject to the restrictions aforementioned.

(5283) (2) The existing "Navy Channel" adjacent to the north shore of Magazine Point, by which vessels enter and egress Bayous Davenport and Grande into Pensacola Bay shall remain open to all craft except in those extraordinary circumstances where the Commanding Officer, N.A.S. or his/her designee determines that risk to the installation, its personnel, or property is so great and so imminent that closing the channel to all but designated military craft is required for security reasons, or as directed by higher authority. This section will not preclude the closure of the channel as part of a security exercise; however, such closures of said channel will be limited in duration and scope to the maximum extent so as not to interfere with the ability of private vessels to use the channel for navigation in public waters adjacent thereto not otherwise limited by this regulation.

(5284) (3) The regulations in this section shall be enforced by the Commanding Officer of the Naval Air Station, Pensacola, FL, and such agencies he/she may designate.

(5285)

§334.780 Pensacola Bay, FL; seaplane restricted area.

(5286) (a) *The area*. Beginning at

(5287) 30°22'28", 87°16'00"; thence to

(5288) 30°21'02", 87°14'20"; thence to

(5289) 30°20'02", 87°15'16"; thence to

(5290) 30°20'11"; 87°17'58"; and thence to 272° true to the shore.

(5291) (b) *The regulations*. (1) The area is established as a Naval Air Station small boat operations and training area.

(5292) (2) All persons, vessels, and other craft are prohibited from entering the waters described in paragraph (a) of this section for any reason. All vessels and craft, including

pleasure vessels and craft (sailing, motorized, and/or rowed or self-propelled), private and commercial fishing vessels, other commercial vessels, barges, and all other vessels and craft, except vessels owned or operated by the United States and/or a Federal, State, or local law enforcement agency are restricted from entering, transiting, anchoring, drifting or otherwise navigating within the area described in paragraph (a) of this section.

(5293) (3) The regulations in this section shall be enforced by the Commanding Officer, Naval Air Station Pensacola and/or such persons or agencies he/she may designate.

(5294)

§334.781 Supervisor of Shipbuilding, Conversion and Repair Gulf Coast, Pascagoula, Mississippi; naval restricted area.

(5295) (a) *The area*. The datum for all coordinates is in NAD83 in accordance with 33 CFR 334.6. The restricted area shall encompass all navigable waters of the United States, as defined at **33 CFR part 329**, contiguous to the area identified as the Huntington Ingalls Incorporated/ Ingalls Shipbuilding and Dry Dock (HII) facility and the mean high water level within an area contained in an "L" shaped area bounded by the shore on the west and north ends of the area and bounded by buoys on the east and south sides of the area starting at: Latitude N. 30°21.13′ longitude W. 88°34.13′, thence to Latitude N. 30°21.08′ longitude W. 88°34.13′, thence to Latitude N. 30°21.03′ longitude W. 88°34.13′, thence to Latitude N. 30°20.98′ longitude W. 88°34.13′, thence to Latitude N. 30°20.93′ longitude W. 88°34.13′, thence to Latitude N. 30°20.88′, longitude W. 88°34.13′, thence to Latitude N. 30°20.83′ longitude W. 88°34.13′, thence to Latitude N. 30°20.78′ longitude W. 88°34.13′, thence to Latitude N. 30°20.73′ longitude W. 88°34.13′, thence to Latitude N. 30°20.68′ longitude W. 88°34.13′, thence to Latitude N. 30°20.63′ longitude W. 88°34.13′, thence to Latitude N. 30°20.64′ longitude W. 88°34.10′, thence to Latitude N. 30°20.64′ longitude W. 88°34.25′, thence to Latitude N. 30°20.64′ longitude W. 88°34.33′, thence to Latitude N. 30°20.64′ longitude W. 88°34.41′, thence to Latitude N. 30°20.59′ longitude W. 88°34.47′, thence to Latitude N. 30°20.59′ longitude W. 88°34.51′, thence to Latitude N. 30°20.59′ longitude W. 88°34.57′, thence to Latitude N. 30°20.59′ longitude W. 88°34.63′, thence to Latitude N. 30°20.59′ longitude W. 88°34.70′, thence to Latitude N. 30°20.64′ longitude W. 88°34.75′, thence to Latitude N. 30°20.64′ longitude W. 88°34.82′, thence to Latitude N. 30°20.64′ longitude W. 88°34.87′, thence to Latitude N. 30°20.71′ longitude W. 88°34.87′. The datum for these coordinates is WGS84.

(5296) (b) *The regulations*. (1) All persons, swimmers, vessels and other craft, except those vessels under the supervision or contract to local military or Naval authority, vessels of the United States Coast Guard, and local or state law enforcement vessels, are prohibited from entering the restricted area without permission from the Supervisor of Shipbuilding, Conversion and Repair, USN, Gulfcoast or his/her authorized representative.

(5297) (2) The restricted area is in effect twenty-four hours per day and seven days a week (24/7).

(5298) (3) Should warranted access into the restricted navigation area be needed, all entities are to contact the Supervisor of Shipbuilding, Conversion and Repair, USN, Gulf Coast, Pascagoula, Mississippi, or his/her authorized representative on Marine Communication Channel 16.

(5299) (c) *Enforcement*. The regulation in this section shall be enforced by the Supervisor of Shipbuilding, Conversion and Repair, USN, Gulf Coast and/or such agencies or persons as he/she may designate.

(5300)

§334.782 SUPSHIP Gulf Coast, Pascagoula, Mississippi, Detachment Mobile, AL at AUSTAL, USA, Mobile, AL; restricted area.

(5301) (a) *The area*. The restricted area would encompass all navigable waters of the United States, as defined at 33 CFR part 329, contiguous to the area identified as AUSTAL, USA and the mean high water level within a rectangular shaped area on the east side of the Mobile River beginning at

(5302) 30°41'36.46"N., 88°02'02.70"W.; thence westerly to

(5303) 30°41'35.85"N., 88°02'05.12"W.; thence southerly to

(5304) 30°41'26.67"N., 88°02'03.62"W.; thence easterly to

(5305) 30°41'26.98"N., 88°02'01.81" W.; thence northerly along the easterly shoreline to the point of origin.

(5306) (b) *The regulations*. (1) All persons, swimmers, vessels and other craft, except those vessels under the supervision or contract to local military or Naval authority, vessels of the U.S. Coast Guard and local or state law enforcement vessels are prohibited from entering the restricted area without permission from the Supervisor of Shipbuilding, Conversion and Repair, USN, Gulf Coast, Pascagoula, Mississippi or his/her authorized representative.

(5307) (2) The restricted area is in effect twenty four hours per day and seven days a week.

(5308) (3) Should warranted access into the restricted navigation area be needed, all entities are to contact the Supervisor of Shipbuilding, Conversion and Repair, USN, Gulf Coast, Pascagoula, Mississippi, or his/her authorized representative on Marine Communication Channel 16.

(5309) (c) *Enforcement*. The regulation in this section shall be enforced by the Supervisor of Shipbuilding, Conversion and Repair, USN, Gulf Coast, Pascagoula, Mississippi, and/or such agencies or persons as he/she may designate.

(5310)

§334.783 Arlington Channel, U.S. Coast Guard Base

Mobile, Mobile, Alabama, Coast Guard Restricted Area.

(5311) (a) *The area*. The waters of Arlington Channel west of a line from

(5312) 30°39'09"N., 088°03'24"W. to

(5313) 30°38'54"N., 088°03'17"W.

(5314) (b) *The regulations*. The restricted area is open to U.S. Government vessels and transiting vessels only. U.S. Government vessels include U.S. Coast Guard vessels, Department of Defense vessels, state and local law enforcement and emergency services vessels and vessels under contract with the U.S. Government. Vessels transiting the restricted area shall proceed across the area by the most direct route and without unnecessary delay. Fishing, trawling, net-fishing and other aquatic activities are prohibited in the restricted area without prior approval from the Commanding Officer, U.S. Coast Guard Group Mobile or his designated representative.

(5315) (c) *Enforcement*. The regulations in this section shall be enforced by the Commanding Officer, U.S. Coast Guard Group Mobile or his designated representative.

(5316)

§334.786 [Removed]

(5317)

§334.790 Sabine River at Orange, Texas; restricted area in vicinity of the Naval and Marine Corps Reserve Center.

(5318) (a) *The area:* The berthing area of the Naval and Marine Corps Reserve Center and the waters adjacent thereto from the mean high tide shoreline to a line drawn parallel to, and 100 feet channelward from lines connecting the pierhead of Pier 10 and from a line drawn parallel to, and 200 feet upstream from, Pier 10 to a line drawn parallel to, and 100 feet downstream from Pier 10.

(5319) (b) *The regulations*. (1) No person, vessel or other craft, except personnel and vessels of the U.S. Government or those duly authorized by the Commanding Officer, Naval and Marine Corps Reserve Center, Orange, Texas, shall enter, navigate, anchor or moor in the restricted area.

(5320) (2) The regulations of this section shall be enforced by the Commanding Officer, Naval and Marine Corps Reserve Center, Orange, Texas, and such agencies as he may designate.

(5321)

§334.800 Corpus Christi Bay, TX; seaplane restricted area, U.S. Naval Air Station, Corpus Christi.

(5322) (a) *The area*. The waters of Corpus Christi Bay within the area described as follows: Beginning at a point on the south shore of Corpus Christi Bay at the "North Gate" of the U.S. Naval Air Station at longitude 97°17'15.0"W.; thence through points at:

(5323) 27°42'34.9"N., 97°17'09.6"W.

(5324) 27°41'46.8"N., 97°14'23.8"W.

(5325) 27°41'15.1"N., 97°14'35.4"W.

(5326) 27°41'27.0"N., 97°15'16.7"W.

(5327) 27°40'41.6"N., 97°15'33.3"W.; thence to a point on shore at latitude 27°40'44.9"N.; thence along the shore to the point of beginning.

(5328) (b) *The regulations*: (1) No person, vessel or watercraft shall enter or remain in the area at any time, day or night, except with express written approval of the enforcing agency or as a result of force majeure.

(5329) (2) The regulations in this section shall be enforced by the Chief of Naval Air Training, U.S. Naval Air Station, Corpus Christi, TX, and such agencies as he may designate.

(5330)

§334.802 Ingleside Naval Station, Ingleside, Texas; restricted area.

(5331) (a) *The area*. The waters of Corpus Christi Bay beginning at a point at

(5332) 27°49'15.0"N., 97°12'06.0"W.; thence southerly to

(5333) 27°49'07.3"N., 97°12'05.4"W.; thence south-southwesterly to

(5334) 27°49'01.0"N., 97°12'39.4"W.; thence west-northwesterly to

(5335) 27°49'02.4"N., 97°12'48.3"W.; thence north-northeasterly to

(5336) 27°49'16.5"N., 97°12'41.5"W.; thence easterly to

(5337) 27°49'17.0"N., 97°12'27.5"W.; thence easterly along the shoreline to the point of beginning.

(5338) (b) *The regulations*. Mooring, anchoring, fishing, recreational boating or any activity involving persons in the water shall not be allowed within the restricted area. Commercial vessels at anchor will be permitted to swing into the restricted area while at anchor and during tide changes.

(5339) (c) *Enforcement.* The regulations in this section shall be enforced by the Commanding Officer, Naval Station, Ingleside and such agencies as he/she shall designate.

(5340)

§334.1450 Atlantic Ocean off north coast of Puerto Rico; practice firing areas, United States Army Forces Antilles.

(5341) (a) *The danger zones*–(1) Westerly small-arms range. The waters within the sector of a circle bounded by radii of 10,000 yards bearing **279°** and **315°**respectively, from latitude 18°28'31", longitude 66°25'37", and the included arc.

(5342) NOTE: All bearings in this section are referred to true meridian.

(5343) (2) *Camp Tortuguero artillery range*. The waters within the quadrant of a circle bounded by radii of 20,000 yards bearing **315°** and **045°**, respectively, from latitude 18°28'31", longitude 66°25'37", and the included arc.

(5344) (3) *Easterly small-arms range*. The waters within the sector of a circle bounded by radii of 7,210 yards bearing **45°** and **70°**, respectively, from a point on the southeast boundary of the artillery range 2,790 yards from its southerly end, and the included arc.

(5345) NOTE: The outer boundaries of the danger zones will not be marked, but signs will be posted along shore to warn against trespassing in the firing areas.

(5346) (b) *The regulations*. (1) The danger zones shall be open to navigation at all times except when practice firing is being conducted. When practice firing is being conducted, no person, vessel or other craft except those engaged in towing targets or patrolling the area shall enter or remain with the danger zones: Provided, that any vessel propelled by mechanical power at a speed greater than five knots may proceed through the Camp Totuguero artillery range at any time to and from points beyond, but not from one point to another in the danger zone between latitudes 18°31' and 18°32', at its regular rate of speed without stopping or altering its course, except when notified to the contrary.

(5347) (2) The fact that practice firing is to take place over the designated area will be advertised to the public through the usual media for the dissemination of such information. Factual information as to the dates, time, and characteristics of the firing will be advertised in advance of each session of firing but in no case less than one week nor more than four weeks before such firing is scheduled to take place.

(5348) (3) Prior to conducting each practice firing, the entire danger zone will be patrolled by aircraft or surface vessels to insure that no watercraft are within the danger zone. Any watercraft in the vicinity will be warned that practice firing is about to take place. Any such watercraft shall, upon being so warned, leave the danger zone immediately and shall not return until such practice shall have been terminated and notification to that effect shall have been given by the patrol craft, except that vessels proceeding on a regular course through the area will be allowed to proceed out of the area without warning, and firing will not commence until such vessels are clear of the area.

(5349) (4) This section shall be enforced by the Commanding General, United States Army Forces Antilles, and such agencies as he may designate.

(5350)

§334.1460 Atlantic Ocean and Vieques Sound, in vicinity of Culebra Island, bombing and gunnery target area.

(5351) (a) *The danger zone*. From Punta Resaca on the north coast of Culebra at

(5352) 18°20'12"N., 65°17'29"W. to

(5353) 18°25'07"N., 65°12'07"W.; thence to

(5354) 18°26'31"N., 65°16'45"W.; thence to

(5355) 18°23'00"N., 65°24'30"W.; thence to the charted position of nun buoy “2” at

(5356) 18°20'19"N., 65°24'51"W.; thence to

(5357) 18°18'47"N., 65°24'35"W.; thence to

(5358) 18°15'30"N., 65°21'30"W.; thence to a point on the southeast coast of Cayo de Luis Pena at

(5359) 18°17'51"N., 65°19'41"W.; and thence to Punta Tamarindo on the west coast of Culebra at

(5360) 18°19'12"N., 65°19'22"W.

(5361) (b) *The regulations*. (1) The danger zone is subject to use as a target area for bombing and gunnery practice. It will be open to navigation at all times except when firing is being conducted. At such times, no person or surface vessels, except those patrolling the area, shall enter or remain within the danger area. Prior to conducting each firing or dropping of ordnance the danger area will be patrolled to insure that no watercraft are within the danger area. Any watercraft in the vicinity will be warned that practice firing is about to take place and advised to vacate the area.

(5362) (2) The regulations in this section shall be enforced by the Commander, Caribbean Sea Frontier, San Juan, Puerto Rico, and such agencies as he may designate.

(5363)

§334.1470 Caribbean Sea and Vieques Sound in vicinity of Eastern Vieques, bombing and gunnery target area.

(5364) (a) *The danger zone*. From Punta Conejo on the south coast of Isla de Vieques at

(5365) 18°06'30"N., 65°22'33"W.; thence to

(5366) 18°03'00"N., 65°21'00"W.; thence to

(5367) 18°03'00"N., 65°15'30"W.; thence to

(5368) 18°11'30"N., 65°14'30"W.; thence to

(5369) 18°12'00"N., 65°20'00"W.; and thence to Cabellos Colorados on the north coast of Isla de Vieques at latitude 18°09'49", longitude 65°23'27".

(5370) (b) *Regulations*. (1) It will be open to navigation at all times except when firing is being conducted. At such times, no persons or surface vessels, except those patrolling the area, shall enter or remain within the danger area. Prior to conducting each firing or dropping of ordnance the danger area will be patrolled to insure that no watercraft are within the danger area. Any watercraft in the vicinity will be warned that practice firing is about to take place and advised to vacate the area.

(5371) (2) The regulations will be enforced by the Commander, U.S. Naval Forces Caribbean, U.S. Naval Station, Roosevelt Roads, Puerto Rico, and such agencies and subordinate commands as he/she may designate.

(5372)

§334.1480 Vieques Passage and Atlantic Ocean, off east coast of Puerto Rico and coast of Vieques Island; naval restricted areas.

(5373) (a) *The restricted areas*. (1) A strip 1,500 yards wide, off the naval reservation shoreline along the east coast of Puerto Rico extending from Point Figuera south to Point Puerca, and thence west to Point Cascajo and the mouth of the Daguada River.

(5374) (2) A strip 1,500 yards wide, off the naval reservation shoreline along the west end of Vieques Island extending from Caballo Point on the north shore, west around the breakwater to Point Arenas, and thence south and east to a point on the shoreline one mile east of the site of the abandoned central at Playa Grande.

(5375) (3) A strip 1,500 yards wide, off the south coast of Vieques Island extending from the entrance to Port Mosquito east to Conejo Point.

(5376) (4) An area inclosed by an arc with a radius of 3,000 yards centered on Cabras Island Lighthouse and extending from Point Puerca to Point Cascajo.

(5377) (b) *The regulations*. No person or vessel shall enter or remain within the restricted areas at any time unless on official business. Fishing vessels are permitted to anchor in Playa Blanca, passing through the restricted area described in paragraph (a)(1) of this section, to and from anchorage on as near a north-south course as sailing conditions permit. Under no conditions will swimming, diving, snorkeling other water related activities or fishing, be permitted in the restricted area.

(5378)

§334.1490 Caribbean Sea, at St. Croix, V.I.; restricted areas.

(5379) (a) *The areas*–(1) Area "A". A triangular area bounded by the following coordinates:

(5380) 17°44'42"N., 64°54'18"W.

(5381) 17°43'06"N., 64°54'18"W.

(5382) 17°44'30"N., 64°53'30"W.

(5383) (2) Area "B". A rectangular area bounded by the following coordinates:

(5384) 17°41'42"N., 64°54'00"W.

(5385) 17°41'42"N., 64°54'18"W.

(5386) 17°41'18"N., 64°54'00"W.

(5387) 17°41'18"N., 64°54'18"W.

(5388) (b) *The regulations*. (1) Anchoring in the restricted areas is prohibited with the exception of U.S. Government owned vessels and private vessels that have been specifically authorized to do so by the Commanding Officer, Atlantic Fleet Range Support Facility.

(5389) (2) The regulations in this paragraph shall be enforced by the Commanding Officer, Atlantic Fleet Range Support Facility, Roosevelt Roads, P.R., and such agencies as he may designate.

(5390)

TITLE 40–PROTECTION OF ENVIRONMENT

(5391)

Part 140–Marine Sanitation Device Standard

(5392)

§140.1 Definitions.

(5393) For the purpose of these standards the following definitions shall apply:

(5394) (a) *Sewage* means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes;

(5395) (b) Discharge includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping;

(5396) (c) Marine sanitation device includes any equipment for installation onboard a vessel and which is designed to receive, retain, treat, or discharge sewage and any process to treat such sewage;

(5397) (d) Vessel includes every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on waters of the United States;

(5398) (e) New vessel refers to any vessel on which construction was initiated on or after January 30, 1975;

(5399) (f) Existing vessel refers to any vessel on which construction was initiated before January 30, 1975;

(5400) (g) Fecal coliform bacteria are those organisms associated with the intestines of warm-blooded animals that are commonly used to indicate the presence of fecal material and the potential presence of organisms capable of causing human disease.

(5401)

§140.2 Scope of standard.

(5402) The standard adopted herein applies only to vessels on which a marine sanitation device has been installed. The standard does not require the installation of a marine sanitation device on any vessel that is not so equipped. The standard applies to vessels owned and operated by the United States unless the Secretary of Defense finds that compliance would not be in the interest of national security.

(5403)

§140.3 Standard.

(5404) (a) (1) In freshwater lakes, freshwater reservoirs or other freshwater impoundments whose inlets or outlets are such as to prevent the ingress or egress by vessel traffic subject to this regulation, or in rivers not capable of navigation by interstate vessel traffic subject to this regulation, marine sanitation devices certified by the U.S. Coast Guard (see **33 CFR part 159**, published in **40 FR 4622**, January 30, 1975), installed on all vessels shall be designed and operated to prevent the overboard discharge of sewage, treated or untreated, or of any waste derived from sewage. This shall not be construed to prohibit the carriage of Coast Guard-certified flow-through treatment devices which have been secured so as to prevent such discharges.

(5405) (2) In all other waters, Coast Guard-certified marine sanitation devices installed on all vessels shall be designed and operated to either retain, dispose of, or discharge sewage. If the device has a discharge, subject to paragraph (d) of this section, the effluent shall not have a fecal coliform bacterial count of greater than 1,000 per 100 milliliters nor visible floating solids. Waters where a Coast Guard-certified marine sanitation device permitting discharge is allowed include coastal waters and estuaries, the Great Lakes and inter-connected waterways, fresh-water lakes and impoundments accessible through locks, and other flowing waters that are navigable interstate by vessels subject to this regulation.

(5406) (b) This standard shall become effective on January 30, 1977 for new vessels and on January 30, 1980 for existing vessels (or, in the case of vessels owned and

operated by the Department of Defense, two years and five years, for new and existing vessels, respectively, after promulgation of implementing regulations by the Secretary of Defense under section 312(d) of the Act).

(5407) (c) Any vessel which is equipped as of the date of promulgation of this regulation with a Coast Guard-certified flow-through marine sanitation device meeting the requirements of paragraph (a)(2) of this section, shall not be required to comply with the provisions designed to prevent the overboard discharge of sewage, treated or untreated, in paragraph (a)(1) of this section, for the operable life of that device.

(5408) (d) After January 30, 1980, subject to paragraphs (e) and (f) of this section, marine sanitation devices on all vessels on waters that are not subject to a prohibition of the overboard discharge of sewage, treated or untreated, as specified in paragraph (a)(1) of this section, shall be designed and operated to either retain, dispose of, or discharge sewage, and shall be certified by the U.S. Coast Guard. If the device has a discharge, the effluent shall not have a fecal coliform bacterial count of greater than 200 per 100 milliliters, nor suspended solids greater than 150 mg/1.

(5409) (e) Any existing vessel on waters not subject to a prohibition of the overboard discharge of sewage in paragraph (a)(1) of this section, and which is equipped with a certified device on or before January 30, 1978, shall not be required to comply with paragraph (d) of this section, for the operable life of that device.

(5410) (f) Any new vessel on waters not subject to the prohibition of the overboard discharge of sewage in paragraph (a)(1) of this section, and on which construction is initiated before January 31, 1980, which is equipped with a marine sanitation device before January 31, 1980, certified under paragraph (a)(2) of this section, shall not be required to comply with paragraph (d) of this section, for the operable life of that device.

(5411) (g) The degrees of treatment described in paragraphs (a) and (d) of this section are "appropriate standards" for purposes of Coast Guard and Department of Defense certification pursuant to section 312(g)(2) of the Act.

(5412)

§140.4 Complete prohibition.

(5413) (a) Prohibition pursuant to CWA section 312(f)(3): a State may completely prohibit the discharge from all vessels of any sewage, whether treated or not, into some or all of the waters within such State by making a written application to the Administrator, Environmental Protection Agency, and by receiving the Administrator's affirmative determination pursuant to section 312(f)(3) of the Act. Upon receipt of an application under section 312(f)(3) of the Act, the Administrator will determine within 90 days whether adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels using such waters are reasonably available. Applications made by States pursuant to section 312(f)(3) of the Act shall include:

(5414) (1) A certification that the protection and enhancement of the waters described in the petition require greater environmental protection than the applicable Federal standard;

(5415) (2) A map showing the location of commercial and recreational pump-out facilities;

(5416) (3) A description of the location of pump-out facilities within waters designated for no discharge;

(5417) (4) The general schedule of operating hours of the pump-out facilities;

(5418) (5) The draught requirements on vessels that may be excluded because of insufficient water depth adjacent to the facility;

(5419) (6) Information indicating that treatment of wastes from such pump-out facilities is in conformance with Federal law; and

(5420) (7) Information on vessel population and vessel usage of the subject waters.

(5421) (b) Prohibition pursuant to CWA section 312(f)(4)(A): a State may make a written application to the Administrator, Environmental Protection Agency, under section 312(f)(4)(A) of the Act, for the issuance of a regulation completely prohibiting discharge from a vessel of any sewage, whether treated or not, into particular waters of the United States or specified portions thereof, which waters are located within the boundaries of such State. Such application shall specify with particularly the waters, or portions thereof, for which a complete prohibition is desired. The application shall include identification of water recreational areas, drinking water intakes, aquatic sanctuaries, identifiable fish-spawning and nursery areas, and areas of intensive boating activities. If, on the basis of the State's application and any other information available to him, the Administrator is unable to make a finding that the waters listed in the application require a complete prohibition of any discharge in the waters or portions thereof covered by the application, he shall state the reasons why he cannot make such a finding, and shall deny the application. If the Administrator makes a finding that the waters listed in the application require a complete prohibition of any discharge in all or any part of the waters or portions thereof covered by the State's application, he shall publish notice of such findings together with a notice of proposed rule making, and then shall proceed in accordance with 5 U.S.C. 553. If the Administrator's finding is that applicable water quality standards require a complete prohibition covering a more restricted or more expanded area than that applied for by the State, he shall state the reasons why his finding differs in scope from that requested in the State's application.

(5422) (1) For the following waters the discharge from a vessel of any sewage (whether treated or not) is completely prohibited pursuant to CWA section 312(f)(4)(A):

(5423) (i) Boundary Waters Canoe Area, formerly designated as the Superior, Little Indian Sioux, and Caribou Roadless Areas, in the Superior National Forest, Minnesota, as described in 16 U.S.C. 577–577d1.

(5424) (ii) Waters of the State of Florida within the boundaries of the Florida Keys National Marine Sanctuary as delineated on a map of the Sanctuary at http:/www.fknms.nos.noaa.gov/.

(5425) (2)(i) For the marine waters of the State of California, the following vessels are completely prohibited from discharging any sewage (whether treated or not):

(5426) (A) A large passenger vessel;

(5427) (B) A large oceangoing vessel equipped with a holding tank which has not fully used the holding tank's capacity, or which contains more than de minimis amounts of sewage generated while the vessel was outside of the marine waters of the State of California.

(5428) (ii) For purposes for paragraph (b)(2) of this section:

(5429) (A) "Marine waters of the State of California" means the territorial sea measured from the baseline as determines in accordance with the Convention on the Territorial Sea and the Contiguous Zone and extending seaward a distance of three miles, and all enclosed bays and estuaries subject to tidal influences from the Oregon border (41.999325 North Latitude, 124.212110 West Longitude, decimal degrees, NAD 1983) to the Mexican border (32.471231 North Latitude, 117.137814 West Longitude, decimal degrees, NAD 1983). A map illustration these waters can be obtained from EPA or viewed at http://www.epa.gov/region9water/no-discharge/overview.html.

(5430) (B) A "large passenger vessel" means a passenger vessel, as defined in section 2101(22) of title 46, United States code, of 300 gross tons or more, as measured under the Internation Convention on Tonnage Measurement system in 46 U.S.C. 14302, or the regulatory measurement system of 46 U.S.C. 14502 for vessels not measured under 46 U.S.C. 14302, that has berths or overnight accommodations for passengers.

(5431) (C) A "large oceanogoing vessel" means a private, commercial, government, or military vessel of 300 gross tons or more, as measured under the Internation Convention on Tonnage Measurement of Ships, 1969, measurement system in 46 U.S.C. 14302, or the regulatory measurement system of 46 U.S.C. 14502 for vessels not measured under 46 U.S.C. 14302, that is not a large passenger vessel.

(5432) (D) A "holding tank" means a tank specifically designed, constructed, and fitted for the retention of treated or untreated sewage, that has been designated and approved by the ship's flag Administration on the ship's stability plan; a designated ballast tank is not a holding tank for this purpose.

(5433) (c)(1) Prohibition pursuant to CWA section 312(f)(4)(B): A State may make written application to the Administrator of the Environmental Protection

(5434) Agency under section 312(f)(4)(B) of the Act for the issuance of a regulation establishing a drinking water intake no-discharge zone which completely prohibits discharge from a vessel of any sewage, whether treated or untreated, into that zone in particular waters, or portions thereof, within such State. Such application shall:

(5435) (i) Identify and describe exactly and in detail the location of the drinking water supply intake(s) and the community served by the intake(s), including average and maximum expected amounts of inflow;

(5436) (ii) Specify and describe exactly and in detail, the waters, or portions thereof, for which a complete prohibition is desired, and where appropriate, average, maximum and low flows in million gallons per day (MGD) or the metric equivalent;

(5437) (iii) Include a map, either a USGS topographic quadrant map or a NOAA nautical chart, as applicable, clearly marking by latitude and longitude the waters or portions thereof to be designated a drinking water intake zone; and

(5438) (iv) Include a statement of basis justifying the size of the requested drinking water intake zone, for example, identifying areas of intensive boating activities.

(5439) (2) If the Administrator finds that a complete prohibition is appropriate under this paragraph, he or she shall publish notice of such finding together with a notice of proposed rulemaking, and then shall proceed in accordance with 5 U.S.C. 553. If the Administrator's finding is that a complete prohibition covering a more restricted or more expanded area than that applied for by the State is appropriate, he or she shall also include a statement of the reasons why the finding differs in scope from that requested in the State's application.

(5440) (3) If the Administrator finds that a complete prohibition is inappropriate under this paragraph, he or she shall deny the application and state the reasons for such denial.

(5441) (4) For the following waters the discharge from a vessel of any sewage, whether treated or not, is completely prohibited pursuant to CWA section 312(f)(4)(B):

(5442) (i) Two portions of the Hudson River in New York State, the first is bounded by an east-west line through the most northern confluence of the Mohawk River which will be designated by the Troy-Waterford Bridge (126th Street Bridge) on the south and Lock 2 on the north, and the second of which is bounded on the north by the southern end of Houghtaling Island and on the south by a line between the Village of Roseton on the western shore and Low Point on the eastern shore in the vicinity of Chelsea, as described in Items 2 and 3 of 6 NYCRR Part 858.4.

(5443) (ii) [Reserved]

(5444)

§140.5 Analytical procedures.

(5445) In determining the composition and quality of effluent discharge from marine sanitation devices, the procedures contained in 40 CFR part 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants," or subsequent revisions or amendments thereto, shall be employed.

(5446)

TITLE 50–WILDLIFE AND FISHERIES

(5447)

Part 224–EndangeredMarine and Anadromous Species

(5448)

§224.103 Special prohibitions for endangered marine mammals.

(5449) (c) Approaching right whales–

(5450) (1) Prohibitions. Except as provided under paragraph (c)(3) of this section, it is unlawful for any person subject to the jurisdiction of the United States to commit, attempt to commit, to solicit another to commit, or cause to be committed any of the following acts:

(5451) (i) Approach (including by interception) within 500 yards (460 m) of a right whale by vessel, aircraft, or any other means;

(5452) (ii) Fail to undertake required right whale avoidance measures specified under paragraph (c)(2) of this section.

(5453) (2) Right whale avoidance measures. Except as provided under paragraph (c)(3) of this section, the following avoidance measures must be taken if within 500 yards (460 m) of a right whale:

(5454) (i) If underway, a vessel must steer a course away from the right whale and immediately leave the area at slow safe speed.

(5455) (ii) An aircraft must take a course away from the right whale and immediately leave the area at a constant airspeed.

(5456) (3) Exceptions. The following exceptions apply to this section, but any person who claims the applicability of an exception has the burden of proving that the exception applies:

(5457) (i) Paragraphs (c)(1) and (c)(2) of this section do not apply if a right whale approach is authorized by the National Marine Fisheries Service through a permit issued under part 222, subpart C, of this chapter (General Permit Procedures) or through a similar authorization.

(5458) (ii) Paragraphs (c)(1) and (c)(2) of this section do not apply where compliance would create an imminent and serious threat to a person, vessel, or aircraft.

(5459) (iii) Paragraphs (c)(1) and (c)(2)of this section do not apply when approaching to investigate a right whale entanglement or injury, or to assist in the disentanglement or rescue of a right whale, provided that permission is received from the National Marine Fisheries Service or designee prior to the approach.

(5460) (iv) Paragraphs (c)(1) and (c)(2) of this section do not apply to an aircraft unless the aircraft is conducting whale watch activities.

(5461) (v) Paragraph (c)(2) of this section does not apply to the extent that a vessel is restricted in her ability to maneuver and, because of the restriction, cannot comply with paragraph (c)(2) of this section.

(5462)

Part 226–DesignatedCritical Habitat

(5463)

§226.101 Purpose and scope.

(5464) The regulations contained in this part identify those habitats designated by the Secretary of Commerce as critical, under section 4 of the Act, for endangered and threatened species under the jurisdiction of the Secretary of Commerce. Those species are enumerated at §223.102 of this chapter if threatened and at §224.101 of this chapter if endangered. For regulations pertaining to the designation of critical habitat, see part 424 of this title; for regulations pertaining to prohibitions against the adverse modification or destruction of critical habitat, see part 402 of this title. Additional information regarding designated critical habitats that is not provided in this section may be obtained upon request to the Office of Protected Resources (*see* §222.102, definition of "Office of Protected Resources").

(5465)

§226.208 Critical habitat for green turtle.

(5466) (a) Culebra Island, Puerto Rico–Waters surrounding the island of Culebra from the mean high water line seaward to 3 nautical miles (5.6 km). These waters include Culebra's outlying Keys including Cayo Norte, Cayo Ballena, Cayos Geniqui, Isla Culebrita, Arrecife Culebrita, Cayo de Luis Peña, Las Hermanas, El Mono, Cayo Lobo, Cayo Lobito, Cayo Botijuela, Alcarraza, Los Gemelos, and Piedra Steven.

(5467) (b) [Reserved]

(5468)

§226.209 Critical habitat for hawksbill turtle.

(5469) (a) Mona and Monito Islands, Puerto Rico–Waters surrounding the islands of Mona and Monito, from the mean high water line seaward to 3 nautical miles (5.6 km).

(5470) (b) [Reserved]

Gulf of Mexico

(1) The **Gulf of Mexico** coast of the United States, from Key West, FL, to the Rio Grande, is low and mostly sandy, presenting no marked natural features to the mariner approaching from seaward; shoal water generally extends well offshore. The principal points and harbor entrances are marked by lights, which are the chief guides for approaching or standing along the coast.

(2) From the south shore of the Florida mainland, the **Florida Keys** and **Florida Reefs** extend for about 134 miles in the southwest curve to Sand Key Light and about 58 miles in a west direction to Loggerhead Key. These keys and reefs are of sand, shell and coral formation. The reefs have frequent shoal patches. The keys are generally low and covered with mangrove. Together, they form the north boundary of the **Straits of Florida**. Toward the west end are several openings between the keys offering passage from the straits into the Gulf.

(3) The southwest extremity of the Florida mainland is part of the Everglades National Park and Big Cypress Swamp. Much of these areas is under water throughout the year and is nearly all covered during the rainy summer season. Fronting the swampy areas are the Ten Thousand Islands, a group of low mangrove-covered islands divided by tidal channels. North of the Ten Thousand Islands the coast is low, sandy and generally backed by pine forests and **Hammocks**. These hammocks are a jungle of tropical trees, mostly hardwood, which appear as an impenetrable green wall.

(4) From Cape Romano to Anclote Keys the coast becomes a barrier beach of low islands separated by inlets, most of which are small and cannot be distinguished from offshore. Between Anclote Keys and St. James Island, the west side of Apalachee Bay, the coast is low and marshy for 1 to 2 miles inland then backed by pine forests. The shoreline is broken by a number of unimportant rivers and creeks.

(5) West of St. James Island to the South Pass of the Mississippi River, the coast is mostly a barrier beach of low, wooded sand islands. The general drift of these islands is to the west, which causes an encroachment upon the channels between them. Hurricanes and heavy gales will sometimes change the shape of these islands, and in some cases they have washed away leaving only shoals.

(6) Westward of the Delta to Galveston Entrance, the coast is a wide fringe of flat and generally treeless coastal marsh containing close growths of sedge, grass and rushes with several deep indentations or bays separated from the Gulf by chains of long narrow islands and many shallow saltwater lakes and lagoons. The islands and marshes are fringed with barrier beaches, mostly of fine sand, which rise to a crest with groves of trees on the inner slopes. Sand and shell ridges, sometimes several feet above the general level, are found throughout the marshes. These ridges, called **Chenieres** because of the oak groves usually found growing on them, are former barrier beaches; good examples are Grande Chenier and Pecan Island. In addition to the cheniere, three other marsh features are defined. Small solitary hills are called either **islands** or **mounds** depending on their height above the level of the surrounding marsh. Islands are greater than 25 feet while mounds are less. A **bayou** is a drainage stream for a swamp area or an auxiliary outlet for a river. They flow either to the Gulf of Mexico or a large lake, rarely into a river or other bayou. The depth of water is nearly always sufficient for river-craft navigation. The current, except after a heavy rainfall, is very sluggish but often may be reversed by a change in the direction of the wind. The highest land is found immediately adjacent to the bayous in the form of natural levees; as a rule, the larger the bayou the higher its levee.

(7) From Galveston Entrance to the mouth of the Rio Grande the coast is a barrier beach of long narrow islands and peninsulas, which are generally low and sandy, with but few distinguishing marks, enclosing a chain of shallow bays or lagoons, some of considerable size. The passes between the islands, except where improvements have been made by constructing jetties and dredging, are narrow and cannot be distinguished from offshore.

(8)

State boundaries

(9) The boundary between Florida and Alabama follows the Perdido River. The Alabama-Mississippi boundary follows a marked line cutting across the east end of Petit Bois Island, through Grande Batture Islands. Pearl River, from its most east junction with Lake Borgne, forms the boundary between Mississippi and Louisiana. Sabine Pass, Lake and River form the boundary between Louisiana and Texas.

(10)

Disposal sites and dumping grounds

(11) These areas are rarely mentioned in the Coast Pilot but are shown on the nautical charts. (See Dump Sites and Dumping Grounds, chapter 1, and charts for limits.)

(12)

Aids to Navigation

(13) Lights and buoys are the principal guides to mark the approaches to the important harbors. Many of the light stations have sound signals, particularly those in the vicinity of the larger ports. Many of the coastal and

(29)

harbor buoys are equipped with radar reflectors, which greatly increase the range at which the buoys may be detected on the radarscope. Most of the critical dangers are marked. (See the Light List for a complete description of navigational aids.)

(14)

Radar

(15) Radar is an important aid to navigation in this area, particularly in detecting other traffic and offshore oil platforms and in the prevention of collisions during frequent periods of low visibility. The coast is generally low and does not present a good radar target, but many of the coastal buoys are equipped with radar reflectors.

(16)

COLREGS Demarcation Lines

(17) Lines have been established to delineate those waters upon which mariners must comply with the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS) and those waters upon which mariners must comply with the Inland Navigational Rules Act of 1980 (Inland Rules). The waters inside of the lines are **Inland Rules Waters**, and the waters outside of the lines are **COLREGS Waters**. (See **33 CFR Part 80**, chapter 2, for specific lines of demarcation.)

(18)

Ports and waterways safety

(19) (See **33 CFR Part 160**, chapter 2, for regulations governing vessel operations and requirements for notification of arrivals, departures, hazardous conditions and certain dangerous cargoes to the Captain of the Port.)

(20)

Harbor entrances

(21) The entrances to most of the harbors along the Gulf Coast are obstructed by shifting sandbars. The more important entrances have been improved by dredging and in some cases by construction of jetties. On many of the bars the buoys are moved from time to time to mark the shifting channels. The best time to enter most of the harbors is on a rising tide.

(22) The tidal currents have considerable velocity in most of the harbor entrances, and their direction is affected by the force and direction of the wind. In south gales the sea breaks on some of the bars.

(23)

Shipping safety fairways

(24) A system of shipping safety fairways has been established along the Gulf Coast to provide safe lanes for shipping that are free of oil well structures. **Vessels should approach the harbor entrances and proceed coastwise between the ports within these fairways but should exercise due caution at all times as the lanes are unmarked.** (See **33 CFR 166.100** through **166.200**, chapter 2, for references to the charts showing the limits of the fairways, and the regulations governing them.)

(25)

Anchorages

(26) **Fairway anchorages** have been established off the entrances to some of the ports; these areas are generally free of oil well structures. (See **33 CFR 166.100** through **166.200**, chapter 2, for references to the charts showing the limits of the anchorages, and regulations governing them.) Other anchorages have been established along the Gulf Coast, bays, sounds and rivers. (See **33 CFR Part 110**, chapter 2, for limits and regulations.)

(27)

Lightering Zones

(28) **Lightering zones** and **prohibited-from-lightering zones** have been established in the Gulf of Mexico as follows These areas will be shown on the applicable nautical chart.

(30) Southtex-lightering Zone, centered about 150 miles, 105° from Aransas Pass;

(31) Gulfmex No. 2-lightering Zone, centered about 120 miles, 210° from Head of Passes, Mississippi River;

(32) Offshore Pascagoula No. 2-lightering Zone, centered about 130 miles, 150° from Pascagoula;

(33) South Sabine Point-lightering Zone, centered about 95 miles, 160° from Sabine Pass;

(34) Claypile-prohibited-from-lightering Zone, centered about 90 miles, 160° from Galveston Bay entrance;

(35) Flower Garden-prohibited-from-lightering Zone, centered about 120 miles, 150° from Sabine Pass;

(36) Ewing-prohibited-from-lightering Zone, centered about 100 miles, 240° from Head of Passes, Mississippi River (See **33 CFR Parts 156.300** through **156.330**, chapter 2, for limits and regulations.).

(37)

Vessel Traffic Services (VTS)

(38) **Vessel Traffic Services (VTS)** or **Vessel Traffic Information Services (VTIS)** have been established in Calcasieu Ship Channel (Lake Charles VTS), in the Houston-Galveston Bay area (Houston-Galveston VTS) and in the Atchafalaya River at Morgan City, LA (Berwick Bay VTS). The services have been established to prevent collisions and groundings and to protect the navigable waters from environmental harm.

(39) The Vessel Traffic Services for Berwick Bay and the Houston-Galveston Bay area provide for Vessel Traffic Centers (VTC) that may regulate the routing and movement of vessels by radar surveillance, movement reports of vessels, VHF-FM radio communications and specific reporting points. The services consist of precautionary areas and reporting points.

(40) The Lake Charles Vessel Traffic Information Service (VTIS) consists of reporting points and special conditions to be observed within the VTIS area.

(41) Lake Charles Vessel Traffic Service is voluntary, and Houston-Galveston and Berwick Bay Vessel Traffic Services are mandatory. (See chapters 8, 9, and 10 for details of the Vessel Traffic Services and Vessel Traffic Information Services.)

(42)

Tropical waters

(43) The most remarkable feature is the exceeding clearness of the sea water, enabling the bottom to be seen from aloft at considerable depths and at some distance. The navigation of the banks is consequently conducted almost entirely by the eye, but care must be taken not to run with the sun ahead of the vessel as that prevents the banks from being seen.

(44) The charts indicate clearly the positions of the many shoal heads, but considerable experience is required in identifying the patches by the color of the water. Small clouds, moving slowly and known to the pilots as flyers, are apt to deceive the inexperienced, their reflection on the surface of the sea over the clear white sandy bottom having every appearance of rocky shoals. It is prudent to avoid a dark spot.

(45) **Bank blink** is a phenomenon in tropical waters described as a bright reflected light hanging over the clear white sandbanks, serving to point them out from a considerable distance. From experience, it has been found to be untrustworthy, however, and should not be depended on in place of a lookout aloft. Soundings, the reckoning and especially the latitude, should be unremittingly checked.

(46)

Marine protected areas

(47) Marine protected areas (MPAs) are special places in ocean, coastal and estuarine ecosystems where vital natural and cultural resources are given greater protection than in surrounding waters. MPAs have been used in the U.S. for more than a century. Currently, there are over 1,600 MPAs in U.S. marine waters and the Great Lakes, with levels of protection ranging from a few "no-take" areas that prohibit all extractive uses to the more common multiple use areas in which a variety of consumptive and non-consumptive uses are allowed and often encouraged.

(48) MPAs are managed by dozens of federal, state, tribal and local authorities. For detailed information on MPA locations, types, purposes and legal restrictions, visit *www.marineprotectedareas.noaa.gov*.

(49) There are over 300 MPAs in this Coast Pilot Region from Texas to the west coast of Florida, and Puerto Rico and Virgin Islands. Most of these are small, near-shore MPAs managed by state agencies. Several large MPAs have been established in federal waters to restore fisheries and protect habitat. Other federal MPAs in the region include National Marine Sanctuaries, such as Flower Garden Banks; National Parks, such as Gulf Islands National Seashore in Texas; and National Wildlife Refuges, such as the Breton National Wildlife Refuge in Louisiana.

(50)

Area to Be Avoided

(51) The **Florida Keys Particularly Sensitive Sea Area (PSSA)** is an International Maritime Organization (IMO) designated zone that encircles the sea area around all of

the Florida Keys. The PSSA includes the entire Florida Keys National Marine Sanctuary as well as Biscayne National Park at the northeastern end of the Keys. The PSSA is bounded by a line connecting the following points:

(52)

In The Vicinity of the Florida Keys		
Point	Latitude	Longitude
1	25°45.00'N.	80°06.10'W.
2	25°38.70'N.	80°02.70'W.
3	25°22.00'N.	80°03.00'W.
4	25°06.38'N.	80°10.48'W.
5	24°56.37'N.	80°19.26'W.
6	24°37.90'N.	81°47.30'W.
7	24°29.20'N.	81°17.30'W.
8	24°22.30'N.	81°43.17'W.
9	24°28.00'N.	81°43.17'W.
10	24°28.70'N.	81°43.50'W.
11	24°29.80'N.	81°43.17'W.
12	24°33.10'N.	81°35.15'W.
13	24°33.60'N.	81°26.00'W.
14	24°38.20'N.	81°07.00'W.
15	24°43.20'N.	80°53.20'W.
16	24°46.10'N.	80°46.15'W.
17	24°51.10'N.	80°37.10'W.
18	24°57.50'N.	80°27.50'W.
19	25°09.90'N.	80°16.20'W.
20	25°24.00'N.	80°09.10'W.
21	25°31.50'N.	80°07.00'W.
22	25°39.70'N.	80°06.85'W.
23	25°45.00'N.	80°06.10'W.

(53)

In the Vicinity of Key West Harbor		
24	24°27.95'N.	81°48.65'W.
25	24°23.00'N.	81°53.50'W.
26	24°26.60'N.	81°58.50'W.
27	24°27.75'N.	81°55.70'W.
28	24°29.35'N.	81°53.40'W.
29	24°29.35'N.	81°50.00'W.
30	24°27.95'N.	81°48.65'W.

(54)

Area Surrounding the Marquesas Keys		
Point	Latitude	Longitude
31	24°26.60'N.	81°59.55'W.
32	24°23.00'N.	82°03.50'W.
33	24°23.60'N.	82°27.80'W.
34	24°34.50'N.	82°37.50'W.
35	24°43.00'N.	82°26.50'W.
36	24°38.31'N.	81°54.06'W.
37	24°37.91'N.	81°53.40'W.

Area Surrounding the Marquesas Keys		
Point	Latitude	Longitude
38	24°36.15'N.	81°51.78'W.
39	24°34.40'N.	81°50.60'W.
40	24°33.44'N.	81°49.73'W.
41	24°31.20'N.	81°52.10'W.
42	24°28.70'N.	81°56.80'W.
43	24°26.60'N.	81°59.55'W.

(55)

Area Surrounding the Dry Tortugas Islands		
44	24°32.00'N.	82°53.50'W.
45	24°32.00'N.	83°00.05'W.
46	24°39.70'N.	83°00.05'W.
47	24°45.60'N.	82°54.40'W.
48	24°45.60'N.	82°47.20'W.
49	24°42.80'N.	82°43.90'W.
50	24°39.50'N.	82°43.90'W.
51	24°35.60'N.	82°46.40'W.
52	24°32.00'N.	82°53.50'W.

(56)

Dangers

(57) **Danger zones** and **restricted areas**, extending as much as 100 miles offshore, are located in the Gulf of Mexico from Key West to the Rio Grande. (See **33 CFR Parts 162** and **334**, chapter 2, for limits and regulations.)

(58) **Fish havens**, some marked by privately maintained buoys, are numerous along the coast of the Gulf of Mexico. Navigators should be cautious about passing over fish havens or anchoring in their vicinity.

(59)

Wrecks

(60) Numerous wrecks, submerged and showing above water, in the bays, sounds and rivers and along the coast of the Gulf of Mexico are obstructions to navigation. A careful check should be made of the chart to ensure that dangerous wrecks are not along the routes selected.

(61) Periodically, District Engineer, New Orleans Corps of Engineers, publishes in a navigation bulletin the locations of obstructions affecting navigation in navigable waterways within the State of Louisiana that are within the New Orleans district boundaries. (See Appendix A for extent of the New Orleans District.) This list includes obstructions in the Gulf within the 3-mile limit.

(62)

Oil Well structures

(63) Numerous submerged wells and oil well structures (platforms), including appurtenances thereto, such as mooring piles, anchor and mooring buoys, pipes and stakes, exist in the Gulf of Mexico off the coasts of Mississippi, Louisiana and Texas. The heaviest concentration of these obstructions, however, is found between the Mississippi River Delta and Galveston Bay, extending as much as 70 miles offshore.

(64) In general, the oil well structures (platforms) in the Gulf are marked at night as follows:

(65) Structures outside the 5-fathom curve show quick flashing white lights visible from all directions at a distance of at least 5 miles; more than one light may be displayed. Sound signals are sounded from the structures when visibility is less than 5 miles; signal consists of a horn sounding one 2-second blast every 20 seconds.

(66) Structures between the 2-fathom and 5-fathom curves show quick flashing white lights visible from all directions at a distance of at least 3 miles. Sound signals are sounded from the structures when visibility is less than 3 miles.

(67) Structures along the coast in less than 2 fathoms and within the bays and sounds show either quick flashing white or red lights visible from all directions at a distance of at least 1 mile. Normally these structures are not equipped with sound signals.

(68) Structures on or adjacent to the edges of navigable channels and fairways, regardless of location, may be required to display lights and sound signals for the safety of navigation.

(69) Associated structures within 100 yards of the main structures, regardless of location, are not normally lighted but are marked with red or white retro-reflective material. Mariners are cautioned that uncharted submerged pipelines and cables may exist in the vicinity of these structures or between such structures and the shore.

(70) During construction of a well or during drilling operations and until such time as the platform is capable of supporting the required aids, fixed white lights on the attending vessel or drilling rig may be shown in lieu of the required quick flashing white lights on the structure. The attending vessel's foghorn may also be used as a substitute.

(71) Submerged wells may or may not be marked depending on their location and depth of water over them.

(72) All obstruction lights and sound signals used to mark the various structures are operated as privately maintained aids to navigation. The detailed regulations for the marking of offshore structures are contained in **33 CFR 67** (not carried in Coast Pilot 5.)

(73) Information concerning the establishment, change or discontinuance of offshore oil well structures and their appurtenances are published in Notice to Mariners with the exception of those inside the outer shoreline.

(74) All structures in the Gulf of Mexico are shown on the latest issues of the 1:80,000 and/or larger scale nautical charts covering the area. A warning note in lieu of the individual obstructions is shown on some charts. Some Gulf charts show oil well structures only when they are offshore of the indicated purple limits of the 1:80,000 scale charts.

(75) Mariners are advised to use the Shipping Safety Fairways that have been established in the Gulf of Mexico. These fairways provide shipping lanes free of oil drilling structures. Although the use of these fairways is not mandatory, mariners should take advantage of the safer passageways made available.

(76) Information concerning seismographic operations is not published in Notice to Mariners unless such operations will create a menace to navigation in waters used by general navigation. Where seismographic operations are being conducted, casings (pipes), buoys, stakes and detectors are installed. Pipes are marked with flags by day and fixed red lights by night, buoys are colored international orange and white horizontal bands, and stakes are marked with flags.

(77)

Pipelaying barges

(78) With the increased number of pipeline-laying operations, operators of all types of vessels should be aware of the dangers of passing close aboard, close ahead or close astern of a jetbarge or pipelaying barge. Pipelaying barges and jetbarges usually move at 0.5 knot or less and have anchors that extend out about 3,500 to 5,000 feet in all directions and that may be marked by lighted anchor buoys. The exposed pipeline behind the pipelaying barge and the area in the vicinity of anchors are hazardous to navigation and should be avoided. The pipeline and anchor cables also represent a submerged hazard to navigation. It is suggested, if safe navigation permits, for all types of vessels to pass well ahead of the pipelaying barge or well astern of the jetbarge. The pipelaying barge, jetbarge and attending vessels may be contacted on VHF-FM channel 16 for passage instructions.

(79)

Drawbridges

(80) The general regulations that apply to all drawbridges are given in **33 CFR 117.1** through **117.49**, chapter 2, and the specific regulations that apply only to certain drawbridges are given in **33 CFR Part 117, Subpart B**, chapter 2. Where these regulations apply, references to them are made in the Coast Pilot under the name of the bridge or the waterway over which the bridge crosses.

(81) The drawbridge opening signals (see **33 CFR 117.15**, chapter 2) have been standardized for most drawbridges within the United States. The opening signals for those few bridges that are nonstandard are given in the specific drawbridge regulations. The specific regulations also address matters such as restricted operating hours and required advance notice for openings.

(82) The mariner should be acquainted with the general and specific regulations for drawbridges over waterways to be transited.

(83)

Routes

(84) On the east side of the Gulf of Mexico, for a distance of possibly 100 miles outside the 100-fathom curve, southeast currents prevail and velocities as high as 2.5 knots have been reported. The Gulf Stream investigations indicated that the strongest current into the Straits of Florida is found near the 1,000-fathom curve west of

Dry Tortugas and that velocities of 1.5 to 2 knots are frequent in that locality. Approaching Dry Tortugas from the Gulf should, therefore, be regarded as a difficult run, as a vessel will overrun her log, and observations are the principal guide; currents may be expected at all times, but variations occur both in direction and velocity, due to the season of the year and the winds. Approaching Dry Tortugas a vessel must take care to stand outside the Area To Be Avoided Off the Coast of Florida (ATBAOCF, indexed as such, this chapter).

(85) Approaching the passage west of Rebecca Shoal from north, a number of vessels have stranded on New Ground, indicating an east set.

(86) **Junction point** for deep-draft vessels bound to or from Gulf Coast ports is **Straits of Florida** (24°25'N., 83°00'W.), which is 14 miles south-southwest of Dry Tortugas Light.

(87) From the Straits of Florida to Cape Hatteras vessels follow the Gulf Stream and pass about 14 miles south of Rebecca Shoal Light. Vessels then parallel the Florida Reefs, taking care to stand outside the ATBAOCF. See Area To Be Avoided Off the Coast of Florida (indexed as such), this chapter. Fowey Rocks Light is passed at a distance of 10 to 12 miles and Jupiter Inlet Light 15 miles. The velocity of the current varies greatly in different localities and is also subject to sudden changes, due to wind, differences in barometric pressure, and the like, so that no fixed hourly rate of drift can be given. Frequently high velocities will be carried between certain points and suddenly dropping off between others. The position should, therefore, be checked whenever possible by bearings. The ship speed plus supposed rate of current should not be assumed to fix the position. The greatest velocity will be found between Carysfort Reef and Jupiter Inlet, ranging from 2 to 4.5 knots.

(88) During the winter months when northers are frequent, it is well for westbound vessels to keep a little north of the **295°** course from Dry Tortugas to Heald Bank Lighted Whistle Buoy but go south of it in passing. In either direction, verify position as often as possible, because of the varying conditions of the current. For 300 miles before reaching Heald Bank, westbound craft frequently overrun, especially during the winter months, and eastbound vessels overrun the last 300 miles before reaching Dry Tortugas. Depend upon soundings westbound but upon observations eastbound.

(89) Currents along the course from Dry Tortugas to Galveston are subject to great variability. However, observations have shown that a 0.5-knot southeast current may be expected for 200 miles after leaving Dry Tortugas. For the next 100 miles the current generally sets east at 0.5 knot. For the next 200 miles the set is about north-northeast at 0.2 knot. For nearly 200 miles before reaching Galveston the set is approximately west-northwest at 0.2 knot. It is emphasized that this approximates the long-term mean current pattern and that it may not be experienced on any particular voyage. (See Loop Current, this chapter.) Winds and storms frequently modify conditions, and their effects must be taken into account.

(90)

Inside navigation

(91) Navigation on the waterways covered by this volume requires a knowledge of the channel conditions and other factors restricting navigation. General items of interest to the vessel operator are indicated in the paragraphs that follow; details are given in the text.

(92) **Special regulations** governing the use, administration and navigation of floodgates and locks of the Intracoastal Waterway are given in **33 CFR 207.185** and **207.187**, chapter 2.

(93)

Manmade canals

(94) In addition to the numerous bayous and natural canals, thousands of manmade canals have been dredged in the wetlands along the Gulf coast. While the original purpose of many of these canals was for private access to pipelines and well locations or for other mineral-related activities, some are used by boaters. These canals and bayous contain numerous obstructions including barriers, pipes, pilings and construction debris. Some of these structures are permanently maintained and have been suitably marked or lighted by their owners. Many others appear and disappear without notice and are uncharted, unlighted and unmarked. Even on the marked structures, mariners cannot rely on the markings always being maintained in good condition because of vandalism or weather damage. Therefore, all persons using canals and bayous must anticipate the hazards posed by these obstructions and navigate with extreme caution, especially at night and during periods of reduced visibility.

(95)

Bends and curves

(96) In the Intracoastal and adjoining waterways there are many sharp bends that are dangerous to vessels meeting or passing. On approaching a bend, a vessel should reduce speed sufficiently to be able to stop within half the distance to a ship coming from the opposite direction. Under no circumstances should a vessel attempt to overtake and pass another at a bend. Even with sufficient view of the channel ahead and after proper exchange and understanding of signals, the overtaken vessel may suddenly sheer from current action. This is even more pronounced with larger vessels and tows.

(97)

Crosscurrents

(98) Where two streams cross, the current will have a greater velocity in the deeper channel. This is noticeable along the Intracoastal Waterway where it follows a dredged canal cutting across a winding stream. Crosscurrents will also be noticed where either an inlet from the ocean or a drainage canal or a river enter the waterway.

(99) Crosscurrents are especially strong along the Intracoastal Waterway in San Carlos Bay, The

Rigolets-New Orleans Cut, Chef Menteur Pass, Vermilion River Cutoff and Brazos and Colorado Rivers.

(100)

Spoil banks

(101) Nature quickly covers her scars. This is true of the spoil banks made by dredging. When awash, these banks are often covered by grass, bushes and sometimes fairly large trees.

(102) **Water hyacinth** is a floating freshwater plant which infests numerous streams tributary to the South Atlantic and Gulf Coasts. It has bright green leaves and a purple flower. It propagates from seeds and suckers, spreads quickly in most localities and may cause complete suspension of navigation if not removed. The hyacinths form in mats or jams and float around driven by the wind or current. In open water these mats often resemble small islands. At times some of the bays and tributaries may be changed in appearance due to hyacinth jams. Where the water is apt to be brackish, an attempt can be made to force a boat through the mat. In doing so, however, care should be taken that any logs that might be floating in the weeds are not struck with force enough to damage the hull. Snakes may also be found on the hyacinth mats. The work of removing this growth is undertaken by the various Corps of Engineers districts and the State of Florida by the processes of spraying and cutting and the use of booms.

(103)

Mangrove

(104) Three distinct types of mangrove are found in the south section of this area. Yellow or white mangrove is found principally on the sand flats in front of the fast land. Red mangrove is rooted in water most of the time. Black mangrove grows on sand ridges and higher ground which cover only at very high water or storm tides. The black mangrove sometimes grows to a height of 50 to 60 feet. Along the coast from Cape Sable to Everglades City, most mangroves grow from 25 to 50 feet high with some stands of red mangroves reaching above 60 feet. Along the coast of Florida Bay, the red and black mangroves generally do not exceed a height of about 26 feet.

(105)

Stumps and sunken logs

(106) Reports are frequently made that vessels have struck shoals or rocks in rivers that have later proved to be stumps or sunken logs. Mariners are warned against navigating too close to the banks of streams where submerged stumps are known or may be expected to exist.

(107)

Hurricane moorings

(108) On receiving advisory notice of a tropical disturbance small boats should seek shelter in a small winding stream whose banks are lined with trees, preferably cedar or mangrove. Moor with bow and stern lines fastened to the lower branches; if possible snug up with good chafing gear. The knees of the trees will act as fenders, and the branches, having more give than the trunks, will ease the shocks of the heavy gusts. If the banks are lined only with small trees or large shrubs, use clumps of them within each hawser loop. Keep clear of any tall pines as they generally have shallow roots and are more apt to be blown down.

(109)

Manatees

(110) The West Indian manatee is a herbivorous marine mammal that is protected at the federal level by the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. These acts make it illegal to harass, hunt, capture or kill any marine mammal, including all dolphins, whales and manatees. The manatee is a large (approximately 8 to 10 feet in total length) and slow-moving marine mammal with a torpedo-like body and a paddle-shaped tail. These animals mainly inhabit the estuarine and inland waters of Florida, although they have been sighted in the Atlantic Ocean and Gulf of Mexico and have been seen as far north as Massachusetts and as far west as Texas. Due to their sensitivity to colder temperatures, in the winter manatees move from cooler waters and congregate, sometimes in large numbers, in warmer rivers and springs, streams and canals and near the cooling water discharge outlets of power plants and other industrial sources. During the spring and autumn months, many manatees undertake extensive migrations along the Atlantic and Gulf Coasts. Manatee distribution in the warmer months of the year is typically more widespread.

(111) Manatees need to surface regularly to breathe, approximately every 2 to 10 minutes, but are capable of holding their breath for up to 20 minutes. Calves are approximately 3 feet in length at birth and stay with the mother for a period of up to 2 years. During this time, they nurse regularly from the mother and take more frequent breaths than a larger adult. This mother-calf bond is very important and critical to the survival of the calf; it is very important that the mother and calf do not become separated. Manatees are typically solitary in nature, found as a cow-calf pair, or found in small groups. However, when a female is in estrus, she may be accompanied by large numbers of males, typically referred to as a mating herd.

(112) Statewide aerial surveys (synoptic surveys) are conducted following significant cold weather to provide a minimum population estimate for manatees in Florida waters. In January 2009, the synoptic survey resulted in a total count of 3,802 manatees on both the east and west coasts of Florida. This is a minimum count, and it is reasonable to assume that some manatees were not detected during the surveys. Manatees are quite docile and have no natural enemies but are an endangered species, mostly due to collisions with boats, which have caused as many as 95 deaths per year. Watercraft-related mortality may result from injuries caused by the propeller and/or impact from a collision with a vessel. As such, manatee protection speed zones (ranging from no entry

zones to 30 miles per hour zones) exist around the State of Florida to provide additional protection in areas of high manatee use and high watercraft-related mortality.

(113) The Florida Manatee Sanctuary Act authorizes the Florida Fish and Wildlife Conservation Commission (FWC) and, in some cases, local governments, to regulate motorboat speed and operation in areas frequently used by manatees. The **regulated zones** are marked by large reflective signs or buoys. In these zones, boat operators must operate their vessels at or below the established limits, and no person may intentionally or negligently annoy, molest, harass, disturb, collide with, injure or harm manatees. Maps of the state zones are available at *myfwc.com*. Questions about the state regulations should be directed to the FWC Imperiled Species Management Section, 620 South Meridian Street, Tallahassee, FL 32399. **Regulated zones** within the area covered by this Coast Pilot are in Faka Union Bay, River and Canal; in the Caloosahatchee River from San Carlos Bay to the Edison Memorial Bridge (U.S. 41); in Orange River and at its confluence with Caloosahatchee River; in Withlacoochee River; in the approach to Alafia River from the main channel through Hillsborough Bay; in the Homosassa River; and in Kings Bay on the Crystal River.

(114)

Tides

(115) Periodic tides in the Gulf of Mexico usually are small and may, therefore, be greatly modified and sometimes obliterated by fluctuations in the water surface due to winds or other meteorological conditions.

(116) At Key West the mean range of tide is 1.3 feet. Extreme variations in the level from 1.5 feet below the plane of reference to 4 feet above may occur in this locality.

(117) Along the west coast of the peninsula of Florida from Cape Sable to Apalachee Bay, the mean range varies from 0.5 to 3.6 feet. Extreme tides from 3 feet below to 6 feet above the plane of reference have been observed on this coast.

(118) Along the north shore of the Gulf of Mexico from St. George Sound to the Rio Grande the tide is generally diurnal and the range is less than 3 feet, but fluctuations due to the wind from 3.5 feet below to 4 feet above the plane of reference are not uncommon. During the severe storms that occasionally visit this region, high waters from 10 to 12 feet above the plane of reference have been reported at Galveston, TX, and 12.7 feet has been observed at Port O'Connor, TX.

(119) The periodic or astronomical tide, small at the mouth of the Mississippi River, gradually diminishes as it ascends the river until it finally becomes completely masked by the larger fluctuations resulting from meteorological conditions. At New Orleans the diurnal range of the tide during low-river stages averages about 0.8 foot. There is no periodic tide at high-river stages. There is, however, a large fluctuation in the level due to the condition of the river. The mean annual fluctuation at New Orleans is about 14 feet, the water being highest in the spring months and lowest during the autumn and early part of the winter. An extreme fluctuation of 21 feet in the river level at this city has been reported. (See Tidal information, including real-time water levels, tide predictions and tidal current predictions is available at *tidesandcurrents.noaa.gov*.)

(120)

Currents

(121) Under normal conditions, at all seasons of the year, the great volume of water passing north through Yucatan Channel into the Gulf of Mexico spreads out in various directions. Surface flows set: west across Campeche Bank, the Gulf of Campeche, and the Sigsbee Deep; northwest toward Galveston and Port Arthur; north-northwest toward the Mississippi Passes; and east into the Straits of Florida.

(122) A straight line drawn from Buenavista Key, Western Cuba, to the Mississippi Passes forms an approximate boundary between movements having different directions. West of this line the drift is generally north or west, while east of it the drift is east or southeast toward the Straits of Florida.

(123) There are north flows along the west side of the Gulf between Tampico and Corpus Christi in the vicinity of the 100-fathom and 1,000-fathom curves, north of the Sigsbee Deep between the 2,000-fathom and the 100-fathom curves, and along the west coast of Florida.

(124) In general, the surface circulation is the same at all seasons. There is, however, some seasonal change in velocity, the flow being generally stronger in spring and summer than in the autumn and winter.

(125) The current near the Florida Keys is variable and uncertain.

(126) Tidal currents are generally weak in the open Gulf, but they are strong at times near shore, in the vicinities of shoals, and in the entrances to harbors. See the Tidal Current Predictions at *tidesandcurrents.noaa.gov* for more information. Links to a user guide for this service can be found in chapter 1 of this book.

(127) The **Gulf Stream System** is the most famous of the principal ocean currents. The name was first used by Benjamin Franklin in 1769. In general, as the swift current of the Gulf Stream issues into the sea through Straits of Florida, its waters are characterized by a deep blue color, high salinity, high temperature in the upper stratum and absence of phosphorescence. Except near shoals where waves may stir up bottom sediments, Gulf Stream water is very clear, enabling visual penetration to unusually great depths. At its junction with coastal seawater, the edges may frequently be recognized in moderate weather by ripples, as well as by the difference in color. Northward, in the cooler regions, the evaporation from its surface, when the temperature of the air is lower than that of the water, is apparent as "sea smoke." In addition, the stream may carry with it some **Gulf weed**

(Sargassum), which is olive brown, branched seaweed with berrylike air vessels.

(128) The upstream extent of the Gulf Stream System can be traced to the Yucatan Strait where a well-established current enters the Gulf of Mexico. The current in the Gulf of Mexico is called the **Loop Current**. The position of the Loop Current is quite variable, but there is some evidence of a cyclical pattern of about 290 days. The Loop Current begins with a short flow pattern protruding into the Gulf of Mexico, then it slowly builds up, gradually protruding northward and westward into the Gulf and reaching as far as 28°N and 90°W before shedding a large warm ring. The remaining Loop Current has a shortened flow path and begins the process anew. The large detached warm ring will drift west about 1.5 miles per day to southwest into the western Gulf of Mexico where it will eventually dissipate. Gulf of Mexico warm rings average about 120 miles in diameter. The warm ring has a clockwise flow with a maximum current close inside its periphery of 0.5 to 1.5 knots.

(129) After entering the Straits of Florida between Cuba and the Florida Keys, the Gulf Stream System's path becomes much more stable. The major variation of the current from off Key West to off Little Bahama Bank appears to be a meandering of the axis of the current within the narrow confines of the Straits. The current within the Straits and slightly to the north is frequently referred to as the **Florida Current**.

(130) Shortly after emerging from the Straits of Florida, the Gulf Stream is joined by the **Antilles Current**, which flows northwest along the open ocean side of the West Indies. The Antilles Current, like the Gulf Stream, carries warm, highly saline waters of clear indigo blue. The union of the two currents gives rise to a broad and deep current possessing about the same characteristics as the Florida Current except that the velocity is somewhat reduced. The Gulf Stream from the Florida Straits flows north, then northeast, paralleling the general trend of the 100-fathom contour up to Cape Hatteras. From 32°N to Cape Hatteras the stream shows some lateral meandering that does not generally exceed one stream width, or about 40 miles.

(131) Beyond Cape Hatteras the Gulf Stream flows east away from the coast and into much deeper water. As it moves into progressively deeper water, the stream is subject to increased meandering, which can have as large a north-south extent as 270 miles. The wavelike meanders of the stream propagate east at speeds of about 3 to 5 miles per day. These meanders occasionally shed detached current rings or eddies that are found north and south of the stream and that are respectively warmer and cooler than the surrounding waters. Rings are generally formed east of 65°W.

(132) Warm rings average about 70 miles in diameter and are found north of the stream between it and the continental shelf. Warm rings rotate in a clockwise direction with a maximum flow of about 1.6 knots located about 2/3–3/4 from the center of the eddy. Warm rings generally move about 1.5 miles per day west after formation in the region between the stream and the continental shelf to about 70°W. From 70°W the rings generally move southwest along the continental shelf and eventually are absorbed into the stream near Cape Hatteras. Many warm rings are absorbed by the stream well before they reach Cape Hatteras. About 20 warm rings are formed each year and average about a 20-week life cycle. Cold rings average about 60 miles in diameter and are found south of the stream in the Sargasso water region. Cold rings rotate in a counterclockwise direction with a maximum flow of about 1.6 knots located 2/3-3/4 from the center. Cold ring velocities can be significantly higher than 1.6 knots. Cold rings tend to move about 1.5 miles per day southwest after formation and are eventually absorbed back into the Gulf Stream. About 20 cold rings are formed each year and average about a 1.5 year life cycle.

(133) East of the Grand Banks of Newfoundland, the whole surface is slowly driven east and northeast by the prevailing west winds to the coastal waters of northwestern Europe. For distinction, this broad and variable wind-driven surface movement is sometimes referred to as the **North Atlantic Drift**.

(134) On its west or inner side, the Gulf Stream is separated from the coastal waters by a zone of rapidly falling temperature, to which the term **north wall** (**west wall** from Georgia south) has been applied. The abrupt change in the temperature of the waters separated by the north wall (west wall) is frequently very striking and is a definite indication of the edge of the stream. It is most clearly marked north of Cape Hatteras but extends, more or less well defined, from the Straits of Florida to the Grand Banks of Newfoundland. In the vicinity of the Grand Banks, the north wall represents the dividing line between the warm current of the Gulf Stream and the cold waters of the **Labrador Current**, which according to observations, turns sharply, between 42°–43°N and 51°–52°W, and flows parallel to the Gulf Stream.

(135) Throughout the whole stretch from the Florida Keys to past Cape Hatteras the stream flows with considerable velocity. Characteristic average surface speed is on the order of 2.5 knots, increasing to about 4.5 knots off Cape Florida where the cross-sectional area of the channel is least. These values are for the axis of the stream where the current is a maximum, the speed of the stream decreasing gradually from the axis as the edges of the stream are approached. The axis of the stream is estimated to be about 3–15 miles seaward of the north wall. Both the speed and position of the axis of the stream fluctuate from day to day, hence description of both position and speed are averages.

(136) Crossing the stream at Jupiter or Fowey Rocks, an average allowance of 2.5 knots in a north direction should be made for the current.

(137) Crossing the stream from Habana, a fair allowance for the average current between 100-fathom curves is 1 knot in an east-northeast direction.

(138) A vessel bound from Cape Hatteras to Habana, or the Gulf ports, crosses the stream off Cape Hatteras. A fair allowance to make in crossing the stream is 1 to 1.5 knots in a northeast direction for a distance of 40 miles from the 100-fathom curve.

(139) Earlier systematic observations on the Gulf Stream dealt with the temperature of the water rather than its motion, and the axis was taken to be along the line of highest temperature obtained. Later the axis was taken to mark the line of greatest velocity. Ordinarily it is assumed that these two axes coincide, but this is by no means certain. The thermometer, although it indicates the limits of the stream in a general way, is therefore only an approximate guide to the velocity of the currents.

(140) The lateral boundaries of the current within the Straits of Florida are fairly well fixed, but as the stream crosses **32°N** its east boundary becomes somewhat vague. On the west side the limits can be defined approximately since the waters of the stream differ in color, temperature, salinity and flow from the inshore coastal waters. On the east, however, the Antilles Current combines with the Gulf Stream so that its waters here merge gradually with the waters of the open Atlantic. Observations of the National Ocean Survey indicate that, in general, the average position of the inner edge of the Gulf Stream from the Straits of Florida to Cape Hatteras lies inside the 100-fathom curve.

(141) At the west end of the Straits of Florida the limits of the Gulf Stream are not well defined. Between Fowey Rocks and Jupiter Inlet the inner edge lies very close to the shoreline.

(142) Along the Florida Reefs between Alligator Reef and Dry Tortugas the distance of the north edge of the Gulf Stream from the edge of the reefs gradually increases toward the west. Off Alligator Reef it is quite close inshore, while off Rebecca Shoal and Dry Tortugas it is possibly 15 to 20 miles south of the 100-fathom curve. Between the reefs and the north edge of the Gulf Stream the currents are ordinarily tidal and are subject at all times to considerable modification by local winds and barometric conditions. This neutral zone varies in both length and breadth; it may extend along the reefs a greater or lesser distance than stated, and its width varies as the north edge of the Gulf Stream approaches or recedes from the reefs.

(143)

Location of the Gulf Stream

(144) The approximate position of the axis of the Gulf Stream for various regions is shown on NOS charts: the Straits of Florida; South Carolina to Cuba; Cape Canaveral to Key West; Alligator Reef to Habana. Southeastern U.S. charts show the axis and the position of the inner edge of the Gulf Stream from Cape Hatteras to Straits of Florida.

(145) Up-to-date information on the location, width and maximum surface temperature of the Gulf Stream System is available in a variety of ways. Such information is broadcast by NOAA Weather Radio stations from Key West, FL, to Cape Hatteras, NC. The times of these broadcasts and their formats vary from station to station, but in general, all give the distance to the inshore edge of the Stream with reference to a navigational light or buoy, the width of the Stream when that is known and the maximum temperature. This information is derived largely from infrared satellite imagery, and it is unfortunately not available during the warmer summer months south of about Jupiter Inlet. (See Appendix A for a list of NOAA Weather Radio stations.)

(146) For ships in port or with telecopy equipment, an analysis of the satellite-based Gulf Stream System from the central Gulf of Mexico to Cape Hatteras, which includes an estimated location of the maximum current, is available through the Naval Oceanographic Office at *ecowatch.ncddc.noaa.gov/JAG/Navy/data/satellite_analysis/gsscofa.gif.*

(147) An analysis of the Gulf Stream System from the western Gulf of Mexico to Cape Hatteras (South Panel) and from Cape Hatteras to Nova Scotia (North Panel) is provided the National Weather Service (NWS) Weather Forecast Offices (WFOs) in their Coastal Waters Forecast Synopses. WFO Melbourne, FL; WFO Miami, FL and WFO Key West, FL are found at *www.nws.noaa.gov/om/marine/zone/south/stheastmz.htm.*

(148)

Currents

(149) **Wind-driven currents** are very complicated. Their velocities and directions depend upon a number of factors such as the velocity, direction and duration of the wind; the proximity of the coast and the direction of the coastline. Generally in the Northern Hemisphere the wind-driven current sets somewhat to the right of the wind, but in coastal waters there are many exceptions to this general rule, the current often setting to the left of the wind, due to the tendency of the current to follow the direction of the coastline or to other local conditions.

(150) The velocity of the wind current relative to that of the wind also varies with the locality. Wind-current information is available from the Tidal Current prediction service at *tidesandcurrents.noaa.gov*. Links to a user guide for this service can be found in chapter 1 of this book.

(151)

Weather

(152) Climatological tables for coastal locations and meteorological tables for coastal ocean areas are found within the appropriate chapters in which they are discussed. The climatological tables are a special extraction from the International Station Meteorological Climate Summary (ISMCS). The ISMCS is a CD-ROM jointly produced by the National Climatic Data Center, Fleet Numerical Meteorology and Oceanography Detachment-Asheville, NC, and the U.S. Air Force Environmental Technical Applications Center, Operating Location-A. The meteorological tables for the ocean areas are compiled from observations made by ships in

(153)

Mean Surface Water Temperatures (°C) and Densities

	Years		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
Key West, FL	41	Temp	21.7	22.2	23.7	25.8	27.9	29.6	30.4	30.6	29.7	27.6	24.4	22.3	26.3
		Density	26.8	26.9	27.1	27.3	27.5	27.2	27.3	27.3	26.9	26.6	27.0	26.9	27.1
St. Petersburg, FL	25	Temp	16.7	17.6	19.7	23.1	26.4	28.8	29.7	29.7	28.7	25.4	21.0	17.6	23.7
		Density	19.7	19.6	19.4	19.5	20.5	21.2	20.6	18.6	17.1	17.5	18.8	19.5	19.3
Cedar Keys, FL	31	Temp	14.4	15.7	18.4	22.9	26.4	29.1	29.8	29.8	28.3	24.2	19.0	15.4	22.8
		Density	19.9	19.1	18.1	18.1	19.1	20.2	19.9	19.0	18.8	19.2	20.2	20.1	19.3
Pensacola, FL	48	Temp	13.1	14.3	17.1	21.6	25.4	28.6	29.6	29.7	27.8	23.5	18.1	14.2	21.9
		Density	13.0	11.9	9.5	8.2	10.9	12.8	12.9	12.9	14.6	15.9	17.2	15.5	12.9
Grand Isle, LA	21	Temp	16.1	16.2	17.6	20.9	25.2	28.3	29.3	29.4	28.3	25.0	21.2	18.1	23.0
		Density	22.9	21.0	20.3	17.3	16.7	17.3	20.1	20.8	21.2	22.7	24.1	23.9	20.7
Eugene Island, LA	28	Temp	10.8	11.9	15.3	19.9	24.6	28.3	29.4	29.6	27.9	23.3	17.3	12.6	20.9
		Density	1.9	1.1	1.1	0.8	0.6	0.6	1.0	2.4	5.7	5.5	4.7	3.3	2.4
Galveston, TX	50	Temp	13.1	14.2	16.8	21.4	25.6	28.8	30.2	30.3	28.5	24.4	18.8	14.8	22.3
		Density	17.1	16.7	16.8	16.2	15.1	16.0	19.1	22.1	19.9	18.6	18.8	18.2	17.9
Freeport Harbor, TX	16	Temp	11.9	13.5	16.2	21.4	25.1	27.7	28.7	29.3	27.9	23.8	18.9	14.9	21.6
		Density	18.1	17.6	18.9	18.5	17.0	19.1	22.5	24.5	20.9	18.4	19.0	18.4	19.4
Rockport, TX	7	Temp	16.7	16.8	19.8	23.5	27.1	30.1	30.8	30.8	29.1	25.6	20.1	16.9	23.9
		Density	20.6	20.0	19.6	20.6	20.9	22.4	25.6	27.6	23.2	20.4	20.5	19.2	21.7
Port Aransas, TX	11	Temp	13.6	14.3	16.7	22.2	25.8	28.8	29.8	30.0	29.2	25.3	20.7	16.3	22.7
		Density	22.5	23.1	23.4	22.9	21.8	24.3	26.2	27.2	24.8	22.6	22.8	23.3	23.7
Port Mansfield, TX	9	Temp	14.6	16.1	18.6	23.8	26.1	28.3	29.2	29.2	28.3	24.6	20.7	16.7	23.0
		Density	25.8	26.0	26.2	26.3	24.9	24.7	27.1	30.1	29.7	28.0	28.8	27.6	27.1
Brazos Santiago, TX	14	Temp	14.6	15.3	17.4	21.3	24.7	26.3	25.9	26.7	28.2	25.8	21.7	17.6	22.1
		Density	24.2	24.6	25.1	25.3	25.3	26.7	27.2	27.5	26.6	25.2	25.5	24.6	25.7
Port Isabel, TX	24	Temp	16.0	17.3	19.8	23.6	26.8	29.0	29.6	29.6	29.1	25.9	21.4	17.5	23.8
		Density	24.8	25.0	24.7	25.3	25.4	26.4	27.5	27.6	25.7	24.3	25.1	25.3	25.6
San Juan , PR	10	Temp	26.6	26.4	26.9	27.4	27.3	28.1	28.3	28.4	28.8	28.6	28.2	27.1	27.7
		Density	25.4	26.0	26.1	26.2	25.3	25.5	25.6	25.1	24.4	24.0	24.1	24.5	25.2
Isla Maguey, PR	15	Temp	26.6	26.4	27.1	28.0	28.6	28.8	28.9	28.9	29.3	29.2	28.6	27.2	28.2
		Density	26.3	26.7	26.8	27.0	27.0	26.9	26.9	26.9	26.6	5.9	25.9	26.1	26.5

Temperature (Celsius)
F (Fahrenheit) = 1.8C (Celsius) + 32

Density as used in this table is the specific gravity of the sea water or the ratio between the weight of a sea-water sample and the weight of an equal volume of distilled water at 15°C (59°F).

passage and extracted from the National Climatic Data Center's Tape Deck-1129, Surface Marine Observations. Listed in Appendix A are National Weather Service offices and radio stations that transmit weather information.

(154) This section presents a seasonal picture of the weather that can be expected to affect shipping in the Gulf of Mexico and the northwest Caribbean. Detailed local weather is discussed in the appropriate chapters.

(155) While navigating the Gulf of Mexico presents few weather hazards, the ones that occur can be treacherous. Winter storms and cold fronts can generate gales and rough seas. Sea fog, frequent from December through April, can plague the mariner in open and coastal waters. During summer and fall, there is the threat from hurricanes.

(156) During winter, the region is subjected alternately to maritime tropical and continental polar air masses. While the Gulf lies south of the primary winter storm tracks, one will occasionally stray through the region. When cold fronts push through and stall over the Gulf, they may trigger the formation of winter storms. These systems often parallel the north Gulf coast or move inland producing persistent low stratus clouds and rain ahead of their centers. About one-half of the 30 to 40 cold fronts that penetrate the Gulf each year bring strong north winds and whip up rough seas; these are known as **"northers."** The cold air behind the fronts can cause sudden and sometimes large drops in temperature. These cold air masses lower the sea surface temperatures, which aids in the formation of dense advection fog that occurs when warm southerlies blow across these cool waters. This fog is most prevalent along the north Gulf coast from January through April.

(157) By May, the semipermanent, subtropical **Atlantic High (Bermuda High)**, which extends westward across the Gulf of Mexico, strengthens and tends to block

storms and fronts from the north. Spring is one of the most trouble-free seasons in the Gulf. Easterly moving systems are infrequent until early summer when the threat of easterly waves and tropical cyclones looms over the region.

(158) The summer wind flow around the Bermuda High is generally from the east through south, and this is reinforced along much of the coast by the afternoon sea breeze. These prevailing winds provide a source of moist tropical air that results in frequent shower activity along the coast, particularly during the afternoon and evening. Many of these showers develop into thunderstorms, which may drift offshore at night. Infrequently, west through north winds bring hot, dry weather to the Gulf coast.

(159) Easterly wave and tropical cyclone activity increases during August and reaches a peak in September. The principal paths of tropical cyclones moving into the Gulf are from the Straits of Florida and the Yucatan Channel. More than one-half of the tropical storms reach hurricane strength, threatening ships at sea as well as coastal installations. This threat remains through November.

(160) During autumn, the Bermuda High begins to weaken and retreat eastward, opening the way for cold fronts and an occasional winter storm. This increases the frequency of gales and rough seas. However, there are still many days of fine sailing weather. Locally, along the coast, radiation fog forms on clear, calm nights but disperses quickly with the rising sun or if the wind picks up.

(161) Puerto Rico and the Virgin Islands lie directly in the path of easterly trade winds throughout the year. Surrounded by warm tropical waters, the islands have fairly uniform year-round weather with small annual and diurnal temperature changes and slight wet and dry seasons. In winter, the trades are occasionally interrupted by weak cold fronts from north that generate shifting winds and provide some rain during the normally dry winter season. From May through November, easterly waves, which are migratory, unorganized masses of clouds and showers, occasionally move through the region. Sometimes they organize into tropical storms or hurricanes, which are a threat to the mariner and marine coastal facilities. Normally in summer, rain falls as brief showers or thunderstorms, the result of warm, moist air being forced aloft by mountainous or hilly terrain.

(162)

Extratropical cyclones

(163) From October through April, cold continental air masses invade the Gulf of Mexico some 30 to 40 times. These cold outbreaks may become unstable as they spread across the warm water. Squalls containing thick clouds and heavy showers may develop, and local winds may reach 50 knots or more. Initially these fronts may be accompanied by gale-force winds. About 15 to 20 of them are considered by mariners to be true "northers," with winds exceeding 20 knots. Ship observations indicate that winds exceed 20 knots 5 to 15 percent of the time in the north Gulf region. Close to the north coast, rough seas are less likely than farther south because of the limited fetch. Northers usually last 1 to 2 days but can persist for 4 days. The passage of these fronts often results in sudden, large temperature drops, particularly close to the coast.

(164) These fronts often stall over the Gulf of Mexico. The contrast between the cold continental air to north and warm tropical air to south may result in the formation of an atmospheric wave along the front. Depending upon supporting environmental conditions, the wave may develop into a low-pressure system. These lows often move northeast or east-northeast and sometimes develop into major winter storms off the Atlantic coast. North Gulf waters are considered a region of cyclogenesis from December through March, and the waters off the central coast of Texas are particularly active. February is usually the most active month. These low-pressure systems spread dense low clouds and rain ahead of their centers and draw in cold air in their wakes.

(165) Lows and northers are mainly responsible for the strong winds and rough seas that hamper navigation from fall through spring. Wave heights of 10 feet or more are encountered up to 8 percent of the time while winds of 28 knots or more blow up to 6 percent of the time. January and February are the worst months, and conditions are roughest off the coasts of Mississippi, Louisiana and Texas. Gale-force winds (speeds of 34 knots or more) are encountered up to 2 percent of the time.

(166)

Tropical cyclone

(167) To the meteorologist, the tropical cyclone is a warm-core low-pressure system that develops over the warm waters of the tropical oceans with a counterclockwise rotary circulation in the northern hemisphere. When maximum sustained windspeeds exceed 63 knots, it is called a **hurricane** in the North Atlantic. To the mariner, the tropical cyclone is a storm to be avoided, a relatively small, unpredictable system capable of generating 200-knot winds, 40-foot seas and 20-foot storm surges. Aboard today's ships, the wind itself is usually not the greatest problem. However, in open water a ship is at the mercy of the combination of wind and wave. The sides of a ship tend to act as a sail. Under certain conditions this sail effect may be critical. In hurricanes, the combination of this sail effect, the wave action, stress on the vessel and ship's handling can cause a vessel to capsize. The more the mariner knows about tropical cyclones, their habits and the areas in which they may be encountered, the better are his chances of survival.

(168) Rarely does the mariner who has experienced a fully developed tropical cyclone (hurricane) at sea wish to encounter a second one. He has learned the wisdom of avoiding them if possible. The uninitiated may be misled by the deceptively small size of a tropical cyclone as it appears on a weather map and by the fine weather experienced only a few hundred miles from the reported center of such a storm. The rapidity with which the

weather can deteriorate with approach of the storm, and the violence of the hurricane, are difficult to visualize if they have not been experienced.

(169) As a tropical cyclone moves out of the tropics to higher latitudes, it normally loses energy slowly, expanding in area until it gradually dissipates or acquires the characteristics of extratropical cyclones. At any stage, a tropical cyclone normally loses energy at a much faster rate if it moves over land. As a general rule, tropical cyclones of the North Atlantic Region move with the prevailing winds of the area. In small hurricanes the diameter of the area of destructive winds may not exceed 25 miles while in some of the greatest storms the diameter may be as much as 400 to 500 miles.

(170) At the center is a comparative calm known as the "eye of the storm." The diameter of this "eye" varies with individual storms and may be as little as 7 miles but is rarely more than 30 miles. The average is 15 to 20 miles. This center is the region of low atmospheric pressure around which winds blow in a more or less circular course, spiraling inward in a counterclockwise direction. Winds at the outer edge of the storm area are light to moderate and gusty, and often increase toward the center to speeds too high for instrument recording. Although the air movement near the center of the hurricane is usually light and fitful, the seas in this area are in most cases very heavy and confused, rendered so by the violent shifting winds which surround it. Furthermore, after the center has passed a vessel, she may expect a sharp renewal of the gales, with winds from a more or less opposite direction. The hurricane may affect an area covering tens of thousands of square miles.

(171) In the North Atlantic, tropical cyclones form over a wide range of ocean between the Cape Verde Islands and the Windward Islands, over the west Caribbean Sea and the Gulf of Mexico. In an average year nine or ten tropical cyclones come to life and about six of these reach hurricane intensity. Early and late season tropical cyclones tend to form in the west Caribbean or east Gulf of Mexico and move in a northwest through northeast direction. In both June and November an average of two tropical cyclones develop every three years; one of these usually reaches hurricane strength. By July, activity spreads east to the Windward Islands, and four tropical cyclones can be expected every five years. Storms have a tendency to move into the Gulf of Mexico or along the east coast of the United States. During August and the first half of September, the breeding grounds lie between the West Indies and Africa, while during the latter part of September they extend into the Caribbean and Gulf of Mexico. During this 2-month period about seven tropical cyclones come to life, with about four reaching hurricane strength. Early August tracks are similar to those of July, while later in the month storms move in a more west direction in the lower latitudes and either continue into the south Gulf of Mexico or recurve over Puerto Rico. This is also true for many late-September storms, while earlier in the month many move west-northwest to the north of Puerto Rico and either through the Straits of Florida into the Gulf of Mexico or northeast into the mid-Atlantic. October activity decreases to August levels while development is concentrated in the west Caribbean and just east of the West Indies. October storms frequently move into the Gulf of Mexico from the southeast.

(172)

Locating and tracking tropical cyclones

(173) By means of radio, the National Weather Service collects weather observations daily from land stations, ships at sea and aircraft. When a tropical cyclone is located, usually in its early formative stage, it is followed closely. In the North Atlantic, U.S. Air Force and NOAA aircraft make frequent flights to the vicinity of such storms to provide information needed for tracking the tropical cyclone and determining its intensity. Long-range shore radar stations follow the movement of the storm's precipitation area when it is in range.

(174) All tropical cyclones in the Atlantic Ocean are routinely and continuously monitored by satellite. In areas far removed from the United States and the West Indies, satellite observations are the primary and often the only means of tracking tropical cyclones, other than ship reports. Satellite imagery, in addition to other means of observation such as aircraft reconnaissance, also provides estimates of the strength of the maximum sustained winds and minimum central pressure in tropical cyclones. Bulletins are broadcast to ships several times daily, giving information on each storm's location, intensity and movement. As a further aid, the mariner may obtain weather reports by radio directly from other ships in the vicinity of a tropical cyclone.

(175)

Signs of approach

(176) While National Hurricane Center warnings provide information for locating and avoiding a tropical cyclone, it is important to know the sequence of events leading to its passage.

(177) An early indication of the approach of such a storm is the presence of a long swell. In the absence of a tropical cyclone, the crests of swell in the deep waters of the Atlantic pass at the rate of perhaps eight per minute. Swell generated by a tropical cyclone is about twice as long, the crests passing at the rate of perhaps four per minute. The swell may be observed several days before the arrival of the storm.

(178) When the storm center is 500 to 1,000 miles away, the barometer usually rises a little and exhibits a slight pumping action. Skies are relatively clear, and cumulus clouds, if present at all, are few in number and their vertical development appears suppressed. Snow-white, fibrous "mare's tails" (cirrus) appear when the storm is about 300 to 600 miles away. Usually these seem to converge more or less in the direction from which the storm is approaching.

(179) Shortly after the cirrus appears, but sometimes before, the barometer starts a long, slow fall. At first the

fall is so gradual that it appears only to alter somewhat the normal daily cycle (two maximums and two minimums in the tropics). As the rate of fall increases, the daily pattern is completely lost in the more or less steady fall.

(180) The cirrus becomes more confused and tangled, and then gradually gives way to a continuous veil of cirrostratus. Below this veil, altostratus forms, and then stratocumulus. These clouds gradually become more dense, and as they do so, the weather becomes unsettled. A fine, mist-like rain begins to fall, interrupted from time to time by showers. The barometer has fallen perhaps 0.1 inch (3 mb).

(181) As the fall becomes more rapid, the wind increases in gustiness, and its speed becomes greater, reaching perhaps 22 to 40 knots (Beaufort 6–8). On the horizon appears a dark wall of heavy cumulonimbus, the **bar** of the storm. Portions of this heavy cloud become detached from time to time and drift across the sky, accompanied by rain squalls and wind of increasing speed. Between squalls, the cirrostratus can be seen through breaks in the stratocumulus.

(182) As the bar approaches, the barometer falls more rapidly and wind speed increases. The seas, which have been gradually mounting, become tempestuous, and squall lines, one after the other, sweep past in ever-increasing number and intensity.

(183) With the arrival of the bar, the day becomes very dark, squalls become virtually continuous and the barometer falls precipitously, with a rapid increase in the wind speed. The center may still be 100 to 200 miles away in a hurricane. As the center of the storm comes closer, the ever-stronger wind shrieks through the rigging and about the superstructure of the vessel. As the center approaches, rain falls in torrents. The wind's fury increases. The seas become mountainous. The tops of huge waves are blown off to mingle with the rain and fill the air with water. Objects at a short distance are not visible. Even the largest and most seaworthy vessels become virtually unmanageable and may sustain heavy damage. Less sturdy vessels do not survive. Navigation virtually stops as safety of the vessel becomes the prime consideration. The awesome fury of this condition can only be experienced. Words are inadequate to describe it.

(184) If the eye of the storm, which may be from 5 to 30 miles across, passes over the vessel, the winds suddenly drop to a breeze as the wall of the eye passes. The rain stops and skies clear to permit the sun to shine through the thin cloud cover. Visibility improves and confused, mountainous seas approach from all sides. The barometer reaches its lowest point. As the wall on the opposite side of the eye arrives, the full fury of the wind strikes as suddenly as it ceased, but from the opposite direction. The sequence of conditions that occurred during approach of the storm is reversed, and pass more quickly, as the various parts of the storm are not as wide in the rear as on the forward side of the storm.

(185)

Locating the center of a tropical cyclone

(186) If intelligent action is to be taken to avoid the full fury of a tropical cyclone, early determination of its location and direction of travel relative to the vessel is essential. The bulletins and forecasts are an excellent general guide, but they are not infallible and may be sufficiently in error to induce a mariner in a critical position to alter course so as to unwittingly increase the danger of the vessel. Often it is possible, using only those observations made aboard ship, to obtain a sufficiently close approximation to enable the vessel to maneuver to the best advantage.

(187) As previously stated, the presence of an exceptionally long swell is usually the first visible indication of the existence of a tropical cyclone. In deep water it approaches from the general direction of origin (the position of the storm center when the swell was generated). However, in shoaling water this is a less reliable indication, because the direction is changed by refraction, the crests being more nearly parallel to the bottom contours.

(188) When the cirrus clouds appear, their point of convergence provides an indication of the direction of the storm center. If the storm is to pass well to one side of the observer, the point of convergence shifts slowly in the direction of the storm movement. If the storm center will pass near the observer, this point remains steady. When the bar becomes visible, it appears to rest upon the horizon for several hours. The darkest part of this cloud is in the direction of the storm center. If the storm is to pass to one side, the bar appears to drift slowly along the horizon. If the storm is heading directly toward the observer, the position of the bar remains fixed. Once within the area of the dense, low clouds, one should observe their direction of movement, which is almost exactly along the isobars, with the center of the storm being 90° from the direction of cloud movement (left of direction of movement in the Northern Hemisphere).

(189) The winds are probably the best guide to the direction of the center of a tropical cyclone. The circulation is cyclonic, but because of the steep pressure gradient near the center, the winds there blow with greater violence and are more nearly circular than in extratropical cyclones.

(190) According to Buys Ballot's law, an observer who faces into the wind has the center of the low pressure on his right (Northern Hemisphere) and somewhat behind him. If the wind followed circular isobars exactly, the center would be exactly eight points, or 90°, from dead ahead when facing into the wind. However, the track of the wind is usually inclined somewhat toward the center, so that the angle dead ahead varies between perhaps 8 and 12 points (90° to 135°). The inclination varies in different parts of the same storm. It is least in front of the storm, and greatest in the rear, since the actual wind is the vector sum of that due to the pressure gradient and the motion of the storm along the track. A good average is perhaps 10 points in front and 11 or 12 points in the rear. These values apply when the storm center is still several hundred miles away. Closer to the center, the wind blows more nearly

along the isobars, the inclination being reduced by one or two points at the wall of the eye. Since wind direction usually shifts temporarily during a squall, its direction at this time should not be used for determining the position of the center.

(191) When the center is within radar range, it might be located by this equipment. However, since the radar return is predominately from the rain, results can be deceptive, and other indications should not be neglected.

(192) Distance from the storm center is more difficult to determine than direction. Radar is perhaps the best guide. The rate of fall of the barometer is of some help; this is only a rough indication, however, for the rate of fall may be quite erratic and will vary somewhat with the depth of the low at the center, the speed of the storm center along its track and the stage in the life cycle of the storm.

(193)

Hurricane avoidance

(194) Most mariners feel that ocean-going ships should leave ports that are threatened by a hurricane. Despite this natural caution, ships continue to be damaged by tropical cyclones both in port or after leaving port. This can be blamed largely on the relative unpredictability of storm movement. In making a decision to leave or stay, the mariner must take into account the local climatology of tropical cyclones, the local predictability of their movement, the speed of movement and the suitability of the port. The Gulf of Mexico coast displays a balance of these factors. However, the reduced flexibility in evasion options created by the shape of the Gulf biases the leave/stay decision in favor of an early departure. This effectively reduces the predictability of the threat at the time of decision. The large range of storm speeds affecting the section of the coast from New Orleans to Pensacola encourages an even earlier departure. These are considered "high risk" ports. Local factors in the Gulf of Mexico further diminish the security of many ports. For example, the strong impact of storm surge along much of the Gulf coast in places leads to closure of ports due to sudden silting of their long dredged approach channels. Detailed information on the vulnerability of North Atlantic ports to hurricanes may be found in the **Hurricane Havens Handbook for the North Atlantic Ocean** published by the Marine Meteorology Division, Naval Research Laboratory, Monterey, CA 93943. Additional local information may be found in the individual chapters of this book.

(195) The safest procedure with respect to tropical cyclones is to avoid them. If action is taken sufficiently early, this is simply a matter of setting a course that will take the vessel well to one side of the probable track of the storm and then continuing to plot the position of the storm center, as given in the weather bulletins, revising the course as needed.

(196) However, such action is not always possible. If one finds oneself within the storm area, the proper action to take depends in part upon one's position relative to the storm center and its direction of travel. It is customary to divide the circular area of the storm into two parts. In the Northern Hemisphere, that part to the **right** of the storm track (facing in the direction toward which the storm is moving) is called the **dangerous semicircle**. It is considered dangerous because (1) the actual wind **speed** is greater than that due to the pressure gradient alone, since it is augmented by the forward motion of the storm, and (2) the **direction** of the wind and sea is such as to carry a vessel into the path of the storm (in the forward part of the semicircle). The part to the **left** of the storm track is called the **navigable semicircle**. In this part, the wind is decreased by the forward motion of the storm, and the wind blows vessels away from the storm track (in the forward part). Because of the greater wind speed in the dangerous semicircle, the seas are higher there than in the navigable semicircle.

(197) A plot of successive positions of the storm center should indicate the semicircle in which a vessel is located. However, if this is based upon weather bulletins, it is not a reliable guide because of the lag between the observations upon which the bulletin is based and the time of reception of the bulletin, with the ever present possibility of a change in the direction of motion of the storm. The use of radar eliminates this lag, but the return is not always a true indication of the center. Perhaps the most reliable guide is the wind. Within the cyclonic circulation, a **veering wind** (one changing direction to the right in the Northern Hemisphere and to the left in the Southern Hemisphere) indicates a position in the dangerous semicircle, and a **backing wind** (one changing in a direction opposite to a veering wind) indicates a position in the navigable semicircle. However, if a vessel is underway, its motion should be considered. If it is outrunning the storm or pulling rapidly toward one side (which is not difficult during the early stages of a storm, when its speed is low), the opposite effect occurs. This should usually be accompanied by a rise in atmospheric pressure, but if motion of the vessel is nearly along an isobar, this may not be a reliable indication. If in doubt, the safest action is usually to stop long enough to determine definitely the semicircle. The loss in valuable time may be more than offset by the minimizing of the possibility of taking the wrong action and increasing the danger to the vessel. If the wind direction remains steady (for a vessel which has stopped), with increasing speed and falling barometer, the vessel is in or near the path of the storm. If it remains steady with decreasing speed and rising barometer, the vessel is on the storm track, behind the center.

(198) The first action to take if one finds oneself within the cyclonic circulation is to determine the position of one's vessel with respect to the storm center. **While the vessel can still make considerable way through the water, a course should be selected to take it as far as possible from the center**. If the vessel can move faster than the storm, it is a relatively simple matter to outrun the storm if sea room permits. But when the storm is faster the solution is not as simple. In this case, the vessel, if

ahead of the storm, will approach nearer to the center. The problem is to select a course that will produce the greatest possible minimum distance. This is best determined by means of a relative movement plot.

(199) As a general rule, for a vessel in the Northern Hemisphere, safety lies in placing the wind on the starboard bow in the dangerous semicircle and on the starboard quarter in the navigable semicircle. If on the storm track ahead of the storm, the wind should be put about 2 points on the starboard quarter until the vessel is well within the navigable semicircle, and the rule for that semicircle then followed. With a faster than average vessel, the wind can be brought a little farther aft in each case. However, as the speed of the storm increases along its track, the wind should be brought farther forward. If land interferes with what would otherwise be the best maneuver, the solution should be altered to fit the circumstances. If the speed of the vessel is greater than that of the storm, it is possible for the vessel, if behind the storm, to overtake it. In this case, the only action usually needed is to slow enough to let the storm pull ahead.

(200) In all cases, one should be alert to changes in the direction of movement of the storm center, particularly in the area where the track normally curves toward the pole. If the storm maintains its direction and speed, the ship's course should be maintained as the wind shifts.

(201) If it becomes necessary for a vessel to heave to, the characteristics of the vessel should be considered. A power vessel is concerned primarily with damage by direct action of the sea. A good general rule is to heave to with head to the sea in the dangerous semicircle or stern to the sea in the navigable semicircle. This will result in greatest amount of headway away from the storm center and least amount of leeway toward it. If a vessel handles better with the sea astern or on the quarter, it may be placed in this position in the navigable semicircle or in the rear half of the dangerous semicircle, but never in the forward half of the dangerous semicircle. It has been reported that when the wind reaches hurricane speed and the seas become confused, some ships ride out the storm best if the engines are stopped and the vessel is permitted to seek its own position. In this way, it is said, the ship rides with the storm instead of fighting against it.

(202) In a sailing vessel, while attempting to avoid a storm center, one should steer courses as near as possible to those prescribed above for power vessels. However, if it becomes necessary for such a vessel to heave to, the wind is of greater concern than the sea. A good general rule always is to heave to on whichever tack permits the shifting wind to draw aft. In the Northern Hemisphere this is the starboard tack in the danger semicircle and the port tack in the navigable semicircle.

(203) The rules for avoiding the storm center for power-driver vessels are summarized as follows:

(204)

Right or dangerous semicircle

(205) Bring the wind on the starboard bow (**045°** relative), hold course and make as much way as possible. If obliged to heave to, do so with head to the sea.

(206)

Left or navigable semicircle

(207) Bring the wind on the starboard quarter (**135°** relative), hold course and make as much way as possible. If obliged to heave to, do so with stern to the sea.

(208)

On storm track, ahead of center

(209) Bring wind two points on the starboard quarter (**157½°** relative), hold course and make as much way as possible. When well within the navigable semicircle, maneuver as indicated above.

(210)

On storm track, behind center

(211) Avoid the center by the best practicable course, keeping in mind the tendency of tropical cyclones to curve north and east.

(212)

Coastal effects

(213) The high winds of a hurricane inflict widespread damage when such a storm leaves the ocean and crosses land. Aids to navigation may be blown out of position or destroyed. Craft in harbors, unless they are properly secured, drag anchor or are blown against obstructions. Ashore, trees are blown over, houses are damaged, power lines are blown down, etc. The greatest damage usually occurs in the dangerous semicircle a short distance from the center, where the strongest winds occur. As the storm continues on across land, its fury subsides faster than it would if it had remained over water.

(214) Along the coast, particularly, greater damage may be inflicted by water than by the wind. There are at least four sources of water damage. First, the unusually high seas generated by the storm winds pound against shore installations and craft in their way. Second, the continued blowing of the wind toward land causes the water level to increase perhaps 3 to 10 feet above its normal level. This **storm tide**, which may begin when the storm center is 500 miles or even farther from the shore, gradually increases until the storm passes. The highest storm tides are caused by a slow-moving hurricane of larger diameter, because both of these effects result in greater duration of wind in the same direction. The effect is greatest in a partly enclosed body of water, such as the Gulf of Mexico, where the concave coastline does not readily permit the escape of water. It is least on small islands, which present little obstruction to the flow of water. Third, the furious winds which blow around the wall of the eye often create a ridge of water called a **storm surge**, which strikes the coast and often inflicts heavy damage. The effect is similar to that of a **tsunami (seismic sea wave)** caused by an earthquake in the ocean floor. Both of these waves are popularly called **tidal waves**. Storm

surges of 20 feet or more have occurred. About 3 or 4 feet of this is due to the decrease of atmosphere pressure and the rest to winds. Like the damage caused by wind, that due to high seas, the storm tide and the storm surge is greatest in the dangerous semicircle, near the center. The fourth source of water damage is the heavy rain that accompanies a tropical cyclone. This causes floods that add to the damage caused in other ways.

(215) When proceeding along a shore recently visited by a hurricane, a navigator should remember that time is required to restore aids to navigation that have blown out of position or have been destroyed. In some instances the aid may remain but its light or sound apparatus may be inoperative. Landmarks may have been damaged or destroyed.

(216)

Cargo care

(217) The temperature at which condensation to water droplets occurs is called the dew point. When the dew point is above freezing, condensation will be in the form of water; below freezing dew points, when reached, will result in the formation of ice crystals deposited upon cold surfaces. Knowledge of the dew point along with the cargo temperature and moisture content is vital for hold ventilation decisions.

(218) The relatively high humidities and temperatures encountered in this subtropical region make protection of cargoes from sweat an important consideration. Critical conditions are most likely to occur when cargoes are loaded under conditions of high temperatures, which are prevalent from spring through autumn.

(219) When free air has a dew point temperature higher than the temperature of the surface with which it comes in contact, the air is often cooled sufficiently below its dew point to release moisture. When this happens aboard ship, condensation will take place on relatively cool cargo or on the ship's structure within the hold where it later drips onto the cargo. Thus, if cargo is stowed in a cool climate and the vessel sails into warmer waters, ventilation of the hold with outside air will likely lead to sweat damage in any cargo sensitive to moisture. Under such conditions external ventilation should, as a rule, be closed off entirely, unless the cargo generates internal heat, that hazard being greater than sweat damage. In the opposite case, when a vessel is loaded during a warm period, and moves into cooler weather, vulnerable cargo should be ventilated.

(220) A safe rule for ventilation directed toward moisture control may be stated as follows: Whenever accurate measurements show the outside air has a dew point below the dew point of the air surrounding the cargo to be protected, such outside air is capable of removing moisture from the hold and the ventilation process can be safely started. Whenever the reverse is true, and the outside dew point is higher than the dew point temperature around the cargo, then ventilation will increase the moisture content of the hold and may readily result in sweating within the ship. The above does not take into account possible fumes or gases in the compartment; in such cases discretion must be used.

(221)

Principal ports

(222) The principal deep-draft commercial ports within the area of this Coast Pilot are Port St. Joe, Panama City, Pensacola, Tampa, Mobile, Pascagoula, New Orleans, Baton Rouge, Lake Charles, Orange, Freeport, Port Lavaca-Point Comfort, Port Arthur, Beaumont, Galveston, Texas City, Houston, Corpus Christi, Port Brownsville and Port Isabel. (See chapters 13 and 14, respectively, for the principal deep-draft commercial ports of Puerto Rico and U.S. Virgin Islands.)

(223) Other ports are Key West, Port Boca Grande, Sarasota, St. Petersburg, St. Marks and Carrabelle.

(224)

Pilotage

(225) Pilotage, with a few minor exceptions, is compulsory for all foreign vessels and U.S. vessels under register in the foreign trade. Pilotage is optional for coastwise vessels that have on board a pilot properly licensed by the federal government for the waters that the vessel travels.

(226) Arrangements for pilots are generally made in advance by the ships' agents. Pilots serving the larger ports maintain a 24-hour radio watch, while those at the smaller ports maintain a radio watch only when vessels are expected. Detailed information on pilotage procedures is given in the text for the ports concerned.

(227) Pilotage for vessels desiring service between ports on the Gulf of Mexico is provided by the Gulf of Mexico Pilots, Port Arthur, TX. The service, extending from sea buoy to sea buoy throughout the Gulf of Mexico and the Straits of Florida, is intended primarily for foreign vessels unfamiliar with the congested waters of the Gulf. Vessels are generally boarded at their berth or, for vessels desiring service inbound from the Straits of Florida, by launch off Miami or Key West. The Gulf of Mexico Pilots provide service from the discharge point of the port pilot at one port to the pickup point for the port pilot at the destination. Advance notice of 48 hours is required. Arrangements can be made by cable (GOMPILOTS) or telephone (409–982–2961).

(228)

Towage

(229) Tugs are available at all major ports; they can usually be obtained for the smaller ports on advance notice if none are available locally. Arrangements for tugs should be made in advance through ships' agents or the pilots. (See the text for the ports concerned as to the availability of tugs.)

(230)

Vessel arrival inspections

(231) Vessels subject to U.S. quarantine, customs, immigration and agricultural quarantine inspections generally make arrangements in advance through ships' agents. Government officials conducting such inspections

are stationed in most major ports. Mariners arriving at ports where officials are not stationed should contact the nearest activity providing that service. (See Appendix A for addresses.) Unless otherwise directed, officials usually board vessels at their berths. **Note:** U.S. Public Health quarantine matters for ports in Puerto Rico and the U.S. Virgin Islands are handled by the U.S. Quarantine Station, San Juan, PR.

(232) **Harbormasters** where appointed are mentioned in the text. They usually have charge of the anchorage and berthage of vessels.

(233)

Supplies

(234) General supplies, including fuel oil, diesel oil and fuel, gasoline, water and marine supplies are available at the principal ports. Similar items but in more limited quantities can be obtained at many places mentioned under descriptions of the different ports.

(235)

Repairs-salvage

(236) Hull and engines of medium to large vessels can be repaired at Tampa, Mobile, New Orleans, Port Arthur, Beaumont, Orange, Galveston and Houston. Smaller vessels can be handled at numerous other ports. Extensive above-the-waterline hull and engine repairs can be made at Pensacola, Pascagoula and Lake Charles. Minor repairs can be made at Freeport and Port Brownsville. Marine railways are available, and repairs to smaller craft can be made at many other places on the Gulf Coast, as listed under the descriptions of the different ports.

(237) Deep-sea salvage equipment is available at Key West, Tampa, Mobile, New Orleans, Port Arthur, Beaumont and Galveston.

(238)

Small-craft facilities

(239) There are numerous places where fuel, supplies, repairs, slips for dockage and launching ramps are available for small craft. For isolated places and small cities, the Coast Pilot describes the more important of these facilities; for large port areas, where individual facilities are too numerous to mention, the information given is more general. Additional information may be obtained from various local small-craft guides.

(240) A vessel of less than 65.6 feet (20 meters) in length or a sailing vessel shall not impede the passage **of a vessel that can safely navigate only within a** narrow channel or fairway. (Navigation Rules, International-Inland Rule 9(b).)

(241)

Standard time

(242) Port St. Joe, Florida and the areas east observe eastern standard time (e.s.t.), which is 5 hours slow of Coordinated Universal Time (UTC). When it is 1000 UTC, it is 0500 at Tampa, Florida. The area from Port St. Joe to the Rio Grande uses central standard time (c.s.t.), which is 6 hours slow of UTC. When it is 1000 UTC, it is 0400 at Corpus Christi, Texas. Puerto Rico and the U.S. Virgin Islands observe Atlantic standard time (A.s.t.), which is 4 hours slow of UTC. When it is 1000 UTC, it is 0600 at San Juan, Puerto Rico and Charlotte Amalie, U.S. Virgin Islands.

(243)

Daylight saving time

(244) In all states covered by this Coast Pilot clocks are advanced one hour on the second Sunday of March and are set back to standard time on the first Sunday of November. Puerto Rico and the U.S. Virgin Islands do not observe daylight saving time.

(245)

Legal public holidays

(246) New Year's Day, January 1; Martin Luther King, Jr.'s Birthday, third Monday in January; Washington's Birthday, third Monday in February; Memorial Day, last Monday in May; Independence Day, July 4; Labor Day, first Monday in September; Columbus Day, second Monday in October; Veterans Day, November 11; Thanksgiving Day, fourth Thursday in November; and Christmas Day, December 25. The national holidays are observed by employees of the federal government and the District of Columbia and may not be observed by all the areas in every case.

(247) In addition, the following holidays are also observed in the area covered by this Coast Pilot:

(248) Three Kings' Day, January 6: Puerto Rico and Virgin Islands.

(249) Battle of New Orleans, January 8: Louisiana.

(250) De Hostos' Birthday, January 11: Puerto Rico.

(251) Robert E. Lee's Birthday, January 19: Florida and Louisiana. (Third Friday in January in Mississippi and Alabama.)

(252) Arbor Day, Third Friday in January: Florida.

(253) Franklin D. Roosevelt's Birthday, January 30: Virgin Islands.

(254) Lincoln's Birthday, February 12: Virgin Islands.

(255) Washington's Birthday, February 22: Louisiana and Virgin Islands.

(256) Texas Independence Day, March 2: Texas.

(257) Emancipation Day, March 22: Puerto Rico.

(258) Mardi Gras (Shrove Tuesday): Alabama, Florida and Louisiana.

(259) Transfer Day, March 31: Virgin Islands.

(260) Holy Thursday: Virgin Islands.

(261) Good Friday: Florida, Louisiana, Puerto Rico and Virgin Islands.

(262) Easter Monday: Virgin Islands.

(263) Pascua Florida Day, April 2: Florida.

(264) Thomas Jefferson's Birthday, April 13: Alabama.

(265) Jose de Diego's Birthday, April 16: Puerto Rico.

(266) San Jacinto Day, April 21: Texas.

(267) Whit Monday: Virgin Islands.

(268) Confederate Memorial Day, April 26: Florida. (Last Monday in April in Alabama and Mississippi.)

(269) Memorial Day, May 30: Louisiana and Virgin Islands.

(270) Confederate Memorial Day, June 3: Louisiana.

(271) Jefferson Davis' Birthday, June 3: Florida and Texas, (First Monday in June in Alabama and Mississippi.)

(272) Organic Act Day, June: Virgin Islands.

(273) Munoz Rivera's Birthday, July 17: Puerto Rico.

(274) Constitution Day, July 25: Puerto Rico.

(275) Supplication Day, July 25: Virgin Islands.

(276) Dr. Jose C. Barbosa's Birthday, July 27: Puerto Rico.

(277) Huey P. Long's Birthday, August 30: Louisiana.

(278) Columbus Day, October 12: Louisiana, Puerto Rico and Virgin Islands.

(279) Thanksgiving Day, October 25: Virgin Islands.

(280) Liberty Day, November 1: Virgin Islands.

(281) Discovery Day, November 19: Puerto Rico.

(282) Second Christmas Day, December 26: Virgin Islands.

Chart Coverage in Coast Pilot 5—Chapter 4
NOAA's Online Interactive Chart Catalog has complete chart coverage
http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml
83°W
82°W
81°W
80°W
28°N
27°N
26°N
25°N
24°N
Clearwater
Tampa
St. Petersburg
11415
F L O R I D A
Sarasota
11425
LAKE OKEECHOBEE
CALOOSAHATCHEE RIVER
11427
Fort Myers
Naples
Cape Romano
11430
Cape Sable
Florida Keys
11462
Dry Tortugas
11441
11446
Key West
11447
S T R A I T S O F F L O R I D A

Key West to Tampa Bay

(11)

Florida Keys Particularly Sensitive Sea Area (PSSA)

The **Florida Keys Particularly Sensitive Sea Area (PSSA)** is a zone designated by the International Maritime Organization that encircles the sea area around all of the Florida Keys. The PSSA includes the entire Florida Keys National Marine Sanctuary as well as Biscayne National Park at the northeastern end of the keys. The PSSA has been established to protect the exceptional values of the sea area around the Florida Keys from possible damage by international shipping activities. The PSSA includes the Tortugas Ecological Reserve, which was established in 2001 to protect nearly pristine coral formations and habitat in the Sanctuary. The coral resources within the Reserve are especially vulnerable to possible damage from shipping activities.

Domestic law and regulations adopted by the United States for the Sanctuary apply within the PSSA. Several of these concern shipping activities.

Areas to be Avoided (ATBAs)–There are four ATBAs in the Sanctuary: in the vicinity of the Florida Keys, in the vicinity of Key West Harbor, in an area surrounding the Marquesas Islands, and in an area surrounding the Dry Tortugas Islands. All tank vessels and vessels greater than 50 meters in registered length are prohibited from operating within the ATBAs. The ATBAs are described and the coordinates are provided in chapter 3.

Areas Closed to Anchoring–All vessels are prohibited from anchoring in the Tortugas Ecological Reserve. Vessels that are 100 feet or less in length (30.48 meters) may request permission from the Sanctuary to use mooring buoys in the northern portion of the Reserve (Tortugas North). Vessels 50 meters or greater in registered length are prohibited from anchoring on the portion of Tortugas Bank west of Dry Tortugas National Park. (This area was modified in January 2001 by the establishment of the Tortugas Ecological Reserve.)

Anchoring Restriction–In areas of the Sanctuary identified as Ecological Reserves and Sanctuary Preservation Areas all anchor apparatus (including the anchor, chain or rope) must not touch any coral, living or dead, or any attached organism. In all other areas of the Sanctuary, vessels are prohibited from anchoring on living coral in water depths of less than 40 feet when visibility is such that the seabed can be seen.

Restricted Access–Vessels are not allowed to stop in the southern portion of the Tortugas Ecological Reserve (Tortugas South) and must receive permission in advance in order to stop in the northern portion of the Reserve (Tortugas North).

Discharge Restriction–In Ecological Reserves and Sanctuary Preservation Areas, all discharges and deposits are prohibited except cooling water or engine exhaust.

Additional restrictions on vessel activities, such as vessel discharges, apply within the Sanctuary. (See **15 CFR 922**, chapter 2, for limits and regulations) for the Sanctuary, including the coordinates of ATBAs, Ecological Reserves and Sanctuary Preservation Areas.

(1) This chapter describes the west coast of Florida from Key West to Tampa Bay; the ports of Key West, Naples, Fort Myers, Port Boca Grande, Venice and Sarasota; and many of the smaller ports and landings. Also described are the Ten Thousand Islands, Big Marco Pass, Gordon Pass, Estero Island, Matanzas Pass, San Carlos Bay, Caloosahatchee River, Sanibel Island, Charlotte Harbor, Peace River, Myakka River, Gasparilla Sound, Gasparilla Island, New Pass, Venice Inlet, Big Sarasota Pass, Lido Key, Longboat Key, Longboat Pass and Anna Maria Key.

(2) The section of the Intracoastal Waterway from Caloosahatchee River, FL, to Tampa Bay passing through the waters described in this chapter and places along its route is discussed in chapter 12.

(3)

COLREGS Demarcation Lines

(4) The lines established for this part of the coast are described in **33 CFR 80.740** through **80.750**, chapter 2.

(5)

ENC - US3GC07M
Chart - 11420

(6) The coast, for nearly 115 miles, from Key West to San Carlos Bay, is low, sandy and generally wooded. Innumerable small islands and keys, interlaced by many small rivers and bayous, make up Everglades National Park and the Ten Thousand Islands. From San Carlos Bay north to Tampa Bay the coast is made up of nearly straight sandy beaches of the barrier islands.

(14)

METEOROLOGICAL TABLE – COASTAL AREA OFF KEY WEST, FLORIDA
Between 23°N to 25°N and 79°W to 83°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	0.5	0.5	0.3	0.2	0.1	0.3	0.1	0.2	0.5	0.6	0.5	0.5	0.3
Wave Height > 9 feet [1]	2.0	2.0	1.9	1.7	1.1	0.8	0.4	0.7	0.7	2.4	2.5	1.9	1.5
Visibility < 2 nautical miles [1]	0.4	0.4	0.3	0.2	0.3	0.5	0.2	0.4	0.4	0.7	0.3	0.4	0.4
Precipitation [1]	2.8	2.6	1.8	1.4	2.5	3.7	2.3	2.9	3.9	4.6	2.9	2.6	2.8
Temperature > 69° F	70.1	69.7	81.9	95.2	99.7	99.9	99.9	100.0	99.9	99.3	93.3	77.1	90.9
Mean Temperature (°F)	72.2	72.4	74.3	76.8	79.7	82.8	83.7	84.0	83.2	80.5	76.9	73.5	78.5
Temperature < 33° F [1]	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean RH (%)	78	78	78	77	78	79	77	77	79	78	77	77	78
Overcast or Obscured [1]	12.8	11.7	9.8	7.2	9.4	12.9	6.8	7.1	10.1	12.4	10.4	12.3	10.2
Mean Cloud Cover (8ths)	3.8	3.7	3.5	3.4	3.7	4.2	4.0	4.0	4.3	4.3	4.0	4.0	3.9
Mean SLP (mbs)	1019	1018	1017	1017	1015	1016	1017	1016	1014	1014	1017	1019	1017
Ext. Max. SLP (mbs)	1038	1036	1035	1035	1031	1032	1030	1029	1030	1031	1034	1037	1038
Ext. Min. SLP (mbs)	997	1000	997	998	1000	997	1004	1002	996	991	1000	1000	991
Prevailing Wind Direction	E	E	E	E	E	E	E	E	E	E	E	E	E
Thunder and Lightning [1]	0.5	0.7	0.5	0.6	2.0	3.0	4.8	5.0	5.9	3.2	1.2	0.6	2.4

[1] Percentage Frequency

(7) The **Florida Keys** comprise a chain of low islands along the southwest coast of the Florida Peninsula extending west in a wide arc to the Dry Tortugas. The keys are mostly of coral formation and are generally covered with dense mangrove, though some have stands of pine and a few have coconut groves. **Florida Keys National Marine Sanctuary**, a Marine Protected Area (MPA), surrounds the keys from Biscayne Bay to Dry Tortugas.

(8) On the straits side of the keys, and at an average distance of 5 miles, are the **Florida Reefs**, a dangerous line of shoals extending along the entire length of the chain. The reefs are particularly hazardous because they do not break in smooth weather and few of them are exposed. The water shoals abruptly between the reefs and along their outer edges.

(9) When approaching the reefs from seaward, their proximity usually is indicated by a change in color of the water from deep blue to light green or by the bank blink, described in chapter 3. However, too much reliance should not be placed on such indications. Lights and daybeacons facilitate navigation along the reefs in clear weather, but soundings should be resorted to in thick weather. Depths of 50 fathoms indicate a distance of 2 to 3 miles from the reefs, and great caution should be used in approaching closer. Fogs are infrequent in this area.

(10) The water always becomes milky following windy weather. The usual color is bluish green on the reefs, while the rock patches are dark, shading through brown to yellow as they approach the surface. Sand patches are bright green. Grass patches at depths of 10 to 15 feet have the appearance of rocks. With the sun astern, the line marking deep water and the edges of reefs is surprisingly clear from a position aloft.

(12)

Weather

(13) Along the coast from Key West to Tampa Bay, the major weather hazards include tropical cyclones, thunderstorms and cold fronts. Tropical cyclones, which can occur in any month, are mainly a threat in June, August, September and October. Seventeen tropical cyclones have approached the coastline between Key West and Tampa Bay since 1950. The chance of a tropical cyclone encounter decreases along the west coast, north to Fort Myers and Tampa Bay. Thunderstorms develop on about 60 to 80 days annually along this section of the coast. They are least likely near Key West and most likely in the Tampa Bay area. While they can occur at any time, they are most likely from June through September, during the late afternoon and evening hours; at sea they frequently occur at night. During the summer months, thunderstorms are observed on about 10 to 20 days per month. From fall through spring, cold fronts occasionally reach these waters, generating strong, gusty winds that kick up rough seas. While gales are infrequent, winds of 28 knots or more occur about 1 to 2 percent of the time off Key West and 2 to 3 percent of the time off Fort Myers. Wave heights of 10 feet or more are encountered 1 to 3 percent of the time in the south compared to 3 to 5 percent off Fort Myers. Visibilities are usually good, particularly off Key West. Farther north, they drop below 2 miles about 1 percent of the time from December through April. Along the coast, a shallow ground fog may form, but this usually dissipates with the rising sun.

(15)

ENCs - US5FL94M, US5FL93M, US5FL99M
Charts - 11447, 11441, 11446

(16) **Key West Harbor** is 134 miles and 151 miles southwest of Miami Harbor via the inside and coastwise

routes, respectively. The harbor proper is in front of the city of Key West, protected on the east side by the island and on the opposite side by **Tank Island** and **Wisteria Island**, reefs and sand flats. The harbor is entered through breaks in the reef by several principal channels with depths of about 13 to 33 feet and several minor channels.

(17) **Key West**, on the island of the same name near the west end of the Florida Keys, is a winter resort. Tourism is one of the leading industries. Cruise ships frequently call here, and the harbor is a safe haven for any vessel.

(18)

Prominent features

(19) Easy to identify when standing along the keys are three 300-foot-high radio towers and a watertank about 0.3 mile east-southeast of Fort Taylor, the hotel 0.3 mile south of Key West Bight, the cupola close south of the hotel, a white spherical radar dome, and a 110-foot-high abandoned lighthouse 0.5 mile east-northeast of Fort Taylor. Numerous tanks, lookout towers, and masts are prominent but difficult to identify. Also conspicuous are a white radar dome and an aerobeacon on Boca Chica Key, and the aerobeacon at Key West International Airport. From south, several apartment complexes, condominiums and hotels on the south shore just west of the airport are prominent.

(20) **Sand Key Light** (24°27'21"N., 81°52'38"W.), 40 feet above the water, is shown from a skeleton tower. An abandoned white square pyramidal skeleton tower is in the vicinity; extreme caution advised.

(21)

Channels

(22) **Main Ship Channel** is the only deep-draft approach to Key West. Federal project depth is 34 feet from the Straits of Florida to a turning basin off the Naval Air Station Truman Annex Mole and inside the annex basin, thence 30 feet to an upper turning basin off Key West Bight, and then 12 feet to and including a turning basin in the bight. (See Notice to Mariners and latest editions of the charts for controlling depths.) The channel from the entrance to the upper turning basin is marked by lighted ranges and other aids to navigation. Spoil areas are west of the channel.

(23) **Northwest Channel** is a medium-draft passage between Key West Harbor and the Gulf of Mexico. Vessels can pass directly across the reefs from the Gulf to the Straits of Florida by way of Northwest Channel and Main Ship Channel. The Gulf end of the channel is shifting west. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through the USACE hydrographic survey website listed in Appendix A.

(24) The jetties on either side of the Gulf entrance to Northwest Channel are 0.3 to 0.5 mile from the centerline of the channel, and only the outer part of the east jetty shows above low water; caution is advised. The northwest end of the east jetty is marked by a light. The channel is marked by lights, daybeacons, and lighted and unlighted buoys. The steel pilings and skeletal tower of a former Coast Guard lighthouse are about 0.3 mile southwest of the south end of the west jetty.

(25) **Smith Shoal**, about 4.5 miles north of the north entrance to Northwest Channel, is covered 10 feet and marked by **Smith Shoal Light** (24°43'06"N., 81°55'18"W.). The light also marks the north approach to the channel and is shown 54 feet above the water from a hexagonal, pyramidal skeleton tower on a three-legged jacket. A relatively flat-topped coral head, covered by a least depth of 12 feet, is about 3 miles west-southwest of the light.

(26) **Southwest Channel** is a deep unmarked approach to Key West from the southwest. Local knowledge is advised.

(27) **West Channel**, a passage leading west from Key West between the keys and outer reefs, is deep but unmarked. It is used by shrimp boats and small craft bound toward the Dry Tortugas. Local knowledge is advised for safe passage.

(28) **Calda Channel** leads north from Man of War Harbor to the open waters of the Gulf. The channel is narrow and crooked but is well marked by daybeacons and a light at the north end. Shoaling exists close to the aids marking the channel. The channel should be used only with local knowledge and during good visibility.

(29) **Garrison Bight Channel**, well marked, leads from Man of War Harbor around the north end of Fleming Key, thence south for about 1.8 miles, thence east to Trumbo Point, thence into a turning basin just inside the entrance of Garrison Bight. In 2012, the controlling depth in the channel was 6 feet, thence 7.5 feet in the turning basin. An overhead power cable crosses the entrance and the north part of the bight; clearances are 50 feet at the entrance and 34 feet elsewhere. A privately dredged channel with a reported depth of 5 feet leads from the turning basin to a basin in the southwest part of the bight; local knowledge is advised. A causeway bridge, with a 44-foot span and a clearance of 19 feet, crosses the southwest part of the bight.

(30) In 1984, an obstruction covered 4 feet was reported close south of Garrison Bight Channel Light 3 in about 24°35'19.7"N., 81°48'17.2"W.

(31) Garrison Bight can also be reached via an unmarked channel, locally known as Fleming Key Cut, that leads from Man of War Harbor east between Fleming Key and the north shore of Key West to a junction with Garrison Bight Channel at Trumbo Point. A depth of about 6 feet can be carried to the junction. Fleming Key Cut is reported to have very strong tidal currents and is not recommended for low-powered vessels. The channel is crossed by a 42-foot fixed span highway bridge with a clearance of 18 feet that connects Fleming Key with Key West. Garrison Bight has excellent small-craft facilities; these are described later in the chapter.

(32)

Anchorages

(33) The best anchorage for vessels up to 150 feet long is north of the city in **Man of War Harbor** where depths range from 14 to 24 feet. Mariners should exercise caution to avoid the visible and submerged wrecks in the harbor. It is protected against heavy seas by **Frankfort Bank** and **Pearl Bank**, on the west and **Fleming Key** on the east. Small craft usually anchor east of **Wisteria Island**, to the west of the main ship channel. Anchoring in the vicinity of Key West Bight Channel Light 2, between Key West Bight Channel and the shoreline, is not recommended because of poor holding ground, strong currents and obstruction of the dock approaches.

(34) Vessels can anchor west of the city, outside of the federal channel and upper turning basin, in depths of 20 to 26 feet, taking care, however, to avoid the reefs that rise abruptly in some places along the edges of the channels. The outer anchorages, southwest of **Fort Taylor** and about 1 mile south-southeast of Eastern Triangle Light, are favored by deep-draft vessels. They are somewhat exposed but have depths of 22 to 36 feet and are safe for vessels with good ground tackle. The anchorage area at Key West is one of the best for large vessels south of Chesapeake Bay.

(35) A **naval explosives anchorage** is about 2.5 miles southwest of Key West. (See **33 CFR 110.1** and **110.189a**, chapter 2, for limits and regulations.)

(36)

Dangers

(37) **Naval restricted areas** are off the south, west and north sides of Key West. A **restricted area** extends about 150 yards from the shoreline around Fleming Key. (See **33 CFR 334.610**, chapter 2, for limits and regulations.)

(38) A **naval operational training area**, aerial gunnery range and bombing and strafing target **danger zones** are in the Straits of Florida and the Gulf of Mexico in the vicinity of Key West. (See **33 CFR 334.620**, chapter 2, for limits and regulations.)

(39)

Caution

(40) Craft approaching Key West, Boca Chica and Safe Harbor from the east through Hawk Channel should be mindful that submerged rocks and reefs extend up to 0.6 mile off the keys and give little or no indication of their presence under certain conditions.

(41) It is reported that rain squalls that move through the area during the rainy season can quickly obscure visual ranges and landmarks and make navigation of the narrow channels hazardous.

(42) Fishermen operating out of the Florida Keys, particularly Key West, routinely use stakes to mark otherwise unmarked channels that they use as short cuts or for safe passage in rough weather. When the channels change or fall into disuse, these stakes are not removed. Visitors to the keys should not rely on them as channel markers without local knowledge.

(43)

Currents

(44) A westerly current, counter to the prevailing easterly set of the Gulf Stream, at times exceeding 3 knots, has been reported in the vicinity of Key West Entrance Lighted Whistle Buoy KW. In the southerly approaches to Key West within the 10-fathom curve just inside the entrance to the main channel, the tidal currents are weak and variable. In the main channels west of Fort Taylor, the flood (northerly) and the ebb (southerly) currents are 2 and 3 knots, respectively. North of Key West, In the upper turning basin and Northwest Channel, the currents are somewhat less. However, both the time and velocity of the tidal current are influenced by the winds. Very strong currents have been reported in the channel between Fleming Key and Key West. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(45)

Weather

(46) Key West has a notably mild, tropical maritime climate where winters are mild and summers pleasant thanks to the Gulf Stream and the prevailing easterly trade winds. The differences in maximum and minimum temperatures are about 10°F on the average. There is no record of frost, ice, sleet, or snow at Key West and on 44 days annually, on the average, the temperature reaches 90°F or more. It has never reached 100°F. The extreme maximum temperature for Key West is 95°F, recorded most recently on August 31, 1957. The average high temperature for Key West is 83°F while the average low is 73°F. The extreme minimum temperature for Key West is 41°F, recorded on January 13, 1981. From December through April, sunshine is abundant and less than 25 percent of the average annual rainfall is recorded, usually as brief showers in advance of cold fronts. From June through October numerous showers and thunderstorms provide more than 50 percent of the precipitation recorded each year. Heaviest amounts are often associated with easterly waves or the more organized tropical cyclones. The average annual precipitation for Key West is 40 inches. September is the wettest month averaging nearly 6.5 inches and February is the driest averaging just 1.5 inches.

(47) If a tropical cyclone is considered a threat when it moves within 50 miles (93 km) of Key West, then an average of 1 tropical cyclone threat every three years is the normal. While tropical cyclones can develop in any month they are most likely in this region from June through November. Even within that period there are fluctuations. Since 1886, only one tropical cyclone has produced significant effects during July. The threat resumes in August, as storms originating east of the Antilles tend to enter the Gulf of Mexico via Cuba or the

Straits of Florida, instead of recurving northward near the Bahamas. This threat continues into the peak of the season; by October the principal threat is as it was in June, from storms originating in the western Caribbean that move northward across Cuba. Statistically, hurricane-force winds can be expected at Key West about once every 15 years and a frequency of 50-knot winds once every 5 years on the average.

(48) Tropical cyclone waves affecting these waters are produced by swell, which advances ahead of the storm, and sea, which is determined by wind direction, which in turn is dependent upon the path of the storm. The deep-water berths outside of North Mole, piers A and B, and Municipal Wharf (Mallory Wharf) are all badly exposed to swells from the southwest. The berths at Naval Air Station Truman Annex are well protected from wave action. The piers off the turning basin north of Key West Bight are affected by waves generated in Man of War Harbor by northerly winds. These conditions can occur in cold winter outbreaks as well as hurricanes. The anchorages in this harbor are protected from sea and swell by the shallow reef north of the turning basin. Key West Bight is sheltered by Stone Mole, and Garrison Bight is also protected from wave action from all quarters. At Safe Harbor, Stock Island, sea and swell from the southern quadrant will cause heavy surf at the harbor entrance; during southerly winds a seiche of 2 to 3 feet inside the harbor is possible.

(49) Storm tides are worst, usually, when an intense hurricane approaches Key West from the Caribbean, passing close to the west. On three occasions since 1900 the streets of the Old Town (greater than 10 feet MSL) have been flooded by such storms. The height of the expected surge will appear in the hurricane warnings. However, there is a large variability in surge heights along the Florida Keys due to their physical characteristics. Tidal currents are considerably magnified by the wind and surge generated by a tropical cyclone. This is particularly evident along the deep western shores where effective storm surge drainage has the advantage of reducing tide heights at main berthing facilities.

(50) For masters of deep-draft vessels, shortages of tug power and lack of protected anchorages and piers at Key West makes an early assessment of a tropical cyclone threat essential. This is best accomplished by using the forecasts in conjunction with climatology. This detailed climatology, as well as the foregoing text and a study of evasion tactics, can be found in the **Hurricane Havens Handbook for the North Atlantic Ocean** (further details in chapter 3.) Under the present port circumstances, evasion at sea is the recommended course of action for all seaworthy, deep-draft vessels capable of making 15 knots or more when the port is under threat from a hurricane or an intense tropical storm (50–63 knots).

(51) The National Weather Service maintains an office at the Key West International Airport. **Barometers** can be compared and weather information obtained by telephone. (See Appendix A for address.)

(52)

Pilotage, Key West

(53) Pilotage is compulsory for all foreign and U.S. vessels under register in the foreign trade drawing more than 7 feet (including tugs, barges and tows) bound for or from Key West Harbor, Key West anchorages and Key West channels. Pilotage is optional for U.S. mechanically propelled vessels in the coastwise trade that have on board a pilot properly licensed by the federal government.

(54) Pilotage is available from Key West Bar Pilots Association, P.O. Box 848, Key West, FL 33041, Telephone 305–296–5512.

(55) The Pilot Station is at the northeast end of Front Street, Key West. Pilot Station monitors VHF-FM channels 16 and 14 (when expecting traffic). The 39-foot pilot boat has a gray hull with black trim and gray superstructure with the word PILOT on the side. The 40-foot pilot boat has a green hull and white superstructure with the word PILOT on the side. Occasionally other boats may be used. Pilots board day or night 2 miles south of Key West Harbor Main Channel Entrance Lighted Whistle Buoy KW (24°27'26"N., 81°48'00"W.).

(56) Vessels being boarded should maintain 8 knots and provide a good lee with the ladder 3.34 feet (1 meter) (not dragging) above the water. Seas should be slightly aft of the weather beam. Arrangements for pilots are made through the above telephone number or through ships' agents. A minimum 24-hour notice of time of arrival is requested; however, pilots will still attempt to service vessels with less time of notice.

(57) The operational guidelines in the Port of Key West are flexible due to changing conditions, different stages of current, tide, bottom shoaling, weather and the change in acceptable risk in emergency situations, Key West being a port of emergency entry as well as a cruise ship port of call and a naval station. The main guideline is a knowledge of seamanship and the port on the part of the pilot and communication of this to the vessel's master for guidance.

(58) Certain rules of thumb are sometimes used. These are:

(59) 1. Not over 10-foot draft or 250-foot length for transiting Northwest channel, daylight only.

(60) 2. Not over 10-foot draft or 250-foot length for entering Safe Harbor, Stock Island, under normal conditions.

(61) 3. Tankers docking at Pier D-2 North should do so on or near at slack water, daytime only, with at least two tugs, one for port bow, one for aft, docking starboard side to. Deep draft limited to 25.7 feet. Sailing should be daytime only, on or near slack water, with two tugs.

(62) 4. Naval men of war with their sonar dome in the bow may dock at Pier D-2 North, starboard side to, with deep draft limited to 26 feet. If possible, the same current restrictions as for tankers should be used.

(63) 5. All vessels should be limited to not over 29 foot-deep draft, dependant on tide. Some piers require shallower drafts and length limitations. Poorly handling

ships may be restricted even further in draft, and very large poorly handling ships may be restricted to daylight only and in not over 25 knots wind.

(64) 6. Tug assistance may be needed at berths in Key West, even with twin screw bow thrustered ships, due to wind and current. Tugs, however, are not provided; plan ahead if needed.

(65) 7. Key West Harbor is under the International Rules of the Road.

(66)

Security calls

(67) All vessels 65 feet or greater and all tugs with tows on entering or leaving Key West Harbor or the Key West Main Ship Channel shall give Security Calls on VHF-FM channels 16 and 13.

(68)

Towage

(69) There are no tug boats available in Key West.

(70)

Quarantine, customs, immigration and agricultural quarantine

(71) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(72) Key West is a **customs port of entry.**

(73) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See U.S. Public Health Service, chapter 1.) The quarantine anchorage is in Man of War Harbor if size and draft of vessel permit. Larger vessels anchor in the outer harbor.

(74) County and private hospitals are available.

(75)

Coast Guard

(76) **Key West Coast Guard Station** is at Pier D-2 on the northwest side of Key West.

(77)

Harbor regulations

(78) The City of Key West Port Operations Office has direct supervision of city docks, properties, moorings and anchorages. This office collects city property port dues. The office telephone number is 305–809–3790. A 5-mph speed limit is enforced in Garrison Bight and in all constricted channel areas.

(79) In the Main Ship Channel, not more than one vessel shall be in the reach of the channel between Lighted Buoys 23 and 25. Vessels in this reach shall have the right-of-way over vessels departing the Truman Annex Basin.

(80) The reach of the channel from Lighted Buoys 14 and 15 to the north end of the Truman Annex Mole shall be kept clear except for vessels able to proceed to their berths without delay. Vessels shall not lie-to in this reach of the channel. If a vessel is unable to proceed because of harbor congestion, she shall pull aside to the westward and lie-to in safe water. No passing is permitted in this reach of the channel.

(81) Vessels shall not overtake or pass in the following areas: between Buoys 2 and 3, in the passage from Western Triangle and Eastern Triangle to Buoys 7 and 8, and in the passage from Buoy 9 to Buoys 14 and 15.

(82) It is permissible to pass in Cut A Range reach between Buoys 7 and 12 after making proper signals, but extreme caution is mandatory when passing in the narrow reaches of the channel.

(83) Vessels that will be delayed in berthing shall notify vessels astern of that fact in order that they may proceed.

(84) Nothing in the above shall relieve masters or commanding officers of their responsibilities for observing the Navigation Rules and the practice of good seamanship.

(85)

Wharves

(86) Municipal Wharf, also known as Mallory Wharf (24°33'35"N., 81°48'28"W.), is 870 feet long and has a deck height of about 7 feet. The northerly half is privately owned by a condominium development. The southerly half is operated by the City of Key West Port Operations Office as a cruise ship terminal. Two mooring dolphins off the wharf face provide a total of 464 feet of berthing space with reported depths of 26 feet alongside. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through the USACE hydrographic survey website listed in Appendix A. Potable water is available with advance arrangements. Large vessels must depart the berth 45 minutes before sunset except in emergency or by special arrangement with the City of Key West Operations Office.

(87) Pier B (24°33'22"N., 81°48'33"W.) is another deepwater berthing facility operated by the Pier B Developement Corporation. It has 483-foot face with a mooring dolphin at the north end; deck height about 9 feet. Maneuverable ships up to 1,040 feet have docked here.

(88) Outer Navy Mole (24°33'17"N., 81°48'29"W.), another deepwater berth has a 580-foot face; deck height about 7 feet. Sometimes the mole is used to dock vessels up to 1,040 feet in length, by directions of the City of Key West Port Operations Office.

(89) Municipal Wharf, Pier B, and the Outer Navy Mole are available for emergency dockage. Contact the Key West Pilots Association, ships' agents or the City of Key West Port Operations Office for further information.

(90) Commercial fish wharves are in Safe Harbor. Charter boats and yachts use Key West Bight, Garrison Bight and Stock Island.

(91)

Supplies

(92) Gasoline, diesel fuel, water, ice, provisions and marine supplies can be obtained in Key West.

(93)

Repairs

(94) There is a small repair yard at Key West on the west side of Garrison Bight. Lifts to 30 tons and engine, hull, electrical, radio and electronic repair facilities are available. Above-the-waterline repairs can also be made to larger vessels. In 1991, shoaling to 3½ feet was reported at the entrance to the yard.

(95)

Small-craft facilities

(96) Berths, electricity, water, ice and some marine supplies are available at Key West. Gasoline and diesel fuel are available at Key West Bight and Garrison Bight. A pumpout facility is at a marina in the southwestern part of Key West Bight. Hull, engine, electrical and electronic repairs can be made. Small craft moor in Key West Bight and in Garrison Bight at the Municipal Marina or at the Key West Yacht Club, which are at the southwest and east ends of the bight, respectively. A causeway across the southwest part of Garrison Bight has a small-craft opening. The highway bridge over the opening has a 44-foot fixed span with a clearance of 19 feet at the center. An overhead power cable crossing the north part of Garrison Bight and the entrance has a clearance of 50 feet over the entrance channel and 34 feet elsewhere. Anchoring or mooring elsewhere in Garrison Bight, except in an emergency or as a shelter during bad weather, is not permitted. Public launching ramps are in Garrison Bight and at the foot of Simonton Street.

(97)

Communications

(98) There are no rail connections at Key West. Movement of freight in and out of the port is by vessel or truck. The Overseas Highway (U.S. Route 1) connects the city with Miami and points north, and there is air service to Miami. Bus service is available to mainland points.

(99) **Boca Chica Key**, 5 miles eastward of Key West, is the site of the Key West U.S. Naval Air Station. A **naval restricted area** extends about 150 yards from the shoreline along a portion of the northeast side of the Naval Air Station. (See **33 CFR 334.610**, chapter 2, for limits and regulations.) **BocaChica Channel**, from Hawk Channel to the naval air station basin on the west side of the key, is marked by a light at the entrance, thence by lights and daybeacons. An overhead power cable has a clearance of 60 feet across the channel. The basin provides a good hurricane anchorage for small vessels in emergencies only.

(100) A restricted area is off the southwest end of Boca Chica Key. (See **33 CFR 334.610**, chapter 2, for limits and regulations.)

(101) Two auxiliary channels marked by private daybeacons lead off Boca Chica Channel. Channel A leads northwest just north of Boca Chica Channel Daybeacon 5. A large boatyard has an entrance on the west side of the channel between Daybeacon 5A and an overhead cable. Transient berths, hull and engine repairs, water, ice, diesel fuel and an open end travel lift that can haul sail and motor vessels to 75 feet and 75-tons are available.

(102) A marina is north of the overhead cable, which has an authorized clearance of 25 feet at this point. Water, ice, gasoline and hull and engine repairs are available.

(103) In 1986, the reported controlling depth was 6 feet to Daybeacon 5A and then 5 feet to the marina.

(104) Channel B leads northwest from opposite Boca Chica Channel Light 8 toward the Route U.S. 1 bridge. In 1986, the reported controlling depth was 4 feet.

(105) A marina in the northwest corner by highway U.S. 1 has transient berths, hull and engine repairs and gasoline. The following conditions were reported in 1986. Boats proceeding to the marina will find deeper water and avoid obstructions, after passing Daybeacons 6B and 7B, nearer the highway to a point near a boat ramp at the highway, then angling southwest to a spit and following the spit to the marina entrance. Small boats heading north of the highway via the Boca Chica Channel usually pass through at the western end of the bridge where the clearance is less and the water is deeper. Boats passing under the high rise center of the bridge will find shallower water immediately north of the bridge.

(106) **Safe Harbor**, 4 miles east of Key West, is a medium-draft harbor on the south side of Stock Island. Conspicuous objects include the stack and tanks at a power plant and desalination plant on the east side of the harbor and a large red dry storage building at a marina on the southeast end of Stock Island. A privately dredged channel leads from Hawk Channel into the harbor. A light marks the approach; lights and a daybeacon mark the channel. In 1998, the controlling depth in the entrance channel was 12 feet, with greater depths inside the harbor.

(107) Piers with dolphins on the east side of the harbor near the entrance are used by barges to unload petroleum products for the power and desalination plants. Depths of 18 feet are reported alongside the piers.

(108) The piers on the east and west sides of the harbor are used by cold storage and seafood packing plants; numerous shrimp boats tie up alongside the finger piers.

(109) A boatyard on the west side at the head of the harbor has a mobile hoist that can handle craft to 60 tons. Diesel fuel, water and ice are available. In 1982, a depth of 30 feet was reported alongside the piers at the yard; 300 feet of berthing space was available. A marina on the east side, at the head of the harbor, has transient berths, electricity, water, ice and marine supplies; hull, engine and radio repairs are available. In 1991, the depths alongside the facility was reported to be 18 feet. A facility serving shrimpers and other commercial vessels on the east side of the harbor, just north of the electric plant, has water, ice, diesel fuel and electricity available.

(110) A privately dredged spur channel east of Safe Harbor leads to a large marina on the southeast end of Stock Island.The channel is marked by private daybeacons. Berths, gasoline, diesel fuel, water, ice, electricity, a launching ramp, storage and complete marine supplies are available. A forklift can haul out craft to 25 feet for

hull and engine repairs. The **dockmaster** can be contacted on VHF-FM channel 16.

(111) **Cow Key Channel**, between Stock Island and Key West, is narrow and marked by private daybeacons. A shoal that bares is about 0.2 mile south-southwest of the southwest point of Cow Key. The channel is subject to frequent change—mariners are advised to seek local knowledge before entering the channel. Two fixed highway bridges with a horizontal clearance of 36 feet and vertical clearance of 9 feet cross the channel between the keys. An overhead power cable at the bridges has a vertical clearance of 25 feet. The channel north of the highway bridges is difficult to follow.

(112) Three radio antennas on the east side of the channel are prominent. A marina on the east side of the channel at the bridges can provide transient berths, a launching ramp, water, ice, storage and some marine supplies. Another marina on Stock Island has berths, gasoline, storage and marine supplies. A forklift can haul out boats to 25 feet for engine repairs. To avoid the restricted passage of Cow Key Channel, vessels may use Garrison Bight Channel to the north end of Fleming Key. From the channel, head easterly, north of Sigsbee Park to a dredged channel on the east side and follow the dredged channel to the marina. In 1986, the reported controlling depth was 4 feet for approximately 150 yards just east of Sigsbee Park and west of the beginning of the dredged channel. Elsewhere, the controlling depth was 8 feet or greater.

(113)

ENC - US3FL90M
Chart - 11434

(114) The area from Key West for 63 miles west to Dry Tortugas is a continuation of the keys with their intervening reefs and shoals. The keys are low, small in extent and, except for the Dry Tortugas, generally covered with dense growths of mangrove.

(115) About 5 miles south of the main chain of keys and reefs is a line of reefs, shoals and generally broken ground that rises abruptly from the deep water of the Straits of Florida. Buoys, lights and daybeacons mark the outer reefs. Deep-draft vessels standing along the keys should avoid this broken ground and also the areas with depths less than 10 fathoms, south and west of Rebecca Shoal and the Dry Tortugas.

(116) Currents are variable along the edge of the reefs, being influenced by winds, by differences of barometric pressure in the Gulf and the Straits of Florida and by the tides. At times there are strong tidal currents through the passages between the keys.

(117) Between Key West Harbor and Boca Grande Channel there is an extensive shoal area in which are several small scattered keys. The white sand beaches of the southernmost keys are easily discernible from seaward. A large house on **Ballast Key** (24°31.3'N., 81°57.8'W.) is reported to be prominent.

(118) A small-craft channel, marked by private daybeacons, extends through the shoal area from Key West to the north side of Boca Grande Key. The channel has a reported controlling depth of 5 feet except south of Mule Key, near Key West, where the controlling depth is 2 feet. Local knowledge is advised. In 2009, unexploded ordnance was reported about ½ mile north of Boca Grande Key within a 200-yard radius of a visible wreck at 24°32'37"N., 81°59'56"W. Mariners are advised not to anchor in this area; caution is advised.

(119) **Key West National Wildlife Refuge** extends west from Key West to Marquesas Keys.

(120) **Boca Grande Channel**, between **Boca Grande Key** and the Marquesas Keys, is about 15 miles west from Key West. The channel has a controlling depth of about 11 feet from the Straits of Florida to the Gulf of Mexico and is marked by daybeacons but is seldom used except by local boats of 6 feet or less draft. The channels through Key West Harbor are deeper and better marked and offer a shorter passage from the Gulf to the Straits of Florida.

(121)

Currents

(122) In Boca Grande Channel the average velocity of the current is 1.2 knots; the flood current sets north and the ebb south-southwest. The velocity of the current is considerably influenced by the winds.

(123) The **Marquesas Keys**, on the west side of Boca Grande Channel, are 4 miles in extent and surrounded by a large shoal area. The northernmost key is the largest and has a strip of sandy beach free of mangrove.

(124) **Mooney Harbor** is a central lagoon within Marquesas Keys. The main entrance, close west of Gull Keys, was reported closed by shoaling in 1987. It is reported, however, that good, protected anchorage can be found in 1 to 4 feet with good holding ground in a small lagoon close southwest of Mooney Harbor Key. Another good anchorage was reported southeast of Mooney Harbor with a 4-foot entrance marked by pipes and deeper water within. Entrance into the central lagoon is restricted by a shoal. The lagoon should be entered only during daylight hours and caution should be exercised.

(125) **Ellis Rock**, 4 miles northwest of the Marquesas Keys, is covered 7 feet and surrounded by depths of 21 to 39 feet; the rock is marked by a light.

(126) **Danger zones** of bombing and strafing target areas, centered on targets, are in the vicinity of Marquesas Keys. (See **33 CFR 334.620**, chapter 2, for limits and regulations.)

(127) A large shoal, the west part of which is known as **The Quicksands**, extends 18 miles west from the Marquesas Keys. The shoal is about 4.5 miles wide between the 18-foot curves and has a least depth of 2 feet over its east part. A strong east to west current was observed in the area of The Quicksands in 1975.

(128) **Halfmoon Shoal**, covered 8 feet, is off the west end of The Quicksands. A wreck covered 6 feet and marked by a light is on the west edge of the shoal.

(129) **New Ground**, a shoal with a least depth of 4 feet at its west end, is about 6 miles long. It extends in an east-west direction about 3.5 miles north of The Quicksands. A light is on the west side of the 4-foot spot. The water shoals abruptly on the north side of New Ground, and vessels should stay in depths greater than 13 fathoms to ensure clearing the shoal.

(130) Between New Ground and The Quicksands is a natural channel about 2 miles wide with depths greater than 30 feet. The route should be used with caution because of the general irregularity of the bottom inside the 10-fathom curve.

(131) A channel, sometimes used, lies west of Halfmoon Shoal but is not recommended. Southwest of Halfmoon Shoal depths of 20 to 22 feet rise abruptly from depths of about 40 feet.

(132) **Isaac Shoal**, 5 miles west of Halfmoon Shoal and 2 miles southeast of Rebecca Shoal, is covered 14 feet. The shoal rises from depths of 30 to 60 feet.

(133) **Rebecca Shoal**, 43 miles west of Key West, is a small coral bank covered 11 feet. An abandoned square skeleton tower that once supported a light is on the south edge of the shoal. Depths of 18 feet are reported within 1 mile southeast and west of the shoal. A lighted buoy marks the southwest edge of the shoal.

(134)

Currents

(135) At Isaac Shoal, the current floods north with an average velocity of about 1 knot and ebbs south with an average velocity of about 0.8 knot. The velocity of the current is considerably influenced by the wind.

(136) The current south of New Ground Shoal has an average velocity of 0.7 knot with the flood setting northeast and the ebb southwest. The velocity and direction of the current are influenced considerably by the wind.

(137)

ENC - US3FL90M
Chart - 11434

(138) A channel between Rebecca Shoal and the Dry Tortugas frequently is used by vessels bound from the Straits of Florida to points on the west coast of Florida. Vessels bound for Mobile and points west pass to the west of the Dry Tortugas. So far as known, the channel is clear, but there may be undiscovered spots with lesser depths than those now charted. Deep-draft vessels should use the passage with great caution and should continue about 15 miles past the lighted buoy, 8 miles south-southeast of Halfmoon Shoal, before turning north.

(139)

Dry Torgugas to Bird Key Harbor

(140) The **Dry Tortugas** are a group of small keys and reefs 63 miles west from Key West. The group is about 11 miles long, in a northeast-southwest direction, and 6 miles wide. **Pulaski Shoal**, at the northeast end of the group, is 12 miles northwest of Rebecca Shoal. **Pulaski Shoal Light** (24°41'36"N., 82°46'23"W.), 56 feet above the water, is shown from a small black house on a hexagonal pyramidal skeleton tower on a three-legged jacket on the east side of the shoal.

(141) The keys are low and irregular and have a thin growth of mangrove. In general, they rise abruptly from deep water and have fairly good channels between them. They are continually changing in size and shape.

(142) **Garden Key** is the site of historic **Fort Jefferson National Monument**, a hexagonal structure with walls 425 feet long rising from a surrounding moat. The fortress, once a military prison, is now a government reservation administered by the National Park Service. An abandoned lighthouse, 67 feet high, is behind the southeast bastion. A fixed white light, visible at least 8 miles, is displayed at night from the tower by the National Park Service. Garden Key and the surrounding waters of the Dry Tortugas are subject to rules and regulations prescribed by the Secretary of the Interior. Commercial fishing is prohibited within these waters.

(143) The south and north of the three wharves on the east side of the key are in ruins. The center wharf, off the southeast front of the fort, is in good condition, with 16 to 22 feet alongside. No fuel, provisions or water are available. The National Park Service permits berthing for a maximum of 2 hours.

(144) Small craft should not try to make Dry Tortugas from Key West because of the rough nature of the sea around Rebecca Shoal.

(145) **Loggerhead Key**, the other of the two principal keys in the Dry Tortugas, is 2.5 miles west of Garden Key. **Dry Tortugas Light** (24°38'00"N., 82°55'14"W.), 151 feet above the water, is abandoned and shown from a 151-foot conical tower, lower half white and upper half black, near the center of Loggerhead Key.

(146) Fort Jefferson and Dry Tortugas Light are good landmarks and can be seen at a distance of 10 to 12 miles on a clear day. Fort Jefferson has the appearance of a bare rocky island and is an excellent radar target at distances greater than 12 miles.

(147) **Bush Key**, just east of Garden Key, is a refuge for noddy and sooty terns. These birds come in early April and leave in September.

(148) When approaching the Dry Tortugas from east or southeast, soundings give little warning of danger, as depths of 10 to 15 fathoms are found close to the reefs in many places. The water shoals more gradually in the approaches from northwest or southwest, but an

approaching vessel should stay in depths greater than 15 fathoms if uncertain of her position.

(149) Southeast and Southwest Channels are the principal approaches; both are marked, and the shoals can be identified on a clear day by the difference in color of the water. Northwest Channel is unmarked.

(150) **Southeast Channel** skirts the reefs south of **East Key** and **Middle Key** and passes between the 25-foot shoal south of **Hospital Key** and **Iowa Rock** off **Bush Key Shoal**. Iowa Rock is marked by a light. The reefs south of Middle Key can be cleared by keeping south of a line through the abandoned lighthouse on Fort Jefferson and Dry Tortugas Light. The channel has depths of 20 feet or more, but it should be used with caution by vessels drawing more than 18 feet.

(151) In Southeast Channel, 1 mile east of Garden Key, the current floods north and ebbs south with an average velocity of 0.6 knot.

(152) **Southwest Channel** leads between the reefs west and southwest of Garden Key and those off Loggerhead Key. The least depth found along the marked channel is 31 feet, but the same caution is advised as with Southeast Channel.

(153) Among the reefs and keys are numerous places where vessels can anchor and find shelter from seas from various quarters. A good anchorage, although somewhat open to the north, is north and northwest of Garden Key. The holding ground is good, and the depths range from 8 to 10 fathoms.

(154) Excellent anchorage for small craft is found in the deep water of Bird Key Harbor, reached through the narrow channel encircling Garden Key, which is well marked. The entrance to **Bird Key Harbor** is narrow, and care is required to avoid the shoals on either side. The main entrance channel is marked by daybeacons.

(155) In emergencies, the best shelter is southwest of Garden Key and the channel encircling it, where protection is afforded from northwest winds. However, the holding ground is poor, as boats drag anchor along the silty bottom.

(156) A **general anchorage** is in Bird Key Harbor. (See **33 CFR 110.1** and **110.190**, chapter 2, for limits and regulations.)

(157)

Currents

(158) In Southwest Channel, 1 mile south of Loggerhead Key, the current floods north and ebbs southwest at an average velocity at strength of 0.5 knot. In Southeast Channel the current floods north and the ebb south at an average velocity at strength of 0.6 knot.

(159)

ENC - US3FL90M
Chart - 11434

(160) For 10 miles west from the Dry Tortugas the bottom is broken and irregular and consists of coral rock with patches of sand and broken shell. **Tortugas Bank**, the shoalest part of this area, is 7 miles west of Loggerhead Key and has a least known depth of 37 feet. Depths less than 10 fathoms are found for a distance of 2.5 miles in all directions. Between Tortugas Bank and the Dry Tortugas the depths range from 7¼ to 19 fathoms. Deep-draft vessels should avoid Tortugas Bank, especially in heavy weather.

(161)

ENC - US3GC07M
Chart - 11420

(162) From Cape Sable to San Carlos Bay the west coast of Florida is low, sandy and generally wooded and has few distinguishing features. Back of the coast is an extensive swampy region, thinly settled, known as **The Everglades**. Off the coast the water is generally shoal, and the 10-fathom curve roughly approaches a line drawn north-northwest from Key West to Tampa Bay. This part of the coast is seldom approached by deep-draft vessels.

(163) Moderate-draft vessels bound up the coast from Key West can lay a straight course from Northwest Channel to Sanibel Island Light at the entrance to San Carlos Bay, a distance of 118 miles from Key West. This course is well clear of all dangers, and the light on Sanibel Island is a good landmark day or night. Because of frequent northers during the winter, this track is not recommended for small craft, and the route across Florida Bay is to be preferred.

(164)

Moser Channel

(165) **Moser Channel**, 36 miles east of Key West, affords passage between the keys from the Gulf of Mexico to Hawk Channel for vessels of 7 to 8 feet in draft. The swing span of Seven Mile Bridge across Moser Channel has been removed; however, the bridge piers remain. The fixed highway bridge close south of the former swing span has a clearance of 65 feet.

(166) The tidal current at the bridge floods north-northwest with an average velocity of 1.4 knots and ebbs south-southeast with an average velocity of 1.8 knots. Wind effects modify considerably the current velocities and directions. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(167)

ENC - US4FL20M
Chart - 11462

(168) **Florida Bay**, a triangular-shaped body of water between the Florida Keys and the south coast of the mainland, extends in a general east-west direction from Shell and Bogie Keys to Cape Sable. Depths are shallow and irregular; the bottom is mostly mud. From

April to October the waters of the bay are clear and the shoals plainly discernible, but during the winter the water frequently turns milky and renders the shoals indistinguishable.

(169) In the east part of the bay are small keys and numerous mudflats that bare, or nearly bare, at low water. The west part of the bay has depths ranging from 7 to 13 feet, and the bottom is covered with loggerhead sponges and turtle grass.

(170) A protected area of the **Everglades National Park** is in the northern part of Florida Bay.

(171) For the protection of wildlife, all keys in the Florida Bay portion of Everglades National Park are closed to landing except those marked as designated camping areas. The killing, collecting or molesting of animals, the collecting of plants and waterskiing are prohibited by federal regulation.

(172)

Manatees

(173) Regulated **speed zones** for the protection of manatees are posted throughout the Everglades National Park.

(174)

COLREGS Demarcation Lines

(175) The lines established for Florida Bay are described in **33 CFR 80.740**, chapter 2.

(176)

Buttonwood (Flamingo) Canal

(177) **Flamingo**, on the mainland about 9 miles east of East Cape (25°07'N., 81°05'W.), is a tourist center in Everglades National Park at the entrance of **Buttonwood (Flamingo) Canal**. A 300-foot tower east of the canal about 0.3 mile northeast of the visitors center is prominent. A privately dredged channel leads from the 7-foot contour of Florida Bay to the canal entrance. The channel is marked by lights, buoys and daybeacons. A dam blocks the canal about 200 yards above the entrance. Boat ramps at the dam allow the passage of craft to 26 feet long from Florida Bay to **Coot Bay** and **Whitewater Bay**. A highway bridge, about 0.5 mile above the mouth of the canal, has a reported 45-foot fixed span and a clearance of 10 feet. A marina on the west side of the canal just below the dam at Flamingo has berths with electricity, water, ice, and limited marine supplies. Gasoline, diesel fuel and launching ramps are available on either side of the dam. A 5-mph no-wake **speed limit** is enforced in the canal.

(178)

Cape Sable to Ten Thousand Islands

(179) **Cape Sable**, the low and wooded southwest tip of the Florida Mainland, has three points known as **East Cape**, **Middle Cape** and **Northwest Cape**. These are relatively steep-to and are partially cleared.

(180) Small vessels can find anchorage 1.5 miles southeast of East Cape in 7 to 8 feet of water. The even marl bottom is good holding ground, but the anchorage is reported to be unsheltered from winds, particularly from west. Vessels should anchor bow and stern to avoid being set onto the beach. **East Cape Canal**, a drainage canal opening into Florida Bay 1 mile east of East Cape, offers good protection for any boat that can enter. A depth of 2 to 3 feet can be carried into the canal at low water by approaching from due south. Fishing and pleasure craft frequent this area, but local knowledge is necessary to avoid the numerous snags inside the canal.

(181) From Northwest Cape the coast trends north for 20 miles, then northwest for about 30 miles to Cape Romano. Along this stretch of coast are the **Ten Thousand Islands**, innumerable small islands and keys interlaced by a network of small rivers and bayous leading to the interior. The islands and keys are generally lumps of mud, low and densely wooded and almost impossible for a stranger to identify. Small in size, they are mostly awash at high water and fringed with oyster reefs. Except for the lights marking the offshore boundary of the Everglades National Park, the only other useful marks along this stretch of the coast are the light at the entrance to Little Shark River and the slightly higher growths of timber on Shark River Island, Shark Point and Highland Point. The water is shallow for a distance of 10 miles from the coast, depths of 7 feet being found as much as 3 miles offshore. With local knowledge, drafts of 3 to 6 feet can be carried into many of the rivers.

(182) The rivers and inland lakes to the north of Northwest Cape are frequented mostly by fishing parties, particularly during the winter season. Strangers are advised to hire guides at Flamingo, Marco or Everglades City. The rivers afford good anchorage for craft able to cross the bars off the entrances.

(183)

Wilderness Waterway to Broad River

(184) Small craft can traverse the system of tidal bays, creeks and canals from Flamingo Visitors Center to the Gulf of Mexico, 6 miles north of Northwest Cape. The route through Buttonwood Canal, Coot Bay, Tarpon Creek, Whitewater Bay, Cormorant Pass, Oyster Bay and Little Shark River is marked by daybeacons. The controlling depth is about 3½ feet.

(185) The route from Flamingo to Daybeacon 48, near the west end of Cormorant Pass, is part of the Wilderness Waterway.

(186) **Wilderness Waterway** is a 100-mile inside passage winding through the mangrove wilderness of Everglades National Park from Flamingo on Florida Bay to Everglades City on the Gulf of Mexico. From Daybeacon 48, near the west end of Cormorant Pass, the waterway leads north through Shark Cutoff and then through various creeks, rivers and open bays to Everglades City. The passage above Cormorant Pass is marked by the National Park Service. The National Park Service advises that boats with cabins or high windshields or boats over 18 feet in length should not attempt the entire passage, because of

the narrow creeks and overhanging branches along some portions of the waterway. The section of the waterway that transits Broad Creek and The Nightmare, an area between Harney River and Broad River, should only be attempted by canoes or kayaks.

(187)

Manatees

(188) Regulated **speed zones** for the protection of manatees are posted in the Wilderness Waterway.

(189) Maps of the waterway and other information are contained in a booklet entitled, "A Guide to the Wilderness Waterway of the Everglades National Park," published by the University of Miami Press, Drawer 9088, Coral Gables, FL 33124.

(190) **Ponce de Leon Bay** is a nearly rectangular bight 7 miles north of Northwest Cape. **Shark Point**, on the north side of the bight, and **Shark River Island**, on the south side, are heavily wooded to the water's edge and stand out in bold relief against the tree line at the head of the bight. The north part of the bight is shallow, but fair anchorage is available for vessels drawing up to 6 feet off Shark River Island. The anchorage is sheltered from winds east of north or south, and the shoal on the northwest affords considerable protection from that direction. Several narrow streams empty into the head of the bight. Boats drawing up to 5 feet can continue into the southernmost of these streams.

(191) The area for some 10 miles east and southeast of Ponce de Leon Bay is a complicated network of tidal channels around thousands of mangrove islands. These channels lead or enlarge into Oyster, Whitewater and Tarpon Bays, from which, in turn, shallow rivers lead back into The Everglades. Generally, a depth of 5 feet can be carried through the various passes into Oyster and Tarpon Bays by giving a good berth to the points, which often have tidal bars projecting out from them.

(192) **Oyster Bay** is about 2 miles inland from the southeast corner of Ponce de Leon Bay. At the south end of Oyster Bay is the entrance to **Joe River**, a tidal channel extending some 10 miles in a southeast direction to the south end of Whitewater Bay. A depth of 4 feet can be carried through Oyster Bay and Joe River by avoiding occasional bars.

(193) Numerous channels lead east from Oyster Bay through a belt of mangrove about 2 miles wide into **Whitewater Bay**. The latter has numerous low mangrove islands, and its brackish water is from 2 to 6 feet deep. Northeast winds often cause drops in the water level of a half foot. At the south end of Whitewater Bay, **Tarpon Creek** leads into **Coot Bay**, which is about 1 mile in diameter and 3 feet deep. A 5-mph no-wake **speed limit** is enforced in Tarpon Creek. Boats going to and from Whitewater and Coot Bays can use Joe River, which is the southernmost passage, is easy to follow and is deep enough for all boats that can navigate the bays.

(194) **Little Shark River**, which empties into the Gulf on the south side of **Shark River Island** about 6 miles north of Northwest Cape, is a good channel to Oyster Bay for vessels drawing 4 feet or less. The river also provides anchorage of limited extent but is well protected. An entrance light and daybeacons as far as Oyster Bay mark the channel. Little Shark River trends east-northeast from Oyster Bay to a junction with Shark River about 7 miles above the entrance light.

(195) **Shark River** is the channel emptying into the middle of the east side of Ponce de Leon Bay. Some 8 miles northeast, the channel joins Harney River and enlarges into **Tarpon Bay**. A depth of about 5 feet can be carried through Shark River and Tarpon Bay. Shallow rivers lead north and east from Tarpon Bay into the Everglades.

(196) **Harney River**, emptying into the Gulf about 11 miles north of Northwest Cape, is a good passage to Tarpon Bay. Numerous bars at the entrance limit the depth to 2½ feet.

(197) **Broad River** and **Rodgers River** enter the Gulf about 16 miles north of Northwest Cape. In 1982, it was reported that about 2½ feet could be taken over the bar 1.5 miles southwest of the entrance to Broad River. Vessels of that draft can anchor just outside the mouths of the rivers and be protected from the sea by the bars outside. These rivers extend back into The Everglades for about 15 miles. About 6 miles from the coast they connect with a chain of shallow bays and creeks that extend north along the coast for some 60 miles. Small craft drawing up to 1½ feet can traverse these inside passages from Broad River to Naples. However, the charts do not cover this area completely; local knowledge is required to navigate north of Everglades City to Marco.

(198)

ENCs - US5FL45M, US5FL4AM
Chart - 11430

(199) **Lostmans River** is entered through **First Bay**, which is about 19 miles north of Northwest Cape. Local boatmen use the north entrance to the river. A depth of about 3 feet can be carried some 10 miles back into this river, which drains a large area of shallow bays. The crooked winding channel is marked by private daybeacons.

(200)

ENCs - US5FL45M, US5FL4AM
Chart - 11430

(201) **Seminole Point** (25°36.9'N., 81°16.3'W.), 24 miles north from Northwest Cape, is fairly prominent when standing up the coast at a distance of 2 to 3 miles off. The point is the southwest end of **Plover Key** and is the most west land seen until Pavilion Key is picked up to the northwest.

(202)

ENCs - US5FL45M, US5FL4AM
Chart - 11430

(203) **Pavilion Key** (25°41.4'N., 81°21.2'W.), 30 miles north of Northwest Cape, is the first prominent land seen after leaving Seminole Point. Anchorage is available for drafts of 4 to 5 feet off the east point of the south end of Pavilion Key. The anchorage is exposed to southwest winds. The approach to the anchorage passes close west of Dog Key, 0.3 mile southeast of Pavilion Key.

(204) **Chatham River** and **Huston River** empty into the Gulf 3 miles east of Pavilion Key. These rivers offer a connection to the system of shallow bays which parallel the coast. In 1982, it was reported that a draft of about 1½ to 2 feet could be taken up these rivers, but local knowledge is necessary to avoid the numerous bars.

(205) **Jewel Key** (25°47.1'N., 81°25.1'W.), 6 miles north-northwest from Pavilion Key, marks the entrance to **Chokoloskee Pass**, the approach to the town of Chokoloskee. Jewel Key is a small flat island.

(206) **Chokoloskee** is a year-round community on an island, about 0.5 mile in diameter, near the southeast end of **Chokoloskee Bay** about 3 miles east-northeast of Jewel Key. The island is joined to the mainland near Everglades City by a long causeway, which has a bridge opening off the mouth of Halfway Creek. The 23-foot fixed span has a clearance of 5 feet. Two channels, privately marked by stakes, lead from the Gulf through **Rabbit Key Pass** and Chokoloskee Pass to the facilities at Chokoloskee. In 1982, it was reported that the channel through Rabbit Key Pass was closed and that with local knowledge 2 feet could be carried in the channel through Chokoloskee Pass. At low water, during periods of north winds, it was reported that very little water remains in these channels and the bay dries out for the most part. At these times local knowledge is essential. There is no marked channel across the bay from the island to the entrance to Barron River, but with local knowledge craft drawing up to 1 foot can make it ordinarily. A channel leads from the vicinity of Jewel Key through **Sandfly Pass** and thence into a privately dredged channel, marked by privately maintained daybeacons, across the bay to the National Park Service basin at the northwest end of the causeway. In 2000, the channel had a reported controlling depth of 2 feet with lesser depths reported in the basin.

(207) The island has three marinas. One is at the north end on the east side of the causeway, and two are on the west side of the island. Two marinas have protected basins. All have gasoline, water, and ice available. A boatyard on the east side of the island has a marine railway that can handle craft to 53 feet for hull and engine repairs.

(208) **Indian Key**, on the west side of the entrance to the pass, is wooded and, except for its shape, resembles the neighboring keys. Good anchorage is available in Indian Key Pass about 700 yards northeast of Indian Key in depths of 8 to 13 feet and about 1 mile northeast of the key in 12 to 15 feet, gravel bottom. The anchorage is well protected from all winds, is suitable for drafts up to 7 feet, and is easily entered day or night.

(209) **Indian Key Pass** (25°48.0'N., 81°28.0'W.), 38 miles north of Northwest Cape, is the approach to Everglades City. A dredged channel leads from the Gulf of Mexico through Indian Key Pass, across Chokoloskee Bay, and up the **Barron River** to a turning basin about 1.3 miles above the mouth of the river.The channel is well marked by lights and daybeacons. Overhead power cables with clearances of 65 feet and 49 feet cross the river about 0.5 and 0.7 mile above the mouth, respectively. A 5-mph no-wake **speed limit** is enforced on the river.

(210) In 1983, the microwave tower at Everglades City was reported to be a good landmark from offshore although it is obscured closer in. When making the approach to Indian Key Pass, it is reported that mariners should steer about 053° for the microwave tower while it is visible, then hold that course until Indian Key Pass Light 1 can be identified. The light is reported to be difficult to distinguish from its background.

(211) A privately dredged channel, marked by daybeacons, leads southeast from the channel at the mouth of the Barron River to a turning basin and the protected basin of the National Park Service. In 2000, depths of less than 4 feet were reported in the channel with shoaling in the basin. A visitors center of The Everglades National Park is at the basin.

(212) **Indian Key Pass Light** (25°47'59"N., 81°28'04"W.), 16 feet above the water and shown from a pile on the south end of the bank extending off the south end of the key, marks the entrance to the pass. The mean range of tide is 3.4 feet at Indian Key.

(213) **Everglades City**, about 0.5 mile above the mouth of the Barron River, is the tourist center for Everyglades National Park. Itis also a center for sport fishing in **The Everglades** and the offshore waters of the Gulf. It is 3 miles by road, on State Route 29, from the Tamiami Trail (U.S. Route 41), the main highway across The Everglades from Miami to Tampa. The town has several marinas.

(214) Local fishing guides will act as pilots for The Everglades and adjacent waters of the Gulf.

(215) The mean range of **tide** is 2.0 feet at Everglades City.

(216) **West Pass**, 2.8 miles northwest from Indian Key, extends generally northeast for 3 miles from the north side of **Tiger Key** to **West Pass Bay**. A draft of 2 feet can be taken to West Pass Bay, thence east into Chokoloskee Bay and southeast to Barron River and Everglades City. West Pass is unmarked.

(217) **Fakahatchee Pass**, 4 miles northwest from Indian Key, extends northeast for 3 miles from the west side of **Round Key** to **Fakahatchee Bay.**

(218) **Faka Union Canal**, 6.5 miles northwest of Indian Key, is entered through a channel east of Panther Key that extends north for 4 miles through **Faka Union Bay** and **Faka Union River**. Private daybeacons mark the channel as far as Faka Union Bay. At the head of the canal is a marina that provides berths with electricity, gasoline,

water, ice, marine supplies, wet and dry storage, a pump-out facility, and a launching ramp. In 2006, a reported approach depth of 4 feet could be carried to the marina.

(219)

Manatees

(220) Regulated speed zones and a caution zone for the protection of manatees are in Faka Union Bay, River and Canal. (See Manatees, chapter 3.)

(221) **Cape Romano** is the south end of a large island 78 miles north from Key West. Here the coast changes its trend from northwest by west to north-northwest.

(222) North of Cape Romano deep water approaches the coast much more closely than it does south of the cape, and the coast is quite regular in outline although broken by many small inlets. The 12-foot curve is less than 0.5 mile offshore except at the entrances to some of the passes. The mouths of the passes are usually small and difficult to recognize unless close to shore. These passes are subject to change, developing and filling in rapidly, making local knowledge mandatory. There are several prominent apartments and hotels along the beach on the west side of Marco Island. Readily identifiable are the light at Capri Pass, and the pier, buildings, microwave tower and water tanks at Naples.

(223) **Cape Romano Shoals**, extending 10 miles south from the cape, are a series of irregular patches that bare in places near the shore and have depths of 1 to 20 feet over them farther off. A light marks the south end of the shoals. There is a strong current around the shoals, particularly on the seaward side and during spring tides. The mean range of **tide** at Cape Romano is 2.6 feet. The flood current sets south and the ebb north. In 1982, it was reported that the character of Cape Romano Shoals appeared to be changing and that in some areas lesser depths than those charted may exist. It was further reported that breakers were observed and that shoaling to 6 feet was reported in about 25°46'21"N., 81°42'55"W. In 1980, shoaling to 4 feet was within a 0.5-mile radius of 25°49'27"N., 81°41'33"W. Mariners are advised to exercise caution in this area.

(224) A fish haven, with a minimum depth of 15 feet, is 6.1 miles west-northwest from Cape Romano.

(225) **Gullivan Bay** is between Cape Romano and the islands to the east. At the head of the bay is **Coon Key Pass**. The pass is marked by daybeacons and is the south approach to Goodland and Big Marco River. A marked channel leads northwestward from Gullivan Bay to Caxambas Bay and Caxambas Pass. The approach from southeast is marked by **Coon Key Light** (25°52'54"N., 81°37'56"W.), 22 feet above the water and shown from a pile with a red and white diamond-shaped daymark. In 1992, a submerged wreck was on the west side of the pass above Daybeacon 2 in about 25°54'21.6"N., 81°38'22.8"W. As **Coon Key** is neared, the land behind becomes visible, but the key stands well above everything in the vicinity. When nearly up to the key, the entrance to Big Marco River is seen to east as a narrow gap between the more distant keys. The mean range of **tide** is 2.6 feet at Coon Key.

(226) **Caxambas Pass**, The channel through Caxambas Pass is about 4 miles northwest of Cape Romano and runs directly adjacent to the south shoreline of Big Marco Island. The area included in and surrounding the channel is subject to continual change; mariners should seek local knowledge before transiting the channel. Private daybeacons marking the pass are not charted. The area immediately south of the pass is extremely shoal and marked with danger beacons. Just south of the shoal area, is an unmarked row of piles that are the remains of an old jetty extending north and west from **Dickmans Point**, the north end of**Kice Island.**

(227) **Big Marco Pass**, 8 miles north from Cape Romano, is completely closed off by a barrier island. Shoals extend 1 mile seaward from the former pass and the area is subject to continual change. A fish haven with a minimum depth of 10 feet is about 2 miles southwest of this shoal area.

(228) **Capri Pass**, about 0.5 mile north of Big Marco Pass, is used by boatmen to gain entrance to inland waters that were formerly entered through Big Marco Pass. Local knowledge is advised. The entrance is marked by lights and daybeacons.

(229) **Big Marco River** trends east and then south for about 11 miles from Big Marco Pass to Gullivan Bay and affords a through passage behind Cape Romano. The midchannel controlling depth is about 4 feet; however, there have been numerous reports of shoaling between Capri Pass Light 2 and Big Marco River Daybeacon 18. Vessels drawing 2 feet or more should exercise caution and obtain local knowledge before attempting passage. The channel, though narrow and crooked, is well marked by daybeacons. The approach from Gullivan Bay is over shallow water with a depth of 4 feet and is marked by Coon Key Light. This approach is protected from all directions except southeast to southwest, and any sea from those directions is reduced by the wide expanse of gradually shoaling water. Local knowledge of conditions is necessary to carry the best water through the channel.

(230) A fixed highway bridge with a clearance of 55 feet crosses Big Marco River about 3 miles north of Coon Key. The approach piers of the former swing bridge immediately south of the fixed bridge remain and are used as fishing piers. An overhead power cable just south of the highway bridge has a clearance of 81 feet. A fixed highway bridge, connecting **Bear Point** and **Marco Island**, about 2.3 miles east of Capri Pass, has a clearance of 55 feet. An overhead power cable with a clearance of 77 feet at the center span and 55 feet reported elsewhere is close west of the bridge. A new bridge is under construction adjacent to the existing bridge.

(231) **Marco Island**, a large island situated between Caxambas Bay, Big Marco Pass, and Big Marco River, has for the most part been developed as a residential year-round community. Canals have been dredged and the marshland backfilled to provide for waterfront homesites.

(232) **Goodland** is a small fishing village and winter resort on Big Marco River at the east end of Marco Island. Several fish wharves and small-craft facilities are at the village. Local fishing guides are available and will act as pilots for the waters.

(233) **Marco** is a settlement at the north end of Marco Island on the south side of Big Marco River about 1 mile from Capri Pass entrance. The town is known locally as **Old Marco Village**. It has several marinas. Local fishing guides act as pilots for the adjacent waters.

(234) A **special anchorage** is on the south side of the river at **Marco**. (See **33 CFR 110.1** and **110.74**, chapter 2, for limits and regulations.) In 1993, shoaling to 2 feet was reported in the anchorage area.

(235) State Routes 92 and 951 connect all parts of Marco Island with the Tamiami Trail about 11 miles inland.

(236) **Collier Bay** enters Big Marco River from the south of Old Marco Village. In 1982, it was reported that 4 feet could be carried in the privately marked channel through the bay.

(237) **Isles of Capri** is a year-round community on three interconnected islands at the head of Big Marco Pass opposite Old Marco Village and is connected by State Routes 951 and 92 with the Tamiami Trail. Marinas are on the south side of Johnson Bay. Berths with electricity, gasoline, diesel fuel by truck, water, ice, a launching ramp, and marine supplies are available. A forklift that can handle craft to 28 feet for hull, engine, and electronic repairs is available. Local fishing guides act as pilots for the adjacent waters of the Gulf, the bay and channels. In 1982, it was reported that 4 feet could be carried in the privately marked channel through Johnson Bay from the marinas at Isles of Capri to the inside passage to Naples with local knowledge. A 5-mph no-wake **speed limit** is enforced in Johnson Bay in the channel adjacent to the marinas on Isles of Capri.

(238)

Routes

(239) The approach to Big Marco River from Gullivan Bay leads between the north end of Coon Key and Big Marco River Daybeacon 2, on a course of **325°** and from a position 0.3 mile northeast of Coon Key Light . Follow the daybeacons, keeping in mind that the markings reverse toward seaward at State Route 951 highway bridge. After passing the highway bridge, head north-northeast for 100 yards before heading north along the main channel. From Big Marco River, follow the daybeacons and lights through Capri Pass.

(240) An 11-mile inland waterway between Marco and Naples traverses through creeks, bays, and dredged landcuts; the waterway is well-marked by lights and daybeacons. In 2000, the centerline controlling depth was 3.6 feet to the junction with Gordon Pass entrance channel; thence in 2006, 7.6 feet to Naples.

(241) **Hurricane Pass**, 1.5 miles north from Big Marco Pass, was reported in 2002 to have a swift current and not recommended for small craft passage due to shoaling.

(242) **Little Marco Pass**, 3 miles north of Big Marco Pass, had a reported depth of 2 feet over the bar in 1982. The pass is unmarked.

(243) **Gordon Pass**, 16.5 miles north of Cape Romano, is the entrance to Naples Bay and also the north entrance to the inland waterway and numerous passages that traverse the area known as the Ten Thousand Islands, which extends along the lower Gulf Coast from Naples to Cape Sable, including Everglades National Park. A dredged channel leads from the Gulf of Mexico through Gordon Pass, thence north to the U.S. Route 41 highway bridge at Naples about 2.5 miles above Gordon Pass. The channel is marked by a buoy, lights and daybeacons.

(244) **Naples**, 2.5 miles north of Gordon Pass, is a large year-round tourist center on Naples Bay and the outer Gulf Coast. It has a sizable fishing industry, an airport, and a modern hospital, and is located on the Tamiami Trail. Canals have been dredged and the former marshland backfilled to form waterfront homesites in the areas of **Port Royal** at the south end of the city, **Royal Harbor** on the east side of Naples Bay, and **The Moorings** at the north end of the city.

(245) A microwave tower, several water tanks, and numerous hotels and apartment houses are prominent in Naples from offshore. The kiosk of the 1,000-foot municipal fishing pier is prominent inshore. It is reported that the television tower in 26°03'09"N., 81°42'09"W. is a good landmark when approaching at night from west or southwest.

(246) There are several boatyards and marinas on Naples Bay. A large municipal yacht basin is in **Crayton Cove**. There is a **dockmaster** at the municipal yacht basin who assigns berths and enforces the regulations. A no-wake **speed limit** is enforced in Gordon Pass between Daybeacons 7 and 10 and in Naples Bay between Daybeacon 29 and the bridge at Naples. The dockmaster can be contacted on VHF-FM channel 16.

(247) Few craft go above U.S. Route 41 (Tamiami Trail) highway bridge at the head of the harbor, which has a 32-foot fixed span with a clearance of 10 feet. Taxi and interstate bus lines serve the city.

(248) **Doctors Pass**, about 5 miles north of Gordon Pass, has been privately dredged. The pass is the entrance to **Hurricane Harbor**, **Venetian Bay** and **Moorings Bay**. The entrance is protected by two stone jetties. In 2013, shoaling to less than 2 feet was reported in the channel to Daybeacon 14; caution is advised. Large apartment buildings on either side of the entrance are prominent.

(249) **Clam Pass**, about 5 miles north of Naples, is a shoal drainage canal to **Outer Clam Bay**. The pass is used only by outboards in good weather. A fixed pedestrian bridge with a vertical clearance of 7 feet and a horizontal clearance of 12 feet crosses Outer Clam Bay. (See **33 CFR 117.1** through **117.59** and **117.323**, chapter 2, for drawbridge regulations.)

(250)

ENC - US5FL42M
Chart - 11427

(251) **Wiggins Pass**, 4 miles north of Clam Pass, is subject to frequent changes. The pass is used by small craft entering **Cocohatchee River** and the chain of lagoons and inland waterways that lead north to the passes in Estero Bay. A private light marks the approach to the pass. Inside the pass, a channel, marked by private daybeacons, leads south to **Water Turkey Bay**. There are several marinas on the north side of the Cocohatchee River near the mouth that provide gasoline, diesel fuel, water, ice, dry storage and marine supplies. Hull, engine and electronic repairs can be made; lift to 5 tons.

(252) A fixed highway bridge connecting **Big Hickory Island** and **Little Hickory Island** has a horizontal clearance of 40 feet and a vertical clearance of 10 feet.

(253) A microwave tower, about 7 miles inshore between Wiggins Pass and **Big Hickory Pass**, is reported to be prominent. The tower, 715 feet high, is marked at the top by a red aircraft light. A lighted green water tower on **Big Hickory Island** and a hotel between Wiggins Pass and Clam Pass are also reported to be prominent.

(254) In 1992, Big Hickory Pass was reported open for small craft with local knowledge. Private daybeacons reportedly mark the channel from the pass south through Hogue Channel, Big Hickory Bay and Fish Trap Bay to Imperial River and also north through Broadway Channel to New Pass and Big Carlos Pass. Local knowledge is advised. A marina on the east side of the bridge over Big Hickory Pass has berths with electricity, gasoline, water and ice.

(255) The highway continues north from Big Hickory Pass over causeways on the islets in the south end of Estero Bay with bridges over New Pass, the pass just north of Big Hickory Island, and Big Carlos Pass. The bridge over New Pass has a clearance of 30 feet, and the one over the entrance to the lagoon on the east side of **Black Island** has a 30-foot fixed span with a clearance of 10 feet. An overhead power cable with a clearance of 36 feet crosses the entrance to the lagoon just west of the bridge.

(256) In 2016, severe shoaling was reported in **New Pass** from New Pass Lighted Buoy 1 to Buoy 4; local knowledge and extreme caution are advised. A row of pilings, centered in 26°22'42"N., 81°51'53"W., were reported in 1978 to obstruct the channel through New Pass.

(257) **Big Carlos Pass**, marked by lighted and unlighted buoys, is about 1.5 miles northwest of New Pass. A bridge with a 50-foot bascule span crossing Big Carlos Pass from Carlos Point to Black Island has a clearance of 23 feet at the center. (See **33 CFR 117.1** through **117.59** and **117.267**, chapter 2, for drawbridge regulations.) Shoaling to bare was reported in 2016 in the Pass to the bridge; local knowledge and extreme caution are advised.

(258) High-rise buildings on the south end of Estero Island are prominent when approaching Big Carlos Pass from the Gulf. Other high-rise and/or lower condominiums dot the Gulf side of Estero Island at its north end.

(259) About 1 mile northwest of the bridge, a 2,100-foot privately dredged cut, 150 feet wide with several canals branching off from it, leads to a basin 500 feet long and 200 feet wide. A marina in the basin has gasoline, diesel fuel, electricity, pump-out, water, ice, marine supplies and boat storage and hull, engine and electronic repairs available. In 2011, a depth of 6 feet was reported in the approach channel and alongside.

(260) **San Carlos Bay**, 41 miles north-northwest from Cape Romano, is largely filled with shoals on which the depths vary between 1 and 6 feet and is of importance chiefly as the approach to Caloosahatchee River, the Okeechobee Waterway and the Intracoastal Waterway, Gulf Section. The bay and adjacent waters are frequented mostly by small vessels and yachts and are popular with tourists and fishermen during the winter.

(261) **Sanibel Island Light** (26°27'11"N., 82°00'51"W.), 98 feet above the water, is shown from a brown square pyramidal skeleton tower, enclosing a stair cylinder on **Point Ybel**, the east end of **Sanibel Island**.

(262) **San Carlos Bay Light SC** (26°25'08"N., 81°57'33"W.), 16 feet above the water, shown from a dolphin, is 3.6 miles southeast of Sanibel Island Light and marks the entrance to San Carlos Bay.

(263)

COLREGS Demarcation Lines

(264) The lines established for San Carlos Bay are described in **33 CFR 80.748**, chapter 2.

(265)

Channels

(266) **Matanzas (Estero) Pass** opens into the southeast end of San Carlos Bay, 2.5 miles from Sanibel Island Light. Small vessels can find secure anchorage just inside the pass. A dredged channel, marked by lights and daybeacons, leads from San Carlos Bay through Matanzas Pass to a turning basin off the shrimp terminals on San Carlos Island. The entrance channel navigational aids were relocated to mark the best water due to severe shoaling; local knowledge is advised.

(267) An **idle speed zone** is around Sanibel Island extending about 500 feet from any beach, the city boat ramp, any public launching area and fishing pier.

(268) The highway bridge that connects Fort Myers Beach, on **Estero Island**, with **San Carlos Island** has a fixed span with a clearance of 65 feet. The highway bridge that connects San Carlos Island with the mainland has a 31-foot fixed span with a clearance of 6 feet.

(269) **Fort Myers Beach Coast Guard Station** is on San Carlos Island near the north end of the bridge from Estero Island.

(270) There are extensive small-craft facilities in the vicinity of the bridges that connect the north end of Estero

Island with San Carlos Island and San Carlos Island with the mainland.

(271) **Punta Rassa**, on the east side of San Carlos Bay and 2 miles north of Sanibel Island Light, has several condominiums on the point and a hotel. A privately marked channel leads east to a marina at Port Sanibel. Berths with electricity, gasoline, diesel fuel, water, ice, marine supplies and wet and dry storage are available. In 2012, a depth of 5 feet was reported in the approach channel and 6 feet alongside. Launching ramps are available close west of the marina. VHF-FM channel 16 is monitored.

(272) **Sanibel Island Causeway** and toll bridge crossing San Carlos Bay from Punta Rassa to Sanibel Island has three bridges over the channels. Bridge *A*, the easternmost, over the main channel has a fixed span with a clearance of 70 feet. Bridge *B* about the middle of the causeway has a 48-foot fixed span with a clearance of 9 feet. Bridge *C* over Sanibel Island Channel at the west end has a fixed span with a clearance of 26 feet.

(273) A natural channel along the northeast side of Sanibel Island from Point Ybel to Pine Island Sound had a reported controlling depth of 9 feet in 1982. The channel is marked by lights and daybeacons.

(274) A marina in the basin about a mile west of Point Ybel has berths with electricity, gasoline, diesel fuel, water, ice, marine supplies, pump-out and dry and wet storage. Hull, engine and electronic repairs can be made. In 2015, a depth of 6 feet was reported in the approach channel. There is a public boat ramp about 500 yards west of the marina entrance.

(275) A **Manatee Protection Zone** is along the northeasterly side of Sanibel Island. A **slow speed zone** is in effect all year.

(276)

Anchorages

(277) Vessels with drafts too deep to enter San Carlos Bay can obtain good anchorage in calm weather in depths of 15 to 25 feet, sticky bottom, 3 to 4 miles southeast of Sanibel Island Light. With north winds there is good anchorage in depths of 16 to 24 feet under the lee of the south side of Sanibel Island, with the light bearing anywhere between northeast and north by west. The anchorage off Punta Rassa is good, but the tidal currents have considerable velocity at times, and there is considerable boat traffic. There is good anchorage along the northeast shore of Sanibel Island west of the light; the currents have considerable velocity, but spots of good holding ground can be found. Small skiffs find storm anchorage in Tarpon Bay.

(278)

Currents

(279) The average velocity of the current is 1.0 knot in San Carlos Bay off Point Ybel. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(280)

ENC - US5FL42M
Chart - 11427

(281) The **Caloosahatchee River** flows generally southwest from its source in Lake Okeechobee and empties into San Carlos Bay at Punta Rassa. The river has an average width of about 1 mile to a point 3 miles above Fort Myers, and then narrows to little more than the width of the channel which has been dredged to Lake Okeechobee.

(282) A dredged channel, part of the Okeechobee Waterway, leads from Punta Rassa to Fort Myers. The channel is well marked by lights, daybeacons and ranges. In 1995, the midchannel controlling depth was 8 feet.

(283) The diurnal range of tide in Caloosahatchee River is 2.4 feet at Punta Rassa and 1.2 feet at Fort Myers.

(284) The dredged channel leading from the entrance of the Caloosahatchee River southwest to Pine Island Sound is part of the Intracoastal Waterway to Brownsville, TX, which is discussed in chapter 12.

(285) **Shell Point Village**, about 500 yards south-southeast of **Shell Point**, is a large retirement development. A private marina is at the development. A privately marked channel, with a reported controlling depth of 2 feet in 1982, leads from the Okeechobee Waterway to the marina.

(286) **Iona Cove** is on the south side of the river about 1 mile above Shell Point. Privately marked channels leads through the cove. In 2006, the reported approach depth was 6.0 feet. Several oyster bars are close to the entrance channel; caution is advised.

(287) **Cape Coral**, the extensive canalized area northwest of **Redfish Point** on the north side of the river 7 miles above the mouth, is the site of a large year-round community.

(288) **Glover Bight** , 0.8 mile north of Shell Point, has marinas with gasoline, diesel fuel, berthing with electricity, ice, water, launching ramps and pump-out stations.

(289) A privately marked channel leads to a marina in Cape Coral Yacht Basin just west of Redfish Point. In 2002, the reported approach and alongside depths to the marina were 5 feet. Berths with electricity, gasoline, diesel fuel, water, ice, launching ramps and a pump-out station are available; hull and engine repairs can be made. VHF-FM channel 16 is monitored; telephone, 239–574–0809.

(290) In 1982, there was reported to be 5 feet in the privately marked channel leading to the west entrance to the lagoons at the west half of the Cape Coral developments.

(291) A hospital is at Cape Coral.

(292) **Deep Lagoon**, across the river from Cape Coral, provides good anchorage and moorings for drafts up to 7 feet. In 2004, the reported controlling depth in the privately marked channel leading to the lagoon was 5 feet.

(300)

METEOROLOGICAL TABLE – COASTAL AREA OFF FORT MYERS, FLORIDA
Between 25°N to 27°N and 81°W to 85°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	0.7	0.6	0.5	0.1	0.0	0.2	0.0	0.2	0.5	0.5	0.5	0.3	0.3
Wave Height > 9 feet [1]	3.1	2.7	2.8	1.6	0.5	0.7	0.3	0.7	1.4	2.7	3.1	2.5	1.8
Visibility < 2 nautical miles [1]	0.5	0.8	0.6	0.5	0.3	0.5	0.2	0.4	0.5	0.2	0.2	0.2	0.4
Precipitation [1]	3.5	3.0	2.5	1.7	1.9	2.9	2.3	3.2	4.0	3.1	2.3	2.2	2.7
Temperature > 69° F	51.6	51.5	65.7	87.3	99.2	100.0	100.0	100.0	100.0	98.7	86.8	62.6	84.0
Mean Temperature (°F)	70.1	70.2	72.1	75.1	78.9	82.1	83.8	84.0	83.0	79.6	75.2	71.6	77.3
Temperature < 33° F [1]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean RH (%)	78	78	79	79	79	79	77	77	79	77	77	77	78
Overcast or Obscured [1]	17.8	15.8	13.8	10.2	9.0	10.3	7.3	7.6	11.8	11.1	11.7	14.2	11.7
Mean Cloud Cover (8ths)	4.2	4.0	3.8	3.4	3.4	3.8	3.9	4.0	4.4	4.0	3.9	4.1	3.9
Mean SLP (mbs)	1019	1018	1017	1017	1016	1016	1018	1016	1015	1015	1017	1019	1017
Ext. Max. SLP (mbs)	1040	1037	1037	1032	1029	1030	1030	1030	1033	1029	1035	1040	1040
Ext. Min. SLP (mbs)	995	992	993	1000	1000	999	1004	1001	997	997	996	999	992
Prevailing Wind Direction	E	E	SE	E	E	E	E	E	E	NE	E	E	E
Thunder and Lightning [1]	1.1	1.0	1.1	0.8	1.5	2.8	4.1	5.1	4.5	2.4	1.0	0.9	2.2

[1] Percentage Frequency

(293) A marked channel leads to a private marina about 0.5 mile northeast of Deep Lagoon. In 2006, the reported approach depth was 5.0 feet.

(294) The highway bridge (Cape Coral Bridge) crossing Caloosahatchee River from Negro Head to Cape Coral has a fixed span with a clearance of 55 feet at the center.

(295) **Whiskey (Wyomi) Creek**, on the southeast side of the river 10 miles above the mouth, had a privately marked channel with a reported depth of 2 feet in 1992. A housing development borders the creek, but there are no marine facilities. A fixed highway bridge, with a clearance of 12 feet at the center, crosses the creek about 0.1 mile above the mouth. An overhead power cable crossing the creek at the bridge has a clearance of 32 feet. A fixed highway bridge, about 1.3 miles north of Whiskey Creek, has a clearance of 55 feet.

(296) **Waterway Estates** is a community on the west side of the river opposite Fort Myers, about 1½ miles southwest of the Caloosahatchee Fixed Bridge. Lagoons have been dredged to provide waterfront homesites. A channel leading to a basin and marina had a reported depth of 5 feet in 1999. In 1982, submerged obstructions were reported in the entrance channel in about 26°38'14"N., 81°54'22"W. and 26°38'16"N., 81°54'27"W.

(297) **Hancock Creek**, on the west side of Caloosahatchee River across from Fort Myers, leads to a housing development 1 mile upstream. In 2000, the reported controlling depth was 3½ feet in the privately dredged entrance channel. The channel to the creek entrance and the channel in the creek are well marked by private daybeacons. A highway bridge about 0.3 mile above the mouth has a 27-foot fixed span with a clearance of 13 feet.

(298) **Fort Myers**, on the southeast side of Caloosahatchee River 14 miles above the mouth, is the commercial center for this part of the state. The city is served by the Seminole Gulf and Amtrak Railways and is on Interstate Highway 75, which connects Tampa and Miami. Other state highways lead to West Palm Beach and to Punta Rassa. Fort Myers has two hospitals and some fishing, canning and manufacturing industries. A regional airport is southeast of the city.

(299)

Weather

(301) Fort Myers has a subtropical climate where temperature extremes, both hot and cold, are checked by the maritime influence of the Gulf of Mexico. Winters are mild, with many bright warm days and cool nights. Occasional cold snaps drop temperatures into the thirties, but rarely do they fall below freezing. Summers are warm and humid. While maximum temperatures frequently reach the 90°F range, they rarely top 100°F. Warm summer days are often cooled by sea breezes or afternoon thunderstorms. The average high temperature at Fort Myers is 74.8°F. The average maximum is 84.3°F while the average minimum is 64.7°F. August is the warmest month with an average temperature of 83.3°F, and January the coolest with an average temperature of 64.7°F. The warmest temperature on record, 103°F, occurred in June 1981, and the coolest temperature on record, 26°F, occurred in December 1962.

(302) Precipitation is moderate averaging 53.88 inches on an annual basis. June is the wettest month averaging 9.28 inches and November the driest averaging 1.44 inches. Summer is the wet season with a full 50% of the annual rainfall occurring in the three-month period, June through August. An average of 144 days each year record measurable precipitation. The 24-hour precipitation record of 7.75 inches occurred in May 1989.

(303) Thunderstorms occur on more than 90 days each year. They are most likely from June through September, developing on about 14 to 22 days each month. Occasionally they generate gale-force winds and briefly reduce visibilities to near zero in torrential downpours. When associated with a tropical system, thunderstorms

or showers may produce 6 to 10 inches of rain within 24 hours. While the tropical cyclone season generally lasts from June through November, this area is particularly vulnerable to October hurricanes. However, it was hurricane Donna in September 1960 that brought 80-knot winds to Fort Myers. On the average, Fort Myers can expect hurricane-force winds about once every 12 years.

(304) Winter weather problems are usually the result of cold fronts that work their way down from the north. In addition to dropping temperatures, these fronts can also produce strong, gusty winds and showers. Only rarely do winds reach gale force. Visibilities, which are generally good, are sometimes restricted by a shallow early morning ground fog, which occurs on 3 to 5 winter days per month; this usually dissipates quickly with the rising sun.

(305)

Small-craft facilities

(306) There are numerous small-craft facilities on both sides of the Caloosahatchee River in the vicinity of Fort Myers.

(307) Local fishing guides can be obtained as pilots for the adjacent waterways and the Gulf.

(308) **Edison Memorial Bridge** (U.S. Business Route 41), has two fixed spans that cross the Caloosahatchee River at Fort Myers, Mile 134.5, with a vertical clearance of 56 feet.

(309) **Caloosahatchee Bridge** (U.S. Route 41), which crosses the Caloosahatchee River about 0.5 mile southwest of the Edison Memorial Bridge has a fixed span with a clearance of 55 feet at the main channel.

(310) Regulated speed zones for the protection of manatees are in the Caloosahatchee River from San Carlos Bay to the Edison Memorial Bridge (U.S. 41) and in **Orange River** and at its confluence with Caloosahatchee River about 5 miles above Edison Memorial Bridge. (See Manatees, chapter 3.)

(311) The **Okeechobee Waterway** is a shallow-draft passage across Florida by way of Caloosahatchee River, Lake Okeechobee, St. Lucie River and the connecting canals. The federal project for the waterway provides for a channel 8 feet deep from Fort Myers to the Intracoastal Waterway near Stuart. Controlling depths are given in Local Notice to Mariners. (See **United States Coast Pilot 4, Atlantic Coast, Cape Henry to Key West**, for detailed description of the waterway.)

(312) The section of the Intracoastal Waterway from Caloosahatchee River, FL, to Tampa Bay passing through the waters described in this chapter and places along its route is discussed in chapter 12.

(313)

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(314) **Matlacha Pass** is a shallow body of water extending north from San Carlos Bay to Charlotte Harbor between Pine Island and the mainland. The pass is navigable for drafts of 2 to 3 feet, but the channel, marked by private daybeacons, is narrow and crooked and has numerous oyster bars. This channel is not recommended without local knowledge as the hydrography in Matlacha Pass is from surveys made before 1900.

(315) About 4 miles above the entrance, the pass is crossed by an overhead power cable with a clearance of 47 feet over the channel and 32 feet over the rest of the pass. State Route 78 highway bridge connects Pine Island, Little Pine Island and West Island with the mainland. The section of the bridge between Little Pine Island and West Island is a 27-foot fixed span with a clearance of 4 feet, and the section of the bridge between West Island and the mainland is a bascule span with a clearance of 9 feet. (See **33 CFR 117.1** through **117.59** and **117.303**, chapter 2, for drawbridge regulations.) An overhead power cable on the south side of the bascule bridge has a clearance of 56 feet. Gasoline, water, ice, marine supplies, launching ramps and some engine repairs can be obtained at the small piers near the bridge.

(316) **Bird Island** and **Givney Key**, near the south end of the pass, are part of the **Matlacha Pass National Wildlife Refuge**.

(317) The coast from San Carlos Bay trends north-northwest to Boca Grande, the entrance to Charlotte Harbor. The barrier islands of Sanibel, Captiva, North Captiva and Cayo Costa are separated from the large Pine Island to the east by Pine Island Sound.

(318) **Sanibel Island** is a 10-mile hook-shaped island almost tropical in climate and vegetation and with considerable resort development. A large portion of the island is part of the U.S. Department of Interior **J.N. "Ding" Darling National Wildlife Refuge**. (See chapter 12.)

(319) Fish havens are 3 to 8 miles southwest of Sanibel Island Light. The outermost fish haven, 8 miles out, is marked by a private buoy.

(320) **Blind Pass** separates Sanibel Island from Captiva Island. The pass is marked by private daybeacons and is subject to frequent changes. A highway bridge over the pass has a 38-foot fixed span with a clearance of 7 feet.

(321) **Captiva Island**, about 4 miles long and up to 0.3 mile wide, has considerable resort development.

(322) **Redfish Pass**, frequently used by fishing vessels, leads into Pine Island Sound from the Gulf between Captiva Island and **North Captiva Island**. The channel, marked by private buoys and daybeacons, is winding and difficult, with strong currents and frequent changes in depth and position. The pass should not be attempted without local knowledge. A partially submerged groin is on the south side of the pass.

(323) **Captiva Pass**, leading from the Gulf into Pine Island Sound between North Captiva Island and **Cayo Costa**, is used to some extent by small fishing vessels. The channel is unmarked and subject to change—local knowledge is required to carry the best water. In 1988, a visible wreck was reported in the entrance channel in about 26°35'00"N., 82°13'30"W. Fair anchorage is available for small boats in **Safety Harbor**, which is 0.5 mile south of

Captiva Pass on the inner side of North Captiva Island. The depth inside the harbor is about 5 feet, but only small craft drawing about 2 feet can enter. The channel into the harbor is marked by private lights and daybeacons, but local knowledge is advised. The holding ground is good, and the anchorage is well protected from all directions.

(324)

ENC - US5FL19M
Chart - 11425

(325) **Charlotte Harbor**, about 60 miles south-southeast from Tampa Bay, is the approach to Port Boca Grande, Boca Grande, Punta Gorda and several smaller settlements. On the south side Charlotte Harbor opens into Pine Island Sound and on the north side into Gasparilla Sound, which are described in chapter 12 in connection with the Intracoastal Waterway. Matlacha Pass, on the south side, has been described earlier in this chapter.

(326)

Prominent features

(327) **Port Boca Grande Light** (26°43'02"N., 82°15'39"W.), 41 feet above the water, is shown from a white frame dwelling on the south end of the island.

(328)

COLREGS Demarcation Lines

(329) The line established for Charlotte Harbor is described in **33 CFR 80.750**, chapter 2.

(330) Vessels should approach the harbor through the Charlotte Harbor Safety Fairway. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(331)

Channels

(332) The federal project for Charlotte Harbor provides for a channel 32 feet deep from deep water in the Gulf to Port Boca Grande. The channel is marked by lighted and unlighted buoys.

(333) A natural channel, marked by lights and daybeacons, leads from deep water at Port Boca Grande through Charlotte Harbor to the mouth of Peace River. In 1982, the reported controlling depth in the channel was 9 feet.

(334) A break in the shoal on the north side of the channel near the south end of Gasparilla Island forms a swash channel which was reported to have a controlling depth of 8 feet in 1982. The best water in this swash channel is about 150 yards off the point, using the end of the fishing pier as a guide.

(335)

Anchorages

(336) Vessels should anchor in the Charlotte Harbor Anchorage, on the southwest side of the Safety Fairway. (See **33 CFR 166.100** through **166.200**, chapter 2.) In addition, good anchorage in Charlotte Harbor for large vessels is in depths of 20 to 40 feet at the inner end of the entrance channel; the holding bottom is good. The anchorage affords excellent shelter from all winds and is used as a harbor of refuge by coasting vessels and others. Small vessels can anchor almost anywhere in Charlotte Harbor. Good depths for small craft can be found close inshore between Port Boca Grande and Boca Grande. Small craft also can use the lagoon at Boca Grande. Another good anchorage for small craft has been reported between **Johnson Shoals** and the northwest side of Cayo Costa. Depths in the anchorage are 7 to 11 feet, but only craft drawing less than 5 feet can enter through the unmarked swash channel along the northwest side of Cayo Costa.

(337)

Dangers

(338) Numerous floating piles have been reported in Charlotte Harbor and adjacent waterways and in Boca Grande Channel and its approaches.

(339)

Currents

(340) The tidal currents in the entrance channel average 2.2 knots at strength. The ebb current, that is said to attain occasionally an extreme velocity of 3 to 4 knots, depending also upon the force and direction of the wind. In the harbor channel between Cape Haze and the north end of Pine Island, the average velocity of the current is 0.5 knot. In Matlacha Pass at Little Pine Island bridge the current floods to the southeast with an average velocity of 0.6 knot; the ebb current is weak and variable. To the north at the Myakka River bridges the current floods to the northwest with an average velocity of 0.5 knot; the ebb current is weak and variable. In Peace River the current floods to the northeast and ebbs to the southwest with an average velocity of about 0.4 knot at strength. Predictions of the current at several places in Charlotte Harbor may be obtained from the Tidal Current prediciton service at *tidesandcurrents.noaa.gov*.

(341)

Pilotage, Charlotte Harbor

(342) Pilotage is compulsory for all foreign vessels and U.S. vessels under register in the foreign trade and any oil-carrying vessel. Pilotage is optional for U.S. coastwise vessels that have on board a pilot licensed by the federal government for these waters; however, most commercial vessels take a local pilot. Pilotage is available from Boca Grande Pilots, Inc., Post Office Box 266, Boca Grande, FL 33921, telephone 941–964–2245, FAX (same number). The pilot office monitors VHF-FM channels 16 and 12 about 12 hours before a vessel's ETA. Pilots board vessels approximately 1 mile seaward of Charlotte Harbor Lighted Buoy 2 (26°40'17"N., 82°18'50"W.). In 1996, due to shoaling channel conditions all vessel movements are in daylight and at slack water. The pilot boat has a blue hull and white and gray superstructure with the name PILOT on transom and bow. The pilot boat monitors VHF-FM channel 12 and works on channel 12. Vessels being boarded should maintain a dead-slow speed and provide a ladder 1 meter (about 3 feet) above the water on the lee side. Pilotage is arranged by telephone

or FAX (both given above), or through ships' agents. An advance lead-time of 24 hours is requested.

(343)

Towage

(344) A small tug is available for light towing jobs.

(345)

Quarantine, customs, immigration and agricultural quarantine

(346) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(347) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(348) Boca Grande is a **customs port of entry.**

(349)

Supplies

(350) Bunker fuels are not available locally. Limited amounts of gasoline, provisions and marine supplies are available locally; large amounts require advance notice. Unlimited amounts of ice are available on short notice. Fresh water is available.

(351)

Repairs

(352) There are no drydocking or major repair facilities for deep-draft vessels at Port Boca Grande; the nearest such facilities are at Tampa, FL. Small machine-shop repairs are available locally; larger above-the-waterline repairs using portable equipment are available from the mainland on about 4 hours notice. Divers are available on a few hours notice.

(353) A privately marked channel with a reported depth of 5.5 feet leads to a marina on the east side of Charlotte Harbor about 2.6 miles, 088° from Cape Haze Shoal Light 6 (26°45'36"N., 82°06'38"W.). Large and small craft are handled at the marina. Berths with electricity, gasoline, diesel fuel, water, ice, some marine supplies, provisions, wet and dry storage, a surfaced launching ramp and a restaurant are available at the marina. A forklift with a 4.7 ton capacity is available.

(354)

Charlotte Harbor

(355) **Riviera Lagoons** is a development on **Alligator Creek**, on the east side of Charlotte Harbor about 14 miles northeast of Boca Grande. Lagoons have been dredged to provide waterfront homesites. A marina has berthage in 6 to 7 feet, and in 1991, there was reported to be 6 feet in the channel leading to the creek. A private light and daybeacons mark the channel. Gasoline, diesel fuel, water, ice and marine supplies are available. There is a launching ramp and a travel lift that can handle craft to 60 feet and 35 tons for hull and engine repairs, or storage. Towing service is available 24 hours a day.

(356) An artificial reef, marked by private daybeacons, is about 2 miles southwest of the entrance to Alligator Creek.

(357) **Peace River** empties into the head of Charlotte Harbor from northeast. Above Punta Gorda the river is navigable by small outboards with local knowledge as far as Hull, 15 miles above the entrance, but caution is necessary to avoid the snags in the upper reaches. Heavy growths of hyacinth also are found in the upper reaches, which completely block many of the small inlets, bayous and lakes.

(358) The entrance to the river is marked by a light about 1.7 miles west of **Mangrove Point**. The river channel is marked by a light and daybeacons as far as Long Island just above Cleveland, about 9 miles above the entrance; above that stakes mark the channel.

(359) **Port Charlotte** is a year-round community on **Alligator Bay**, on the north side of Peace River 3 miles above the entrance. The town has two hospitals and bus connections.

(360) **Punta Gorda**, a town on the south side of Peace River, 4 miles above the entrance, has rail connections with points to the north and south. Punta Gorda is a commercial fishing port. The town has a hospital.

(361) A dredged channel leads from the river to a marina at the northwest end of town. The channel is marked by a light and daybeacons. A riprap breakwater protects the northeast and northwest sides of the marina basin. The marina has berths with electricity, gasoline, diesel fuel, water, ice and sewage pump-out.

(362) U.S. Route 41 (Tamiami Trail) highway bridge crossing the river at Punta Gorda has two fixed spans, each with a clearance of 45 feet. The channel span of the former highway bridge close northeast of these bridges has been removed, but the ruins of the north and south approach piers remain and are awash; extreme caution should be exercised in the area. An overhead power cable close northeast of the ruins has a clearance of 75 feet.

(363) A marina, on the south side of the river about 1 mile east of the bridge, has two travel lifts that can handle craft to 60 feet and 35 tons for hull and engine repair or storage. A privately marked channel, with a reported controlling depth of about 3 feet in 2013, leads to the marina.

(364) A municipal marina, about 0.5 mile southeast of the bridge, has berths with electricity, water, ice, pump-out, some marine supplies and a launching ramp. In 2011, the reported controlling depth was 7 feet with 4 to 8 feet in the basin.

(365) **Charlotte Harbor** is a community at the northwest end of the bridge. A marina on the west side of the bridge can provide gasoline, water, marine supplies and dry storage. Berths are not available. A mobile hoist can haul out craft to 20 tons for hull and engine repairs. In 2002, there was reported to be 3.8 feet of water in the approaches. Intercity bus service is available at Punta Gorda. A Class I railroad provides freight service; air service is available at the county airport.

(366) Interstate Route 75 twin fixed highway bridges, with a clearance of 45 feet, cross Peace River 2.1 miles above the Route 41 bridge at Punta Gorda.

(375)

(367) **Cleveland** is a small village on the south side of Peace River 3 miles above Punta Gorda. The only dock along the waterfront is for small boats only and is privately owned. No supplies are available. The natural channel above the highway bridge at Punta Gorda is marked by daybeacons as far as Long Island, about 1 mile above Cleveland. The controlling depth was reported to be about 3 feet in 1982, but local knowledge is required to carry the best water. Overhead power cables crossing the river, about 5 miles and 6.1 miles above Punta Gorda, have a clearance of 60 feet.

(368) There are numerous private fishing piers and fish camps along the Peace River above Punta Gorda. About 14 miles above the entrance, a highway bridge crossing the river has a fixed span with a clearance of 12 feet.

(369) **Myakka River** empties into the head of Charlotte Harbor from northwest. A depth of 9 feet can be taken into the mouth of the river, and 3 feet can be carried to a marina at **El Jobean**, at the north end of the bridges crossing the river 3 miles above the mouth; provisions are available. The highway bridge has a fixed span with a clearance of 25 feet, On the west side of the fixed bridge, adjacent and running parallel, is a portion of the abandoned railroad bridge, now a fishing pier.

(370) Boats drawing 2 feet can navigate Myakka River for about 17 miles above the mouth with local knowledge. The Tamiami Trail highway bridge, 10 miles above the mouth, has a fixed span with a horizontal clearance of 43 feet and a vertical clearance of 15 feet. The nearby overhead power cable has a clearance of 32 feet. Gasoline, water, a launching ramp and limited marine supplies are available.

(371) The flora and fauna of the Everglades region are preserved in **Myakka State Park** in the upper reaches of the river.

(372)

ENCs - US5FL19M, US5FL11M
Charts - 11425, 11415

(373) The coast between Charlotte Harbor and Tampa Bay trends about northwest by north and has a nearly straight sand beach that is broken in places by small inlets. Back of the barrier islands are shallow bays and lagoons that can be entered from the Gulf of Mexico through Gasparilla Pass, Stump Pass, Venice Inlet, Big Sarasota Pass, New Pass and Longboat Pass. Most of these passes, though marked, are subject to change, and the aids are frequently shifted in position. The low shore is wooded nearly to the water's edge and has few prominent features except in the vicinity of Boca Grande, Venice and Sarasota and for the 720-foot Venice Fishing Pier, about 2.5 miles south of the entrance to Venice Inlet. The pier is reported marked at its end by two fixed red lights.

(374) **Gasparilla Pass** between **Gasparilla Island** and **Little Gasparilla Island** affords passage from the Gulf

(378)

to Gasparilla Sound, Placida Harbor and the Intracoastal Waterway. Local knowledge is needed to carry the deepest water. In 2003, the reported controlling depth over the bar through the unmarked channel was 3.5 feet.

(376) **Stump Pass**, 6 miles north of Gasparilla Pass, between **Knight Island** and Manasota Key, affords passage from the Gulf into the south end of Lemon Bay and the Intracoastal Waterway. The channel is subject to frequent change and should not be attempted without local knowledge. A private light with a daymark reading "Danger Navigate with Local Knowledge Only" marks the approach.

(377) **Venice Inlet**, about 26 miles northwest of Port Boca Grande, affords a passage from the Gulf to the Intracoastal Waterway, Roberts, Dona and Lyons Bays. A dredged channel leads east from the Gulf between parallel jetties for about 0.5 mile to the Intracoastal Waterway—daybeacons mark the channel. **Venice Inlet Light 1** (27°06'46"N., 82°28'13"W.), 20 feet above the water, is shown from a a pile with a square green daymark.

(379) An unmarked fish haven is about 1 mile southwest of Venice Inlet.

(380) **Big Sarasota Pass**, 12 miles north-northwest from Venice Inlet, leads from the Gulf of Mexico to the south end of Sarasota Bay and the Intracoastal Waterway. The pass lies between **Siesta Key** and **Lido Key** and is marked by private daybeacons—a light marks the channel approach. The approach channel over the bar and the channel through the pass are subject to continual changes. Mariners are advised to exercise extreme caution. Several large hotel buildings at the south end of Lido Key and along the shore of Siesta Key are prominent.

(381)

Currents

(382) In Big Sarasota Pass the flood current sets north with an average velocity of 1.5 knots, and the ebb sets south with an average velocity of 1 knot.

(383) Three fish havens are from 1.1 to 2.2 miles offshore between Big Sarasota Pass and New Pass.

(384) **New Pass**, 2 miles north-northwest from Big Sarasota Pass, between **Lido Key** and **Longboat Key**, affords passage from the Gulf of Mexico to Sarasota Bay and the Intracoastal Waterway. A dredged channel leads from the Gulf through the pass and crosses the Intracoastal Waterway to a turning basin at Centennial Park. The channel approach is marked by a light, and the channel is marked by a light and daybeacons. Buoys are not charted as they are frequently shifted in position to mark the best water. The channel is subject to shoaling; local knowledge is advised.

(385) State Route 789 bridge over the pass has a bascule span with a clearance of 23 feet. (See **33 CFR 117.1** through **117.59** and **117.311**, chapter 2, for regulations.)

(389)

(386)

Currents

(387) In New Pass the flood current sets northeast with an average velocity of 1.6 knots, and the ebb sets southwest with an average velocity of 1 knot.

(388) **Longboat Pass**, about 9 miles north-northwest of Big Sarasota Pass, between Longboat Key and **Anna Maria Island**, affords passage from the Gulf of Mexico to the north end of Sarasota Bay and the Intracoastal Waterway. A dredged channel, marked by a light, buoys and daybeacons, leads from the Gulf to the Intracoastal Waterway; the buoys are not charted. The channel is subject to continual changes at the entrance—greater depths may be available with local knowledge. Shoaling extends west and south in an arc from the south end of Anna Maria Island and also west from the northwest end of Longboat Key. State Route 789 bridge over the pass has a 45-foot bascule span with a clearance of 17 feet. The bridgetender may be contacted on 941–355–7107 and on VHF-FM channel 9.

(390)

Currents

(391) In Longboat Pass the flood current sets east with an average velocity of 1.8 knots, and ebb sets west with an average velocity of 1.6 knots.

(392) **Anna Maria Island**, about 6.5 miles long and about 1 mile wide near the north end, extends north-northwest from Longboat Pass to Passage Key Inlet on the south side of Tampa Bay Entrance. It is separated from the mainland by **Anna Maria Sound**, which joins Sarasota Bay with Tampa Bay. Several fish havens are offshore of Anna Maria Island and within the three-nautical-mile line, between Longboat Pass and Passage Key Inlet. A fish haven is 7.2 miles west of Bean Point, the north point of Anna Maria Key. There are several year-round communities and a yacht club, marinas, launching ramps and boatyards on the island, which is also a winter resort.

Chart Coverage in Coast Pilot 5—Chapter 5
NOAA's Online Interactive Chart Catalog has complete chart coverage
http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml
84°30'W
84°W
83°30'W
83°W
82°30'W
30°N
29°30'N
29°N
28°30'N
28°N
27°30'N
APALACHEE BAY
F L O R I D A
STEINHATCHEE RIVER
DEADMAN BAY
SUWANNEE RIVER
Cedar Keys
WACCASASSA BAY
Crystal River
Bayport
New Port Richey
11411
G U L F O F M E X I C O
Tarpon Springs
Clearwater
11416
Tampa
St. Petersburg
TAMPA BAY
11415

Tampa Bay to Apalachee Bay

(1) This chapter describes the 170-mile Gulf coast of Florida from Tampa Bay to Apalachee Bay, the numerous rivers emptying into this section of the Gulf and the passes making from the Gulf to the Intracoastal Waterway. Also described are the deepwater ports of Tampa, Port Tampa, Port Sutton, St. Petersburg and Port Manatee and many smaller ports.

(2) The section of the Intracoastal Waterway from Tampa Bay to Anclote Anchorage passing through the waters described in this chapter and places along its route are discussed in chapter 12.

(3)

COLREGS Demarcation Lines

(4) The lines established for this part of the coast are described in **33 CFR 80.750** through **80.805**, chapter 2.

(5)

ENC - US3GC06M
Chart - 11400

(6) From Tampa Bay 35 miles north to Anclote Keys, the bottom is broken, and depths of 18 feet or less are sometimes found more than 4 miles offshore. The coast is bordered by a line of long narrow barrier islands that overlap at the ends. The Gulf sides of the islands are straight or gently curving sand beaches, backed by dense growth. Between the islands and the mainland is a chain of shallow bays and passages. Prominent north of Tampa Bay are water tanks and numerous tall buildings along the beaches, a large hotel in Clearwater and a water tank near the center of Clearwater Beach Island and an abandoned light structure.

(7) Two seasonal areas designed to protect Gulf reef fish are on and around the vicinity of **Florida Middle Ground**, about 95 miles northwest of the entrance to Tampa Bay. See **50 CFR 622.34**, not carried in this Coast Pilot.

(8) Between Anclote Keys and Cedar Keys, 60 miles to the north, the low coast is fringed with marsh broken by shallow rivers and creeks that can be entered only by small craft. Small keys and islets border the coast, and broken ground extends as much as 15 miles from shore. The bottom slopes gradually shoreward, but there are many rocks and shoals in the deeper water. Between Anclote Keys and Cedar Keys, a stack near the mouth of the Anclote River and four stacks near the mouth of the Crystal River are reported prominent.

(9) Bird guano racks, consisting of square platforms on piles about 20 feet above water, have been built on the outermost shoals between Tampa and Apalachee Bays; some have been destroyed in aerial gunnery practice, leaving broken piling, which constitutes a hazard. Not all of the racks are charted.

(10) Numerous fish havens, some marked by private buoys, extend as much as 10 miles offshore along this section of coast.

(11) The coast extends in a general northwest direction from Cedar Keys for about 75 miles to Apalachee Bay. The low marsh along the shoreline is 1 to 2 miles wide and is backed by pine forests. The coast is broken by several small rivers and creeks, some of which are navigable for drafts of 4 to 5 feet. The bottom is broken and irregular for a distance of about 10 miles from shore, and coral heads and reefs are numerous. This stretch of coast is frequented mostly by shrimpers and other fishermen, who can assist strangers to enter any of the rivers or creeks. The shoal water affords fair anchorage, with considerable protection from heavy seas, for light-draft boats.

(12)

Weather

(13) Along the coast from Tampa Bay to Apalachee Bay, tropical cyclones, thunderstorms, and cold fronts are the potential weather hazards. Within the June through November hurricane season, September is the most active month for tropical cyclones in the Atlantic Basin. However, June and October historically pose the greatest risk for storms in and around the eastern Gulf. Between 1950 and 2018, twenty-seven tropical storms or hurricanes have passed within 100 nm of Tarpon Springs, FL. They usually approach from the south or southwest but occasionally traverse westward across south Florida and move into the eastern Gulf. Tides have run 12 to 15 feet above normal, especially in the Florida “bight” of Apalachee Bay south through southwest. Tides have run 12 to 15 feet above normal, especially in the Florida “bight” of Apalachee Bay.

(14) Thunderstorms develop on about 50 to 85 days annually along this section of coast. They are most likely from May through September when they occur on 8 to 20 days per month; July and August are the most active months. The Tampa Bay and Apalachee Bay areas are the most active. Offshore thunderstorms are most frequent in the evening near dissipating inland thunderstorms and early morning as the land breeze develops off the coast. Thunderstorms can spring up quickly and generate strong gusty winds and may contain hail or even tornadoes or waterspouts. They can occur as isolated cells or as an organized squall line sometimes preceding a cold front.

(17)

METEOROLOGICAL TABLE – COASTAL AREA OFF APALACHICOLA, FLORIDA
Between 27°N to 30°N and 82°W to 86°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	1.1	1.2	0.6	0.1	0.1	0.1	0.2	0.2	1.1	0.6	0.8	1.0	0.5
Wave Height > 9 feet [1]	5.0	3.5	2.3	0.8	0.1	0.4	0.8	0.3	2.0	2.3	3.0	3.1	1.8
Visibility < 2 nautical miles [1]	3.4	1.8	3.6	1.1	1.0	0.2	1.0	1.0	1.3	0.4	0.6	2.0	1.4
Precipitation [1]	4.8	3.6	3.0	1.4	1.8	3.9	4.3	4.5	5.7	3.1	3.1	3.6	3.6
Temperature > 69° F	23.8	25.3	37.9	70.3	94.5	100.0	99.9	99.7	99.5	93.3	66.9	33.7	74.0
Mean Temperature (°F)	63.2	65.5	68.1	72.5	77.1	81.1	83.4	83.2	82.1	77.4	71.8	66.1	75.2
Temperature < 33° F [1]	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean RH (%)	78	78	80	79	79	80	77	78	79	75	76	76	78
Overcast or Obscured [1]	23.6	22.7	18.4	16.2	8.2	15.7	10.7	11.8	15.9	13.1	15.3	18.0	15.5
Mean Cloud Cover (8ths)	4.5	4.4	4.0	3.6	3.4	4.2	4.2	4.2	4.5	3.9	4.0	4.2	4.1
Mean SLP (mbs)	1020	1019	1018	1017	1016	1016	1018	1016	1015	1016	1018	1020	1017
Ext. Max. SLP (mbs)	1040	1043	1033	1032	1030	1027	1032	1027	1027	1031	1030	1037	1043
Ext. Min. SLP (mbs)	992	1000	1000	998	1000	999	1004	1001	997	997	995	1000	992
Prevailing Wind Direction	N	E	SE	SE	E	E	SW	E	E	NE	NE	E	E
Thunder and Lightning [1]	1.7	1.6	1.6	0.7	1.2	3.8	5.4	5.5	6.4	1.4	0.6	0.9	2.7

[1] Percentage Frequency

(15) Cold fronts from the north occasionally reach these waters from fall through spring. At Tallahassee, temperatures drop below freezing on 30 days annually compared to 3 days at Tampa. The Gulf modifies the cold air masses quickly. Strong winds from these fronts or low-pressure systems that form in the Gulf of Mexico often result in winds in excess of 20 knots and occasionally gale-force winds (34 knots or more). Wave heights of 10 feet or more are also not uncommon behind these frontal systems.

(16) Visibilities are generally good along this section of coast. They may be briefly reduced to near zero in heavy showers or thunderstorms but during the winter and early spring, fog is usually the source of visibility restrictions. Sea fog is most common between December and early March, and severe fog events can last for several days with near zero visibility over a widespread area. The best chance for sea fog development is out ahead of a cold front when winds are south to southwest, air is warm/moist and water temperatures are cool.

(18)

Tampa Bay

(19) **Tampa Bay**, a large natural indentation about midway along the west coast of Florida, is one of the important harbors of the Gulf coast and is easily accessible day or night. The bay extends northeast for about 20 miles and is 6 to 7 miles wide. It is the approach to Manatee River, Boca Ciega Bay, Old Tampa Bay and Hillsborough Bay and to the cities of St. Petersburg, Port Tampa, East Tampa, Bradenton, Port Manatee and Tampa.

(21) The entrance to Tampa Bay, between Mullet Key on the north and Anna Maria Key on the south, is 4.5 miles wide and encompasses Egmont Channel and Southwest Channel, separated by Egmont Key. Egmont Channel, the main deepwater ship channel, has been dredged through shoals that extend about 6 miles west of the entrance. **Tampa Bay Lighted Buoy T** (27°35'19"N., 83°00'43"W.), 13.5 miles west of Egmont Key, marks the approach to the bay. Egmont channel is marked by high-intensity range lights showing fixed white lights by day and fixed green lights by night that are normally visible approaching Tampa Bay Lighted Buoy T from sea.

(22)

Prominent features

(23) **Egmont Key**, a low, sandy, and wooded island almost in the middle of the entrance to Tampa Bay, is about 1.6 miles long. **Egmont Key Light** (27°36'03"N., 82°45'38"W.), 85 feet above the water, is shown from a white tower on the north end of the key. A pilot station lookout tower near the center of the island and nearby buildings are conspicuous. A draft of about 15 feet can be taken to the small pier just inside the north end of the key.

(24) Old **Fort DeSoto** on the south end of **Mullet Key** and a tall water tank on St. Jean Key about 1.5 miles northeast of the fort stand out at the head of Egmont Channel. Also prominent to the north are the numerous tall hotel and apartment buildings and a church spire, a tall building on Maximo Point and farther north other numerous tanks and buildings along the beaches and at St. Petersburg and Gulfport.

(25)

Shipping safety fairways

(26) Vessels should approach the harbor through the Tampa Safety Fairway–see **33 CFR 166.100** through **166.200**, chapter 2, for limits and regulations.

(27)

COLREGS Demarcation Lines

(28) The lines established for Tampa Bay and tributaries are described in **33 CFR 80.750**, chapter 2.

(20)

Entrance to Tampa Bay, Florida
Image courtesy of Fly Elite Helicopters (2005)

(29)

Tampa Bay navigation guidelines

(30) The Coast Guard Captain of the Port and the Tampa Bay Harbor Safety Committee recommend that the following guidelines regarding the movement of vessels in and out of port be adopted and practiced by pilots, masters and persons in charge of vessels.

(31) Nothing in these guidelines shall supersede or alter any applicable laws or regulations. In construing and complying with these guidelines, regard shall be had to all dangers to navigation and collision and to any special circumstances, including the limitations of the vessels involved, which may make a departure from the guidelines necessary to avoid immediate danger.

(32) a. Ship draft of 39 feet plus the tide to a maximum of 41 feet at higher conditions of tide is considered reasonable in and out of Tampa Bay.

(33) b. During periods of restricted visibility, vessels should not commence an inbound, shift or outbound transit during periods where visibility is less than one nautical mile due to fog or inclement weather. (See **33 CFR 165.782**, chapter 2, for limits and regulations.)

(34) c. Whenever possible, vessel movement arrangements should be made via landline through the local agents. If time is of the essence, arrangements may be made via radiotelephone.

(35) d. When arranging a movement between a vessel in port and a vessel that has not yet entered the port (at the sea buoy), a general rule of precedence is that, under normal circumstances, outbound vessels have priority with the following exceptions:

(36) 1. Within the port area incoming and outgoing vessels restricted by tide should split time, with no more than two vessels trying to make the tide.

(37) 2. If a vessel having priority is unable to clear the berth or enter the port within 30 minutes of the time agreed upon, that vessel loses priority.

(38) 3. All meeting and passing situations should be made at the safest possible locations, with due regard to the size of the vessels, width of the channel and existing conditions. Both vessels should adjust speed to accomplish this safely. Vessels least affected by existing conditions (current and winds) should give way to the other. Light-draft vessels should give way to deep-draft vessels if conditions permit.

(39) 4. When one vessel is underway inbound and the other vessel is safely moored at berth, the vessel at the berth should remain alongside if no safe passing area can be agreed on.

(40)

Cooperative Vessel Traffic Service, Tampa Bay

(41) The Cooperative Vessel Traffic Service (CVTS) is a partnership between the U.S. Coast Guard and the Tampa Port Authority. The operational portion of the CVTS, the Vessel Traffic Center (VTC), located at the Tampa Port

Authority Security Operations Center, is manned 24 hours a day by Coast Guard and Port Authority personnel.

(42) The CVTS primary function is to coordinate safe and efficient vessel movement and to prevent marine accidents and waterway incidents in Tampa Bay and also the associated loss of life and damage to property and the environment. This is accomplished by coordinating vessel movements through the collection, verification, organization and dissemination of information.

(43) Contact the CVTS by telephone at 813–241–1886 or 813–242–1600; FAX 813–241–1810.

(44) The CVTS monitors VHF-FM channels 16, 13 and 12; works on channel 12.

(45) Voice calls are "Tampa Traffic" or "WHX-362."

(46)

Required Reports to CVTS Tampa Bay

(47) **Sailing Plan INBOUND**

(48) Fifteen minutes from approaching the Tampa RACON "T" buoy when inbound for Tampa Bay, check in with the CVTS on VHS-FM Channel 12 and report the following:

(49) Vessel name, current position, destination, length/beam/deepest draft, estimated time at the Sunshine Skyway Bridge, alongside berth time. Tug with tows should indicate if the barge is in the notch, on the head or on the wire and if they will make a transition during transit.

(50) **Sailing Plan SHIFTING**

(51) Fifteen minutes prior to getting underway from a berth to shift to another berth or Port in Tampa Bay, check in with CVTS and report the following:

(52) Vessel name, location, destination, length/beam/deepest draft and alongside new berth time.

(53) **Sailing Plan OUTBOUND**

(54) Fifteen minutes prior to getting underway from a berth bound for sea, check in with CVTS and report the following:

(55) Vessel name, location, destination, length/beam/deepest draft, estimated time at the Sunshine Skyway Bridge and all clear passing the Tampa "T" buoy. Tug with tows should indicate if the barge is in the notch, on the head, or on the wire and if they will make a transition during transit.

(56)

Channels

(57) A federal project provides for a main channel with depths of 45 feet in the entrance from the Gulf, thence 43 feet to Tampa and 34 feet to Port Tampa. (See Notice to Mariners and latest editions of charts for controlling depths.)

(58) **Egmont Channel**, the main ship channel, extends between Mullet Key and Egmont Key and is used by all deep-draft vessels entering Tampa Bay. A lighted **083°** range and lighted buoys mark the dredged cut over the bar.

(59) The main ship channel continues through Mullet Key Channel and dredged cuts leading up the bay through Tampa Bay, Hillsborough Bay, and Old Tampa Bay to Port Manatee, Big Bend, Alafia River, Port Sutton, Tampa, Port Tampa and Weedon Island. The channels are marked by lighted ranges and lighted and unlighted buoys.

(60) **Southwest Channel**, a natural passage on the south side of Egmont Key, had a controlling depth of about 14 feet but is subject to shoaling. The approach is marked by a lighted bell buoy, and the channel by a light, a bell buoy and a buoy. **Passage Key**, on the south side of Southwest Channel, is a low sand island about 0.3 mile long and showing about 4 feet above high water. The key is barren and is used as a bird refuge. The breakers and shoal areas in and around Passage Key are to be avoided due to unexploded ordnance reported in 2020. **Passage Key Inlet**, between Passage Key and Anna Maria Key, has a controlling depth of about 9 feet in an unmarked shifting channel.

(61)

Measured course

(62) Four measured nautical mile courses, each connected to the other and forming a square, are on the northwest side of Tampa Bay channel about 7 miles northeast of Sunshine Skyway. The range for the southeasterly and northwesterly courses is **037.7°-217.7°**, and the range for northeasterly and southwesterly courses is **127.7°-307.7°**. The range markers are square white daymarks with black letters and orange reflective borders on piles.

(63)

Anchorages

(64) **Vessels with good ground tackle should anchor in the Tampa Anchorages, north of the Tampa Safety Fairway leading to Egmont Channel**. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(65) Explosives and quarantine anchorages are east of Mullet Key, northeast of Papys Point, and south of Interbay Peninsula. (See **33 CFR 110.1** and **110.193**, chapter 2, for limits and regulations.)

(66)

Dangers

(67) Shoal areas extend 5 miles seaward from Egmont Key. The shoals consist of several small lumps with depths of 11 to 18 feet. Unmarked spoil areas with reported depths of 10 feet or less border the dredged cuts of the main ship channel in Tampa Bay and the channels in Old Tampa Bay. Caution should be observed particularly at the entrances to the side channels leading to Port Manatee, Alafia River and Port Sutton.

(68) Local weather during the thunderstorm season is unpredictable, and intense winds can develop suddenly. Before entering or departing the port, mariners should obtain local weather forecasts, maintain a close watch on the weather and ensure that light vessels are properly ballasted during the transit.

(69)

Regulated navigation areas

(70) **Security zones** have been established around Cruise Ships and vessels carrying Especially Hazardous Cargos. See **33 CFR 165.1**through **165.33** and **165.703**, chapter 2, for limits and regulations.

(71) **Regulated navigation areas** have been established in the entrance and all other navigable waters of Tampa Bay, Hillsborough Bay, Old Tampa Bay and tributaries herein—see **33 CFR 165.1** through **165.13**, and **165.753**, chapter 2, for limits and regulations.

(72)

Caution

(73) A number of close calls and dangerous situations have occurred involving small recreational vessels impeding larger commercial vessels as they navigate the main channel span of the **Sunshine Skyway Bridge**. These vessels are only able to transit through the main channel span of the bridge and are restricted in their movements due to the larger dimensions. Large vessels may appear to move slowly due to their size but actually transit at speeds in excess of 12 knots, requiring a great distance in which to maneuver or stop. Rule 9b of the Navigation Rules states that vessels of less than 20 meters in length or a sailing vessel shall not impede the passage of a vessel which can safely navigate only within a narrow channel or fairway—see N**avigation Rules** after Chapter 14**.**

(74)

Bridges

(75) **The Sunshine Skyway**(Interstate 275/U.S. Route 19) crosses lower Tampa Bay from Maximo Point to Terra Ceia Island. It is a landfilled causeway for the greater part of its length with bridge spans over the channels that it crosses. The high-level 500-foot fixed span has a clearance of 180 feet over the main ship channel in the middle of the bay. The clearances of the other bridge spans are given in the description of the channels that they cross.

(76)

Currents

(77) A strong offshore wind sometimes lowers the water surface at Tampa and in the dredged channels as much as 4 feet and retards the time of high water by as much as 3 hours. A continued southwest wind raises the water by nearly the same amount and advances the time of high water by as much as 1 hour.

(78) Daily tidal current predictions for Tampa Bay Entrance are available from the Tidal Current prediction service at *tidesandcurrents.noaa.gov*. There is a large daily inequality in the ebb, and velocities of 2 knots or more may be expected at the strength of the greater ebb of the day in Egmont Channel, Passage Key Inlet and off Port Tampa. Flood velocities seldom exceed 2 knots. Winds have considerable effect in modifying the tidal current. Actual real-time information on wind direction and velocity, tidal height and current direction and velocity at several locations on Tampa Bay may be obtained 24 hours a day by calling PORTS (Physical Oceanographic Real Time System) at 866–827–6787 or online at *https://tidesandcurrents.noaa.gov/ports.html*.

(79) At a location 6.7 miles west of Egmont Key Light, the tidal current is rotary, turning clockwise, and has considerable daily inequality. The strengths of the greater floods and ebbs set north and south, respectively. Four days of current observations at this location during a period of moderate north winds indicated a resultant nontidal current of 0.4 knot setting south.

(80)

Weather

(81) Mild winters and warm summers characterize the maritime subtropical climate of Tampa Bay. The outstanding summer feature is the thunderstorms, which occur on an average of 86 days, mostly in the late afternoons or evenings during June, July, August and September. These showers often help cool things off as Tampa records 86 days annually with readings of 90°F or more.

(82) The average annual temperature at Tampa is 73.1°F. The average annual maximum is 81.4°F while the average annual minimum is 64.8°F. July and August are the warmest months with an average temperature of 82.6°F, and January is the coolest month with an average temperature of 61.3°F. The warmest temperature on record at Tampa is 99°F recorded in June 1985, and the coolest temperature on record is 18°F recorded in December 1962. Every month except December through February has had a maximum of 90°F, while each month November through March has had temperatures below freezing. Only about three days each winter season see temperatures below freezing.

(83) The average annual precipitation at Tampa is 46.30 inches (1,176.02 mm). August is the wettest month averaging nearly 8 inches (203 mm), while November is the driest month averaging less than two inches (51 m). Greater than 40% of the average annual precipitation falls during the summer months of June, July and August. The greatest precipitation event in 24 hours occurred in May 1979 when 11.45 inches (290.8 mm) fell. Snow has fallen in each month, December through March, but the greatest 24-hour snowfall is less than one inch.

(84) While tropical cyclones are likely from June through November, the Tampa Bay area seems most vulnerable in June and October, although this region has been one of the least active hurricane spots along the west coast. There is about 1 chance in 20 that a hurricane will strike the Tampa Bay area in any given year. The worst storm to strike the area occurred in September 1848. It drove tides 15 feet above mean low water and was followed less than 3 weeks later by another storm that produced 10-foot tides. The 1921 Tarpon Springs hurricane brought extensive damage to the Tampa Bay region, and the Labor Day hurricane of 1935 brought 5-minute winds of 64 knots to the area. Numerous other tropical cyclones have

impacted the region recently with the most notable being Hermine in 2016, Irma in 2017 and Michael in 2018.

(85) Cold fronts may bring one or two freezes per winter to the area, although snowfall is negligible and below-freezing temperatures are rare. These fronts may produce showers and strong, gusty winds; gales remain infrequent. The flat terrain aids in the formation of nighttime ground fogs during the cool-weather season. They form on about 3 to 6 nights per month in winter but usually dissipate during the morning hours.

(86) The local National Weather Service office is at in Ruskin, FL; barometers may be compared there or by telephone. NWS Ruskin is responsible for the 60 nautical miles of coastal waters between Bonita Beach to Suwannee River while NWS Tallahassee covers to the north. (See Appendix A for address.)

(87)

Pilotage, Tampa Bay

(88) Pilotage is compulsory for all foreign vessels drawing 7 feet or more. It is optional for U.S. vessels sailing coastwise under license and enrollment that have on board a pilot licensed by the federal government. Pilotage is available from Tampa Bay Pilots.

(89)

Tampa Bay Pilots
1825 Sahlman Drive
Tampa, Florida 33605
Telephone 813–247–3737
Fax 813–247–4425
Email *dispatch@tampabaypilots.com*

(90) The pilot station, on Egmont Key, monitors channels 16, 10, 12 and 13—call KAW-767. The pilot office monitors VHF-FM channel 10—call KAW-763. Pilot boats *Tampa* and *Manatee* are 53 feet long with black hull and grey superstructure. Pilot boat *Egmont* is 60 feet long with black hull and white superstructure.

(91) Arriving vessels should contact Pilot Dispatch 24 hours before arrival with the following information—International gross tonnage, LOA, beam, deep draft, name of local agent. Contact pilot station on VHF-FM channel 16 four hours prior to arrival and one hour prior to arrival at the Tampa Bay Lighted Buoy T. Additional instructions will be given upon radio contact. If instructed to anchor, please keep 24-hour watch on VHF-FM channels 12 and 13. Some weather conditions may require alternative boarding arrangements, such as making a lee north of Egmont Channel or boarding inside of Egmont Key. The pilot boat will provide specific boarding instructions to inbound vessels.

(92) Pilots board vessels day and night, usually in Egmont Channel between Egmont Channel Lighted Buoys 9 and 10. Boarding speed will be a safe speed as directed, depending upon weather conditions. Pilot ladder should be rigged 2.5 meters (8 feet) above the water and rigged according to SOLAS and IMCO specifications. All vessels should be ballasted to ensure that propeller and rudder are submerged and that visibility over bow is sufficient.

(93)

Towage

(94) The Port of Tampa has two towing companies with tugs up to 6,700 hp. Some tugs are equipped for firefighting. Large vessels usually require at least two tugs. Arrangements for tugs are usually made in advance by ships' agents.

(95) The Port of Tampa is a **customs port of entry.**

(96)

Quarantine, customs, immigration and agricultural quarantine

(97) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(98) Quarantine is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) Vessels are usually boarded at their berths. Tampa has several public and private hospitals with ample facilities.

(99)

Coast Guard

(100) A **Sector Office** is in St. Petersburg. (See Appendix A for address.)

(101)

Harbor regulations

(102) The Port of Tampa is under the direction of the Tampa Port Authority and includes Tampa proper, Port Tampa, Big Bend and the mouth of the Alafia River. The Authority is composed of a seven-member board appointed by the Governor of Florida. The board appoints a Port Manager to administer the regulations established by the Authority. The Authority publishes an Operations Manual, a Port Directory and a Terminal Map that includes additional port information. (Address: 1101 Channelside Drive, Tampa, FL 33602; telephone 813–905–5045). There is a **harbormaster**; telephone 813–241–1886.

(103)

ENC - US5FL11M
Chart - 11415

(104) **Mullet Key**, on the north side of the entrance to Tampa Bay, is low and wooded. The fishing pier on the southeast side of the key has a depth of about 10 feet at the face. A large pile of rocks, covered 2 feet, is to the north and nearly in line with the face of the pier. These rocks are a danger for vessels landing with a strong flood current but are usually marked by tide rips except at slack water.

(105) Old Fort DeSoto and a concrete and shell tower, about 25 feet high, at the south end of the key, and a water tank on St. Jean Key are conspicuous. **Fort DeSoto Park** includes Mullet Key, **St. Jean Key, St. Christopher Key**and **Madelaine Key**, which are connected with the mainland by the Pinellas Bayway. An 800-foot-long T-head fishing pier with a pavilion and a toll house on it extends into the Gulf from in front of the fort; two private, fixed red lights mark the end of the pier. The park has

picnic areas, restrooms, bathhouses, surfaced launching ramps and several large parking areas.

(106) **Manatee River** empties into the south side of Tampa Bay just east of Anna Maria Sound. The river width varies from 0.5 mile to nearly 1 mile for about 10 miles above the mouth, thence from 80 to 600 feet for some 8 miles to Rye. The river is well protected from all directions and affords good storm anchorage for small boats.

(107) In Manatee River, a channel with several dredged sections leads from the entrance to Mitchellville Bridge at Rye, 18.6 miles above the mouth. In 1995, the centerline controlling depths were 6½ feet to Daybeacon 31 near Rocky Bluff, then 4 feet to the highway (I-75) bridge. Snags and debris obstruct the river above Rocky Bluff. A light marks the entrance, and the channel is marked by lights and daybeacons as far as Ellenton.

(108) A fish haven, marked by two private daybeacons, is on the north side of the river off Emerson Point.

(109) **Bradenton**, a winter resort on the south side of the river 4.5 miles above the mouth, is the seat of Manatee County and the largest town on the river. Bradenton has a large municipal pier close west of the first highway (U.S. Route 41) bridge with berthing space for larger vessels along the end and numerous berths for small craft inside the pier head. In 2011, the reported approach and alongside depth was 9 feet. Gasoline, diesel fuel, electricity, water, ice, a pump-out station, wet storage and marine supplies are available. Engine and electronic repairs can be made.

(110) The town has numerous stores, several hotels and a hospital. The Sarasota-Bradenton Municipal Airport is about 6 miles south of the city. Local guides can be obtained as pilots.

(111) The National Park, **DeSota National Memorial**, is on the south side of the river entrance at **DeSoto Point**. A marina and boatyard are in a basin protected by a concrete pier about 0.5 mile west of the point. Berths, electricity, water, storage, a pump-out station and a 35-ton lift are available. Hull, engine and electronic repairs can be made.

(112) Three bridges cross Manatee River at Bradenton. The first, U.S. Route 41 fixed highway bridge close east of the municipal pier, has a clearance of 41 feet. The second bridge across the river, the Seaboard System Railroad (SCL) bridge 500 yards above the highway bridge, has a bascule span with a clearance of 5 feet. (See **33 CFR 117.1** through **117.59** and **117.300**, chapter 2, for drawbridge regulations.) The third, U.S. Route 301 highway bridge about 500 yards above the railroad bridge, has a fixed span with a clearance of 40 feet.

(113) **Emerson Point** is on the north bank at the entrance to the river at the west end of **Snead Island**. **McKay Point** is on the south shore of the island about 1.5 miles east of Emerson Point. A marina and boatyard in a protected privately dredged basin on the east side of McKay Point has electricity, water and storage available. Hull, engine and electronic repairs can be made; lift to 40 tons. In 2003, 5 feet was reported in the privately marked approach channel and basin.

(114) A **special anchorage** is on the north side of the river just east of the entrance to the marina and boatyard on McKay Point. (See **33 CFR 110.1** and **110.74a**, chapter 2, for limits and regulations.)

(115) A dredged cutoff channel at the east end of Snead Island leads into Terra Ceia Bay from Manatee River. Daybeacons mark each end of the cutoff channel. In 2000, a reported depth of 4 feet was available in the cut north into Terra Ceia Bay. Gasoline is available at several facilities along the cutoff. A highway bridge over the cutoff has a 33-foot fixed span with a clearance of 13 feet. Overhead power and telephone cables crossing close northeast of the bridge have a clearance of 32 feet.

(116) A marina is in the lagoon east of the cutoff (27°31.5'N., 82°36.5'W.). The privately marked entrance channel had a reported controlling depth of 5 feet in 2003. Water, storage, a launching ramp and a 40-ton lift are available. Hull and engine repairs can made.

(117) **Palmetto** is on the opposite side of Manatee River from Bradenton. **Ellenton** is on the north bank of the river, 2 miles above the Seaboard System Railroad bridge. All three towns have rail and highway connections to all parts of the state and there are several marinas in the area.

(118) There is a small marina in a small basin at **Rocky Bluff**, about 1.5 miles east of Ellenton. In 1982, a reported depth of about 2½ feet could be carried to the facility. Gasoline, berths, a launching ramp, provisions and water are available. Interstate Route 75 twin fixed highway bridges with a clearance of 40 feet cross the river at Rocky Bluff. An overhead power cable with a clearance of 49 feet crosses the river at Rocky Bluff.

(119) Manatee Memorial Hospital is a large white building in **Manatee** on the south bank of the river east of Bradenton. There is a large seafood packing and canning plant at Manatee.

(120) **Braden River** empties into Manatee River about 2 miles above the upper highway bridge at Bradenton. In 1972, the river had a reported controlling depth of 1 foot to a point about 2 miles above the highway bridge. There are several shoal areas, but the channel is marked with private daybeacons to about 1 mile above the highway bridge. State Route 64 highway bridge over Braden River has a 45-foot fixed span with a clearance of 10 feet over the marked channel. Overhead power cables 0.1 mile and 0.6 mile above the bridge have clearances of 32 and 31 feet, respectively.

(121) **Terra Ceia Bay**, just north of Manatee River on the southeast side of Tampa Bay, may be entered from Manatee River through the cutoff between Snead Island and the mainland.

(122) The other entrance to Terra Ceia Bay from Tampa Bay is the narrow and generally crooked channel between Snead Island and **Rattlesnake Key**. The entrance is marked by a light and the channel to the bay is marked by daybeacons. The channel has a reported depth of about 4 feet; local knowledge is advised. The U.S. Route

19 (State Route 55) bridge crossing the head of the bay has a fixed span with a horizontal clearance of 46 feet and a vertical clearance of 8 feet. Overhead power and telephone cables close southwest of the bridge have a least clearance of 29 feet.

(123) There is a boat ramp at the head of **Bishop Harbor**, about 7 miles northeast of the entrance to Manatee River.

(124) **Port Manatee** (27°38.0'N., 82°33.7'W.), owned by the Manatee County Port Authority, is a deepwater terminal on the southeast side of Tampa Bay, about 10 miles above Egmont Key. The terminal is reached through a dredged channel that leads southeast from the main ship channel about 4 miles northeast of the Sunshine Skyway Bridge to a turning basin at Port Manatee. A federal project provides for a depth of 40 feet in the channel and turning basin. The channel is marked by a **127.9°** lighted range and lighted buoys.

(125)

Towage

(126) Tugs to 6,000 hp are based at Port Manatee. Larger tugs to 6,700 hp are based at Tampa.

(127)

ENCs - US5FL12M, US4FL12M, US5FL09M
Chart - 11416

(128) **Hillsborough Bay**, the northeast arm of Tampa Bay, is 8 miles long and 4 to 5 miles wide. A federal project provides for depths of 43 feet in the channels leading through Hillsborough Bay. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A. The main ship channel follows a dredged cut up the middle of the bay to Tampa. Spoil banks border the east side of the channel for most of its length. Good anchorage is available for shallow-draft vessels in the central part of the bay west of the main channel.

(129) At the turn in the main ship channel southeast of Gadsden Point, Big Bend Channel leads east to a turning basin at **Big Bend**. East of the turning basin, the channel continues into Port Redwing, with Tampa Port Authority facilities on the north side and a chemical plant on the south side. South from the turning basin the channel leads to a power plant wharf. Coal for power plant consumption is unloaded from vessels at the wharf. The channel is marked by lights, lighted ranges, lighted and unlighted buoys and daybeacons.

(130) Two miles north from the sharp turn in the main channel, Alafia River channel leads east to **Alafia River**. Federal project depth for the channel is 32 feet from the ship channel in Hillsborough Bay to and including the turning basin at **East Tampa**, the site of a large chemical plant, on the north side of Alafia River 0.5 mile above the mouth. The channel is well marked and is subject to frequent shoaling. Check with Tampa Bay pilots for current allowable drafts. (See Notice to Mariners and latest editions of charts for controlling depths.)

(131) A draft of about 3 feet can be taken for about 8 miles up Alafia River at high water with local knowledge. A highway bridge, about 1 mile above the mouth of the river, has a 44-foot fixed span with a clearance of 28 feet; the nearby overhead power cables have a clearance of 33 feet. The railroad bridge just above the highway bridge has a 40-foot swing span with a clearance of 6 feet. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.) The minimum clearance of the overhead power and telephone cables crossing the river above these bridges is 31 feet. Twin fixed highway bridges 2.8 miles above the entrance have a clearance of 28 feet. A fixed highway bridge about 4.0 miles above the entrance has a clearance of 14 feet.

(132)

Manatees

(133) Regulated speed zones for the protection of manatees are in the lower mile of Alafia River and in the approach to the river from the main channel through Hillsborough Bay. (See Manatees, chapter 3.)

(134) Small-craft facilities on the Alafia River include a boatyard on the south side of the river about 0.2 mile east of the railroad bridge that has a 5-ton crane and another marina on the south side of the river about 1.8 miles above the railroad bridge. These facilities can provide berths, gasoline, water, ice, launching ramps and hull and engine repairs.

(135) The boat basin for **MacDill Air Force Base** on the west side of Hillsborough Bay about 2 miles north of **Gadsden Point** (27°49.3'N., 82°28.5'W.), is entered through a dredged channel. In 1999, a controlling depth of 7 feet (13 feet at midchannel) was reported in the channel and a controlling depth of 6 feet was reported in the basin.

(136) The MacDill AFB marina, about 0.5 mile west of Gadsden Point, is entered from Tampa Bay through a privately marked channel. In 1987, the channel had a reported depth of 7 feet.

(137) **Port Sutton** is on the east side of Hillsborough Bay just north of **Pendola Point** (27°54.0'N., 82°26.0'W.). A dredged channel leads northeast from the main ship channel to a turning basin and slip at Port Sutton, the site of large power, chemical and cement plants and a scrap metal wharf. The stack atop the powerplant is floodlighted at night.

(138) A federal project provides for depths of 43 feet in the Port Sutton Entrance Channel and Port Sutton Turning Basin and 34 feet in Port Sutton Terminal Channel. (For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.) The entrance channel is marked by a **054.1°-234.1°** lighted range, lights and lighted buoys.

(143)

(139) **East Bay** is on the east side of **Hookers Point** immediately north of Port Sutton. A dredged channel leads north from Port Sutton channel to a dredged basin. The Tampa Port Authority is developing port facilities on the west side and the northeast side of the bay.

(140) A federal project provides for depths of 43 feet in East Bay Channel and East Bay Turning Basin and 34 feet in Upper East Bay (For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.)

(141) **McKay Bay**, about 1.3 miles north of Port Sutton, is a shallow bay about 1 mile wide and 1.5 miles long. The 22nd Street highway causeway across the bay entrance has twin fixed spans with clearances of 40 feet. Overhead power and telephone cables close north of the causeway have clearances of 32 feet. About 0.3 mile north of the bridge is an overhead power cable with a clearance of 40 feet.

(142) **Tampa** is an important manufacturing, shipping and distribution center at the head of Tampa Bay. It has an expanding economy and sizable phosphate and manufacturing industries. There is considerable foreign and domestic trade in shipments of phosphate rock, petroleum, liquid sulfur, cement, chemicals, grain, scrap iron, machinery, general cargo and refrigerated and containerized cargo. The University of South Florida is at the north end of the city, and the University of Tampa is on the west bank of the Hillsborough River in the city.

(145)

Channels

(146) The main ship channel leads into Tampa Harbor along the east side of **Davis Islands**. The channel divides off the south end of **Harbour (Seddon) Island; Seddon Channel** continues northwest to a turning basin at the mouth of Hillsborough River, and **Sparkman Channel** leads north to the **Ybor Turning Basin** at the end of **Ybor Channel. Garrison Channel**, an east-west channel between Harbour Island and the Tampa waterfront, connects the two turning basins.

(147) A federal project provides for depths of 34 feet for the main ship channel, Sparkman and Ybor Channels and Ybor Turning Basin and 12 feet for Seddon Channel. (For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.) Garrison Channel has been de-authorized as a federally maintained navigation project and shoaling has been reported throughout the western portion of the channel.

(148) A fixed highway bridge about midlength of Garrison Channel has a clearance of 10 feet. Another fixed highway

(144)

bridge near the west end of the channel has a clearance of 10 feet.

(149) A **barge anchorage** is close off the southeast side of Davis Islands. (See **33 CFR 110.1** and **110.193 (a)(5)**, chapter 2, for limits and regulations.)

(150) Only small boats can pass around the north end of Davis Islands. Two fixed highway bridges, about 100 yards apart, connect the north end of the islands with Tampa to the west; minimum width is 34 feet, minimum clearance is 9 feet.

(151) A **no-wake speed zone** is enforced in the area between the southern tip of Harbour Island and Platt Street bridge.

(152) Information on anchorages, tides, currents, pilotage, towage, quarantine, customs, immigration, agricultural quarantine and harbor regulations can be found at the beginning of this chapter under general information for Tampa Bay.

(153)

Supplies

(154) All grades and types of bunkers are available via barge and truck. Martin Product Services, Port Consolidated, Palmdale Oil Company, SSI Petroleum, Tropic Oil and World Fuel Services are the primary providers of bunkering services. Arrangements can be made through local agents. Water is available at most of the piers. Marine supplies and provisions are available in any quantity.

(155)

Repairs

(156) The Port of Tampa has facilities for making all types of hull and engine repairs to vessels of all sizes. Several companies operate waterfront facilities at the port for the repair and conversion of ocean-going vessels, tugs, barges and small vessels. The largest shipyard, on the east side of Sparkman Channel, has a graving dock that is 907 feet long at the bottom, 150 feet wide and 22 feet deep over the sill. The largest floating drydocks have 12,000 ton capacity. Machine, foundry, carpenter and electric shops, outfitting wharves and cranes up to 250 tons are available at shipyards at Tampa.

(157) In addition, a number of firms without waterfront facilities engage in marine repair work. These companies maintain shops and portable equipment for making above-the-waterline repairs and for installing equipment, gear and machinery on all types of craft at their berths.

(158)

Communications

(159) Tampa is served by a Class I Railroad. Regular scheduled steamship service is maintained between Tampa and foreign ports and Caribbean and West Indies ports. Several major airlines provide frequent scheduled service between Tampa International Airport, at the west end of the city, and domestic and overseas points. There is bus and trucking service to all points.

(160)

Small-craft facilities

(161) Small-craft facilities in Tampa are limited. The municipal boat landing is on the east side of the entrance to Hillsborough River. The Majorie Park Yacht Basin on Davis Islands, on the west side of Seddon Channel, has gasoline, diesel fuel, water, electricity, open berths for boats up to 85 feet and a pumpout facility. The basin has depths of about 7 feet. A launching ramp is nearby on the southern end of Davis Islands.

(162) **Hillsborough River** flows south through the city of Tampa into the turning basin at the north end of Seddon Channel. Daymarkers mark the channel for a short distance to the northwest side of North Boulevard Bridge. The stream is narrow above Tampa and relatively deep. The head of navigation is the dam at Sulphur Springs, 8 miles above the mouth.

(163) The Platt Street Bridge, at the mouth of the Hillsborough River, has a bascule span with a clearance of 15 feet. About 0.1 mile above the mouth are twin fixed bridges with a clearance of 40 feet, and bascule bridges adjacent to the north with a clearance of 15 feet. The bascule bridge at Kennedy Boulevard, 0.35 mile above the mouth, has a clearance of 11 feet. About 0.65 mile above the mouth are bascule bridges with a clearance of 7 feet. About 0.9 mile above the mouth is a bascule bridge with a clearance of 12 feet. About 1.0 mile above the mouth, the expressway twin fixed bridges have a clearance of 39 feet at the center, and the North Boulevard fixed highway bridge, about 1.3 above the mouth, has a clearance of 40 feet. Various lift bridges cross the Hillsborough River north of the North Boulevard highway bridge. (See **33 CFR 117.1** through **117.59** and **117.291**, chapter 2, for drawbridge regulations.)

(164) **Old Tampa Bay**, the northwest arm of Tampa Bay, is separated from Hillsborough Bay by Interbay Peninsula. Old Tampa Bay is 12 miles long and ranges in width from 2.5 miles at the entrance, to 6 miles; about three-fourths of the bay area has depths ranging from 6 to 17 feet. A branch of the main ship channel leads through the shoals at the entrance to Old Tampa Bay to the wharves and turning basin at Port Tampa. A federal project provides for a depth of 34 feet to and including the turning basin. (For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.) The channel is well marked by buoys and lighted ranges. Spoil banks border the east side of the north-south reaches of the channel; several spoil islands 5 to 10 feet high are just south of Port Tampa.

(165) A swash channel from Port Tampa parallels the southwest shore of Interbay Peninsula at a distance of about 0.6 mile. The channel is marked by daybeacons and has a controlling depth of 7 to 8 feet.

(166) A **danger zone** of a small-arms firing range of **MacDill Air Force Base** is on the southwest shore of **Interbay Peninsula**. (See **33 CFR 334.630**, chapter 2, for limits and regulations.)

(167) A privately dredged channel extends from the south end of Port Tampa (Cut K) Channel northwest to a turning basin at the power plant at Weedon Island. In 1998, the reported controlling depth was 30 feet in the channel and the basin. The channel is marked by a private lighted range and lighted buoys. A slip at the plant has a controlling depth of 32 feet.

(168) An **explosives anchorage** is about 0.6 mile north of the junction of the Port Tampa Channel and the channel to the powerplant at Weedon Island. (See **33 CFR 110.1** and **110.193 (a)(3)**, and **(b)(2)**, chapter 2, for limits and regulations.)

(169) **Port Tampa** is an important shipping terminus on the east shore of Old Tampa Bay just inside the entrance. The elevators, oil tanks, and the long slip are conspicuous from Tampa Bay as are two high radio towers near the west end of Gandy Bridge Causeway and the stacks of the powerplant on Weedon Island. The terminal facilities at Port Tampa are at the entrance and along both sides of a long dredged slip.

(170) **Gandy Highway Bridge** (U.S. Route 92), crossing Old Tampa Bay about 1.5 miles north of Port Tampa, has three fixed spans with a clearance of 43 feet through the opening about 1 mile west of the Interbay Peninsula shore. A bicycle trail and fishing pier parallel the highway bridge.

(171) In 1980, numerous submerged pilings were reported about 0.2 mile south of the east end of the bridge. Caution should be exercised in the area.

(172) Private daybeacons mark the channel leading to basins at the east end of Gandy Highway Bridge at **Rattlesnake**. In 1999, the channel on the north side of the bridge had a reported controlling depth of 6 feet to the basin.

(173) A private light and daybeacons mark the channel leading along the south side of the east end of Gandy Bridge approach. In 1982, there was reported to be 17 feet in the channel.

(174) **South Gandy Channel** leads along the south side of the fill at the west end of Gandy Bridge to **Snug Harbor**, where small craft can find good anchorage from storms. Open and covered berths with electricity and open and covered storage are available at several marinas. A full-service boatyard is available with wet and dry slips to 85 feet; 88-ton lift. Gasoline, water, ice and marine supplies are available. The controlling depth in South Gandy Channel to the marinas is about 7 feet.

(175) The approach to South Gandy Channel is from south, between shoals that can be avoided with a little care. When about 100 yards from the outer end of the highway fill, turn west and steer parallel with the fill, following the channel markers.

(176) Along the east shore of Old Tampa Bay, north of Gandy Bridge, are several small craft basins; most are privately marked and maintained.

(177) The W. Howard Frankland Bridge (Interstate Route 275) and Causeway crosses Old Tampa Bay about 3 miles north of Gandy Bridge from just north of Beach Park to just south of Big Island on the west shore. The bridge across the main channel has a fixed span with a clearance of 44 feet. Two other bridges in the causeway crossing the south end of **Big Island Gap** have 44-foot fixed spans with a clearance of 6 feet.

(178) The twin fixed spans of the 49th Street highway bridge cross the west end of Old Tampa Bay and have a clearance of 47 feet.

(179) **Courtney Campbell Parkway** (State Route 60) crosses Old Tampa Bay about 6 miles above Gandy Bridge. This is a causeway, mostly fill, with a total length of 8 miles. The causeway has two twin fixed navigation spans. The main span, near the center of the causeway, has a clearance of 40 feet. The second span, near the west end of the causeway, has a 35-foot span with a vertical clearance of 10 feet.

(180) **Safety Harbor** is a health resort town on the northwest shore of Old Tampa Bay 2 miles north of the Courtney Campbell Parkway. A draft of 8 feet can be taken to within 0.5 miles of the town landing.

(181) In 1990, a reported depth of about 5 feet could be taken to the small basin on the south side of the large waterfront fill 1.6 miles north of the Courtney Campbell Parkway; depths of 4 feet were reported in the basin. Berths with water, electricity, and a public boat ramp are available.

(182) At the head of Old Tampa Bay about 1 mile north of the town of Safety Harbor is the entrance to a large bight also known as Safety Harbor. A draft of 6 feet can be taken into the bight. An overhead power cable crossing the bight entrance from Booth Point to Philippe Point has a clearance of 98 feet. The town of **Oldsmar** is on the northeast shore of the bight.

(183)

ENCs - US5FL12M, US4FL12M, US5FL09M, US-5FL11M, US5FL17M
Charts - 11416, 11415, 11411

(184) **St. Petersburg**, a large winter resort city, is on the west side of Tampa Bay. Major highways connect the city with all parts of the state. A city hospital and several private hospitals are in St. Petersburg. Supplies available include gasoline, diesel fuel, water, ice and marine supplies. Charter boats and guides are avialable. The St. Petersburg-Clearwater International Airport is north of the city, and the Albert Whitted Municipal Airport is on the east waterfront at the center of the city.

(185)

Prominent features

(186) The large Municipal Auditorium and the baseball stadium on the east waterfront south of the yacht basins, several large office buildings and hotels, radio towers and tanks are all prominent.

(187)

Channels

(188) Point Pinellas channel extends north for about 5.5 miles from deep water in lower Tampa Bay to an entrance channel leading west to basins at the Port of St. Petersburg and **Bayboro Harbor**. In 2008, the controlling depths were 19 feet in Point Pinellas channel, thence 21 feet in the entrance channel to the turning basin at the Port of St. Petersburg with depths of 21 to 23 feet in the basin, except for shoaling in the southeast corner near Light 10, thence 15 feet to the basin at Bayboro Harbor with 10 to 12 feet available in the basin, except for lesser depths along the south edge. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.

(189) A draft of 22 feet can be taken to the Port of St. Petersburg by following the main ship channel in Tampa Bay through the west reach leading to Port Tampa then turning southwest into the natural deepwater area extending to the Port of St. Petersburg entrance channel. The channels are marked by lights, a daybeacon and lighted and unlighted buoys. Marked and unmarked fish havens are in the natural deepwater area northeast of St. Petersburg.

(190)

Pilotage

(191) Pilots for St. Petersburg are obtained through the Tampa Pilot Association. (See pilotage for Tampa.)

(192)

Quarantine, customs, immigration and agricultural quarantine

(193) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(194) **Quarantine** is enforced in accordance with the regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) A city hospital and several private hospitals are in St. Petersburg.

(195) St. Petersburg is a customs **port of entry**, and the harbor basins are under the jurisdiction of the Port of St. Petersburg.

(196) **Port of St. Petersburg**, the deepest and southernmost basin along the city waterfront, is about 500 yards long and 400 yards wide. The Port of St. Petersburg Wharf, along the north side of the basin, provides about 1,500 feet of berthing space with a reported 24 feet alongside and a deck height of 8 feet. Fresh water, electrical shore power connections and telephone service are available. The wharf is used for the receipt and shipment of general cargo, mega-yachts and mooring of cruise vessels. Cargo is handled by rented mobile cranes or ships' gear. The port monitors VHF-FM channel 16 and works on VHF-FM channel 74; telephone, 727–893–7053; fax, 727–893–7428. **St. Petersburg Coast Guard Station** and **St.**

Petersburg Coast Guard Sector Office are at the outer end of the basin.

(197) **Bayboro Harbor**, under the jurisdiction of the Port of St. Petersburg, is entered from the inner end of the ship basin is used by numerous fishing boats and other small commercial craft.

(198) Oil terminals, marinas, boatyards and other commercial landings are along the banks of **Salt Creek**, which empties into the south side of Bayboro Harbor. Controlling depths in the creek are about 8 feet to the first bend, thence 5 feet to about 100 yards east of the first bridge at Third Street South, which is the head of navigation. A marina near the head of navigation has a 20-ton mobile hoist that can haul out craft for complete repairs. Berths with electricity and water are available.

(199) Northward along the St. Petersburg waterfront from the ship basin are the Municipal Pier and three yacht basins. The pier is a concrete structure about 0.5 mile long. North Yacht Basin and Central Yacht Basin are on either side of the inner half of the pier. Both basins are enclosed by sea walls and provide excellent protection for vessels up to about 125 feet. Depths of about 10 feet are in North, Central and South Yacht Basins. Gasoline, diesel fuel, water, ice, marine supplies, launching ramps and open and covered berthage are available at the St. Petersburg Municipal Marina and the yacht club in Central Basin. A marina at the north end of the basin has transient slips and pumpout facilities; telephone, 727–824–8022, or contact via VHF-FM channel 16.

(200) Lights mark the ends of the moles on either side of the entrance to the Central Yacht Basin. A shoal area is south of the entrance channel. Numerous slips are on the north and west sides of the basin, and a public landing is on the west side. The St. Petersburg Yacht Club is in the Central Yacht Basin.

(201)

Boating safety information

(202) Pinellas County Waterway Management Committee offers the marine public local safe-boating information; call 727–684–8559.

(203) **Coffeepot Bayou**, 1 mile north of the Municipal Pier, affords good anchorage for small craft that can pass under Snell Isle Boulevard bridge, which has a 34-foot bascule span with a clearance of 7 feet. (See **33 CFR 117.1** through **117.59** and **117.279**, chapter 2, for drawbridge regulations.) The entrance channel is well marked with private daymarkers, and a depth of about 5 feet can be carried.

(204) **Smacks Bayou**, about 1 mile northeast of Coffeepot Bayou, has a depth of about 5 feet; the approach from the south is marked by private daybeacons. Inside, there is deeper water resulting from dredging to provide land fill. Any vessel able to enter and pass Overlook Drive Highway Bridge, which has a 38-foot fixed span with a clearance of 11 feet, will find good shelter. A marina just inside the entrance has water, ice and berthing for about 30 boats.

(205) **Bayou Grande**, about 1.8 miles north of Smacks Bayou and about 3.3 miles south of the Gandy Bridge, empties into the west side of Tampa Bay. The entrance channel is reportedly marked by private aids with a controlling depth of about 7 feet in 1990. The basins on the south side of the bayou entrance offer good protection for small boats during periods of very bad weather.

(206) The center 100-foot section of the former Weedon Drive Highway Bridge crossing the north end of Bayou Grande has been removed, and the fixed portions of the bridge on either side of the channel remain as fishing piers. Above Bayou Grande, the waterway is known as **Riviera Bay**. A highway bridge at the west end of the bay has a 22-foot fixed span with a clearance of 10 feet.

(207) **Big Bayou** is about 1 mile south of the St. Petersburg ship basin. The entrance channel, marked by private daybeacons, has a depth of about 3 feet.

(208) **Bayou Bonita**, a small-boat channel behind **Coquina Key (Lewis Island)**, connects Big and Little Bayous. It is crossed by two highway bridges, each with a 40-foot fixed span and a pipeline attached. The minimum clearance is 9 feet. Overhead power cables crossing the bayou immediately north of each bridge have a minimum clearance of 36 feet.

(209) **Little Bayou** is 2.5 miles south of the St. Petersburg ship basin. A channel with a reported depth of 6 feet and marked by private daybeacons leads into the bayou. A privately owned yacht basin is in the south part of the bayou.

(210) **Point Pinellas** is the southeast extremity of Pinellas Peninsula. A channel, marked by private daybeacons, leads to several launching ramps.

(211)

ENCs - US5FL11M, US5FL12M, US4FL12M, US-5FL09M

Charts - 11415, 11416

(212) The Intracoastal Waterway leads from Anna Maria Sound, across the lower part of Tampa Bay, thence through **Boca Ciega Bay**, The Narrows, Clearwater Harbor and St. Joseph Sound to Anclote Anchorage. The section of the Intracoastal Waterway from Tampa Bay to Anclote Anchorage passing through the waters described in this chapter and places along its route are discussed in chapter 12.

(213) **Bunces Pass** (27°38.9'N., 82°44.4'W.), at the north end of Mullet Key, is a passage into the south part of Boca Ciega Bay from the Gulf and through to Tampa Bay. It is unmarked and, in 2001, shoaling was reported of less than one foot over the bar at the Gulf entrance with greater depths inside. Local knowledge is necessary to use the pass. The State Route 679 Pinellas Bayway Bridge (Structure F) over the pass has a fixed span with a clearance of 20 feet. The Sunshine Skyway Bridge over the east end of the pass has a fixed span with a clearance of 16 feet at the center.

(214) A stake-marked channel with a controlling depth of 3 feet leads from Bunces Pass to the south end of **Mullet Key Bayou**. Small craft can anchor in the bayou.

(215) **St. Pete Beach**, north of Bunces Pass and about 5 miles north of Egmont Key Light, is a beach community that occupies most of the 5-mile-long barrier island known as **Long Key**. **Pass-a-Grille Beach**, **Don Ce Sar Beach**and Lido Beach are sections of the resort city. A large hotel with four towers, other hotel and apartment buildings and a church spire are prominent.

(216) **Tierra Verde**, immediately east of the south part of Long Key, is a resort on what was formerly **Pine Key** and formerly a part of **Cabbage Key**. Marinas at the north end of Tierra Verde have berths, gasoline, diesel fuel, pump-out, electricity, water, ice and marine supplies.

(217) **North Channel**, immediately south of Long Key, is a dredged channel that leads over the bar from the Gulf and connects with **Pass-a-Grille Channel**, which separates the south part of Long Key from Tierra Verde and joins the main channel of the Intracoastal Waterway at the north end of Tierra Verde. North Channel and Pass-a-Grille Channel are well marked by lights and daybeacons. In 2022, the controlling depth in North Channel was 3 feet to the main channel of the Intracoastal Waterway. **South Channel** leads to Pass-a-Grille Channel from the southwest and passes east of Shell Key; in 2003, it was reported to have completely shoaled.

(218) In Pass-a-Grille Channel the flood current sets north with an average velocity of 1.2 knots and ebbs south with an average velocity of 1.4 knots. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(219) A marina near the south end of Long Key, west of **Vina del Mar**, can provide transient berths, gasoline, diesel fuel, wet storage, water, ice, pump-out and a lift to 7 tons for full repairs. In 2005, the approach to the marina had a reported depth of 10 feet.

(220) **Mud Key Channel** connects the island channel between Long Key and Vina del Mar with the main channel of the Intracoastal Waterway north of Vina del Mar. Submerged pilings of former private daybeacons may exist in the channel. Caution is advised. State Route 682 (Structures C and D) bridge of the Pinellas Bayway from Long Key to Isla del Sol has a fixed span with a clearance of 65 feet.

(221) **Blind Pass**, about 4 miles north of North Channel, is a shallow pass from the Gulf to Boca Ciega Bay between the north end of Long Key and Treasure Island. Near the pass are several very prominent landmarks that include a large white 10-story apartment hotel, a large hotel with penthouse and a church spire. The pass is used by local fishing boats and other small craft. State Route 699 highway bridge crossing the pass near the inner end has a 37-foot fixed span with a clearance of 11 feet. Overhead power cables at the bridge have a minimum clearance of 30 feet.

(222) **Treasure Island** is a winter resort with many hotels, motels and other conveniences.

(223)

ENC - US5FL17M
Chart - 11411

(224) **Treasure Island Causeway** crosses Boca Ciega Bay from Treasure Island via Paradise Island and South Causeway Isles to the mainland at St. Petersburg. The causeway has a bascule span over the Intracoastal Waterway with a clearance of 21 feet. The bridgetender monitors and operates on VHF-FM channel 9; call signs WQZ-367 or KZU-970. (See **33 CFR 117.1** through **117.59** and **117.287(k)**, chapter 2, for drawbridge regulations.) The east and west openings between the mainland and South Causeway Isles and between Paradise and Treasure Islands have fixed spans with center clearances of 4 and 5 feet, respectively. An overhead power cable of unknown clearance crosses between the mainland and South Causeway Isles.

(225) **Johns Pass**, about 3 miles north of Blind Pass, between Treasure Island and **Sand Key**, affords passage for small craft from the Gulf to the north part of Boca Ciega Bay. A marked channel leads from the Gulf of Mexico through Johns Pass thence north to the Intracoastal Waterway. The channel is reportedly subject to considerable shoaling between Daybeacon 1 and Buoy 3. Extreme caution and local knowledge of the channel conditions is advised. The entrance to the channel is marked by a light, and the channel is marked by lights, buoys and daybeacons. In Johns Pass the flood current sets northeast at an average velocity of 2.0 knots and ebbs southwest at an average velocity of 1.5 knots. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(226) State Route 699 highway bridge over the pass has a bascule span with a clearance of 28 feet at the center. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.) The bridgetender monitors and works on VHF-FM channel 9; call sign WQZ 213.

(227) Numerous fishing piers are near Johns Pass Bridge.

(228) **Sand Key** is a 12-mile-long barrier island that extends from Johns Pass to Clearwater Pass. The island has been developed as a winter resort and has several well-developed communities.

(229)

Prominent features

(230) The 1,000-foot fishing pier at **Redington Shores**, large apartment hotels with penthouses on the island and the water tank at the Veterans Hospital at Bay Pines are all conspicuous.

(231) **Clearwater Pass**, 12 miles north from Johns Pass, extends east from the Gulf between the north end of Sand Key and the south end of **Clearwater Beach Island**. The pass is crossed by Pinellas County Route 183 highway bridge, which has a clearance of 74 feet.

(232) There are many prominent features in the Clearwater area including a large white apartment hotel near the north end of Clearwater Beach Island, a large hotel on the island on the north side of the Clearwater Memorial Causeway, several tall radio towers and several other prominent buildings. At Dunedin, 3 miles north of Clearwater, a large hotel, two tanks and a stack are conspicuous.

(233) A dredged channel leads from the Gulf through Clearwater Pass to a junction with the Intracoastal Waterway, and a dredged side channel leads north from just inside the pass along the east side of Clearwater Beach Island to a turning basin at the west end of Clearwater Memorial Causeway.The channels are well marked by lights and daybeacons.

(234)

Currents

(235) The tidal current in Clearwater Pass averages about 1.2 knots. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(236) The city of Clearwater operates the City Pier and Municipal Marina at the turning basin at the west end of Clearwater Memorial Causeway. The marina can provide berths, electricity, gasoline, diesel fuel, water, ice, a pump-out station and marine supplies. The **harbormaster** has his office at the marina and assigns berths. He can be contacted on VHF-FM channel 16 or by telephone (727–462–6954) for marine information or berthing instructions. The Pinellas County Sheriff boat is based at the marina.

(237)

Coast Guard Station

(238) **Coast Guard Station Sand Key** is on the east side of Sand Key about 1 mile south of Clearwater Pass.

(239) Clearwater Harbor is a link in the Intracoastal Waterway, Caloosahatchee River, FL, to Brownsville, TX. Clearwater Harbor and the city of Clearwater are described in chapter 12.

(240)

ENC - US5FL17M
Chart - 11411

(241) **St. Joseph Sound** extends north from Clearwater Harbor nearly to Anclote Keys and is separated from the Gulf for a part of the distance by narrow strips of beach known as **Caladesi Island** and **Honeymoon Island.**

(242)

COLREGS Demarcation Lines

(243) The lines established for St. Joseph Sound are described in **33 CFR 80.753**, chapter 2.

(244) **Dunedin Pass**, 3 miles north of Clearwater Pass at the opposite end of Clearwater Beach Island, is marked by private daybeacons. In 1984, the pass was reported shoaled to 1 foot and closed to navigation.

(245) A fish haven about 1.3 miles long and 300 yards wide and marked by private buoys is about 3 miles west of the pass.

(246) **Hurricane Pass**, between Caladesi Island and Honeymoon Island, is subject to change, but in 1982 it was reported that with local knowledge 3 to 5 feet could be carried. A light and daybeacons mark the pass.

(247) A fish haven, 600 feet wide and 2,000 feet long on a north-south heading and marked by private buoys, is about 4.5 miles west of the pass.

(248) Five miles off St. Joseph Sound the current floods north with a velocity of 0.4 knot and ebbs south with a velocity of 0.6 knot.

(249) The area west and north of **Honeymoon Island** was, in 1991, reportedly shoaled to bare, and passage between Honeymoon Island and **Three Rooker Bar** to the north should only be made with caution.

(250) **Anclote Keys**, several in number, are about 13 miles north of Clearwater. The trees on the south end of Anclote Key, the largest of the group, are rather tall and can be made out from well offshore. The structure of an abandoned light is reported visible above the trees. In 1992, a shoal area that uncovers was reported up to 1.4 miles off the north end of the Anclote Key.

(251) The area between the keys and mainland offers good protection from west gales for vessels up to 7 feet in draft. The area can be reached by passing either north or south of the Keys; both passages are well marked. In 1993, shoaling to 2 feet was reported in about 28°09'07"N., 82°50'42"W. and 28°08'36"N., 82°51'07"W. in the south entrance. Vessels drawing more than 7 feet can anchor west of the keys where, though more exposed to west winds, the water shoals so gradually that the seas are never very heavy, and vessels with good ground tackle can ride out anything but a hurricane. Eastward of the south end of Anclote Key, the tidal current has an average velocity of 0.6 knot on the flood and 0.8 knot on the ebb.

(252) **Anclote River** empties into St. Joseph Sound over a broad shoal area. A tall powerplant stack on the north side of the entrance is reported conspicuous at a distance of 25 miles. The stack is marked by strobe lights by day and by flashing lights at night.

(253) A channel, with dredged sections and with its entrance about 2 miles southwest of the south end of Anclote Key, leads from the Gulf to a turning basin at Tarpon Springs. The channel is marked by lighted ranges and numerous lights and daybeacons. Above Tarpon Springs the river is navigable for drafts of no more than 2 to 3 feet.

(254) **Anclote** is a small town on the north bank of Anclote River about 1 mile above the mouth. A marina has berths,

electricity, gasoline, diesel fuel, water, ice and dry storage available. Hull, engine and electronic repairs can be made. A TV tower marked by strobe lights east of town can be seen for about 10 miles.

(255) **Tarpon Springs** is a winter resort and commercial fishing center on the south bank of Anclote River, 3 miles above the mouth. Tarpon Springs, headquarters for the sponge fishing fleet on the west coast of Florida, has a municipal hospital and rail and highway connections to all parts of the state. The municipal landing is a marginal wharf 330 feet long at the Sponge Exchange, just below the Alternate U.S. Route 19 highway bridge.

(256) There are several small-craft facilities and a yacht club at Tarpon Springs. There is a marine railway 0.4 mile west of Alternate U.S. Route 19 highway bridge that can handle craft up to 95 feet for engine and hull repairs. Water and supplies are available. The yacht club is on the east bank of Tarpon Bayou opposite Chesapeake Point.

(257) Alternate U.S. Route 19 highway bridge with a 41-foot fixed span and a clearance of 16 feet crosses Anclote River about 3 miles above the mouth at Tarpon Springs. A railroad bridge with a 28-foot fixed span and a clearance of 16 feet is about 1 mile upstream of the highway bridge.

(258) **Kreamer Bayou** and **Whitcomb Bayou** empty into Anclote River along the west side of Tarpon Springs. The junction is at the north end of a small island; the river channel passes to the east of the island, and Anclote River South Channel to the bayous passes to the west. The South Channel branches at Chesapeake Point into Kreamer Bayou on the west and via Tarpon Bayou into Whitcomb Bayou on the east. The channel to Kreamer Bayou has shoaled, and only small skiffs can enter. Beckett Bridge, the highway drawbridge over Tarpon Bayou (South Channel) has a 25-foot bascule span with a clearance of 8 feet. (See **33 CFR 117.1** through **117.59** and **117.341**, chapter 2, for drawbridge regulations.) The clearance of the nearby overhead power cable is 38 feet. A public wharf and launching ramp are south of the entrance to **Spring Bayou**, the east arm in Whitcomb Bayou; and another public wharf is at the yacht basin at the entrance. A draft of 3 feet can be carried from Anclote River through Whitcomb Bayou, which is centrally located in the town of Tarpon Springs.

(259)

St. Martins Reef

(260) The shoals that extend over 10 miles offshore along the coast for 40 miles north from Anclote Keys are known under the general name of **St. Martins Reef**. Many of the rocks and shoals are marked by private daybeacons. The outer limit of shallow water and detached shoals is marked by **St. Martin Outer Shoal Light 10** (28°25'50"N., 82°55'05"W.), 16 feet above the water and shown from a dolphin with a red triangular daymark.

(261) Strangers should approach the coast with care, and deep-draft vessels should stay in depths of 30 to 35 feet. Small craft of 3 to 4 feet in draft usually follow the coast more closely, especially during windy weather, and find comparatively smooth water by keeping about 7 miles offshore. Hazy atmosphere frequently obscures this section of the coast, and the vessels standing inshore close enough to sight land are mostly spongers and fishermen, who sometimes anchor in shoal water, soft bottom, behind shell reefs and ride out the heaviest gales.

(262)

ENC - US5FL17M
Chart - 11411

(263) Two privately maintained and marked channels, about 3.5 and 4 miles north of Anclote River, respectively, lead east to a private housing development known as **Gulf Harbors**. No known services are available.

(264) An unmarked fish haven is about 7 miles west of the entrance to Pithlachascotee River, and fish havens marked by private buoys are about 11.5 and 15 miles west of the river entrance.

(265) **Pithlachascotee River,** locally known as the **Cotee River**, empties into the Gulf 7 miles north of Anclote River. The river has an extensive shoal area off the mouth and numerous oyster reefs just inside. A dredged channel, marked by lights and daybeacons, leads from the Gulf to a turning basin just below the first bridge at Port Richey, about 1.2 miles above the mouth. Depths of about 4 feet can be carried across the shoals to the channel entrance. Depths of 2 feet and greater can be carried to New Port Richey with local knowledge.

(266) Four bridges cross the Pithlachascotee River. The first bridge, U.S. Route 19 highway bridge about 1.2 miles above the mouth, has a 48-foot fixed span with a clearance of 12 feet. An overhead power cable with a clearance of 69 feet is close west of the bridge. An overhead power cable about 2 miles above the mouth has an estimated clearance of 40 feet. The second bridge, a highway bridge about 2.7 miles above the mouth, has a 32-foot fixed span with a clearance of 10 feet. The third bridge, State Route 595 highway bridge about 3.6 miles above the mouth, has a 27-foot fixed span with a clearance of 6 feet; overhead power and telephone cables 0.25 mile east of the bridge have a clearance of 38 feet. A fixed highway bridge with reported clearances of 10 feet vertical and 27 feet horizontal is about 0.25 mile above the third bridge.

(267) **Port Richey** is a resort town at the entrance to the river. Marinas below the first highway bridge have gasoline, diesel fuel, pump-out, ice, boat storage, limited marine supplies and lifts to 22 tons; hull, engine and electronic repairs are available.

(268) **New Port Richey** is a town about 2.5 miles above the mouth of Pithlachascotee River. The municipal water tank at the town is prominent from offshore. There are two hospitals and a small public wharf and launching ramp at the town. Gasoline, oil, water, ice and provisions are available in the town but not on the waterfront.

(269)

Hudson to Crystal River

(270) **Hudson** is a small town on Hudson Creek, which empties into the Gulf 12 miles north of Anclote River. The entrance channel is marked by a private light and daybeacons. Berths, electricity, gasoline, diesel fuel, water, ice, marine supplies, sewage pump-out, launching ramp, wet and dry storage and hull, engine and electronic repairs are available.

(271) **Aripeka** is a village on **Hammock Creek**, 17 miles north of Anclote River. There are numerous deep springs and shoals in the creek, which has a depth of about 1 foot. The approach to Aripeka is marked by a private light and daybeacons. The highway bridges over the channels around the north and south sides of the island in the middle of the creek have fixed spans with clearances of 4 and 8 feet, respectively. There are fish camps on the creek. Gasoline in cans, water, ice and provisions are available at the north of the two highway bridges. The village, on State Route 595, has a launching ramp.

(272) **Hernando Beach** is the site of a large housing development 20 miles north of Anclote River. Transient berths, electricity, gasoline, diesel fuel, water, ice, marine supplies, provisions, a launching ramp and a forklift capable of hauling out craft to 65 feet for hull and engine repairs are available. The approach channel is marked by a private light and daybeacons and can be followed by keeping several yards south of the jetty and fill spit. In 1999, a large submerged rock covered at all stages of tide was reported in the middle of Hernando Beach channel at about 28°30'00"N., 82°40'30"W.; a sign located just outside the southeast channel boundary is reported to warn mariners of the impending danger.

(273) **Bayport** is a village at the mouth of **Weeki Wachee River**, 23 miles north of Anclote River. On a favorable tide a draft of about 2 feet can be taken to a small marina about 1.5 miles above the mouth. Gasoline, water, ice, marine supplies, and outboard engine repairs are available. Bayport Channel Approach Light BP (28°32'49"N., 82°42'15"W.) marks the approach to the channel to Weeki Wachee River. **Beacon Rock**, close north of the light, covers at high water and is marked by a private daybeacon. The remainder of the channel is marked by private daybeacons and a light, and continues in a generally east by south direction through the oyster reefs and into the river. A public launching ramp and wharf are near the north side of the river entrance.

(274) **Chassahowitzka River** empties into **Chassahowitzka Bay** 31 miles north of Anclote River. On a favorable tide a draft of about 2 feet can be taken into the river. The channel is marked by a light and private daybeacons. From Johns Island to the village of Chassahowitzka, the river is shallow and partly blocked by grass and during the summer by hyacinths; the depth is about 1½ feet. **Chassahowitzka** is a small fishing village with a lodge, cabins and a trailer park; a road connects with the state highway. Berthing, gasoline, water, ice, limited marine supplies and a launching ramp are available.

(275) **Bird Island** is prominent in the entrance to Chassahowitzka Bay. **Black Rock**, 1.3 miles seaward from the island, bares at half tide. **Chassahowitzka Point**, on the north side of the bay, is a high and conspicuous mangrove key.

(276) **Homosassa River** empties into **Homosassa Bay** 36 miles north of Anclote River. **St. Martins Keys** are prominent mangrove islets on the north side of the bay entrance.

(277) **Homosassa** is a small fishing community 4 miles above the mouth of the river. Several commercial fish houses, a public pier for transient craft and marinas are here; berths with electricity, gasoline, ice, marine supplies, covered dry storage, launching ramps and a forklift capable of hauling out craft to 26 feet for engine repairs are available. A launching ramp and berths are available just inside the entrance to Halls River, which empties into the north side of Homosassa River about 1 mile above Homosassa. A highway leads from Homosassa to the town of Crystal River.

(278) **Homosassa Bay Entrance Light 2** (28°41'26"N., 82°48'39"W.), 16 feet above the water and shown from a dolphin with a red triangular dayboard, about 3.3 miles southwest of the entrance to the channel, marks the approach. The river entrance is clearly marked by lights, buoys and daybeacons. Shoals on either side of the channel are discernible by their lighter color. The river channel is marked by buoys and daybeacons. Mariners are advised to use extreme caution at a slow and safe speed to avoid collision when approaching and transiting through **Hell Gate**, a narrow section of the Homosassa River between Daybeacon 57A and Buoy 59.

(279) The overhead power cables crossing Homosassa River below Homosassa have a reported least clearance of 45 feet.

(280)

Manatees

(281) Regulated speed zones for the protection of manatees are in Homosassa River. (See Manatees, chapter 3.)

(282) **Crystal River** empties into the north side of **Crystal Bay** 45 miles north of Anclote River and 23 miles southeast from the town of Cedar Keys. **Mangrove Point**, on the south side of the entrance to the bay, is prominent in the approach from the southwest. The white shell of **Shell Island**, on the south side of the river's entrance, is prominent when approached from the dredged channel across Crystal Reefs.

(283) A marked channel with dredged sections leads from the Gulf through Crystal Bay and Crystal River to **Kings Bay** and the town of Crystal River at the river head. The channel through Crystal Reefs to the mouth of the river on the north side of Shell Island to Kings Bay is marked by daybeacons. During periods of prolonged northeast winds, depths in the river may be lowered 1 to 2 feet

below normal levels. With local knowledge, greater depths can be carried in all reaches of the entrance and river; the area is subject to frequent shoaling and extreme caution is advised. A 25 mph speed limit in the channel is strictly enforced year round.

(284) **Salt River** joins Crystal River about 4 miles above the mouth. An overhead power cable with a clearance of 47 feet crosses the entrance to Salt River. The channel is marked with private daybeacons. Berths, electricity, gasoline, diesel fuel, pump-out, water, ice, marine supplies, a launching ramp, a 35-ton lift, storage and hull and engine repairs are reported available at a marina just above Daybeacon 30. A public fishing pier juts out from the south side of the river 4.5 miles above the mouth. A public launching ramp is available just east of the fishing pier.

(285) The town of **Crystal River**, at the head of the river 6 miles above the mouth, has highway connections. Several commercial fish houses, marinas and boatyards are at Crystal River in the coves on the northeast side of Kings Bay. When entering the coves, keep close west of the small island in the entrance. In 1982, it was reported that 3 to 4 feet could be carried into the coves; caution is advised. Overhead power cables crossing the coves have a least clearance of 32 feet. Berths, electricity, gasoline, diesel fuel, pump-out, water, ice, provisions, marine supplies, storage and launching ramps are available; a marine railway can haul out craft to 60 feet for hull and engine repairs and dry open or covered storage. A **no-wake idle speed** is enforced in the coves.

(286)

Manatees

(287) Regulated speed zones and a motorboat prohibited area for the protection of manatees are in Kings Bay. (See Manatees, chapter 3.)

(288)

Cross Florida Greenway to Boiler Gap

(289) A privately dredged channel, marked by private lights, leads east from the Gulf for about 14 miles to a turning basin at the Florida Power Corporation's Crystal River power plant about 2 miles northwest of Crystal River entrance. In 1982, the channel had a reported controlling depth of 20 feet. The inner end of the channel is protected by two dikes extending to shore. The north dike is about 3 miles long, and the south dike about 2 miles long. Spoil banks extend along the north side of the channel for about 3.5 miles seaward from the end of the north dike. Two stacks on the north side of the turning basin, four stacks in about 28°58.0'N., 82°41.8'W., several cooling towers, and the power plant are conspicuous. The stacks at the turning basin, with alternating bands of white and red, are marked on top by flashing red lights and by fixed and flashing red lights on the lower section. The 600-foot stacks to the north and the cooling towers are marked by strobe lights. The power plant has a T-head pier with 500 feet of usable berthing space and 20 feet reported alongside. The pier is used to unload coal from barges. Fresh water and electrical shore-power connections are available.

(290) **Cross Florida Greenway** enters the Gulf about 3.0 miles north of the Crystal River power plant. The 8.5-mile approach channel, marked by lights and daybeacons, can be approached by way of the two outermost reaches of the power plant entrance channel, which are almost in line with the Greenway canal. The canal is primarily open to barge traffic but also used by pleasure and fishing boats. About 4.3 miles above the mouth, a fixed highway bridge crosses the canal with a clearance of 40 feet. A Florida Marine Patrol station and public boat ramp are just east of the bridge. About 5.75 miles above the mouth, the Withlacoochee River enters the canal on the south side. About 7.0 miles above the mouth, the Inglis lock is no longer operational. Overhead power cables crossing the canal have a least clearance of 80 feet.

(291) In 1986, the federal government de-authorized the Cross Florida Barge Canal project and in 1990, turned the right of way to the State of Florida. It is operated by the Office of Greenways and Trails under the State of Florida Department of Environmental Protection. For current information on the Cross Florida Greenway, contact the Office of Greenways and Trails at 352–236–7143 in Ocala, FL.

(292) **Withlacoochee River** rises in the central part of the Florida Peninsula and empties into the Gulf about 17 miles southeast of Cedar Keys. **Withlacoochee River Entrance Light 1** (28°58'08"N., 82°49'43"W.), 16 feet above the water and shown from a pile with a green square daymark, marks the approach.

(293) A dredged channel leads from the Gulf to a turning basin at Port Inglis, about 7 miles above the mouth. Navigation is possible above the turning basin in an unmarked channel to a spillway about 11 miles above the mouth. The dredged channel is marked by lights and daybeacons to a point about 1 mile above the mouth.

(294) The lock in the Cross Florida Greenway (formerly the Cross Florida Barge Canal) is no longer operational. The body of water above the spillway is locally known as **Lake Rousseau** and leads to **Dunnellon**, 24 miles above the mouth. Local knowledge is recommended for navigation through Lake Rousseau; numerous submerged trees and stumps have been reported in the area. Navigation is possible in the river channel above Dunnellon where depths reportedly vary from less than 1 foot to several feet, depending on time of year and rainfall.

(295) Port Inglis was a town at the mouth of the river that has been abandoned. A public launching ramp and park are on the north side of the entrance.

(296) **Yankeetown**, the principal town on the river, is a small winter resort and fishing village about 3 miles above the mouth. A marina, in the town boat basin on the north side of the river, has limited berthage, gasoline, diesel fuel, water, ice, launching ramp and limited marine supplies. A seafood receiving plant is about 1 mile above

the marina. **Yankeetown Coast Guard Station** is at Yankeetown.

(297) **Inglis** is a small town about 6 miles above the mouth of the river. Overhead power cables crossing the river about 1 mile below the town have a minimum clearance of 40 feet. The U.S. Route 19 dual highway bridges crossing the river at Inglis have 38-foot fixed spans with clearances of 10 feet.

(298) Floating logs and other debris partially obstruct the channel above Inglis making it passable by small boats only.

(299)

Currents

(300) Off the mouth of the river a tidal current sets east during the flood and west during the ebb. The ebb has a reported velocity of 3 knots at times, and this must be taken into account by vessels coming in from the entrance buoy. A strong northeast wind may increase the velocity of the ebb current, and a southwest wind may decrease it. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(301)

Manatees

(302) Regulated speed zones and a caution zone for the protection of manatees are in the Withlacoochee River and its approaches. (See Manatees, chapter 3.)

(303) **Waccasassa River**, 10 miles north of Withlacoochee River, has the extensive **Waccasassa Reefs** off its entrance. A channel marked by private daybeacons leads east of the reefs and, in 1982, had a reported controlling depth of 2 feet with greater depths inside the river. A public launching ramp and a marina are on the north shore about 4 and 4.3 miles, respectively, above the mouth. The marina is in a small basin. Gasoline, berths, water, ice, some marine supplies and a launching ramp are available.

(304) **Cedar Keys**, 95 miles north of Tampa Bay, are a group of low sandy islets covered with mangrove trees. Prominent from offshore is the white tower of the abandoned lighthouse on **Seahorse Key**, the outermost of the group. The tower, which is flanked by two white-roofed buildings, shows to seaward among the trees; the tower is 30 feet high and stands on a 45-foot mound on the south side of the key. **Seahorse Reef**, a dangerous shoal with little depth over it, extends 11 miles southwest from Seahorse Key. The outer end of the reef is marked by **Seahorse Reef Light** (28°58'31"N., 83°09'13"W.), 31 feet above the water and shown from a white square skeleton tower on piles.

(305) A submerged wreck with 7 feet of water over it is about 3.5 miles east-southeast of Seahorse Reef Light in about 28°57.7'N., 83°05.4'W.

(306) **Main Ship Channel**, a dredged channel, leads from the Gulf in a general northeast direction between East Bank and West Bank, east of Seahorse Key and Grassy Key; thence by a crooked and winding channel west of Atsena Otie Key into Cedar Key Harbor. In 2010, the centerline controlling depth was 6.5 feet. The channel is well marked by lights and daybeacons. Extreme caution must be exercised at two hairpin curves.

(307) **Northwest Channel**, a dredged channel, leads from the west between North Bank and South Bank.The channel is marked by lights, daybeacons and an approach light. Small craft bound up the coast should enter by Main Ship Channel and leave by Northwest Channel rather than cross Seahorse Reef. Local fishermen have reported a controlling depth of 4 feet in **Deadmans Channel**, a natural channel, which is unmarked and should not be used without local knowledge.

(308) **South Bar Channel**, the approach channel to Cedar Key from the east, had a reported depth of about 2½ feet in 1982. The channel is marked by an entrance light and several daybeacons.

(309)

Fog

(310) This area has considerable fog during the winter; south winds bring it in, and north winds clear it away.

(311)

Currents

(312) Outside the entrance channel the current sets east on the flood and west on the ebb. Inside, the currents generally follow the channels. Currents are strong in the vicinity of the city dock, and caution must be observed when docking with a fair current.

(313) **Cedar Key** is a small town on **Way Key**. The most prominent object in the town is the municipal water tank, 140 feet high. A radio tower is nearby. In 1982, it was reported that a draft of about 8 feet could be taken through the main channel to the city dock, which had reported depths of 8 to 15 feet alongside. A circular boat basin, accessible through a causeway with an estimated clearance of 3 feet, is also used by small boats at Cedar Key.

(314) A marina in the small cove just northeast of the city dock can provide berths, water, ice, electricity and marine supplies. A launching ramp is in the small cove. In 1982, a reported depth of about 3 feet could be carried in the privately marked channel leading to the marina.

(315) The **Cedar Key State Memorial and Museum** is the west side of Way Key. An airstrip is here. Several launching ramps are available.

(316) **Suwannee Sound**, 7 miles north from Cedar Keys, has a long line of narrow shoals on the seaward side known as **Suwannee Reef**. The sound is about 8 miles long and has an average width of about 3 miles. The principal entrance to Suwannee Sound is through **Derrick Key Gap**, a dredged channel 4 miles northwest from Cedar Keys.The channel is marked by daybeacons. The passage through Suwannee Sound from Derrick Key Gap is west of **Lone Cabbage Reef**, which extends about 2.3 miles northwest from **Lone Cabbage Island**. The

entrance channel to East Pass is unmarked. Lone Cabbage Reef bares in spots at low water and is to be avoided.

(317) **Steamboat Gap**, and **West Gap**, unmarked secondary channels with depths of 4 feet or less, should not be entered without local knowledge. **White Shell Bar Gap**, about 1 mile northwest of West Gap, has a controlling depth of about 2 feet through an unmarked channel. About 2.8 miles northwest of West Gap is a channel, marked by a private light and daybeacons, which leads from the Gulf of Mexico through **Ranch Bar Gap** to West Pass at the mouth of Suwannee River. In 1994, the controlling depths were 4 feet in the entrance channel and Wadley Pass to its junction.

(318) **Suwannee River** empties into the north part of Suwannee Sound through the three mouths known as **East Pass, West Pass** and **Wadley Pass**. Wadley Pass is the main entrance. West Pass is little used and good only for shallow draft boats. A private light and daybeacons mark the entrance to West Pass.

(319) The entrance channel to Wadley Pass, dredged by the Suwannee River Authority, leads on a bearing of **102°** from a point in the Gulf about 1.4 miles **260°** from **Axe Island** (29°18.8'N., 83°10.5'W.), thence through Wadley Pass south and east of **Little Bradford Island** to its junction with West Pass. At the southeast end of Little Bradford Island, a branch channel leads north through **Northwest Pass**, thence northeast into **Salt Creek** to the village of **Suwannee**. Suwannee is also fronted on its east side by the Suwannee River. Private lights and daybeacons mark these channels.

(320) There is little commerce on the river.

(321) Low river stage occurs in the winter, and high river stage in the fall months. Fluctuations are extreme because of freshets.

(322) Once inside the river the centerline controlling depths, in 1986, were 3 feet from the junction of East and West Passes (29°19.0'N., 83°07.2'W.) to **Fanning**, about 26 miles above the junction, and thence 3 feet to **Ellaville,** 109 miles above the junction. At high water stages small boats can go to **White Springs,** 147 miles above the junction.

(323) An unmarked sandbar, locally known as **Jack's Sandbar**, is about 13.7 miles above the junction of East and West Passes. The bar is about 800 yards long and 200 yards wide in places and is said to cover almost two-thirds of the east side of the river. Depths over the bar range from less than 1 foot to 3 feet. The bar is not discernible because vegetation colors the water a dark brown. It can best be avoided by passing close to the west shore to within 75 to 100 feet of the shore vegetation.

(324) Marinas in the dredged canals on the north side of Suwannee River at the town of Suwannee can provide berths, gasoline, diesel fuel, launching ramps, marine supplies and hull, engine and electronic repairs. There are marinas, several fish camps, fish wharves and a seafood packing plant at the town on Salt Creek. Berths, gasoline, a limited supply of water and launching ramps are available. Minor hull and engine repairs can be made. There is a post office at the town, and State Route 349 connects the town with Old Town on the main coastal highway.

(325) Water is available at a fish camp at **Vista** about 7.5 miles above the junction of East and West Passes. Gasoline, water, a launching ramp and marine supplies can be obtained at **Fowlers Bluff** (Fowler Bluff), 10 miles above the junction of East and West Passes; at **Manatee Springs State Park**, 16 miles above the junction; and at **Old Town** at U.S. Route 19 highway bridge, 25 miles above the junction. The bridges, the first above the mouth, have fixed spans with least clearances of about 30 feet at low water stage and 15 feet at high water stage. In 1985, the lower bridge was being replaced by a fixed bridge with a design clearance of 29 feet at high water stage. The minimum channel clearance of the bridges crossing the river is at the Seaboard System Railroad Bridge at **Old Town** and 28 miles above the junction of East and West Passes. This bridge has a swing span with a channel width of 48 feet and a clearance of 5 feet at high water stage and 15 feet at low water stage. (See **33 CFR 117.1** through **117.59** and **117.333**, chapter 2, for drawbridge regulations.) An overhead pipeline and numerous overhead power cables cross Suwannee River between the mouth and Ellaville, least clearance is 23 feet.

(326) **Boiler Gap**, about 1 mile **290°** from Axe Island, was formerly used as a passage by local boats going up Salt Creek to Suwannee. The channel through Northwest Pass is now used.

(327)

Horseshoe Point to Hampton Springs

(328) **Horseshoe Beach** is a village on **Horseshoe Point**, which is 5 miles west-northwest from Shired Creek. The village has a seafood packing plant, several fish wharves and a county wharf and is a shrimp boat base. State Route 351 connects the village with **Cross City** on U.S. Route 19, the main coastal highway. **Horseshoe Beach Approach Light 2** (29°23'16"N., 83°20'24"W.), 16 feet above the water and shown from a dolphin with a triangular red daymark, marks the approach. A dredged channel leads from the Gulf to a turning basin at the 100-foot marginal county wharf. The channel is marked by lights and daybeacons. A branch channel leads from the turning basin around Horseshoe Point to a basin on the north side of the point. This channel is marked by private stakes.

(329) Spoil banks are on either side of the entrance channel about in the middle of the dredged cut. A fish haven is about 6 miles southeast of the entrance light. There are fish wharves on a dredged basin that extends about 1,000 feet northeast from the east end of the turning basin. There is a boatyard at the head of the basin with a marine railway that can handle craft up to 50 feet for hull and engine repairs. Berths, gasoline, diesel fuel by truck, wet

and dry covered storage, water, ice, marine supplies and a launching ramp are available.

(330) Overhead power cables leading from the mainland at Horseshoe Beach to off-lying Grassy Island, Bird Island and Cotton Island have clearances of 34 feet.

(331) **Pepperfish Keys**, about 5 miles northwest of Horseshoe Point, are the only features that a stranger can recognize between Cedar Keys and St. Marks River. Pepperfish Keys are 0.3 to 1 mile off the mainland and can be made out at a distance of 5 to 6 miles. The white sand beach on the northwesternmost key is easily identified. Protected anchorage is available for small craft north of this key where depths are 3 to 10 feet and the bottom is sand with patches of boulders. The approach to the anchorage is through an unmarked channel that extends in an east-southeast direction. Boats of less than 3 feet in draft can enter by keeping in dark water; the shoals are discernible by lighter color.

(332) **Steinhatchee River** empties into **Deadman Bay** about 15 miles north-northwest of Horseshoe Point. **Steinhatchee River Light 1** (29°39'23"N., 83°27'23"W.), 30 feet above the water and shown from a pile with a square green daymark, marks the entrance. A dredged channel leads through Deadman Bay to a turning basin at the seafood plants on the south bank of the river about 2 miles above the mouth. Lights and daybeacons mark the channel. A water tank at Steinhatchee is reported to be prominent from seaward.

(333) A fish haven, marked by private buoys, is about 9 miles west of the light marking the entrance to Steinhatchee River.

(334) **Steinhatchee** is a small village and fishing resort on the north bank of the river about 1.2 miles above the mouth. It is the base for a commercial fishing fleet. There are marinas with boat lifts and several fish camps. Craft up to 23 feet can be handled for hull and engine repairs or open or covered storage. Berths, electricity, gasoline, diesel fuel, water, marine supplies, ice, provisions and launching ramps are available. On the south bank of the river about 0.5 mile above Steinhatchee are seafood packing plants and two private boatyards. Craft up to 50 feet can be handled in an emergency.

(335) State Route 358 highway bridge, 2.2 miles above the mouth, has a 45-foot fixed span with a clearance of 25 feet. At **Jena**, about 3 miles above the mouth, there is a fish packing house. Overhead power cables 0.8, 1.6 and 2.5 miles above the bridge have clearances of 43, 43 and 40 feet, respectively. There are several fish camps on the river above Jena. State Route 358 connects Jena with the main coastal highway, U.S. Route 19. State Route 51 runs along the north bank of the river to the main highway. State Route 361 runs along the coast as far as Adams Beach and joins U.S. Route 19 a few miles south of **Perry.**

(336) **Dallus Creek**, 5 miles northwest from Steinhatchee River, has a bar across its mouth that bares at low water. Small boats of not more than 2 feet in draft use the creek as far as **Dallus Creek Landing** a mile above the mouth, where a road connects with the main highway.

(337) The pine trees on **Piney Point**, 10 miles northwest from Steinhatchee River, are visible from well offshore on a clear day. Several small villages north of Piney Point have roads connecting with State Route 361 and the main U.S. Route 19 coastal highway but offer no supplies. The village of **Fish Creek** is 0.5 mile above the mouth of Fish Creek, 2 miles north from Piney Point.

(338) A data tower marked by a private light is 10.4 miles west-southwest of Piney Point in about 29°42'28"N., 83°46'21"W. Mariners are advised not to pass within 150 feet of the tower to avoid its guy wires.

(339) **Cedar Beach** on **Cedar Island**, about 13 miles northwest of Steinhatchee and about 3 miles north of Piney Point, has a boat ramp and a fishing pier for the use of Cedar Island residents. Fresh water is available. The approach is marked by a lights and daybeacons.

(340) **Keaton Beach**, a fishing village 4 miles northwest of Piney Point, is reached through a small-boat channel. The approach is marked by lights and daybeacons. Small docks and several marinas are at the village. Berths, gasoline, diesel fuel, water, ice, a launching ramp, marine supplies and hull and engine repairs are available as well as a hoist that can handle craft up to 40 feet.

(341) **Jug Island**, a summer resort 5 miles northwest of Piney Point, has a small-boat wharf. **Dekle Beach**, about 0.5 mile north of Jug Island, has a boat ramp, rental cottages and a grocery store. **Adams Beach** is 8 miles north from Piney Point. **Yates Creek Landing** and **Spring Warrior** are small landings on the creeks of the same names 9 and 11 miles, respectively, north-northwest from Piney Point. A fish camp is about 0.5 mile above the mouth of the Spring Warrior Creek on the north side. Berths, gasoline, ice, provisions and a launching ramp are available. The creek is marked by a private light and piles and is reported navigable by craft drawing 3 feet on a favorable tide.

(342) **Fenholloway River** empties into the Gulf of Mexico east of Apalachee Bay and about 17 miles northwest of Piney Point. A draft of 3 feet can be taken into the river on a favorable tide, but a knowledge of local conditions is needed. A private light marks the west side of the entrance to the river. The river is navigable for only a few miles above the mouth. About 2 miles above the river's mouth is a small-boat landing but no supplies are available. A paved road connects the landing with U.S. Route 98 at **Hampton Springs** where gasoline and supplies are available.

Chart Coverage in Coast Pilot 5—Chapter 6
NOAA's Online Interactive Chart Catalog has complete chart coverage
http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml
31°N
30°N
29°N
85°W
86°W
87°W
88°W
GEORGIA
FLORIDA
ALABAMA
GULF OF MEXICO
APALACHEE BAY
APALACHICOLA BAY
CHOCTAWHATCHEE BAY
PERDIDO BAY
Milton
Pensacola
Fort Walton Beach
Panama City
Apalachicola
Port St. Joe
11382
11383
11389
11390
11391
11392
11405

Apalachee Bay to Mobile Bay

(18)

METEOROLOGICAL TABLE – COASTAL AREA OFF PENSACOLA, FLORIDA
Between 27°N to 31°N and 86°W to 89°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	1.3	1.2	0.7	0.4	0.1	0.2	0.2	0.2	0.8	0.8	0.8	0.8	0.6
Wave Height > 9 feet [1]	4.5	3.8	3.4	1.8	0.7	0.5	0.5	0.7	3.0	2.9	3.3	3.3	2.3
Visibility < 2 nautical miles [1]	1.7	1.4	2.2	1.0	0.7	0.4	0.5	0.6	0.7	0.5	0.5	0.8	0.9
Precipitation [1]	5.0	4.9	3.9	2.8	2.8	3.0	4.0	4.1	4.9	3.9	3.6	4.0	3.9
Temperature > 69° F	26.8	25.9	36.8	64.3	95.2	99.8	99.9	99.9	98.9	89.4	60.4	37.0	71.8
Mean Temperature (°F)	64.6	64.9	67.6	71.8	77.1	81.5	83.4	83.4	81.5	76.6	70.8	66.5	74.7
Temperature < 33° F [1]	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean RH (%)	77	77	78	78	79	78	77	77	78	74	75	75	77
Overcast or Obscured [1]	27.2	25.5	22.1	15.6	12.4	10.1	11.4	11.5	16.5	13.8	17.5	22.0	16.8
Mean Cloud Cover (8ths)	4.8	4.6	4.3	3.7	3.6	3.7	4.1	4.2	4.4	3.9	4.1	4.6	4.2
Mean SLP (mbs)	1020	1019	1017	1017	1016	1016	1017	1016	1015	1016	1019	1020	1017
Ext. Max. SLP (mbs)	1042	1042	1040	1033	1034	1030	1031	1031	1026	1036	1033	1037	1042
Ext. Min. SLP (mbs)	996	989	991	995	999	1000	997	1002	993	989	995	995	989
Prevailing Wind Direction	N	SE	SE	SE	SE	SE	SE	E	E	E	E	E	E
Thunder and Lightning [1]	1.0	1.2	1.4	1.4	1.6	2.7	3.6	4.0	3.2	1.2	0.9	0.9	2.0

[1] Percentage Frequency

(1) This chapter describes the coasts of Florida and Alabama bordering the Gulf of Mexico from Apalachee Bay to Mobile Bay and the numerous bodies of water emptying into the Gulf including Apalachee Bay, St. George Sound, Apalachicola Bay, St. Joseph Bay, St. Andrew Bay, Pensacola Bay and their tributaries. Also discussed are the ports of Port St. Joe, Panama City and Pensacola and other smaller ports and landings.

(2) The Intracoastal Waterway for this section of the coast is described in chapter 12.

(3)

COLREGS Demarcation Lines

(4) The lines established for this part of the coast are described in **33 CFR 80.805**, through **80.815**, chapter 2.

(5)

ENCs - US3GC06M, US3GC05M
Charts - 11400, 11360

(6) The coast consists of a chain of generally narrow and wooded sand islands that trends southwest for about 40 miles from Apalachee Bay to Cape St. George, thence northwest for 95 miles to Choctawhatchee Bay and thence about 80 miles west and southwest to Mobile Bay.

(7) A **danger zone** for a guided missile test operations area extends well offshore between Apalachee Bay and Choctawhatchee Bay. (See **33 CFR 334.720**, chapter 2, for limits and regulations.)

(8)

Caution

(9) Mariners engaged in bottom dragging operations are advised that the area between 29°23.5'N. and 29°50.5'N. and from 86°36.5'W. to 86°48.0'W., has previously been used for emergency release of munitions, and unexploded munitions are lying on the bottom.

(10) From Apalachee Bay to St. Andrew Bay, the 10-fathom curve extends as much as 19 miles offshore; shoals with as little as 3 feet over them extend several miles from the east end of St. James Island, from Cape St. George and from Cape San Blas. From St. Andrew Bay to Pensacola Bay the 10-fathom curve is close inshore and the beach is steep-to. The 10-fathom curve gradually extends farther offshore beyond Pensacola Bay until off Mobile Bay where it is about 11 miles offshore.

(11) There are numerous fish havens along this section of the coast.

(12) The coral formation that characterizes the coast from the Florida Keys to Apalachee Bay begins to give way in the vicinity of Cape St. George and Cape San Blas to the sand formation to the west.

(13)

Weather

(14) Along the coast from Apalachee Bay to Mobile Bay, navigational weather hazards include tropical cyclones, thunderstorms and cold fronts. The tropical cyclone season generally runs from June through November. August and September have been the most likely months

for a hurricane. During the past 100 years, some 26 hurricanes have crossed the coast between St. Marks and Mobile; 15 of these crossings occurred in August or September. There were some severe hurricanes in the early 1900s. In September 1975, Eloise generated 110-knot winds, nearly 15 inches of rain and 12- to 16-foot tides along this coast.

(15) Thunderstorms develop on about 60 to 70 days annually along this coast. Most occur during the afternoon or evening hours from May through September on about 5 to 15 days per month; June, July and August are the most active months. Over open waters, thunderstorms are observed 3 to 5 percent of the time from June through September; they often occur at night.

(16) During the winter season, some 15 to 20 frontal systems dip into the area and bring adverse weather. As the cold front passes, a polar air mass follows, often bringing strong north winds and low temperatures. Gale-force winds blow about 1 to 3 percent of the time over open waters from September through February; autumn frequencies result from both tropical and extratropical systems. Waves of 8 feet or more are encountered 5 to 11 percent of the time and are most likely during January and February.

(17) Visibilities in this area are briefly restricted in showers and thunderstorms, while fog, which occurs throughout the year, varies from a summer minimum to a maximum in the colder months. There is a peak in March when warm southeasterlies blow across colder waters. Frequency and density of the fog increases when approaching the coast. Visibilities drop below 2 miles 1 to 2 percent of the time during February, March and April; fog is reported up to 6 percent of the time in March over open waters. Shore stations observe fog on about 4 to 7 days per month from December through April.

(19)

ENC - US4FL69M
Chart - 11405

(20) **Apalachee Bay**, about 170 miles northwest of Tampa Bay, is formed by the bend in the coastline from a northwest to a southwest direction. Depths range from 6 to 20 feet with numerous shoals and rocks, some bare at low water. The bay is the approach to St. Marks River.

(21)

COLREGS Demarcation Lines

(22) The lines established for Apalachee Bay are described in **33 CFR 80.805**, chapter 2.

(23)

Danger zone

(24) An Air Force rocket-firing range has been established in the Gulf south of Apalachee Bay. (See **33 CFR 334.640**, chapter 2, for limits and regulations.)

(25) **Econfina River**, entering the east part of Apalachee Bay, is shallow and navigable by boats drawing about 2 feet at half tide or better; although lesser depths may be found during protracted periods of offshore winds. A private light marks the east side of the entrance to the river. The river channel is rocky and should be used only with local knowledge. **Econfina Landing**, on the west bank 2 miles above the mouth, has facilities for small craft. Gasoline, water, ice, a launching ramp and limited berthage are available. State Route 14 leads to the main coastal highway U.S. Route 98.

(26) **Aucilla River** flows into Apalachee Bay 4.5 miles northwest of Econfina River. The approach for a distance of 3 miles is a narrow winding channel that is difficult for strangers. A private light on **Gamble Point** marks the entrance to the river. The river above the mouth is reported to be poorly marked, fast-flowing and with depths of over 5 feet. It has been further reported that by giving the bends in the river a good berth, and by avoiding the rocks in the channel which are discernible by ripples, boats drawing 4 feet will have little difficulty. Local knowledge is advised.

(27) **St. Marks National Wildlife Refuge** covers much of the coastal area between Aucilla River and Ochlockonee Bay, about 12 miles southwest of St. Marks River.

(28)

St. Marks River

(29) **St. Marks River** flows into the head of Apalachee Bay 83 miles northwest of Cedar Keys and 54 miles northeast of Cape St. George. The river is the approach to the town of **St. Marks** about 5.5 miles above the entrance. A power plant is about 0.5 mile above the town. Barges constitute the major traffic on the river.

(30)

Channels

(31) A dredged channel leads from deep water in Apalachee Bay to a turning basin at the town of St. Marks and continues to just above the power plant about 0.5 mile above the town. (See Notice to Mariners and latest edition of chart for controlling depths.) The channel is marked by a lighted range, lights, daybeacons and lighted and unlighted buoys. Numerous shoals are on both sides of the appraoch channel.

(32) A land cut, about 500 yards long, about 0.3 mile northwest of an abandoned light house, has been dredged from the east side of Spanish Hole for the St. Marks National Wildlife Refuge. A public launching ramp is available on the land cut.

(33)

Currents

(34) Prolonged winds from the north will cause tides to be 1 to 2 feet below predicted levels, and prolonged winds from the south will cause tides to be 1 to 2 feet above predicted levels. The tidal current in St. Marks River approach averages about 0.5 knot at strength. In the river the average is from 0.3 to 0.4 knot, although 2-knot currents have been reported. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout

the area. Links to a user guide for this service can be found in chapter 1 of this book.

(35) **Wakulla River** enters St. Marks River 5 miles north of St. Marks Light. A draft of about 7 feet can be taken upriver for about 0.4 mile above the confluence, and about 3 feet to just above U.S. Route 319 highway bridge, about 5 miles above St. Marks. At this point the river is closed to navigation by a 6-foot-high fence across the river that provides protection for a wildlife refuge. The channel is obstructed by grass, and local knowledge is needed to carry the best water.

(36) The **San Marcos De Apalache State Park and Monument** is on the point formed by the confluence of St. Marks and Wakulla Rivers. A private yacht club and a fish camp are on the east side of Wakulla River about 0.5 and 0.8 mile, respectively, above the confluence of the rivers. Berths, gasoline, a launching ramp and a forklift that can haul out craft to 25 feet for hull and engine repairs and covered wet and dry storage are available.

(37) A **no-wake idle speed** is enforced on St. Marks and Wakulla Rivers in the vicinity of all wharves and small-craft facilities.

(38)

Supplies

(39) Gasoline, diesel fuel, water, ice and marine supplies are available.

(40) An overhead power cable with a clearance of 65 feet crosses St. Marks River about 0.7 mile below the U.S. Highway 98 bridge.

(41)

ENC - US4FL69M
Chart - 11405

(42) A beach resort is at **Shell Point** (30°03.4'N., 84°17.4'W.), about 5 miles west of St. Marks River. **Shell Point Light** (30°02'21"N., 84°17'41"W.), 17 feet above the water and shown from a pile with a green and white diamond-shaped daymark, marks the approach. A private sailboat marina is in the basin to the north. A concrete launching ramp is available. In 2010, the reported approach depth was 3 feet; local knowledge is advised.

(43) **Spring Creek**, 2 miles northwest of Shell Point, is entered through a narrow, winding and privately marked channel that leads between oyster bars to a small marina on the east side of the creek, about 0.5 mile above the entrance. Local knowledge is advised. Berths, gasoline, marine supplies and some engine repairs are available at the marina.

(44) **Panacea Harbor**, in **Dickerson Bay**, is about 11 miles southwest of St. Marks Light. A dredged channel leads from Apalachee Bay to the public wharf at the town of Panacea. The channel is marked by lights, buoys and daybeacons. Panacea is a summer resort and fishing center with a seafood processing plant in the harbor and several more in town. Gasoline and some supplies can be obtained in town.

(45) **Ochlockonee Bay**, on the west side of Apalachee Bay, is a shallow bay 5 miles long and a mile wide. The approach from Apalachee Bay is obstructed by shoals, which probably shift from time to time. The south half of the mouth is closed entirely by oyster bars. The entrance is between **Ochlockonee Point** on the north and **Bald Point** on the south. **Ochlockonee Bay Entrance Light OB** (29°56'03"N., 84°18'05"W.), 17 feet above the water and shown from a dolphin with a green square daymark, about 3 miles southeast of Ochlockonee Point, marks the approach to the bay. The mean range of tide is 2 feet.

(46) A narrow channel marked by private markers leads into the bay. In 1989, it was reported that craft drawing up to 6 feet experienced no trouble going to the facilities about 1.5 miles above the bridge.

(47) U.S. Route 98 highway bridge, about 2.3 miles west of the entrance to the bay, has a clearance of 35 feet. A launching ramp is at the south end of the bridge.

(48) About 1.5 miles west of the bridge on the north bank, there is a marina in a basin. In 1989, the reported controlling depth was 6 feet in the channel from the bay and in the basin. The channel is marked by private daybeacons. Berths, gasoline, water, ice, marine supplies and storage are available. There is a concrete launching ramp and a 7½-ton forklift that can haul out craft up to 25 feet for hull and engine repairs or dry open or covered storage.

(49) With local knowledge, a depth of 4 feet can be carried through **Buckhorn Creek** into **Sopchoppy River** to the fixed highway bridge about 7 miles from the bay. The bridge has a 33-foot channel span and clearance of 6 feet. The creek is little used.

(50) **Ochlockonee River**, emptying into the head of Ochlockonee Bay, leads west to the junction of Crooked River and then turns north and finally east. A depth of 5 feet, with local knowledge, can be found for 29 miles. U.S. Route 319 highway bridge about 6 miles above the mouth has a fixed span with a clearance of 10 feet. The river is little used. About 8 miles above the mouth, piling of a former railroad bridge is a hazard in the river. A launching ramp is available at a state park on the north side of the river, about 4.5 miles above the mouth.

(51) **Crooked River**, a narrow, crooked tidal stream 22 miles long, connects Ochlockonee River with Carrabelle River. Crooked River is completely blocked by trees and growth about 10 miles above the east mouth.

(52) **Ochlockonee Shoal**, lying about 8 miles southeast of Ochlockonee Point, has depths of 3 to 17 feet. Although the shoal is separated from St. James Island by lanes of moderate depths, there is no safe passage between the shoal and the island except for small craft. A lighted buoy is southeast of the shoal.

(53) There are three fish havens in Apalachee Bay. The first is about 2.2 miles 167° from Shell Point Light, the second about 4.6 miles 161° from St. Marks Light, and the third about 4.5 miles 108° from Ochlockonee Bay Entrance Light OB—the first two are unmarked and the third is marked by private buoys.

(54)

ENC - US4FL69M
Chart - 11405

(55) **St. George Sound** and **Apalachicola Bay** are adjoining bodies of water, 40 miles long and 3 to 6 miles wide, separated from the Gulf by Dog, St. George, Little St. George and St. Vincent Islands. Both sound and bay are generally shallow with numerous oyster reefs and shoals dangerous to navigation. East Pass, West Pass and Government Cut are the principal entrances to the sound and the bay from the Gulf, and thence into the towns of Carrabelle and Apalachicola.

(56)

COLREGS Demarcation Line

(57) The lines established for St. George Sound and Apalachicola Bay are described in **33 CFR 80.805**, chapter 2.

(58) **St. James Island** is the 20-mile-long portion of coast from **Lighthouse Point**, on the west side of Apalachee Bay, west to Carrabelle. The island is separated from the mainland by Ochlockonee Bay and by Ochlockonee, Crooked and Carrabelle Rivers.

(59) **South Shoal** extends south from the east end of St. James Island for about 6 miles. The sea breaks on portions of the shoal even in good weather. A lighted buoy marks the south end of the shoal.

(60) **Duer Channel**, unmarked and subject to frequent changes, lies at the east end of St. George Sound between South Shoal and Dog Island Reef. The channel is used occasionally by light-draft vessels with local knowledge but is difficult for strangers. There are several wrecks in the approach to the channel and on the east side. A buoy marks one of the wrecks in the middle of the approach.

(61) **Alligator Harbor**, a shallow body of water at the east end of St. George Sound, is formed by a long, narrow spit of land that extends west from Lighthouse Point to Peninsula Point. The harbor is entered from Duer Channel through a crooked privately dredged channel that leads from west of **Peninsula Point**, northwest to the vicinity of **Wilson Beach**, around the north end of **Bay Mouth Bar**, and thence southeast into the harbor. The channel is marked by a private light and daybeacons but is subject to continual change and extensive shoaling; local knowledge is advised. In 1982, a reported depth of 4½ feet was available in the channel. Good anchorage can be found in depths of 5 to 7 feet, hard sand bottom, north of Peninsula Point.

(62) A marina is in a small basin about 0.6 mile east of the point. Gasoline, diesel fuel, electricity, water, ice, marine supplies, storage facilities and a 40-ton mobile hoist that can handle craft up to 65 feet are available at the marina; hull and engine repairs can be made. The marina monitors VHF-FM channel 16 during working hours.

(63) Prominent at Alligator Harbor are the large green boat storage building and skeleton tower at the marina and the water tank at Southwest Cape, about 1.7 miles west of Lighthouse Point.

(64) **Dog Island Reef**, lying 5 to 6 miles offshore south of St. James Island, extends from a point about 5 miles west-southwest of Lighthouse Point to the east end of Dog Island. There are depths of 2 to 6 feet over a considerable part of the reef. Local fishermen sometimes enter St. George Sound through the shoal close to the eastern side of Dog Island. The reef is marked near its northeast extremity by a light.

(65) North of Dog Island Reef and about 4.5 miles west of Peninsula Point, a privately dredged and marked channel leads to a basin at Florida State University's Marine Laboratory; the channel had a reported controlling depth of 10 feet in 1982. The 180-foot concrete marginal wharf had a reported depth of 8 feet alongside.

(66) **Dog Island**, a narrow, sparsely wooded island over 5 miles long, is the first land sighted in approaching East Pass from the southeast. Several houses are on the island, and lodging is available. A channel leads to a small cove—**Tysons Harbor**—on the north side of the east end of the island. The channel is marked privately maintained pilings and had a reported depth of 5 feet in 1999. Water and limited berthage are available at a small marina in the cove.

(67)

Carrabelle Harbor

(68) **Carrabelle Harbor** is at the entrance to Carrabelle River, which flows into St. George Sound. The principal entrance to the harbor and the sound is through **East Pass** between Dog and St. George Islands, about 31 miles southwest of St. Marks Light. **Carrabelle** is a small town at the mouth of the river that has several seafood processing plants. The town is on the main coastal highway, U.S. Route 98, and a good road leads to the interior.

(69) **Carrabelle River** flows into St. George Sound 5 miles north-northeast of East Pass. River currents are rather strong on the ebb. A fixed highway bridge with a clearance of 40 feet crosses the river about 0.5 mile above the turning basin. Overhead power cables with clearances of 50 feet are at the bridge and about 2 miles above the bridge.

(70)

Prominent features

(71) Approaching East Pass from southeast on a clear day, the first objects to be seen are the sand dunes on Dog and St. George Island. On closer approach, the trees on the mainland can be seen over the islands and a few pine trees will be noticed near the west end of Dog Island. A water tower and several radio towers are also prominent.

(72)

Channels

(73) A channel, marked by lighted and unlighted buoys, leads from the Gulf of Mexico through East Pass and around the west end of Dog Island towards Carrabelle

River. Near Carrabelle River Light 15, a dredged channel continues northward and through the river entrance to a turning basin at the town of Carrabelle. From the turning basin, the channel continues for 3 miles to the confluence of New and Crooked Rivers. (See Notice to Mariners and the latest edition of the chart for controlling depths.) The dredged part of the channel is marked with lights, buoys and daybeacons.

(74) A few wrecks with depths that are unknown are on the east side of the channel through East Pass. In heavy seas, deep-draft vessels should stay in depths of 30 to 40 feet until Carrabelle Channel Lighted Buoy 2 is picked up. In 1969, a submerged object, covered 15 feet, was reported in the vicinity of the buoy.

(75)

Anchorages

(76) Vessels may anchor in St. George Sound behind the west end of Dog Island in depths of about 20 feet and to the northwest of the east end of St. George Island in depths of 18 to 20 feet. At these anchorages, vessels with good ground tackle can safely ride out any gale except a hurricane. Small boats can anchor closer inshore behind the hook at the east end of St. George Island or at various points in the sound where depths are suitable.

(77)

Currents

(78) The tidal currents are strong at East Pass and Carrabelle, sometimes having a velocity of 3 to 4 knots, and ordinarily at least 1 knot. They usually set across the shoals at an angle with the channel, and great care should be taken not to be set toward the shoals on either hand. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(79)

Pilotage

(80) Arrangements can be made for local fishing guides to pilot yachts from Carrabelle to Tampa and other coast ports.

(81)

Small-craft facilities

(82) Pump-out stations are offered at the facilities at Carrabelle.

(83)

St. George Island to Cape San Blas Shoals

(84) **St. George Island** and **Little St. George Island**, the south boundary of Apalachicola Bay, extend about 24 miles west from East Pass. The islands are densely wooded except the east end of St. George Island, which is a low and barren spit.

(85) A marked channel leads to the town of **Eastpoint**, 1 mile northeast of **Cat Point**. Detached breakwaters parallel the east and west arms of the channel. Gasoline in cans, groceries, ice, a launching ramp and some marine supplies are available on St. George Island from a store at the southwest end of the causeway. Gasoline, diesel fuel and limited marine supplies are available at the wharves at Eastpoint. There are seafood packing plants and numerous fish piers at Eastpoint.

(86) **Bulkhead Shoal**, which extends from Cat Point south to Bulkhead Point on St. George Island, marks the dividing line between St. George Sound and Apalachicola Bay. The Intracoastal Waterway has been dredged through this shoal.

(87) **West Pass** enters Apalachicola Bay between **Sand Island**, the northwest tip of Little St. George Island, and **St. Vincent Island**. The pass is the west approach to Apalachicola Bay and the town of Apalachicola.

(88) **Apalachicola** is on the north shore of Apalachicola Bay at the mouth of the Apalachicola River. The principal industries are fishing and oystering. Waterborne commerce consists of petroleum products, chemicals, fertilizer products, sand, gravel, cement, liquid and dry sulfur, grain, feeds and logs. The port is the gateway for the extensive river systems of the Chattahoochee and Flint Rivers. The Intracoastal Waterway enters Apalachicola River, passes the town and then continues west through Jackson River—see chapter 12. The town has several historic buildings, a museum and a hospital.

(89)

Prominent features

(90) From inside West Pass on the approach to Apalachicola, a water tank, several microwave and radio towers and the highway bridges are prominent.

(91)

Dangers

(92) A fan-shaped test firing area projects southward from Little St. George Island, between Government Cut and West Pass. (See **33 CFR 334.650**, chapter 2, for limits and regulations.)

(93)

Channels

(94) The main entrance to Apalachicola Bay is through **Government Cut** (also known as **Bob Sikes Pass**), a dredged cut between St. George and Little St. George Islands from the Gulf into the bay. The entrance to the cut is protected by twin jetties and the channel is marked by lighted buoys.

(95) In 1992, a dangerous wreck that uncovers was reported 1.0 mile southeast of the entrance buoys in about 29°35'14.4"N., 84°56'42.6"W.

(96) The channel from the Gulf through West Pass is entered through a bar channel. The passage from inside the pass to Apalachicola is via a channel, marked by lights and a daybeacon, that leads southeast along the north side of the west end of Little St. George Island to Lower Anchorage and Horseshoe Cove. The route continues, unmarked, northeasterly across Apalachicola Bay to the Intracoastal Waterway and on to Apalachicola. Mariners should use caution when transiting West Pass.

The bar channel is subject to frequent shoaling. Once inside the pass, depths of about 9 feet can be carried to Apalachicola.

(97) A swash channel, used considerably by local fishermen, lies between **East Bank** and Sand Island. The channel has a depth of about 3 feet and is passable in all but severe weather. Government Cut and the West Pass channels join the Intracoastal Waterway about 3.5 miles south of Apalachicola.

(98) **Two Mile Channel**, on the south side of Apalachicola, is a dredged channel leading north for 1.2 miles from the bay to a lateral channel running east and west and parallelling the shore. The east channel connects with the Intracoastal Waterway at Two Mile Channel Light TM. An entrance light, buoys and daybeacons mark the channels.

(99) **Scipio Creek Channel**, a dredged channel, leads from the river off Apalachicola to a municipal boat basin in **Scipio Creek**.

(100)

Anchorages

(101) Vessels may anchor anywhere in **Upper Anchorage** in Apalachicola Bay where depths are suitable. Good anchorage in depths of 12 to 15 feet may be found in **Lower Anchorage**, east of Sand Island. Another good anchorage is about 1 mile south of the turn in the channel leading to Apalachicola.

(102)

Dangers

(103) A **restricted area** of **Tyndall Air Force Base** is close west of Government Cut. (See **33 CFR 334.660**, chapter 2, for limits and regulations.)

(104) **Cape St. George Shoal** extends 11 miles south from **Cape St. George**, the southwest tip of Little St. George Island. The shoal consists of several detached spots with moderate depths between them. Shoals extend more than 3 miles offshore at West Pass.

(105)

Currents

(106) At West Pass and at Cat Point, the currents are influenced by the winds and by freshets and at times are very strong, especially the ebb; at flood they are generally weak. A velocity of 3 knots has been observed in West Pass channel in about 29°37'10"N., 85°09'18"W. The ebb current runs out through West Pass and divides, part going to the south over the breakers and part following the deeper water to the bar, the latter being the stronger.

(107) In Apalachicola River, the current is principally ebb. With strong winds from the north and east there will be little or no flood current or even slack water, and the height of the water in the bay and river will be reduced a foot or more. The tides meet somewhat to the west of Bulkhead Shoal, the ebb current flowing east through the cut.

(108)

Weather

(109) The climate of Apalachicola is typical of that experienced along most of the coast of the north Gulf of Mexico, which tends to moderate temperatures, resulting in a subtropical regime. The annual average temperature at Apalachicola is 68.4°F. The average maximum is 76.2° and the average minimum is 60.1°F. Winter weather often comes from the continent, therefore there are wide temperature variations on occasion. January is the coolest month with an average high of 60.9°F and an average low of 44.3°F. The coolest temperature on record at Apalachicola is 9°F, recorded in January 1985. An average of ten days each year records a minimum below freezing, and below-freezing temperatures have occurred in each month, November through March. Summer temperatures are more uniform. High temperatures reach 90°F or more on 37 days annually, 40 to 50 days less than more inland locations. July and August are the warmest months, each have average temperatures of 81.6°F. The warmest temperature on record is 99°F, recorded in August 1986.

(110) Rainfall results from summer showers and thunderstorms, tropical cyclones and winter cold fronts. The average annual rainfall for Apalachicola is 57.64 inches; 40% of this falls in the three-month period July, August and September. July is the wettest month averaging 8.24 inches and April the driest, averaging 2.95 inches. Thunderstorms develop on 10 to 17 days per month during June through September and have resulted in brief, heavy rains and strong, gusty winds.

(111) Winter weather is usually mild but interspersed with brief cold spells. Snow has fallen on rare occasions but usually melts as it falls. Only twice has snow accumulated enough to be measured; the greatest was 0.4 inch, recorded in January 1977. Strong winds are most likely in winter, but gales are rare.

(112) The National Weather Service maintains an office at the airport. **Barometers** may be compared there or by telephone.

(113)

Pilotage

(114) Pilots are not available, but local fishing guides can be hired as pilots for the adjacent waters and the Gulf.

(115) There is a public hospital in Apalachicola.

(116) **Agricultural quarantine** officials are stationed in Pensacola. (See Appendix A for address.)

(117) **Apalachicola River**, formed by the junction of Flint and Chattahoochee Rivers, flows south for about 98 miles into the north part of Apalachicola Bay. The Intracoastal Waterway extends through the lower part of Apalachicola River, branching west through **Jackson River** at its confluence with Apalachicola River about 5 miles above the latter's mouth. (See chapter 12.) A federal project provides for a 9-foot channel in Apalachicola River from Jackson River to Chattahoochee River. (For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE),

use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.) The channel is marked by daybeacons and unlighted buoys.

(118) Bridge and overhead cable information for structures crossing the Intracoastal Waterway in the vicinity of Apalachicola can be found in the table *Structures across the Intracoastal Waterway (Statute Mile 376.2E to 125E)*, chapter 12.

(119) North and south of the John Gorrie Memorial Bridge are numerous private docks with small-craft berths. The municipal pier and basin are about 300 yards south of the bridge. Berths and a launching ramp are available. In 1982, the pier had a reported depth of about 3 feet alongside the outer face, with 5 feet reported in the basin.

(120)

Small-craft facilities

(121) There are several small-craft facilities at Apalachicola. There are fish piers on Two Mile Channel.

(122)

Communications

(123) The town is served by the freight service of the Apalachicola Northern Railroad Company, and the main coastal highway U.S. Route 98 passes through the town.

(124) **Chattahoochee River**, about 365 miles long, rises in northeast Georgia and flows generally southwest and south to a confluence with Flint River and Apalachicola River at the southwest corner of the state. A federal project provides for a 9-foot channel from the confluence with Flint and Apalachicola Rivers to Columbus, GA, a distance of 142 miles. (For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.)

(125) There are three dams and navigation locks that are 450 feet long and 82 feet wide and have a minimum depth of 13 feet over the sills. **Jim Woodruff Dam and Lock**, on the Apalachicola River about 93 miles above the mouth, is 0.5 mile below the confluence of the three rivers. **George W. Andrews (Columbia) Dam and Lock** is about 40 miles above the confluence. **Walter F. George Lock and Dam** is about 65 miles above the confluence. Operating hours of the locks are as follows: Woodruff Lock, 24 hours; Andrews Lock, 24 hours; and George Lock, 0800 to 1600. There are a general cargo wharf and an oil terminal and a public ramp at Columbia, AL, about 43 miles above the confluence, and a marginal masonry general cargo wharf at Columbus, GA.

(126) **Flint River**, about 287 miles long, rises in central Georgia, flows generally southeastward to **Albany, GA**, thence southwest to its confluence with Apalachiola and Chattahoochee Rivers, about 25 miles below **Bainbridge, GA.** There is a public concrete general cargo wharf and an oil terminal at Bainbridge. There is a private wharf with railroad siding at **Chattahoochee, FL**, a few miles below Jim Woodruff Dam. The wharf is used mainly for handling of sand and gravel. There are recreation and small-craft facilities on the three rivers.

(127) Navigation charts for the Apalachicola, Chattahoochee and Flint Rivers System are available from the Mobile Corps of Engineers Office. (See Appendix A for address.)

(128) **Note:** Mariners are required by the U.S. Army Corps of Engineers to contact Panama City area office by telephone (904–785–5881) for controlling depths and river channel conditions before entering the Apalachicola, Chattahoochee and Flint Rivers system. Failure to comply with this requirement will result in the Corps of Engineers refusing to permit completion of passage by any tow in violation.

(129) **St. Vincent Sound** is a shallow and unimportant extension of Apalachicola Bay at its northwest end. The sound can be entered from east through Apalachicola Bay or from the west through **Indian Pass**, a narrow, shifting, unmarked channel. Strangers should not attempt the pass, which is shallow and used only by local fishing vessels.

(130) **Cape San Blas**, 16.5 miles west-northwest of Cape St. George, is low and wooded.

(131) **Cape San Blas Shoals**, with depths of 13 feet or less, extend 4 miles south from the cape. Depths of 22 to 28 feet are found 10 miles south and southwest of the cape; these waters should be avoided by all except light-draft vessels.

(132) With a fresh breeze from any quarter south of east and northwest, rough water may be expected at the cape and a breaking sea may run far offshore. Between December and March, fog is frequently encountered off Cape San Blas.

(133) A swash channel marked by two buoys crosses the shoals about 2 miles south of Cape San Blas. Although local craft use this channel on a smooth sea, strangers should not. West of Cape San Blas, a half mile offshore, is the foundation of a former lighthouse that is covered 5 feet.

(134)

Danger zone

(135) A **danger zone** of an air-to-air firing practice range is in the Gulf south and west of Apalachicola. (See **33 CFR 334.670**, chapter 2, for limits and regulations.)

(136)

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Chart - 11389

(137) **St. Joseph Bay**, which extends about 12 miles north of Cape San Blas, is separated from the Gulf by **St. Joseph Peninsula (St. Joseph Spit)**, a long, narrow strip of land and sand hills, wooded in places, that curves north-northwest from the cape. St. Joseph Bay, recognized as one of the best harbors on the Gulf, is easily entered by vessels with drafts to 25 feet except during periods of very severe weather such as hurricanes. **St. Joseph Bay Entrance Lighted Buoy 2** marks the entrance.

(138) **Port St. Joe** is a town on the east shore of St. Joseph Bay. Fishing vessels occasionally unload their catch at a fish processing plant in the port. Port St. Joe is in the eastern time zone.

(139)

Prominent features

(140) Several water tanks are conspicuous at a closer distance inshore.

(141) Vessels should approach the harbor within the **Port St. Joe Safety Fairway**. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(142) In 1982, a sunken wreck was reported in the safety fairway in about 29°50.2'N., 85°41.6'W.

(143) Several fish havens are on the north and south sides and in the Safety Fairway. Minimum depths of the fish havens are 57 feet in the fairway, 20 feet on the north side of the fairway and 34 feet on the south side.

(144)

COLREGS Demarcation Lines

(145) The lines established for St. Joseph Bay are described in **33 CFR 80.810**, chapter 2.

(146)

Channels

(147) From the Gulf, a dredged channel leads across 18-foot shoals and around St. Joseph Point, thence south and southeast to a turning basin at Port St. Joe—see Notice to Mariners and latest editions of the charts for controlling depths. A shoal tends to build east from the extremity of St. Joseph Point into the west side of the entrance channel. It is the recommendation of the local pilots that vessels intending to transit to Port St. Joe should request advice on the maximum allowable draft from their local agents or pilots. The dredged channel is marked by lighted ranges and lighted and unlighted buoys. An obstruction with a least depth of 28 feet and a rock with a least depth of 29 feet are between Lighted Buoy 17 and Buoy 18; caution is advised.

(148) A swash channel with a depth of about 14 feet follows the shore along **St. Joseph Peninsula** to **St. Joseph Point** at a distance of 0.2 mile. The channel is subject to frequent changes and should be used only with local knowledge.

(149) **Gulf County Canal** provides a connection between St. Joseph Bay and the Intracoastal Waterway. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A. The entrance to the canal is crossed by a fixed bridge with a clearance of 75 feet. Overhead power cables crossing the canal at Highland View and about 1.4 miles above the mouth have a minimum clearance of 85 feet.

(150)

Anchorages

(151) Vessels should anchor in Port St. Joe Anchorages, north and south of the Safety Fairway leading to the entrance channel. (See **33 CFR 166.100** through **166.200**, chapter 2.) Depths of 24 to 37 feet with hard sand or hard mud bottom are available throughout most of the interior part of the bay. The south third of the bay, a shelf along the sides, and several spoil areas along the entrance channel and along the east side of St. Joseph Peninsula are shoal. **Explosives anchorages** are in St. Joseph Bay—see **33 CFR 110.1** and **110.193a**, chapter 2, for limits and regulations.

(152)

Currents

(153) Strong and erratic crosscurrents are reported at the entrance to St. Joseph Bay northeast of St. Joseph Point. These currents are reported to be particularly strong during the ebb. **Caution** is advised when entering the bay.

(154)

Pilotage, Port St. Joe

(155) Pilotage is compulsory for all foreign vessels and U.S. vessels under register in foreign trade if drawing more than 7 feet of water. Pilotage is optional for U.S. coastwise vessels that have on board a pilot licensed by the federal government. A pilot station is no longer maintained at Port St. Joe. Vessels desiring a pilot should request one through the ships' agent or by contacting the Panama City Pilots. See Pilotage, Panama City, in this chapter. Vessels will be required to proceed to the Panama City pilot station to embark or disembark a pilot in the vicinity of 30°05'N., 85°46.4'W. Procedures for requesting pilots are further described under Panama City pilotage.

(156)

Towage

(157) Tugs are obtained from Panama City when required.

(158)

Quarantine, customs, immigration and agricultural quarantine

(159) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(160) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) A hospital is in the city.

(161) Vessels bound for Port St. Joe notify the customs officer at Panama City of their arrival. Port St. Joe is a **customs port of entry**. The Deputy Collector of Customs at Panama City usually comes to the vessel at the first opportunity. The records for St. Joe are maintained at Panama City.

(162)

Harbor regulations

(163) There are no formal printed harbor regulations. The Port St. Joe Port Authority has jurisdiction over the port. The **harbormaster** can be reached by telephone (904–227–1319). A **speed limit** of 4 mph is posted in the harbor.

(164)

Supplies

(165) Bunker C is available on an emergency basis. Diesel fuel, provisions, water and limited marine supplies are available.

(166)

Repairs

(167) There are no facilities for making major repairs or drydocking deep-draft vessels at Port St. Joe; the nearest facilities are at Mobile. Above- and below-the-waterline repairs can be made to small vessels. A marine railway in the basin on the north side of the Gulf County Canal can haul out craft to 85 feet for complete repairs.

(168)

Small-craft facilities

(169) A boat basin on the north bank of the Gulf County Canal just northeast of the highway bridge provides berths, gasoline, diesel fuel, water, ice and marine supplies.

(170)

Communications

(171) Port St. Joe is served by a Class II railroad and is on the main coastal highway, U.S. Route 98.

(172) **Bell Shoal** is the broken ground northwest of the entrance channel making off from St. Andrew Point, 6.5 miles northwest of St. Joseph Point.

(173) **Mexico Beach** is a small resort community about 4.5 miles north of St. Joseph Point. A privately marked channel leads to **Salt Creek**; the entrance is subject to shoaling and should not be attempted without local knowledge. In 2009, the reported depth inside the creek was 5 feet. U.S. Route 98 highway bridge, on the east branch of the creek about 0.3 mile above the entrance, has a fixed span with a reported clearance of 13 feet. Several marinas are on the east branch. Berths with electricity, gasoline, diesel fuel, water, ice, pump-out station, launching ramps, wet storage and marine supplies are available; a 10-ton forklift can haul out craft to 26 feet for storage or hull and engine repairs. A no-wake **speed limit** is enforced on Salt Creek.

(174) **Crooked Island** is a narrow island extending 7 miles northwest from St. Andrew Point. The island encloses **St. Andrew Sound**, a shallow, unimportant body of water.

(175) A **restricted area** of a drone launch corridor extends through St. Andrew Sound into the Gulf of Mexico. (See **33 CFR 334.770**, chapter 2, for limits and regulations.)

(176)

ENCs - US5FL61M, US5FL66M, US5FL67M
Charts - 11390, 11391, 11392

(177) **St. Andrew Bay**, a narrow irregularly shaped harbor, lies 30 miles northwest of Cape San Blas. Excellent anchorage and protection during hurricanes can be found in this nearly landlocked harbor and its tributary inlets, West, North and East Bays. A ship channel, protected by jetties, in a land cut through **Shell Island**, forms a passage from the Gulf to St. Andrew Bay.

(178) **Panama City** is the seat of Bay County. One of the largest papermills in the world is at **Bay Harbor**, east of Panama City proper. Waterborne commerce consists mainly of general cargo, paper and petroleum products, shell, steel and iron products, marine supplies, chemicals, fertilizers and small amounts of fish.

(179)

Time

(180) Panama City is in the central time zone.

(181)

Prominent features

(182) On the approach from seaward, the shoreline appearance is radically different on the east side of the ship channel where it appears as a low unbroken line of woods and the west side of the ship channel where it appears as a succession of beach homes and condominiums, some as tall as 30 stories. This construction is of varying density from the ship channel at St. Andrew Bay to the east side of the entrance to Choctawhatchee Bay at Destin. It is most dense along the Panama City Beach areas to Phillips Inlet and at Destin. A large condominium apartment building 2.5 miles northwest of the channel entrance is prominent. The condominium is reported to be a good radar target at more than 32 miles. The dredged cut will not show unless the vessel is on or near the line of the cut. The first landmarks to be seen are the smoke and tall stacks of the papermill at Bay Harbor and two 130-foot water tanks at **Tyndall Air Force Base**, about 5 miles south-southeast of the stacks. An aerolight is atop the east tank. Next seen is the Municipal Auditorium at the Panama City Marina.

(183) **St. Andrew Bay Entrance Lighted Buoy SA** (30°05'30"N., 85°46'26"W.) about 2.2 miles southwest of the entrance to the dredged channel, marks the approach.

(184) **Vessels should approach the harbor through the prescribed Safety Fairways.** (See **33 CFR 166.100** through **166.200**, chapter 2.)

(185)

COLREGS Demarcation Lines

(186) The lines established for St. Andrew Bay are described in **33 CFR 80.810**, chapter 2.

(187)

Navigation Guidelines, St. Andrews Bay

(188) The increased size and draft of vessels entering the bay has resulted in increased navigational problems. Based upon reported marine casualties to vessels and after consultation between local marine interests and regulatory agencies, including the Coast Guard Captain of the Port, the following general guidelines have been developed to enhance safe navigation.

(189) It is recommended that all vessels, particularly those that must navigate in the channel because of draft restraints, strictly adhere to them. Nothing in these guidelines shall supersede or alter any applicable laws or regulations. In construing and complying with these guidelines, regard shall be had to all dangers to navigation and collision and to any special circumstances, including the limitations of

the vessels involved, which may make a departure from the guidelines necessary to avoid immediate danger.

(190) The dredged cut between the jetties that leads to natural deep water within the Bay is subject to shoaling and the project depth presently authorized is not always available. The local pilots recommend that vessels intending to call Panama City should request advice from their local agents or the pilots as to the maximum draft that can be safely handled at that time.

(191) Due to the constant shoaling that tends to restrict the width of the dredged cut available for large vessels, as well as the strong currents which run through the cut, one way traffic is required for all large vessels transiting the entrance channel.

(192) Vessels towed on a hawser that must enter or leave through the dredged cut and, due to draft or size, are required to navigate in the main channel should exercise particular care that they at all times have the tow under control and are able to navigate in their channel half width if necessary and stop if required. To ensure this capability it is recommended that they not transit the cut with a strong fair tide and employ assist tugs if necessary.

(193) Large numbers of recreational boats frequent the entrance channel, particularly on weekends and holidays. Additionally sailing regattas sponsored by the local yacht club may, at times, be in St. Andrews Bay. Local shipping agents are familiar with these activities and normally request assistance from the Coast Guard and other local law enforcement agencies in monitoring this recreational activity to minimize conflicts with commercial shipping. However, large vessels must keep a sharp lookout for such boats and be prepared to warn them by appropriate signals if they should obstruct the channel.

(194) All vessels entering from sea and bound for facilities located in St. Andrews Bay will, for a time, be navigating in the Intracoastal Waterway (ICW), which has considerable tug and barge traffic. To ensure they are aware of traffic in their vicinity, all vessels transiting St. Andrew Bay, which are confined to the marked channels or otherwise restricted in their movements, are encouraged to give the following Security Calls on VHF-FM Channels 16 and 13.

(195) Inbound vessels should, as a minimum, give a security call via VHF Channel or Channel 16 at least 15 minutes before passing St. Andrews Bay Entrance Lighted Buoy 1 and another call approaching St. Andrews Bay Entrance Lighted Buoy 15A before encountering traffic in the ICW.

(196) Outbound vessels should give a similar security call at least 15 minutes before getting underway and again approaching Lighted Buoy 15A.

(197) Tugs, barges and other large vessels traversing the ICW should give similar security calls when approaching the Hathaway Bridge eastbound and when passing the DuPont Bridge westbound. An additional call should be made as these vessels approach Lighted Buoy 15A.

(198) Security Calls should provide the following information as a minimum; name and call sign of vessel, if engaged in towing, present location or ETA at the sea buoy or either of the bridges as appropriate, direction of movement and destination or intentions. The above reporting points are the minimum recommended, and additional calls may be prudent under existing circumstances.

(199) Large vessels attempting to dock at the Panama City Port Authority West Berth at Dyers Point with a strong breeze from northeast through southeast and a strong flood tide have frequently grounded on the small island just to the west of the berth. This is a particular problem during the winter months. Vessels going to this berth under these conditions should employ additional tugs. If this is not considered to provide an acceptable level of safety, they should delay until slack water or an ebb tide, which will tend to hold them off the island.

(200) Ship owners and Masters are advised that oil spill clean-up contractor services, including containment and clean-up equipment, are available in Panama City. Information concerning contracting for these services may be obtained by contacting local shipping agents, the Panama City Port Authority, the U.S. Coast Guard or the Florida Fish and Wildlife Conservation Commission.

(201)

Channels

(202) The main entrance to St. Andrew Bay is through a jettied entrance cut through Shell Island. Federal project depths are 38 feet to a point just inside the jetties, about 1.2 miles from the channel entrance, thence 36 feet to the bay. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A. The entrance channel is marked by a **052.6°** lighted range and lighted buoys.

(203) Submerged jetties extend channelward from the northwest and southeast harbor entrance points. The northwest submerged jetty is unmarked and the southeast submerged jetty is marked by a lighted buoy. Mariners are cautioned to keep within the buoyed channel while navigating the land cut through Shell Island.

(204) The entrance southeast of Shell Island is not marked, has shoaled to bare and is considered unsafe for navigation.

(205) Two fish havens are in the safety fairway about 2.5 and 5.4 miles southwest of the entrance.

(206)

Anchorages

(207) Vessels should anchor in the Panama City Anchorage, east of the Safety Fairway. (See **33 CFR 166.100** through **166.200**, chapter 2.) Vessels awaiting berths, or who desire to anchor for short periods of time, normally anchor in the vicinity of St. Andrew Bay Entrance Lighted Buoy SA well clear of inbound or outbound traffic. In addition, excellent anchorage can be found almost anywhere in the bay where the depth is suitable. The usual anchorage for

large vessels is to the west of **Redfish Point** in depths of 35 to 40 feet.

(208)

Dangers

(209) Danger zones for small arms firing ranges are southeast of the entrance to St. Andrew Bay. (See **33 CFR 334.680**, chapter 2, for limits and regulations.)

(210)

Currents

(211) The strong ebb current sets outward through the dredged cut and causes heavy tide rips if the wind is south and of moderate strength. With a south or west breeze, small vessels bound in or out should endeavor to reach the entrance during flood current.

(212)

Weather

(213) Panama City has a pleasant subtropical climate that is occasionally interrupted by cold air outbreaks in winter and thunderstorms in summer. There is also a threat of a tropical cyclone from June through November. Thunderstorms, which can occur in any month, are most likely in June, July and August when they occur on an average of 10 to 14 days per month. Peak wind gusts have been close to 70 knots in August and September. In September 1975, Eloise, generating estimated 110-knot winds, became the first hurricane of the 20th century to hit this area. A 98-foot tower 13 miles off Panama City measured 80-knot winds with 135-knot gusts while high water marks reached 18.2 feet above mean sea level in some areas. Fog is most likely late at night and during early morning hours from November through April, when visibilities drop below 0.5 mile on 5 to 8 days per month.

(214)

Pilotage, Panama City

(215) Pilotage is compulsory for foreign vessels and U.S. vessels under register in foreign trade if drawing 7 feet or more of water. Pilotage is optional for U.S. coastwise vessels that have on board a pilot licensed by the federal government. Pilotage is available from the St. Andrew Bay Pilots Association, LLC, P.O. Box 1389, Panama City, FL 32402-1389, telephone 850–785–2524 (office), 781–738–1825, or 850–832–7418. Pilots do not have a 24-hour manned VHF-FM radio station. Pilots may be arranged by telephone or through ships' agents. The pilots request ETA information 24 hours prior to arrival, if possible. Pilots board vessels seaward of the sea buoy in the vicinity of 30°05.0'N., 85°46.4'W and disembark vessels after clearing channel entrance Lighted Buoys 1 and 2. The primary pilot boat is a 47-foot vessel, and at times an alternate 30-foot vessel will be used. Depending upon circumstances, the vessel's speed should be adjusted as requested by the pilot and the pilot ladder rigged on the lee side 1 meter above the water. The boats monitor VHF-FM channels 14 and 16 one hour before a vessel is expected. Channel 14 is used as a working frequency for tugs and port facilities.

(216)

Towage

(217) Tugs up to 3,600 hp are available. Requests for tug service are best made through the ships' agent, but may also be contacted over VHF-FM channel 16 or by telephone (850–624–0895).

(218)

Quarantine, customs, immigration and agricultural quarantine

(219) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(220) **Quarantine** is enforced in accordance with the regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(221) Panama City is a **customs port of entry.**

(222)

Coast Guard

(223) **Panama City Coast Guard Station** is on **Alligator Bayou**, opposite Dyers Point. The bayou is within a **restricted area**. (See **33 CFR 334.760**, chapter 2, for limits and regulations.)

(224)

Supplies

(225) Diesel fuel and Bunker C can be supplied by truck to vessels at their berths. Water and marine supplies are available.

(226)

Repairs

(227) There are no facilities for making major repairs or drydocking deep-draft vessels at Panama City; the nearest facilities are at Mobile. There are machine shops in the city, and above- and below-the-waterline repairs can be made to small vessels. The largest marine railway can handle vessels up to 150 feet long and 250 tons.

(228)

Small-craft facilities

(229) There are large municipal yacht basins at the head of the main ship channel in Panama City and in St. Andrew. Other small-craft facilities are on Watson and Massalina Bayous, Lake Ware and at the Hathaway Bridge near Dyers Point and in Grand Lagoon.

(230)

Communications

(231) Panama City is served by The Bay Line Railroad and has bus connections to all points. Panama City International Airport is about 4 miles northwest of the center of the city. Maritime radio service is through the Mobile Marine Operator (WLO).

(232) **Watson Bayou** is an irregularly shaped body of water that extends north from St. Andrew Bay. There are several piers for light-draft vessels. Over the east arm, near **Millville**, is a railroad bridge with a 26-foot fixed span and a clearance of 13 feet. A fixed highway bridge is close east of the railroad bridge. Several oil terminals, served by barges, are on the bayou. U.S. Route 98 highway bridge crossing the bayou, about 1.2 miles above the

entrance, has a 35-foot fixed span with a clearance of 9 feet. There are two marinas east of the bridge. Welding and machinery repairs are available nearby. The channel is unmarked.

(233) A yacht club in **Bunkers Cove**, between Bunker Point and Town Point, has berths and marine services for members and guests.

(234) In **Massalina Bayou**, north of Bunkers Point, are many landings for small craft. Several marinas can provide berthing, gasoline, some marine supplies and a marine railway that can haul out vessels to 74 feet for hull and engine repairs. A submerged jetty is on the northwest side of the entrance. A light marks the entrance to the bayou. In 1982, it was reported that a depth of about 8 feet could be carried through the mouth of the bayou, thence depths of 5 to 10 feet were available to the Fourth Street highway bridge about 0.4 mile above the entrance. The bridge has a 28-foot fixed span with a clearance of 6 feet. Beach Drive Highway Bridge (Tarpon Dock bascule bridge) over the entrance has a 40-foot bascule span with a clearance of 7 feet. (See **33 CFR 117.1** through **117.49** and **117.301** chapter 2, for drawbridge regulations.) The bridgetender monitors VHF-FM channel 9, 24 hours every day; telephone 904–872–3169.

(235) About 400 yards northwest of Massalina Bayou is the Municipal Pier and Yacht Basin. In 1982, depths along the face of the inner fuel area were reported to be about 9 feet. It is protected by small jetties from wind and seas from the southwest through the northwest. Another municipally owned long pier and yacht basin at St. Andrew north of **Buena Vista Point** is used as a public landing for sport fishermen.

(236) **Grand Lagoon** extends about 5 miles northwest from just within the dredged entrance to St. Andrew Bay. A dredged channel leads into the lagoon from St. Andrew Bay to a point about 0.4 mile east of State Highway 392 Bridge, thence branches to serve facilities of both the north and south shores; these branches are connected by a channel parallel to the highway bridge. The channel is marked by lights and daybeacons. A fixed highway bridge crosses the lagoon with a vertical clearance of 18 feet. An overhead cable close west of the bridge has an authorized clearance of 36 feet. Marinas near the highway bridge provide gasoline, diesel fuel, berths, electricity, water, ice and marine supplies. A 30-ton mobile hoist can haul out craft for complete repairs and storage.

(237) A privately marked channel, with a reported controlling depth of 5 feet in 1985, branches north from the dredged entrance channel to a yacht club marina; the marina has berths and other services for members and transients.

(238)

ENCs - US5FL61M, US4FL60M
Charts - 11390, 11389

(239) **East Bay** an arm of St. Andrew Bay extends in a general east-southeast direction for about 18 miles. The several small towns on East Bay are of little commercial importance.

(240) **West Bay**, the northwest arm of St. Andrew Bay, is generally free from dangers except for several oyster bars with depths of 5 to 8 feet over them. A small island, created by the dredging of the new Port Authority Terminal, is off Dyers Point; the island is marked by a light.

(241) **Panama City Beach, Long Beach Resort, Edgewater Gulf Beach, Florida Beach, Gulf Resort Beach**and **Laguna Beach** are sections of the residential and resort areas. **St. Andrews State Park** is on both sides of the dredged cut of the main ship channel in St. Andrew Bay entrance.

(242) The route of the Intracoastal Waterway is through East Bay, St. Andrew Bay and West Bay. East Bay, West Bay and North Bay are discussed in chapter 12 in connection with the waterway.

(243)

ENC - US3GC05M
Chart - 11360

(244) From St. Andrew Bay west for 85 miles to Pensacola Bay, the shoreline is a gently curving sand beach, unbroken except at the entrance to Choctawhatchee Bay, 44 miles west of St. Andrew Bay entrance. Except at the entrances to the bays, the beach is steep-to and can be approached closely. Depths of less than 30 feet are rarely over 0.3 mile offshore. For this reason, the sea rolls in with undiminished strength and breaks heavily on the shore when driven by south winds. Small craft bound west from St. Andrew Bay should use the Intracoastal Waterway.

(245)

Top Bluff

(246) **Topsail Bluff**, a slightly elevated knoll, is about 10 miles east of the entrance to Choctawhatchee Bay and can be seen for several miles.

(247) The **danger zones** of aerial gunnery and bombing ranges are in Choctawhatchee Bay. (See **334.700**, chapter 2, for limits and regulations.) The **danger zone** of a guided missiles test operations area is in the Gulf south of Choctawhatchee Bay. (See **33 CFR 334.720**, chapter 2, for limits and regulations.)

(248)

Choctawhatchee Bay Entrance to Destin Harbor

(249) **Choctawhatchee Bay Entrance**, **East Pass**, about 44 miles west-northwest of St. Andrew Bay entrance, extends into the west part of Choctawhatchee Bay between Moreno Point and Santa Rosa Island and is protected by two jetties. The jetties are marked by a light off their seaward ends. **Choctawhatchee Bay Entrance Lighted Buoy CB** (30°22'14"N., 86°30'56"W.), about 0.5 mile off the entrance to the channel, marks the approach. To carry the best depths, mariners should be guided by the

color of the water. Passage should not be attempted in rough weather. Local knowledge is advised. (For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.) The channel south of the bridge is subject to frequent changes and shoals rapidly between dredgings. Buoys are frequently shifted to mark best water. The channel is marked by lights, buoys and daybeacons.

(250) From close offshore the entrance is easily identified by U.S. Route 98 fixed highway bridges crossing the channel just inside the east end of Santa Rosa Island. The parallel bridges have a least clearance of 49 feet.

(251) **Choctawhatchee Bay**, about 25 miles long, extends nearly parallel with the coast and separated from it by a strip of land varying in width from 0.3 to 4 miles. Depths in the bay decrease gradually from west to east with 18 to 43 feet in the west two-thirds, except near the shores, and 8 to 16 feet in the east third. Traffic in Choctawhatchee Bay consists principally of travel along the Intracoastal Waterway and oil deliveries to Freeport. There are good highway connections to Pensacola and Panama City on both the north and south shores of the bay.

(252) U.S. Route 331 highway causeway over the bay at **Wheeler Point** has a fixed span at the Intracoastal Waterway channel with a clearance of 66 feet.

(253) **Choctawhatchee River** empties into the east end of Choctawhatchee Bay. **Cypress River**,**Indian River**and **Mitchell River** are branch outlets north of the main river. The mouth of Choctawhatchee River is very shallow, and boats generally enter through Cypress River. A rectangular area of exposed piling, about 1.2 miles long and 0.5 mile wide just off the mouths of the several rivers in this system, is used as a radar target range by Eglin Air Force Base. Cypress River entrance, marked by a light, has a controlling depth of about 6 feet. The river extends 1.5 miles inland to a junction with Choctawhatchee River. **Black Creek**, with depths of 8 feet inside but bars of about 1-foot depth blocking the entrance, leads to the village of **Black Creek.** Berths, electricity, gasoline, a launching ramp, water, ice and wet storage are available at a small fish camp on the west bank of the creek about 1.6 miles above its mouth. Outboard engine repairs are available nearby.

(254) **Freeport**, a small town on **Fourmile Creek**, which empties into **LaGrange Bayou**, is a distribution point for petroleum products, grain and molasses, which are brought in by barge.

(255) A dredged channel leads from Choctawhatchee Bay to a turning basin at the head of navigation just south of the fixed highway bridge at Freeport. The channel is marked with lights and daybeacons. The bridge at Freeport has a fixed 18-foot span with a clearance of 5 feet. An overhead power cable with a clearance of 24 feet crosses the channel close east of the bridge.

(256) Access channels have been dug through the spoil banks to a channel along the east bank as far as **Ramsey Branch**. Depths of about 1½ feet were reported in these channels in 1997. A small marina on Ramsey Branch provides temporary bulkhead tie-up, limited marine supplies and outboard engine repairs.

(257) There are numerous private piers and fish piers on LaGrange Bayou and Fourmile Creek. Gasoline and some marine supplies can be obtained at stores and service stations on U.S. Route 331 and State Route 20 in Freeport. A small shipyard at the head of LaGrange Bayou on Fourmile Creek has a marine railway that can handle craft to 120 feet for hull and engine repairs.

(258) **Basin Bayou** is a landlocked lake about 5 miles west of LaGrange Bayou. State Route 20 highway bridge across the narrow entrance has a 15-foot fixed span with a clearance of 4 feet. A paved launching ramp is near the bridge. The launching ramp is accessible at high water only.

(259) **Rocky Bayou**, about 10 miles west of Basin Bayou, has depths of 10 to 20 feet and affords good anchorage for small craft. The entrance to the bayou is marked on the west side by a light. A channel about 0.9 mile above the entrance to the bayou leads southeast to a marina in **Ward Cove**. The channel is marked by a private buoy and had a reported controlling depth of 8 feet in 2006. Gasoline, diesel fuel, berths with electricity, water, ice, a launching ramp, pump-out station and marine supplies are available. Hull and engine repairs can be made.

(260) **Boggy Bayou**, about 1.5 miles west of Rocky Bayou, leads to two towns on the bayou. The entrance to the bayou is marked by lights and daybeacons. In 1993, shoaling reportedly extended into the channel east of Light 9 in about 30°30'18"N., 86°29'04"W. **Niceville**, at the head of the bayou, has a hospital, an oil terminal with a wharf and many private piers.

(261) **Valparaiso** is a small town on the west bank of the bayou at the intersection of the bayou with **Toms Bayou**. There is a public park with a launching ramp on the point.

(262) A fixed highway bridge across Toms Bayou is under construction (2019). The overhead power and TV cables close west of the bridge have a clearance of 38 feet.

(263) A **restricted area** has been designated in **Weekley Bayou**, an arm of Boggy Bayou. (See **33 CFR 334.740**, chapter 2, for limits and regulations.)

(264) **Eglin Air Force Base** covers the northwest shore of Choctawhatchee Bay from Boggy Bayou to Garnier Bayou. The tanks and buildings at the base are conspicuous.

(265) **Bens Lake** is about 1.7 miles northeast of **Black Point.**

(266) **Joes Bayou**, 2 miles northeast of the bay entrance, is entered through a channel marked by daybeacons. The bayou affords good anchorage for small craft.

(267) **Garnier Bayou** and **Cinco Bayou** have a common entrance at the northwest corner of Choctawhatchee Bay, and each has depths of 7 feet or more and excellent anchorage against bad weather. State Route 85 highway

crossing Garnier Bayou, about 0.5 mile above the entrance, has a fixed span with a clearance of 19 feet. A large marina is in a protected basin on the east shore about 0.3 mile south of the bridge at **Shalimar**. A tall cylindrical water tank, which resembles a stack near the marina, is prominent. Berths, electricity, gasoline, diesel fuel, water, ice, a launching ramp and pump-out station are available. A 35-ton lift is available for hull, engine and electronic repairs. In 2006, 8 feet was reported in the basin.

(268) A yacht club on **Smack Point**, on the south side of the entrance to Cinco Bayou, has berths and other services for members and guests.

(269) State Route 85 fixed highway bridge crossing Cinco Bayou, about 0.5 mile west of the entrance, has a clearance of 19 feet.

(270) **Restricted areas** are at the head of Garnier Bayou and the head of Poquito Bayou, on the east side of Garnier Bayou. (See **33 CFR 334.742** and **334.744**, chapter 2, for limits and regulations.)

(271) **Fort Walton Beach**, at the west end of Choctawhatchee Bay, is on the Intracoastal Waterway, which is described in chapter 12.

(272) **Destin** is a small fishing village and resort on **Moreno Point**. There are several marinas in **Destin Harbor (Old Pass Lagoon)**, a lagoon behind the spit on the east side of the entrance to East Pass, Choctawhatchee Bay Entrance. There is reported to be excellent anchorage in **Old Pass Lagoon** along the south shore. Gasoline, diesel fuel, berths, electricity, water, ice, pump-out station, launching ramp, wet and dry storage and marine supplies are available. Local fishing guides can be hired as pilots for the bay and the waters of the Gulf. Numerous charter boats moor along the north side of the lagoon, and a few moor on the bay side of Destin close north of the bridge.

(273) A marina is on Santa Rosa Island about 3 miles west of the highway bridge over East Pass, Choctawhatchee Bay Entrance. There is a mobile hoist that can handle craft to 15 tons for hull and engine repairs or storage. Berths, electricity and water are available. There is a fuel dock at the south end of the bridge over The Narrows to Fort Walton Beach. Gasoline and diesel fuel are available.

(274)

Coast Guard Station

(275) **Destin Coast Guard Station** is on Santa Rosa Island, about 0.5 mile west-southwest of the highway bridge over East Pass. A **restricted area** has been established in the waters around the Coast Guard Station. (See **33 CFR 334.746**, chapter 2, for limits and regulations.)

(276)

ENCs - US3GC05M, US4FL71M, US4AL12M, US-5AL12M
Charts - 11360, 11382, 11378

(277) **Santa Rosa Sound** and its east continuation, **The Narrows**, parallel the coast between Choctawhatchee Bay and Pensacola Bay and are separated from the Gulf by **Santa Rosa Island**, a narrow strip of beach. Santa Rosa Sound and The Narrows have a combined length of 33 miles and a width varying from 1.8 miles in the widest part of the sound to 200 yards in the narrowest part. The west part of the sound has a depth of 15 feet or more; the central part and The Narrows have been dredged where necessary to provide a channel for the Intracoastal Waterway. The Narrows and Santa Rosa Sound are discussed further in chapter 12 in connection with the waterway.

(278)

Danger zones

(279) The **danger zones** of two Air Force proving grounds have been established in Santa Rosa Sound, The Narrows and the Gulf. (See **33 CFR 334.710** and **334.730**, chapter 2, for limits and regulations.)

(280) Unexploded ordnance lies on the bottom a mile offshore from Santa Rosa Island, about 8 miles west of Choctawhatchee Bay Entrance.

(281) Santa Rosa Island and the east part of Perdido Key, west of the entrance to Pensacola Bay, are part of **Gulf Islands National Seashore** and subject to the rules and regulations of the U.S. Department of the Interior's National Park Service.

(282)

ENCs - US5FL72M, US4AL12M, US5AL12M, US-4FL71M
Charts - 11383, 11378, 11382

(283) **Pensacola Bay** lies 110 miles west-northwest of Cape San Blas and 125 miles northeast of South Pass, Mississippi River. The bay, about 12.5 miles in length, has depths of 20 to 50 feet and affords excellent shelter and anchorage; it is frequently used as a harbor of refuge. The bay is the approach to several towns and the city of Pensacola; to Escambia and East Bays, extending north and east, respectively, from its east end; to Blackwater Bay and Blackwater River north of East Bay; and to Santa Rosa Sound.

(284) Vessels approaching Pensacola Bay by day can verify their positions by the appearance of the land. For 40 miles east of the entrance, Santa Rosa Island presents a white sand beach and low white sand hills with scattered clumps of trees and bushes; back of this on the mainland are thick woods. For 40 miles west of the entrance, the shore is low and thickly wooded nearly to the water, showing no breaks and very few hillocks. Soundings will indicate whether a vessel is east or west of the entrance; the 10-fathom curve approaches the coast much more closely east of the entrance. Depths of 10 fathoms less than 3 miles off the beach indicate the vessel is east of the entrance.

(285) At night or in thick weather it is well for a vessel uncertain of her position to stay in depths of at least 12 fathoms until the light is sighted or the position is otherwise determined.

(286) **Pensacola**, 7 miles above the entrance to Pensacola Bay, is a commercial city and the site of a U.S. Naval Air Station. The port has good facilities for coastwise and foreign shipping. Primary inbound shipments include aggregate, cement, oil and gas pipeline equipment. Primary outbound shipments include lumber, paper, steel, wind turbine components, oil and gas submarine pipeline equipment.

(287)

Prominent features

(288) **Pensacola Light** (30°20'46"N., 87°18'29"W.), 191 feet above the water and shown from a 171-foot conical brick tower, lower third white, upper two-thirds black, on the shore north of the entrance, is the principal mark for the entrance.

(289) **Fort Pickens**, on the east point of the entrance, is a part of Gulf Islands National Seashore. The buildings of the park ranger station 2.5 miles east of the entrance, two spherical elevated tanks 8.6 and 10.8 miles east, and a 220-foot water tank about 26.5 miles east of the entrance are prominent when coming from the east. The span of the Perdido Pass highway bridge 13 miles west of the entrance, and the buildings at Gulf Beach 6.5 miles west, are conspicuous when coming from the west. The wreck of the old battleship MASSACHUSETTS on the south end of Caucus Shoal, west of the entrance, is visible but cannot be seen for any distance offshore; the wreck is marked by a lighted bell buoy. The buildings, tanks, towers and other features of the naval air station on the neck south of Warrington can be seen over Santa Rosa Island from the south.

(290) In Pensacola, the large water tank, a church steeple, the radio mast atop the telephone building, the Seville Building, the highest building in town which has a small square elevator house on top, and a large green 11-story building about 3.3 miles west of the Municipal Pier can be identified from offshore. At night the numerous radio towers with occulting red lights on top and the aviation lights are easily seen.

(291) **Vessels should approach the harbor through the prescribed Safety Fairways.** (See **33 CFR 166.100** through **166.200**, chapter 2.)

(292) In 1984, an obstruction was reported in the coastwise safety fairway about 5 miles southeast of Caucus Channel entrance in about 30°14'20"N., 87°12'00"W. Several other submerged obstructions are in the fairway about 3.5 miles south of the channel entrance.

(293)

COLREGS Demarcation Lines

(294) The lines established for Pensacola Bay are described in **33 CFR 80.810**, chapter 2.

(295)

Channels

(296) The 0.6-mile-wide entrance to Pensacola Bay is through **Caucus Channel**, a dredged cut through shoals that extends 1.5 miles seaward from the entrance.

(297) **Bay Channel** extends northeast for about 4 miles to two parallel channels. The two channels, **West Channel** and **East Channel**, lead north to **Inner Harbor Channel** and along the wharves at Pensacola.

(298) **Bayou Chico Channel** is a dredged channel that leads from the bay to a turning basin about 1 mile above the entrance to the bayou. In 2007, an unmarked obstruction was reported on the channel edge at about 30°23'59.3"N., 87°14'32.8"W.; extreme caution is advised.

(299) The channels are well marked by lighted range, lights, daybeacons and lighted and unlighted buoys. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.

(300)

Anchorages

(301) **Vessels should anchor in the Pensacola Anchorage, East of the Safety Fairways**. (See **33 CFR 166.100** through **166.200**, chapter 2.) In addition, good anchorage can be found in any part of the bay except south of the naval air station. Inside Pensacola Bay, the usual anchorage is off the city of Pensacola where the holding ground is good.

(302)

Dangers

(303) **East Bank** and **Middle Ground** form an extensive shoal area that extends 1.6 miles south from the west end of Santa Rosa Island. **Caucus Shoal**, with depths of 2 to 18 feet, extends 1.5 miles south from the west side of the entrance. Because of shoaling on the east side of the entrance, large vessels are advised to navigate as close as possible to the range line.

(304) A naval **restricted area**, a **restricted area** and a seaplane **restricted area** are in Pensacola Bay. (See **33 CFR 334.775**, **334.778** and **334.780**, chapter 2, for limits and regulations.)

(305)

Currents

(306) The diurnal velocity of the tidal current in Pensacola Bay Entrance in midchannel is about 1.7 knots at strength, although currents of up to 8 knots have been reported in the entrance and up to 5 knots at the Pensacola Naval Air Station pier.

(307) In Caucus Cut, for 2 hours at the strongest of the ebb, the normal current has a velocity of 2 to 2.5 knots, setting southeast somewhat across the channel in the vicinity of Fort Pickens. The flood has less velocity and sets along the channels. The flood has greater velocity following a norther than at other times. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(308)

Weather

(309) Pensacola is situated in latitude 30°25'N., longitude 87°13'W., on a somewhat hilly, sandy slope that borders Pensacola Bay, an expanse of deep water several miles in width, which in turn is separated from the Gulf of Mexico by a long, narrow island that forms a natural breakwater for the harbor. Elevations in the city range from a few feet above sea level to more than 100 feet in portions of the residential sections, and most of the city is well above storm tides.

(310) The hurricane season extends from late May into early November when there is about a 1 in 10 chance of hurricane-force winds at Pensacola. An average of one tropical storm or hurricane passes within 180 miles of Pensacola each year. Since 1950, 18 tropical storms have come within 50 miles of Pensacola including hurricane Ivan in September 2004. Ivan made landfall about 25 miles west of Pensacola in Gulf shores, Alabama. The storm caused extensive wind and surge-induced damage and loss of life throughout the area. Peak wind gusts of 93 knots and a storm surge of over 10 feet were measured in Pensacola. In a recent 56-year period, 22 of the 61 tropical cyclones that passed within this distance generated hurricane-force winds. September is the most likely month for a tropical cyclone. The principal threat is from storms moving in from the southeast, south and southwest. The port of Pensacola is vulnerable to strong winds from the southeast through southwest while Escambia and Blackwater Bays are vulnerable to winds from north or south. Strong winds do pose a wind wave problem at all deepwater berths because of the large expanse of open water in greater Pensacola Bay, which encompasses East, Blackwater, Escambia and Pensacola Bays. It is protected from ocean waves by the sand barrier islands of Perdido Key and Santa Rosa Islands; these barriers are breached only during a severe storm surge. While storm tides of up to 10 feet above mean sea level have occurred in the past, it has been estimated that 100-year storm tides could reach 13.5 feet in Blackwater and Escambia Bays.

(311) The location of Pensacola in the hurricane belt and the absence of sheltered facilities and anchorages renders Pensacola Bay a poor hurricane haven. Large vessels are advised to leave the area well ahead of the storm's arrival. Small craft, if they cannot be taken out of the water, should seek shelter in the many bayous, sloughs, creeks and rivers that border the greater Pensacola Bay.

(312) Because of Pensacola's nearness to the Gulf of Mexico, it benefits from its moderating effect, which tempers the cold northers of winter and provides cool sea breezes during summer afternoons.

(313) While 90°F temperatures occur about 61 times each year, readings of 100°F or more are observed on about 18 days each summer. Winter temperatures fall below freezing on about 15 days also. These freezes are brought by cold fronts that are often accompanied by strong, gusty winds and rain or, on rare occasions, snow. The average annual temperature at Pensacola is 68.2°F with an average high of 76.9°F and an average low of 59°F. July is the warmest month averaging 82.4°F and January the coolest averaging 52.4°F. The warmest temperature on record at Pensacola is 106°F, recorded in July 1980, and the coolest temperature on record is 5°F, recorded in January 1985. Each month May through August has had temperatures in excess of 100°F, while each month April through October has had temperatures in excess of 90°F. Each month November through March has had temperatures below freezing. Precipitation is moderate averaging 63.64 inches year. July is the wettest month averaging 7.67 inches, and November is the driest averaging 3.85 inches. A third of the annual rainfall occurs during the summer months of June, July and August. The greatest 24-hour rainfall occurred in March 1979 when 11.1 inches fell. Snowfall is light, averaging less than one inch annually. The greatest 24-hour snowfall on record is 2.3 inches, recorded in March 1954. Wind gusts have reached 50 to 60 knots and, on occasion, gone higher in fronts or winter storms. Approaching the port, winds climb to 17 knots or more about 7 to 9 percent of the time from November through April; September is also a likely month for strong winds. Summer winds are usually light and strengthen in thunderstorms or tropical cyclones. While thunderstorms may occur in any month, they are most likely from May through September when they develop on about 5 to 15 days per month; July and August is the most active period. Fog is most likely during winter and spring when visibilities fall below 0.5 mile on 4 to 7 days per month. At other times visibilities are reduced briefly in heavy showers.

(314) The National Weather Service maintains an office in Pensacola. **Barometers** may be compared there. (See Appendix A for address.)

(315)

Pilotage, Pensacola

(316) Pilotage is compulsory for all foreign vessels and U.S. vessels under register in foreign trade if drawing over 7 feet. Pilotage is optional for coastwise U.S. vessels that have on board a licensed federal pilot. Pilotage is available from Pensacola Pilots, LLC—901 S. Old Corry Field Rd. Box 4435—Pensacola, FL 32507. Pilots do not have a 24-hour manned VHF-FM radio station. Pilots can be reached via telephone at 540-848-4524. Pilotage may be arranged by telephone or through ships' agents. The pilots request ETA information 24 hours prior to arrival, if possible. Pilots board vessels seaward of Pensacola Bay Entrance Lighted Buoys 1 and 2. The 34-foot pilot boat, *Nora M*, has a black hull and white house with orange rib collars. The pilot ladder should be rigged on the lee side, 1 meter from the water; boarding speed is 5 knots. Pilots monitor VHF-FM channels 14 and 16 one hour before scheduled boarding. VHF-FM channel 14 is the normal working frequency for tugs and port operations.

(329)

Facilities at Port of Pensacola, Florida

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Port of Pensacola Berth 1	30°24'11"N., 87°12'41"W.	540	35	11	• Shipment of frozen foods (chicken) • Receipt of crude oil • Receipt and shipment of asphalt and liquid sulphur	City of Pensacola/Hady Enterprises; Coastal Fuels Marketing Inc.; and Freeport Sulphur Co.
Port of Pensacola Berth 2	30°24'06"N., 87°12'40"W.	400	35	11	• Receipt and shipment of conventional general cargo, lumber, steel, paper products, scrap metal and asphalt • Receipt of crude oil	City of Pensacola/ Port of Pensacola and Coastal Fuels Marketing Inc.
Port of Pensacola Berths 3 and 5	30°24'05"N., 87°12'35"W.	850	35	11	• Receipt and shipment of conventional general cargo, bagged food, lumber, steel, paper products, scrap metal, and asphalt • Receipt of crude oil	City of Pensacola/ Port of Pensacola and Coastal Fuels Marketing Inc.
Port of Pensacola Berth 6	30°24'06"N., 87°12'26"W.	580	35	11	Receipt and shipment of conventional and general cargo and paper products	City of Pensacola/Port of Pensacola
U.S. Naval Air Station	30°20'42"N., 87°15'54"W.	N/A	25 to 34	8 to 15	Naval activities	U.S. Government

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

(317)

Towage

(318) Two tugs of 2,600 and 3,000 hp are available with 24-hour notice. It is best to make tug arrangements utilizing an agent; however, Portside Marine & Towing can be contacted directly at 850-438-3648.

(319)

Quarantine, customs, immigration and agricultural quarantine

(320) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(321) **Quarantine** is enforced in accordance with the regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) There are several hospitals in Pensacola.

(322) Pensacola is a **customs port of entry.**

(323)

Coast Guard

(324) **Pensacola Coast Guard Station** is about 1 mile east of Pensacola Light; telephone 850-453-8282.

(325)

Harbor regulations

(326) The City of Pensacola, Department of Marine Operations, establishes regulations governing the piers under the control of the Port of Pensacola. The **Port Director** is the manager of the Port of Pensacola and has an office at Port of Pensacola Building No. 1.

(327)

Bridges

(328) The Pensacola Bay bridge spanning the entrance to the bay between Gulf Breeze and Pensacola is under construction (2017).

(330)

Supplies

(331) Bunker fuel is available at Port of Pensacola, Berth No. 1. Water, gasoline, diesel fuel and marine supplies are available.

(332)

Repairs

(333) Facilities at Port of Pensacola are available for making repairs to hull and machinery. Woodworking, machine and steel fabrication shops are available for almost any type of repairs. A mobile 25-ton crane is available. Above-the-waterline repairs are made anywhere in the port area.

(334)

Small-craft facilities

(335) Limited transient berths, gasoline, diesel fuel, water, ice, electricity, pump-out station, wet and dry storage and marine supplies are available in Bayou Chico. Hull, engine and electronic repairs can be made. Mobile hoists to 50 tons are available. (See Repairs for largest facility.) Additional facilities along the Intracoastal Waterway southeast and southwest of Pensacola are discussed in chapter 12.

(336)

Communications

(337) Pensacola is a seaport terminal for freight service on one Class I railroad. Sailings are made to ports throughout the world.

(338) The Pensacola Regional Airport is in the northeast part of the city.

(339) **Bayou Chico**, an inlet in the southwest part of the city, extends about 1.1 miles west from the Pensacola Bay where it divides into a north arm and a southwest arm. Bayou Chico Channel, a dredged channel in the bayou, is discussed earlier in this chapter under Channels. Waterborne commerce on the bayou includes petroleum

products, shell, rafted logs, stone and crushed rock, gravel and sand and trailers on barges. An overhead power cable crosses the bayou 0.25 mile above the mouth with a clearance of 88 feet. The Barrancas Avenue highway bridge, 0.5 mile above the mouth, has a fixed span with a clearance of 65 feet. A fixed bridge with a clearance of 14 feet crosses the bayou about 1.6 miles above the mouth. Pensacola Yacht Club and basin is on the north side of the entrance to the bayou, and an oil-handling berth is on the south side. There are several marinas, two boatyards, a shipyard and shell, sand and gravel plants on the bayou.

(340) **Bayou Texar** joins the bay just east of the highway causeway to Town Point. The entrance to the bayou is marked by a light and a daybeacon. A channel, marked by private piles, leads to a marina on the east side of the bayou about 0.6 mile above the entrance. In 1982, the channel had a reported controlling depth of 2½ feet. Gasoline, water and outboard engine repairs are available at the marina. Two fixed bridges cross the bayou. The CSX Railroad bridge at the mouth has a 44-foot fixed span with a clearance of 13 feet. The U.S. Route 90 highway bridge, about 0.5 mile upstream, has a fixed span with a clearance of 13 feet.

(341) **Warrington** is a suburb of Pensacola on **Bayou Grande**, which is 3 miles southwest of the center of the city. The bayou entrance channel is marked by a private light and private daybeacons and is reported privately maintained to a depth of 6 feet. In 1999, severe shoaling was reported in the channel entrance in about 30°22'30"N., 87°15'48"W.

(342) Admiral Murray fixed highway bridge, crossing Bayou Grande about 0.2 mile west of **Jones Point**, has a clearance of 14 feet. A marina, about 2.6 miles above the bridge on the north side of Bayou Grande, has berths, gasoline, a launching ramp, ice, dry storage and a 10-ton lift available for engine repairs.

(343)

ENCs - US4FL71M, US4AL12M, US5AL12M
Charts - 11382, 11378

(344) **Escambia Bay** extends 9 miles north from Pensacola Bay. About 5 miles above its mouth the bay is crossed by a fixed railroad bridge with a clearance of 50 feet. The twin spans of Interstate Route 10 highway bridge cross the bay about 0.3 mile south of the railroad fixed bridge and have a clearance of 65 feet. The depths in the bay shoal gradually from 15 feet at the mouth to 7 feet in the upper reaches. A dredged channel, marked by lights and daybeacons, leads through the bay to about 6.1 miles above the mouth of Escambia River.

(345) North of **Devils Point** are shoals and submerged obstructions along the west shore of Escambia Bay. This shore should not be approached closer than 0.5 mile. Above the bridge draw, in line with Escambia River, are a 5-foot shoal and a pile awash at low water. These are outside the dredged channel.

(346) **Escambia River**, which flows into Escambia Bay from northwest, extends north for 48 miles to the Alabama State line, where it is known as the **Conecuh River**. The twin highway bridges about 1.5 miles above the mouth have fixed spans with a clearance of 42 feet. There is a nylon fiber plant and some commerce in cypress logs and petroleum on this river, the latter barged to a power plant about 2 miles above the bridge.

(347) Overhead power cables crossing the river 1.7 and 2.3 miles above the bridge have minimum clearance of 60 feet. There are fish camps along the highway bridge on the Escambia and White Rivers that have fuel, berths, launching ramps and some marine supplies.

(348) **East Bay**, an east extension of Pensacola Bay, is entered by way of a passage 1 mile wide between the shoals off **Garcon Point** and **Redfish Point**. A highway bridge over the entrance to East Bay between Hernandez Point and Redfish Point has a fixed span with a clearance of 65 feet. Depths in the bay vary from 8 to 13 feet, with several small scattered shoals of 6 feet or less. The channel through the bay is marked.

(349) **Blackwater River** empties into **Blackwater Bay**, the north arm of East Bay. The channel is marked by lights, daybeacons and buoys to the town of Milton.

(350) Numerous wrecks, submerged piling and other obstructions constitute hazards in Blackwater River. **Wright Basin** and **Marquis Basin** are filled with such obstructions. Twin fixed highway bridges with clearances of 45 feet cross the river at Shields Point.

(351) **Milton** is a small town about 4 miles above the mouth of Blackwater River. There is some barge traffic in grains, soybeans and petroleum products. Berthage is available at the town wharf above the bridges with depths of 10 to 15 feet reported alongside in 1982. The Seaboard System Railroad (L&N) bridge crossing the river at Milton has a swing span with a clearance of 4 feet. (See **33 CFR 117.1** through **117.59** and **117.271**, chapter 2, for drawbridge regulations.) U.S. Route 90/State Route 10 fixed bridge with a clearance of 16 feet crosses about 0.2 mile above the railroad bridge. A marina in the small cove just above the highway bridge can provide berths, water, electricity, outboard engine repairs and marine supplies. Launching ramps are nearby. A small marina for Navy personnel is about 1 mile above the bridge on the east side of the river. Gasoline is available in an emergency.

(352)

ENC - US3GC05M
Chart - 11360

(353) The coast between Pensacola Bay and Mobile Bay has numerous high-rise buildings along the beach. No single structure stands out as a significant landmark. Depths of 5 fathoms or less extend as much as 4 miles offshore between the two bays.

(359)

Perdido Pass, Florida
National Oceanic and Atmospheric Administration (2013)

(354)

ENCs - US4FL71M, US4AL12M, US5AL12M
Charts - 11382, 11378

(355) **Big Lagoon**, which extends west from Pensacola Bay, is about 5 miles long and from 0.2 to 1 mile in width. The lagoon is separated from the Gulf by a narrow strip of sand beach and is the route of the Intracoastal Waterway, which is discussed in chapter 12.

(356) **Perdido Bay**, an irregularly shaped body of water, is 13 miles west of Pensacola Bay entrance and 26 miles east of Mobile Bay entrance. Depths of 6 to 20 feet are found in the bay and in **Perdido River**, the latter being the river that serves as a boundary between the states of Florida and Alabama. **Arnica Bay** and **Bay La Launch** connect Perdido Bay with **Wolf Bay** on the west. Bayou St. John and Perdido Pass connect the bay with the Gulf to the south.

(357) The highway causeway over Perdido Bay at **Cummings Point** has a fixed span with a clearance of 39 feet.

(358) **Perdido Pass**, extending between **Florida Point** and **Alabama Point**, is easily distinguished from offshore by State Route 182 highway bridge across its entrance with two openings. The fixed span over Perdido Pass Channel has a clearance of 54 feet. The fixed span over Cotton Bayou Channel has a clearance of 41 feet. The dredged entrance channel leads from the Gulf through Perdido Pass to a fork at the highway bridge; thence into two channels, one leading north into **Terry Cove** and **Johnson Cove** and the other leading east into **Bayou St. John**. A crossover channel connects the east and the west channels north of the highway bridge. The entrance to the pass is protected by a jetty on the west and east side. Over half of the east jetty is submerged about 1 to 3 feet at low tide; extreme caution is advised. Numerous sunken wrecks are in the approach to the pass. The channels are well marked; a lighted buoy off the entrance marks the approach.

(360)

COLREGS Demarcation Lines

(361) The lines established for Perdido Pass are described in **33 CFR 80.810**, chapter 2.

(362) The Intracoastal Waterway in the lower part of Perdido Bay is reached from Perdido Pass via a marked channel through Bayou St. John. Shoaling to 3 feet was reported between Daybeacons 6 and 8. An overhead power cable with a clearance of 59 feet crosses the channel leading to Terry Cove and Johnson Cove, about 0.4 mile from State Route 182 fixed bridge. In 2007, the overhead power cable was reported to be no longer present. Several small-craft facilities are in the coves and **Cotton Bayou**, on the west side of Perdido Pass 0.7 mile above the entrance.

(363) **Old River** enters Perdido Pass from east between Florida Point and **Ono Island**. In 1982, a reported depth of 5 feet could be carried through the river with local knowledge. The Florida-Alabama state boundary passes through Old River. A fixed highway bridge with a clearance of 24 feet crosses Old River about 1 mile east of Perdido Pass.

(364)

ENCs - US5AL1AM, US4AL11M, US5AL11M
Chart - 11376

(365) **Little Lagoon** is a shallow body of water about 6 miles long and 0.5 mile wide lying just back of the beach between Perdido and Mobile Bays. An opening, protected by jetties, 15 miles east of Mobile Point connects the lagoon with the Gulf. In 1985, it was reported that the east jetty has partially collapsed and about 40 feet of the seaward end covers at low water. In 1985, the reported controlling depth through the opening was 1½ feet. A footbridge, a fixed highway bridge and a pipeline with a least clearance of 7½ feet cross the opening.

Chart Coverage in Coast Pilot 5—Chapter 7
NOAA's Online Interactive Chart Catalog has complete chart coverage
http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml
LOUISIANA
MISSISSIPPI
ALABAMA
GULF OF MEXICO
90°30'W
90°W
89°30'W
89°W
88°30'W
88°W
87°30'W
30°30'N
30°N
29°30'N
29°N
11369
11372
11374
11375
11376
Mobile
Pascagoula
Biloxi
Gulfport
New Orleans
Chandeleur Islands
PEARL RIVER
ST. LOUIS BAY
MISSISSIPPI SOUND
MOBILE BAY
LAKE MAUREPAS
LAKE PONCHARTRAIN
CHANDELEUR SOUND
BRETON SOUND
MISSISSIPPI RIVER
BARATARIA BAY
PASS A LOUTRE
SOUTH PASS
SOUTHWEST PASS

Mobile Bay to Mississippi River

(1) This chapter describes the coasts of Alabama, Mississippi and Louisiana bordering the Gulf of Mexico from Mobile Bay to the Mississippi River and the numerous bodies of water emptying into the Gulf, including Breton Bay, Mobile Bay, Mississippi Sound, Lake Borgne, Lake Pontchartrain, Chandeleur Sound, Breton Sound and their tributaries. Also discussed are Mobile, Pascagoula, Biloxi, and Gulfport and other smaller ports and landings.

(2) The Intracoastal Waterway for this section of the coast is described in chapter 12.

(3)

COLREGS Demarcation Lines

(4) The lines established for this part of the coast are described in **33 CFR 80.815**, chapter 2.

(5)

Weather

(6) The warm, temperate climate of the coast from Mobile Bay to the Mississippi River is influenced by the Gulf of Mexico, which is partly responsible for the warm, humid summers and the relatively mild winters. During spring and summer, the Bermuda High generates moist southeast to south winds that keep the temperatures cooler than those farther inland and also aids in thunderstorm development. Cold continental air pushes far enough south in winter to occasionally drop temperatures below freezing and even produce some snow. Cold spells usually last about 3 days.

(7) About 15 to 20 significant frontal systems penetrate the Gulf of Mexico each year, bringing cool air and strong north winds. The collision of this air with the warm air to south sometimes generates strong low-pressure systems. This pattern continues until the Bermuda High begins to exert its influence in spring. At sea, gales blow about 1 percent of the time from November through March, while waves of 8 feet or higher are encountered 4 to 6 percent of the time. Fog is also a problem in winter and spring, particularly when warm air invades the region and moves over relatively cooler water. Near shore, visibilities drop below 2 miles from 2 to 7 percent of the time from December through April; January and March are the worst months.

(8) While tropical cyclones can affect this coast at any time, late May to early November is considered the hurricane season. A tropical cyclone (tropical storm or hurricane) moves across this stretch of coast every other year, on the average, while the hurricane frequency is about once in 5 years. Intense hurricanes can generate 175-knot winds, 40-foot seas, tides 10 to 25 feet above normal and 15 inches of rain. Of all the storms that have affected this coast, about 45 percent occurred in September; about one-half of these were hurricanes. Most tropical cyclones approach from southeast through southwest. The two most devastating storms to hit this coast in recent years were hurricanes Katrina, in August 2005, and Ivan, in September 2004.

(9)

ENCs - US5AL1AM, US4AL11M, US5AL11M, US-4AL12M, US5AL12M
Charts - 11376, 11378

(10) **Mobile Bay**, 40 miles west of Pensacola and 90 miles northeast of South Pass, Mississippi River, is the approach to the city of Mobile and to the Alabama and Tombigbee Rivers. The bay has depths of 7 to 12 feet outside the dredged channels. The entrance is 3 miles wide between Mobile Point on the east and Pelican Point on the west, but most vessels will prefer to follow the dredged channel rather than chance passage between the breakers and shoals that extend 4 miles south on both sides.

(11)

Shipping Safety Fairways

(12) **Vessels should approach Mobile Bay through the prescribed Safety Fairways**. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(13)

Prominent features

(14) The general appearance of the land is a guide to finding the entrance to Mobile Bay. For a distance of 40 miles east of the entrance, the shore, although low, is populated with high-rise condominiums. For 50 miles west of the entrance there is a chain of islands which, although wooded in places, is generally low and bare.

(15) The most conspicuous landmark near the entrance is the 131-foot black conical tower (30°11.3'N., 88°03.0'W.), which was the base for the former Sand Island Light.

(16) **Fort Morgan**, an historic state shrine, is on **Mobile Point** on the east side of the entrance. The walls of this old brick pentagon-shaped fort are conspicuous when approaching the entrance. **Mobile Point Light** (30°13'41"N., 88°01'27"W.), 125 feet above the water, is shown from a skeleton tower on Mobile Point. A lighted range light (rear) is shown below and on the same structure as Mobile Point Light.

(17) The concrete gun emplacements of later fortifications east of the old fort are also conspicuous.

(18) **Fort Gaines**, an historic landmark and museum on the east end of Dauphin Island, is on the west side of the entrance. A spherical elevated tank is 2 miles west of the fort.

(19)

COLREGS Demarcation Lines

(20) The lines established for Mobile Bay are described in **33 CFR 80.815**, chapter 2.

(21)

Channels

(22) **Main Ship Channel** leads from the Gulf and across the bar, just west of Mobile Point—federal project depth is 47 feet. (See Notice to Mariners and latest editions of charts for controlling depths.) The channel is marked by lighted buoys and a **020.7°** lighted range on Mobile Point. The rear range light is on the same structure and below Mobile Point Light. The wreck of the MAGNOLIA is on the east side of the channel, 0.7 mile southwest of Mobile Point.

(23) From west, boats drawing up to 6 feet can enter Mobile Bay via **Pelican Bay**. Local knowledge is necessary, owing to the shifting character of the bottom. The best water can be found by passing to the south of **Dauphin Island Spit** before shaping a course north into Mobile Bay.

(24) **Mobile Bay Channel** extends from the lower anchorage off Fort Morgan through Mobile Bay to Mobile river. The federal project depth is 45 feet to and in a turning basin off **Magazine Point** at the head of Mobile Ship Channel. Although the channel is subject to shoaling, the project depth is generally maintained. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.The channel is well marked with lighted ranges, lights and lighted and unlighted buoys.

(25)

Caution

(26) The Coast Guard advises vessels exercise particular caution where the channel intersects the Intracoastal Waterway, about 3 miles above Mobile Point at Lighted Buoys 25 and 26. Situations resulting in collisions, groundings and close quarters passing have been reported by both shallow and deep-draft vessels. The Coast Guard has requested vessels make a **SECURITE** call on VHF-FM channel 13 prior to crossing the Intracoastal Waterway, particularly during periods of restricted visibility.

(27) The secondary and other channels are covered geographically under their respective headings.

(28)

Anchorages

(29) **Vessels should anchor in the Mobile Bay Anchorage, south of and between the safety fairways.** (See **33 CFR 166.100** through **166.200**, chapter 2.) The best anchorages in the lower bay for deep-draft vessels are found north and northwest of Mobile Point in depths ranging from 20 to 45 feet with excellent holding ground. This anchorage is secure, but during a norther a short heavy choppy sea is raised that may be uncomfortable for small vessels. A circular **explosives anchorage** is just north of Mobile Point. (See **33 CFR 110.1** and **110.194**, chapter 2, for limits and regulations.) A **general anchorage** for unmanned and other nondescript vessels is near Cedar Point. (See **33 CFR 110.1** and **110.194a**, chapter 2, for limits and regulations.)

(30) Vessels are not permitted to anchor in the Bar Channel, Mobile Bay Channel or Mobile River Channel.

(31) In emergencies, light-draft vessels can anchor in Mobile River above Cochrane (U.S. Route 90) highway bridge with permission of the harbormaster.

(32) Small boats sometimes anchor north and east of Fort Morgan in **Navy Cove**. Several piles and other obstructions are in this locality.

(33)

Dangers

(34) The wreck of the Civil War vessel TECUMSEH is north of Mobile Point Light in 30°13'47.5"N., 88°01'37.5"W. The wreck is marked by a buoy. The vessel is reported to be in an unstable condition, and ammunition and powder aboard the wreck could be detonated if the vessel shifts. Mariners are cautioned not to anchor in the area of the buoy and to reduce speed producing as little wake as possible when transiting Mobile Channel between Buoys 15 and 17.

(35) A nearly continuous spoil bank extends along either side of the bay channel from just inside Mobile Bay entrance to the mouth of Mobile River. Through these spoil banks are several charted openings for passage to various points in Mobile Bay.

(36)

Fish havens

(37) Fish havens, consisting of concrete pipe, lie within a 3.5-mile-square area that extends offshore from 2.7 miles to 6.2 miles east of Mobile Point.

(38) Fish havens, consisting of old automobile bodies lashed together, scrap iron and concrete, have been or may be established on the bottom along the 10-fathom curve off the Alabama coast. While they are not dangerous and are reported to have a minimum depth of 10 fathoms over them, vessels are advised not to anchor in their vicinity.

(39)

Ferry

(40) Scheduled daytime ferry crossings are frequent between Fort Gaines and Fort Morgan. The ferries monitor VHF-FM channel 16.

(41)

Currents

(42) In this area strong winds have considerable effect in modifying the times and velocities of the current; in using the tables, allowance should be made for such effects. (See the Tidal Current Tables for daily predictions of current in Mobile Bay entrance and other locations

in Mobile BaySee the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(43) The tidal current near the outer end of the Main Ship Channel is rotary. Both the flood and ebb currents set somewhat to the left of the channel direction before reaching their strength and to the right of the channel direction after the times of strength. During 3 days of current observations at this location there was an outflow of 0.5 knot average velocity combined with the tidal current.

(44) It has been reported that velocities of 8 to 10 knots have been observed in the Bar Channel and Mobile Bay Channel on the runoff of the ebb after protracted periods of strong south winds. Low-powered and deep-draft vessels should be guided by the advice of the pilots under these conditions.

(45)

Weather

(46) The climate of Mobile Bay is influenced by the waters of the north Gulf of Mexico and of the bay itself. While summers are warm, the heat is tempered by the ocean and bay breezes. Temperatures climb to 90°F or above on about 75 days each summer, compared to 80 days just a few miles inland. During winter, the waters help moderate the colder temperatures. Minimums fall below freezing on about 21 days each season, compared to 20 to 25 days, on average, inland. The annual average temperature at Mobile is 67.6°F with an average high of 77.4°F and an average low of 57.4°F. January is the coolest month with an average temperature of 50.9°F while July is the warmest month with an average temperature of 82.2°F. The warmest temperature on record is 104°F, recorded in July 1952, while the coolest temperature on record is 3°F, recorded in January 1985. Precipitation is moderate, averaging about 66 inches in any given year. The wettest month is July, averaging nearly eight inches, and the driest month is October, which averages about three inches. Thirty percent of the average annual rainfall occurs during the summer months of June, July and August. Cold snaps usually last about 3 days, and occasionally they will bring some snow flurries. Overall, snowfall is light and averages less than one inch in any given year. The greatest 24-hour snowfall occurred in February 1973 when 3.6 inches accumulated. The winds behind these fronts sometimes blow for an extended period and are known as "northers." If they persist, they can lower the water in the bay and this can interfere with the deeper draft vessels bound through the dredged channel.

(47) In addition to these northers, strong winds and rough seas on the bay are generated by extratropical storms, thunderstorms, and tropical cyclones. While gale-force winds are infrequent, winds in the 17- to 33-knot range occur about 5 to 10 percent from November through May. March and April are often the windiest months. Thunderstorm winds are usually in the form of gusts and can reach 50 to 60 knots. Frontal thunderstorms, which are usually the most severe, can occur in any month and are most likely in spring. Air mass thunderstorms are most frequent in summer; during June, July and August, thunderstorms are observed on about 10 to 17 days per month, often in the afternoon. The strongest winds are generated by hurricanes, except for those in a rare tornado. Hurricane winds have reached 175 knots along the north Gulf coast.

(48) While a tropical cyclone may be expected to affect this region about every 2 years on average, destructive storms have been infrequent on Mobile Bay during this century. Nine tropical storms have come within 50 miles of Mobile Bay since 1950. In September 1979, hurricane Frederic, generating 115-knot sustained winds and a 12-foot storm tide, became the first hurricane since 1926 to directly strike Mobile. During the storm, Dauphin Island reported gusts to 126 knots.

(49) Tropical cyclones are a threat from late May through early November, while September is the most active month. Most storms approach the area from southeast through southwest. They are often in the process of recurving and intensifying before moving inland. Mobile Bay is protected by Dauphin Island to the west and banks and shoals to the east. However, during southerly gales it is not usually safe for vessels of over 25-foot draft to attempt to cross the bar.

(50) Visibilities may be briefly restricted to near zero in heavy showers or thunderstorms throughout the year. However, fog is more persistent and is most likely in winter and spring when warm air from south occasionally moves across relatively cooler waters. During this period, it is associated mainly with southeast and south winds. From November through April, visibilities fall below 0.5 mile on 4 to 8 days per month. Conditions are usually worst during the late night and early morning hours, improving during the early afternoon.

(51) The National Weather Service maintains offices in Mobile. **Barometers** may be compared at these offices or by telephone. (See Appendix A for addresses.)

(52)

Pilotage, Mobile and Mobile Bay

(53) Pilotage is compulsory for all foreign vessels and U.S. vessels under register in foreign trade. Pilotage is optional for coastwise vessels that have on board a pilot licensed by the federal government.

(54) The Mobile Bar Pilots Association maintains a station on Dauphin Island and operates two pilot boats, ALABAMA and MOBILE PILOT, based at Fort Gaines. The boats have gray hulls and white superstructures with blue trim and the word PILOT on each side of the wheelhouse. The boats monitor VHF-FM channels 13 and 16, and the station monitors channel 16. The pilot boats and harbor tugs are interconnected with the

harbormaster's office on the intraport radiotelephone system, VHF-FM channel 65A. The pilots board vessels day or night in the vicinity of Mobile Entrance Lighted Buoy M (30°07'31"N., 88°04'07"W.). For boarding, the pilots request that the pilot ladder be rigged 6 feet above the water on the lee side of the vessel.

(55) Pilots can be reached by telephone (251–432–2639 or 251–432–2630) by radiotelephone through the Mobile Marine Operator, or through ships' agents. The pilots request a 48-hour advance notice of arrival and a 1½-hour notice of sailing.

(56) **Bon Secour Bay** extends about 14 miles east of Mobile Bay entrance. Oyster beds are very extensive along the northeast shore of the bay. The bay is the route of the Intracoastal Waterway, which crosses Mobile Bay Channel at a point 2.6 miles north of the latter's entrance. The waterway is described in chapter 12. A marina on the north side of Mobile Point about 0.8 mile east of Fort Morgan provides berths with water and electricity, gasoline, diesel fuel, ice, a launching ramp, wet and dry storage, marine supplies, pump-out station and a 20-ton lift. The approach to the facility is marked by private daybeacons and was reported navigable by craft drawing 8 feet or less in 1982.

(57) **Bon Secour River** empties into the east part of Bon Secour Bay. A dredged channel leads from the Intracoastal Waterway through Bon Secour Bay and into Bon Secour River, a total distance of 3.9 miles. There are two turning basins on the south side of the river at miles 1.6 and 2.5, respectively. The channel is marked by a light and daybeacons. In 1982, it was reported that a depth of 4 feet could be carried for about 1.3 miles above the dredged channel.

(58) **South Fork Channel** leads south from about 1 mile above the mouth of Bon Secour River for about 1.1 miles to shallow **Oyster Bay**. A fixed highway bridge crossing South Fork Channel limits navigation into Oyster Bay to skiffs only.

(59) The town of **Bon Secour** is on the north side of Bon Secour River about 1.5 miles above the mouth.

(60)

Small-craft facilities

(61) Small-craft facilities on the east side of South Fork Channel and at the town of Bon Secour can provide berths, gasoline, diesel fuel, water, ice, marine supplies, launching ramps, storage and hull and engine repairs. The largest marine railway, at a boatyard on the east side of the arm leading to Oyster Bay, about 0.4 mile north of the fixed highway bridge, can handle craft to 80 feet. A channel marked by private stakes, with a reported depth of 7 feet in 1982, leads to the boatyard.

(62)

ENCs - US5AL1AM, US4AL11M, US5AL11M
Chart - 11376

(63) **Weeks Bay**, on the east side of Mobile Bay about 6.8 miles northwest of Bon Secour River, has an average depth of 2 to 5 feet. A marked channel, with a reported controlling depth of about 4 feet in 1982, leads through the entrance and across the bay to **Fish River**. About the same depth can be carried into **Magnolia River** on the east side of the bay.

(64) The approach to the bay is marked by a light about 1 mile west of the entrance. An overhead power cable with a clearance of 56 feet crosses the bay at the entrance.

(65) Small boats go to **Marlow** on Fish River and **Magnolia Springs** on Magnolia River. State Route 98 highway bridge over Fish River at **Yupon** has a fixed span with a clearance of 35 feet. A small marina on the west side of the river just below the bridge has berths, gasoline, diesel fuel, water, electricity, ice, some marine supplies and a launching ramp.

(66) State Route 32 highway bridge crossing Fish River at Marlow, about 5.5 miles above the mouth, has a fixed span with a clearance of 22 feet. Gasoline is available at a small marina just below the bridge on the west side of the river.

(67) **East Fowl River** enters the west side of Mobile Bay about 13.8 miles north of the bay entrance. It extends generally southwest. The entrance is marked by lights and daybeacons. State Route 193 highway bridge, about 1.0 mile above the mouth of the river, has a fixed span with a clearance of 45 feet. An overhead power cable with a clearance of 47 feet crosses the channel connecting with West Fowl River at about 30°23'53"N., 88°08'39"W. A marina on the north side of East Fowl River just east of the bridge has berths with water and electricity, gasoline, diesel fuel, ice, a launching ramp, limited marine supplies and a pump-out station. East Fowl River leads into West Fowl River, and thence into Fowl River Bay; these are discussed later in this chapter.

(68) **Fowl River**, the northwest branch, joins East Fowl River about 2 miles above the mouth. It is navigable for about 3 miles by small craft with local knowledge.

(69) **Great Point Clear** is on the east side of the bay about 16 miles north of the entrance; a light marks the shoals extending west from the point.

(70) **Point Clear, Battles Wharf, Seacliff** and **Daphne** are summer resorts along the east shore. Many of the numerous boat landings are in ruins and constitute a danger to small boats navigating close inshore. A large hotel on Great Point Clear has a prominent water tank. A privately dredged channel with a reported controlling depth of 5½ feet in 1999. The channel, marked by private lights and daybeacons, leads to a yacht basin at the hotel. Berths, electricity, gasoline, diesel fuel and water are available at the basin.

(71) **Fairhope**, on the east side of the bay about 17.6 miles above the entrance, is a town with bus connections. There is a 1,450-foot municipal pier at the town. A channel marked by private daybeacons, with a reported approach depth of 9 feet and alongside depth of 5 feet in 2005, leads to a marina in a basin adjoining the north side of the pier. Gasoline, water, ice, electricity and a launching ramp are available. In 2005, the marina was

(79)

reported to be temporarily closed. Fairhope Yacht Club is located in **Fly Creek**, north of the municipal pier. A dredged channel leads east from Mobile Bay to a turning basin about 0.1 mile above the mouth of the creek. An overhead power cable, northeast of the turning basin, has a reported clearance of 48 feet. The entrance to the channel is marked by a light. A municipal fish dock, on the west side of Fly Creek about 0.3 mile above the entrance, can provide gasoline and diesel fuel. Marinas on the creek can provide berths with water and electricity, pump-out, gasoline, diesel fuel and marine supplies. Lifts to 36 tons can handle craft for hull, engine and electronic repairs.

(72) Fairhope Yacht Club race course, west of Fly Creek and about 2.2 miles in diameter, is marked by private daybeacons.

(73) **Theodore Ship Channel** leads from a point in Mobile Bay Channel about 15 miles north of the entrance northwest for 4.5 miles to an anchorage area and thence through a 1.5-mile landcut to a turning basin at an industrial park. The federal project depth is 40 feet to and in the turning basin. The channel is marked by lights and a **123°35'** lighted range. The south side of the anchorage area is marked by daybeacons. A barge channel extends 1.2 miles from the head of the turning basin. (See Notice to Mariners and latest edition of chart for controlling depths.) A fixed highway bridge with a clearance of 45 feet crosses the barge channel about 0.15 mile above the turning basin. An overhead power cable close west of the bridge has a clearance of 73 feet.

(74) **Dog River**, emptying into the west side of Mobile Bay at a point about 21 miles north of the entrance, is used considerably by yachts and small boats. A channel marked by daybeacons and lights leads northwest from a point in Mobile Bay Channel about 1.3 miles above Gaillard Island to the mouth of Dog River. State Route 163 highway bridge crossing the mouth of Dog River has a fixed span with a clearance of 73 feet. The railroad bridge 7 miles above the mouth has a 22-foot fixed span with a clearance of 8 feet.

(75)

Small-craft facilities

(76) There are several small-craft facilities on the river at which berths, electricity, gasoline, diesel fuel, water, ice, storage, marine supplies and lifts to 70 tons are available; engine and electronic repairs can be made.

(77) Along the west shore of the bay, north and south of Dog River, there are numerous small-craft landings; many, however, are in ruins.

(78) **Mobile**, 28 miles north of the bay entrance, is one of the largest and most important seaports on the Gulf of Mexico. A fully equipped ocean terminal, excellent transportation facilities, large shipyards and all kinds of marine supplies are available at Mobile. Principal foreign exports are marine supplies, paper products, lumber, wood pulp, flour, aluminum, chemicals, grain, soybeans,

coal and bunker oil, iron and steel products and fertilizer. The principal foreign imports are bauxite, mahogany, crude rubber, sugar, newsprint, seafood, rubber, pig iron, ores, molasses, automobiles, fishmeal, frozen foods and chemicals. The coastwise trade consists mainly of petroleum products, shell, lumber, iron and steel products, chemicals and food products. Inland waterway transportation facilities for handling iron and steel products, ore, sugar, grain and coal serve the Warrior, Tombigbee and Alabama River systems with connections to the Mississippi River.

(80)

Prominent features

(81) From about the center of the bay, the industrial complex on Hollingers Island and the battleship ALABAMA moored at the entrance to Tensaw River are conspicuous. On nearing the city, the 37-story RSA Tower and other tall buildings near the waterfront are first seen. Next seen are the water tanks northwest of Garrows Bend. At night, the fixed red lights on the water tank at Great Point Clear are visible from Mobile Bay Channel. An aviation light at Brookley Field, south of Mobile, and the occulting red lights on the radio towers at the mouth of Tensaw River are prominent.

(82)

Channels

(83) Main Ship Channel, the dredged bar channel and Mobile Bay Channel leading from the entrance to Mobile River Channel were discussed earlier in this chapter.

(84) From a point 25.7 miles north of the bay entrance, **Arlington Channel**, a dredged channel, leads west-northwest from Mobile Bay Channel to a turning basin in the west part of Garrows Bend. (See Notice to Mariners and latest edition of charts for controlling depths.) The channel is marked by a **289.3°** lighted range, lights, buoys and daybeacons.

(85)

Coast Guard

(86) **Sector Mobile Office** is at the west end of the channel.

(87) **Garrows Bend Channel**, a dredged channel, leads northeast from the turning basin to a causeway between McDuffie Island and the mainland. (See Notice to Mariners and latest edition of charts for controlling depths.)

(88) **Mobile River Channel**extends from Mobile Bay Channel for 4 miles to the bridge at **St. Louis Point**. Federal project depths are 40 feet from the mouth of the river to and inside **Mobile Turning Basin**, thence 40 feet to St. Louis Point, and thence 25 feet to the mouth of and in **Chickasaw Creek** for about 2 miles to just below **Shell Bayou** entrance. (See Notice to Mariners and latest editions of charts for controlling depths.)

(89) **Threemile Creek** leads west from Mobile River Channel just south of **Magazine Point**. About 0.6 mile above the creek entrance, **Industrial Canal** leads south for about 1 mile. Depths of about 9 feet can be carried in the creek to the canal, thence 12 feet in the canal. Cement, gypsum, sand, gravel and lumber terminals are on the canal. The large bulk material handling plant of the Alabama State Docks, with over 1,600 feet of berthing space in 40 feet, is on the south side of the entrance to Threemile Creek. (See Wharves.)

(90) The old ship channel around the south end of **Pinto Island**, which leads to Tensaw River, had a controlling depth of 8 feet in 1972. The channel is unmarked.

(91)

Anchorages

(92) In emergencies, light-draft vessels may anchor in Mobile River above Cochrane (U.S. Route 90) highway bridge crossing at St. Louis Point with the permission of the harbormaster.

(93)

Bridges

(94) There are no bridges over the main channel from the Gulf to the state docks. Above the docks, at St. Louis Point, Mobile River is crossed by Cochrane (U.S. Route 90) fixed highway bridge; the vertical clearance is 140 feet. Just above the Cochrane bridge, at the mouth of Chickasaw Creek, is the CSX railroad bridge with a swing span with a clearance of 6 feet; the channel is through the south draw. The bridgetender monitors VHF-FM channel 16 and works on channel 13; call sign KQ-7197. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.)

(95) A CSX railroad bridge with a lift span and a clearance of 5 feet down and 60 feet up crosses the Mobile River about 1.5 miles above Twelvemile Island. The bridgetender monitors VHF-FM channel 16 and works on channel 13; call sign KQ-7197.

(96) Twin fixed highway bridges with clearances of 125 feet cross the river about 18 miles above the mouth.

(97) Five bridges cross Threemile Creek below the fixed highway bridge at the head of navigation. The first, CSX railroad bridge, has a swing span with a clearance of 10 feet. The channel is through the north draw. The bridgetender monitors VHF-FM channel 16 and works on channel 13; call sign KQ-7197. The second, the Alabama Terminal Docks railroad bridge, has a bascule span with a clearance of 6 feet. In the open position, the draw overhangs the channel above a height of 59 feet. Beyond the Industrial Canal are the U.S. Route 43 highway and the Southern railway bridge with swing spans having a minimum clearance of 1 foot. The channel is through the north draw. (See **33 CFR 117.1** through **117.59** and **117.115**, chapter 2, for drawbridge regulations.) About 0.15 mile below Route 43 highway bridge, an overhead power cable crosses with a clearance of 53 feet. About 0.4 mile above the Southern railway bridge, the Gulf, Mobile and Ohio railroad bridge has a fixed span with a clearance of 12 feet.

(98) Twin highway tunnels cross under Mobile River between Mobile and **Blakeley Island** about 1.5 miles above McDuffie Island.

(115)

Facilities at Port of Mobile, Alabama

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Facilities on the west side of Mobile River						
Alabama State Port Authority McDuffie Terminal Ship Wharf No. 1	30°39'13"N., 88°01'58"W.	1,015	45	15½	• Shipment of coal • Mooring and bunkering vessels	Alabama State Port Authority
Alabama State Port Authority McDuffie Terminal Ship Wharf No. 2	30°39'25"N., 88°01'58"W.	1,050	45	15	• Receipt and shipment of coal • Bunkering vessels	Alabama State Port Authority
Mobile River Terminal Co. Ship Pier	30°40'13"N., 88°02'09"W.	1,225	12 to 42	10	Receipt of iron, manganese, fluorspar ores and other bulk materials	Warrior & Gulf Navigation Co./Mobile River Terminal Co.
Alabama Sate Dock Berth 2	30°41'41"N., 88°02'16"W.	989	40	11	Receipt and shipment of containerized & conventional general cargo	Alabama State Port Authority
Alabama Sate Dock Berths 3, 4 and 5	30°41'53"N., 88°02'18"W.	1,505	40	11	Receipt and shipment of conventional general cargo, steel, forestry and heavy-lift items	Alabama State Port Authority
Alabama Sate Dock Berths 6, 7 and 8	30°42'05"N., 88°02'20"W.	1,722	40	11	Receipt and shipment of conventional and roll-on/roll-off general cargo, steel, forestry and heavy-lift items	Alabama State Port Authority
Alabama Sate Dock Pier A, South Wharf	30°42'15"N., 88°02'24"W.	690	40	11	Receipt and shipment of conventional general cargo	Alabama State Port Authority
Alabama Sate Dock Pier A, North Wharf and Slip B, End Wharf	30°42'24"N., 88°02'31"W.	1,959	40	6 to 11	Receipt and shipment of conventional general cargo and forest products	Alabama State Port Authority
Alabama State Dock Pier B and Slip C; End Wharf	30°42'27"N., 88°02'23"W.	1,532	40	11	Receipt and shipment of conventional general cargo and forest products	Alabama State Port Authority
Alabama State Dock Pier C	30°42'39"N., 88°02'26"W.	2,417	40	11	Receipt and shipment of conventional general cargo, steel, aluminum, forestry and heavy-lift items	Alabama State Port Authority
Alabama State Dock Pier D, South Wharf	30°42'50"N., 88°02'35"W.	1,000	40	11	Mooring vessels	Alabama State Port Authority
Alabama State Dock Pier D, River End Grain Elevator Wharf	30°42'54"N., 88°02'49"W.	800	40	11	• Shipment of grain • Receipt of conventional cargo	Alabama State Port Authority
Bulk Material-Handling Plant Barge Wharf	30°43'26"N., 88°02'37"W.	550	40	8	Shipment of of dry bulk commodities (coal, coke, bauxite, gravel, potash, manganese, and iron ore)	Alabama State Port Authority
Plains Energy Corp. Mobile Terminal Ship Dock	30°43'40"N., 88°02'37"W.	800	40	12	Receipt and shipment of crude oil	Plains Energy Corp.
BP Oil Co. Mobile Terminal Barge Wharf	30°43'56"N., 88°02'38"W.	400	20	8	Receipt and shipment of petroleum products by barge	BP Oil Co.
Facilities on east side of Mobile River						
Vulcan Materials Co. Blakeley Island Yard Dock	30°43'48"N., 88°02'24"W.	740	40	N/A	Receipt and shipment of limestone	Alabama State Port Authority/Vulcan Materials Co.
Alabama State Port Authority, Blakeley Terminal Wharf	30°43'49"N., 88°02'24"W.	700	30	11	Receipt and shipment of general cargo	Alabama State Port Authority
Gulf Atlantic Blakeley Terminal	30°43'00"N., 88°02'20"W.	750	34	12	Receipt and shipment of crude oil and petroleum products	
Midstream Fuel Service Mobile Wharf	30°43'03"N., 88°02'19"W.	200	22	8	Loading barges for bunkering	Midstream Fuel Service, Inc., and Tenn-Tom Towing, Inc.
Midstream Fuel Service Supply Wharf	30°43'01"N., 88°02'17"W.	200	18	8	Handling of materials, supplies and equipment to and from barges	Midstream Fuel Service, Inc.
Shell Chemical Co., Blakeley Island Terminal Wharf	30°42'51"N., 88°02'15"W.	1,000	40	15	Receipt and shipment of crude oil and petroleum products	Shell Chemical Co.
Gulf Coast Asphalt Co. Mobile Terminal Wharf	30°42'26"N., 88°02'11"W.	900	42	8	Receipt and shipment of asphalt and petroleum products	Gulf Coast Asphalt Co., L.L.C.
Alabama Bulk Terminal Co., Blakeley Island Wharf	30°41'45"N., 88°02'06"W.	800	40	10	Receipt and shipment of petroleum products, petrochemicals, asphalt and crude oil	Alabama Bulk Terminal Co.
Facilities on Chickasaw Creek						

Facilities at Port of Mobile, Alabama

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Mobile Marine Terminal Chickasaw Wharf	30°45'47"N., 88°03'02"W.	934	23	9	Receipt and shipment of conventional and containerized general cargo	Crimson Shipping
Gulf Atlantic Chickasaw Barge Wharf	30°45'50"N., 88°03'08"W.	680	20	12	Receipt and shipment of crude oil and petroleum products	Gulf Atlantic
Dunhill Terminal	30°45'50"N., 88°03'15"W.	456	19 to 23	12	Barge petroleum terminal	

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

(99) Weather and pilotage information for Mobile is discussed earlier in this chapter.

(100)

Towage

(101) Diesel-powered tugs and oceangoing tugs up to 4,000 hp are available at Mobile.

(102)

Quarantine, customs, immigration and agricultural quarantine

(103) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(104) Quarantine laws are enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) Mobile has several hospitals and clinics.

(105) Mobile is a **customs port of entry**.

(106)

Harbor regulations

(107) The Alabama State Docks Department has jurisdiction over the bay, harbor and that part of all the tributary streams in which the tide ebbs and flows, and extends to the outer shoal 5 miles south-southwest of Fort Morgan at the entrance to the harbor. It has supervision over harbor pilotage, state wharves and shipping, as well as authority in all matters relating to the arrival, departure, loading and discharging of all vessels at state wharves. Most routine functions are administered through the **harbormaster**.

(108) The harbormaster controls all of the waterway traffic in the area, assigns berths and enforces the rules and regulations of the port. Ships are normally taken to their berths by the bar pilots, but any subsequent shifting or redocking of vessels in the harbor is done by the harbormaster and his deputies. The harbormaster's office is in the Administration Building at the State Docks and is connected by the intraport radiotelephone system with all pilot boats and tugs on VHF-FM channels 16 and 65A. The harbormaster can be reached by telephone (251–441–7250).

(109)

Speed limit

(110) No vessel, except launches, shall exceed 6 mph in the inner harbor between Mobile Channel Light 76 to and including Chickasaw Creek and shall take all possible precautions to prevent disturbance of vessels berthed at marginal wharves.

(111)

Wharves

(112) The Port of Mobile has more than 150 piers and wharves, most of which are located on both sides of the Mobile River between the mouth and the confluence with Chickasaw Creek about 4 miles above the mouth. Facilities are also on Theodore Industrial Park Ship Canal, Arlington Channel, Threemile Creek, Industrial Canal, Chickasaw Creek, Hog Bayou and Black Bayou.

(113) The facilities on the west side of the Mobile River are generally for handling cargo, while the facilities on the east side are service and industry related—only the deep-draft facilities are listed in the facilities table. The alongside depths of given in the table are reported; for information on the latest depths contact the Alabama State Port Authority or the private operators. General cargo at the port is usually handled by ship's tackle. Floating cranes to 110 tons are available. All deep-draft facilities have rail and direct highway connections, and almost all have water and electrical shore power connections.

(114) In the port area, the Alabama State Port Authority and private companies operate warehouses and transit sheds having a total of more than 3 million square feet of dry storage space. About 36 acres of open storage space is available.

(116)

Supplies

(117) Marine supplies of all kinds are available in Mobile. Bunker fuel, diesel oil and lubricants are available. Large vessels can be bunkered at the Texaco Terminal Pier, Alabama State Docks, Piers B, C, and D North Wharf or at other berths by tank barges. Water, almost chemically pure, is available at most of the berths.

(118)

Repairs

(119) There are three large shipyards in the Mobile area; all types of repairs can be made to deep-draft vessels. The largest floating drydock, at a shipyard on the west side of Pinto Island, has a capacity of 19,400 tons, an overall length of 732 feet, a minimum clear inside width of 105 feet and a depth of 27 feet over the blocks. Smaller shipyards with marine railways and smaller floating

drydocks are on Blakeley Island, on the west side of Mobile River at Mobile, at Chickasaw and on Dog River.

(120) Salvage tugs, seagoing and equipped for heavy work, are available. Barges, derricks, pumps and diving outfits are available for virtually any type of work.

(121)

Small-craft facilities

(122) Berths and other facilities for small craft are limited at Mobile due to heavy commercial traffic. Facilities for small craft at Fort Morgan, East Fowl River, Fairhope, Fly Creek and Dog River are discussed earlier in this chapter.

(123)

Communications

(124) Mobile is served by four trunkline railroads, major airlines and highway connections. Regular steamer communications with most major ports in the world and all the important Gulf, Atlantic, Caribbean and Pacific ports are made from Mobile. Inland boats and barges serve the river ports in the interior of the state and also connect with Gulf ports. Radio station WLO at Mobile handles general commercial radio and radiotelephone business between the hours of 0430 and 0030. The station is equipped to handle traffic on VHF-FM radiotelephone and cable traffic. Radio station WNU, New Orleans, handles traffic for station WLO between the hours of 0030 to 0430. The harbormaster's office is equipped with VHF-FM channel 16 and channel 65A on the intraport radiotelephone system, which connects all pilot boats, tugs and all waterway traffic in the area.

(125) **Mobile River** and **Tensaw River** are formed by the confluence of Alabama River and Tombigbee River about 45 miles above Mobile. In 1972, the reported depth to the confluence was about 14 feet. The channel in Mobile River is marked by lights, buoys and daybeacons.

(126) Tensaw River is crossed at its mouth by two U.S. Route 90 highway bridges, which have fixed spans with a minimum clearance of 26 feet. An overhead power cable with a clearance of 46 feet crosses the river just north of the bridges. Twin fixed highway bridges with a clearance of 24 feet cross the river about 0.3 mile north of the U.S. Route 90 bridges. The south end of Blakeley Island has been extended east by dredged fill to the west side of the entrance to Tensaw River. The battleship ALABAMA is permanently moored on the east side of the fill at a state park.

(127) The **Mobile-Tensaw Rivers Cutoff** connects the two rivers about 8 miles above Mobile. The cutoff had a reported depth of about 13 feet in 1972. From the cutoff the channel into Tensaw River is marked by buoys and an unlighted range on the east bank of the river; the controlling depth on the range is about 3 feet. For craft drawing more than 3 feet, it is necessary to turn south at the east end of the cutoff, pass around the south end of **Gravine Island** and then proceed upriver in the east branch.

(128) A railroad bridge over Mobile River, 8.3 miles above the city, has a swing span with a clearance of 4 feet. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.)

(129) A railroad bridge crossing Tensaw River about 13 miles above the mouth has a swing span with a clearance of 11 feet. (See **33 CFR 117.1** through **117.59** and **117.113**, chapter 2, for drawbridge regulations.) Tensaw River is crossed by overhead power cables on both sides of Gravine Island. The cable crossing the west channel about 1.7 miles below the cutoff has a clearance of 74 feet, and the cable over the east channel about 1.2 miles below the cutoff has a clearance of 68 feet. Interstate Route 65 twin fixed highway bridges, with clearances of 42 feet, cross the Tensaw River about 19.6 miles above the mouth.

(130) Light-draft boats can reach Tensaw River either by going up Mobile River to **Spanish River** and thence down that river, or from the main channel through the channel south of Pinto Island. An overhead power cable with a clearance of 68 feet crosses Spanish River about 0.1 mile below its confluence with Mobile River.

(131) **Blakeley River** and **Apalachee River** are crossed at their mouths by twin fixed highway bridges with clearances of 16 feet. About 0.7 mile above the bridges, the rivers are crossed by U.S. Route 90/State Route 31 fixed highway bridges, which have a minimum vertical clearance of 16 feet. Overhead power cables on the north side of the U.S. Route 90/State Route 31 bridges have minimum clearances of 37 feet. A fish camp about 0.4 mile south of **Vessel Point** has berths, water, ice and a launching ramp.

(132) **D'Olive Bay**, on the east side of Blakeley River, is entered through a channel marked by private daybeacons about 0.9 mile below the U.S. Route 90 bridges. In 1982, the reported controlling depth was about 3 feet across Blakeley River Bar and through the lower river into the bay. A yacht club in the bay has gasoline, diesel fuel and limited marine supplies.

(133) Navigation is possible above Mobile to the inland Alabama ports of **Jackson**, mile 78, **Demopolis**, mile 214, **Tuscaloosa**, mile 340, **Port Birmingham**, mile 396.5, and various landings via dredged channels in the **Black Warrior-Tombigbee River System**. Mobile River joins the Tombigbee River about 45 miles above Mobile. Just above Demopolis, at the junction of the Black Warrior and Tombigbee Rivers at about mile 217, the waterway continues via the Black Warrior River and thence at about mile 385 divides into two navigable forks. The head of navigation on **Mulberry Fork** is at about 385 and on **Locust Fork** at mile 385. A federal project provides for a 9-foot channel in the Black Warrior-Tombigbee River System. (See Local Notice to Mariners for latest controlling depths.)

(134) Six lock and dam systems are on the waterway. Each lock is 600 feet long and 110 feet wide, with a least depth of 11 feet over the sill.

(135) Several bridges and numerous overhead power cables cross the waterway. Bridges over the section of the waterway from the mouth of Tombigbee River to the junction with the upper forks are of the vertical-lift or fixed-span type; least clearance is 40 feet for the fixed spans and 15 feet for the vertical-lift spans. (See **33 CFR 117.1** through **117.49**,**117.106**, and **117.118**, chapter 2, for drawbridge regulations.) Only bridges of the fixed type cross Mulberry and Locust Forks; least clearance is 31 feet over Mulberry Fork and 38 feet over Locust Fork. Least clearance of overhead power cables crossing the waterway is 40 feet.

(136) Waterborne commerce on the waterway between Mobile and Port Birmingham is in pulpwood, chemicals, petroleum products, shell, sand and gravel, limestone, ores, pig iron, coal, grain and steel products.

(137) Charts for the Black Warrior-Tombigbee Rivers System are available from the U.S. Army Corps of Engineers Mobile office. (See Appendix A for address.)

(138) From just above Demopolis, AL, at the confluence on the Tombigbee and Black Warrior Rivers, the **Tennessee-Tombigbee Waterway** (Tenn-Tom Waterway) extends north through the Tombigbee River and land cuts for about 203 miles connecting the Black Warrior-Tombigbee River System with the Tennessee River. The waterway provides a link between the deepwater port of Mobile and the inland waterways that were formerly accessible only via the Mississippi River system.

(139) From Demopolis, the waterway extends up the Tombigbee River for about 127 miles to just south of Amory, MS. For the next 42 miles to Bay Springs, MS, the waterway consists of a canal parallel to and separated from the river by a levee. The remaining 34 miles of the system traverse a cut through the divide between the Tennessee and Tombigbee River basins.

(140) The federal project provides for a 9-foot channel from Demopolis to Amory and thence a 12-foot channel to the Tennessee River. The waterway's 341-foot ascent is accomplished by 5 dams and 10 locks. The locks are 100 feet wide and 600 feet long and have a minimum depth over the sill of 15 feet.

(141) The minimum clearance of the bridges crossing the Tennessee-Tombigbee Waterway is 52 feet at normal pool. Overhead cables have a minimum clearance as great or greater than the minimum bridge clearance.

(142) Waterborne commerce on the waterway includes coal, grain and other farm products, metallic and nonmetallic ores, chemicals and allied products, pulp, paper and other wood products and petroleum.

(143) Charts for the Tennessee-Tombigbee Waterway are available from the U.S. Army Corps of Engineers Mobile office. (See Appendix A for address.)

(144) Mobile River joins **Alabama River** about 45 miles above Mobile. A federal project provides for a 9-foot channel in Alabama River from the mouth to Montgomery, AL, about 290 miles above Mobile. In 1981, the controlling depth was 9 feet to Claiborne, about 58 miles above the mouth; thence in 1972, 3½ feet to the head of the project. Greater depths can normally be carried from November to June. The channel is marked by buoys and daybeacons. Least clearance of bridges crossing the river is 17 feet for swing bridges, 42 feet in the up position for vertical lift bridges and 36 feet (at Montgomery) for fixed bridges. The bridgetender of the Burlington Northern railroad bridge at Coy monitors VHF-FM channel 16 and works on channel 13; call sign WXY-960. (See **33 CFR 117.1** through **117.59** and **117.101**, chapter 2, for drawbridge regulations.) Least known clearance of overhead power cables crossing the river is 50 feet. Least vertical clearance is 27 feet at the cable ferry guide cable about 112 miles above Mobile.

(145)

Cable ferry

(146) A cable ferry crosses the river about 112 miles above Mobile. The ferry carries vehicles and passengers and operates between 0700 and 1700 daily. The ferry guide cable is suspended 27 feet above the water. The ferry crossing is marked by signs on both sides of the river. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY**.

(147) The lock and dam systems on the river are Claiborne Lock and Dam, mile 63.0, Millers Ferry Lock and Dam, mile 115.6, and Henry Lock and Dam, mile 205.2. Operating hours of the locks are as follows: Claiborne Lock, 24 hours; and Millers Ferry and Henry Locks, 0600 to 1400 and 1800 to 0200. The locks are each 600 feet long and 84 feet wide and have 13 feet over the sills.

(148) Waterborne commerce on the river consists of pulpwood, petroleum products, sand and gravel.

(149) Navigational charts for the Alabama River are available from the Mobile Corps of Engineers Office. (See Appendix A for address.)

(150)

ENCs - US3GC05M, US4MS12M, US5MS21M, US5MS11M
Charts - 11360, 11373, 11374, 11372

(151) **Mississippi Sound** extends 70 miles west of Mobile Bay between a chain of narrow, low sand islands and the mainland, providing a sheltered route for the Intracoastal Waterway from Mobile to New Orleans. Natural depths of 12 to 18 feet are found throughout the sound, and a channel 12 feet deep has been dredged where necessary from Mobile Bay to New Orleans. (See chapter 12 for Intracoastal Waterway.) Mississippi Sound can be entered from Mobile Bay through Pass aux Herons; from the Gulf through Petit Bois, Horn Island, Dog Keys, and Ship Island Passes, and Cat Island Channel; from Lake Borgne through Grand Island Pass.

(152) Ship, Horn and Petit Bois Islands, barrier islands separating Mississippi Sound from the Gulf of Mexico, are part of **Gulf Islands National Seashore** and subject to the rules and regulations of the U.S. Department of the Interior, National Park Service. **Petit Bois Island**

National Wildlife Refugeand **Horn Island National Wildlife Refuge**are within the National Seashore.

(153)

COLREGS Demarcation Lines

(154) The lines established for Mississippi Sound are described in **33 CFR 80.815** chapter 2.

(155)

ENCs - US5AL1AM, US4AL11M, US5AL11M, US-4AL12M, US5AL12M
Charts - 11376, 11378

(156) **Pass aux Herons** connects the southwest corner of Mobile Bay with the east end of Mississippi Sound and is part of the Intracoastal Waterway. (See chapter 12 for Intracoastal Waterway.)

(157) **Grants Pass**, 0.3 mile north of Pass aux Herons, connects Mobile Bay and Mississippi Sound. The channel is unmarked and is used only by small boats.

(158) **Dauphin Island** is a fishing village and summer resort at the northeast part of Dauphin Island. A dredged channel leads from Mississippi Sound through **Bayou Aloe** to an anchorage basin at Dauphin Island Village. The channel is marked with lights and daybeacons. There are a marina and fish camps at the village; berths, gasoline, diesel fuel, water and marine supplies are available.

(159) **Dauphin Island Bay** is a shallow bay at the east end of Dauphin Island between Dauphin Island Bridge and Little Dauphin Island. The bay is accessible from Mississippi Sound through a privately marked and dredged channel and from Mobile Bay through an inlet protected by a jetty about 0.2 mile north of Pelican Point. A channel marked by lights and daybeacons leads from Mobile Bay to the inlet entrance, thence a dredged channel leads through the inlet to an anchorage basin at Fort Gaines, thence a connecting channel leads from the anchorage basin to Dauphin Island Bay.

(160) **Dauphin Island Coast Guard Station** is on the south side of the inlet.

(161) **Fort Gaines** has a small-boat basin where a U.S. Customs boat and pilot boat moor. On the south side of the anchorage basin, just inside the inlet, there are eight surfaced launching ramps, five piers and a bulkhead docking area. A ferry operates from Fort Gaines to Fort Morgan.

(162) A large marina on the west shore of the bay has a 7½-ton mobile hoist. Engine and electronic repairs are available, as well as open and covered storage. Berths, electricity, gasoline, diesel fuel, water, ice and marine supplies are available. An offshore breakwater protects the marina from north. In 1972, there was reported to be 8 to 9 feet at the berths and 5 feet in the privately maintained and marked channel that leads along the south and west shores of the bay from the connecting channel to the marina and north and west into Mississippi Sound. Dauphin Island Bridge across the mouth of Dauphin Island Bay has a fixed span with a clearance of 25 feet. An overhead power cable west of the bridge has a clearance of 44 feet.

(163) **Heron Bay** is a shallow bay used mainly by skiff-size crabbing and oyster boats; local knowledge is advised.

(164) **Heron Bay Cutoff**, locally known as **The Cutoff**, about 1.8 miles north of Cedar Point, is a pass joining Heron Bay with Mobile Bay. Tidal currents of considerable velocity run through this pass, which is used only by small boats. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book. A fixed highway bridge over the pass has a clearance of 16 feet.

(165)

ENCs - US5AL1AM, US4AL11M, US5AL11M, US5MS21M
Charts - 11376, 11374

(166) **West Fowl River** enters **Fowl River Bay** about 4 miles northwest of Cedar Point. It extends northeast along the west side of **Mon Louis Island**, separating it from the mainland, and is joined to East Fowl River by a channel reported to be navigable by craft drawing about 2 feet or less. State Route 188 highway bridge, about 2 miles above the mouth, has a 30-foot fixed span with a clearance of 25 feet. An overhead power cable close southwest of the bridge has a clearance of 33 feet. An overhead power cable with a reported clearance of about 30 feet crosses the channel connecting with East Fowl River at about 30°23'53"N., 88°08'39"W. The entrance to the river from Mississippi Sound is marked by private daybeacons from east of Cat Island to just below the highway bridge. A small marina on the east bank of the river about 0.5 mile below the highway bridge can provide berths with water and electricity, gasoline, diesel fuel, ice, a launching ramp, limited marine supplies and engine repairs.

(167) **Coden** is a small fishing village on **Bayou Coden** on the north shore of **Portersville Bay**, northeast of Isle aux Herbes. A dredged channel leads from Bayou La Batre channel through Portersville Bay to the mouth of Bayou Coden, thence north to the State Route 188 highway bridge about 0.5 mile above the mouth of the bayou. A turning basin is on the west side of the channel about 500 feet below the bridge. State Route 188 fixed highway bridge has a 35-foot span with a clearance of 15 feet. There are seafood packing plants and several commercial shipyards that specialize in the construction of steel tugs and supply vessels.

(168)

ENCs - US4MS12M, US5MS21M
Charts - 11373, 11374

(169) A dredged channel leads from deep water in Mississippi Sound through **Bayou La Batre** to a turning basin about 0.5 mile below State Route 188 highway bridge at the town of **Bayou La Batre**, thence to the bridge.

(177)

Pascagoula Harbor (east) and Bayou Casotte, Mississippi
National Oceanic and Atmospheric Administration (2013)

The channel is marked by buoys, lights and daybeacons. State Route 188 highway bridge has a vertical lift span with clearances of 6½ feet down and 73 feet up. (See **33 CFR 117.1** through **117.59** and **117.103**, Chapter 2, for drawbridge regulations.) An overhead power cable at the bridge has a clearance of 60 feet.

(170) Shrimp, fishing and party-boat fleets operate out of Bayou La Batre. The town has several seafood packing plants and canneries. Several boatyards on the bayou build commercial steel and wooden vessels up to about 115 feet in length. Machine shop facilities are also available.

(171)

Small-craft facilities

(172) There are several small-craft facilities on Bayou La Batre; most are along the east side.

(173) The Alabama-Mississippi boundary is about 6.5 miles west of Bayou La Batre.

(174) **Petit Bois Pass**, an entrance from the Gulf between Dauphin Island and **Petit Bois Island**, is used primarily by fishing vessels with local knowledge drawing about 6 feet or less. The pass is no longer maintained and subject to frequent changes; passage can generally be made by following the deep green water during calm weather and by avoiding the breakers during rough weather. A lighted buoy is at the north end of the pass. The chart and knowledge of local conditions are the best guides.

(175)

ENCs - US5MS22M, US5MS21M, US4MS12M
Charts - 11375, 11374, 11373

(176) **Pascagoula Harbor**, one of the important deepwater ports on the Gulf Coast, is on Mississippi Sound about 9 miles north of **Horn Island Pass**. By water, it is 72 miles west of Mobile and 51 miles east of Gulfport. The facilities in the port area include a cold storage facility, shipyards and other industries at the mouth of Pascagoula River and an industrial area centered around Bayou Casotte, about 3 miles east of Pascagoula River.

(179) **Pascagoula**, at the mouth of **Pascagoula River**, is a city with many large industries in shipbuilding and ship repair, manufacture of paper products, textiles, containers, seafood packing and processing, oil refining, fertilizer and chemicals. A hospital is in the city. Waterborne traffic in addition to those mentioned above is in petroleum products, crude oil, sand and gravel, liquid sulphur, ores and logs.

(180)

Prominent features

(181) The refinery flares, east of Bayou Casotte, are very prominent from offshore at night. At the north end of Bayou Casotte, a 140-foot gypsum pile is prominent. The cranes of the shipyard and the twin tanks in Pascagoula

(178)

are prominent from the sound. The range light towers on the west end of Petit Bois Island, the cracking towers and tanks at the oil refinery east of Bayou Casotte, and the towers, tanks, and elevators of the fertilizer plant on the east bank of Bayou Casotte are also prominent.

(182) **Horn Island Pass Lighted Buoy HI** (30°08'30"N., 88°34'40"W.) marks the approach to Horn Island Pass.

(183)

Shipping Safety Fairways

(184) Vessels should approach Horn Island Pass and Pascagoula Harbor through the prescribed Safety Fairways. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(185)

COLREGS Demarcation Lines

(186) The lines established for Horn Island Pass are described in **33 CFR 80.815**, chapter 2.

(187)

Channels

(188) A dredged entrance channel leads north across the bar at **Horn Island Pass** and through Mississippi Sound. The channel divides about 4 miles above the pass into channels leading north towards **Bayou Casotte** and northwest to the Port of Pascagoula at the mouth of the Pascagoula River. (See Notice to Mariners and the latest editions of the charts for controlling depths.) The channels are well marked by lights, lighted buoys and lighted ranges. Some of the inner ranges are often obscured by cranes and floodlights.

(189) The Coast Guard advises vessels exercise particular caution where the channel intersects the Intracoastal Waterway, about 2.4 miles above the west end of Petit Bois Island near Lighted Buoys 27 and 29. Situations resulting in collisions and groundings are reported here by both shallow and deep-draft vessels. The Coast Guard has requested vessels make a **SECURITE** call on VHF-FM channel 13 prior to crossing the Intracoastal Waterway, particularly during periods of restricted visibility.

(190) Pascagoula River channel above Pascagoula and Escatawpa River channel are discussed later in this chapter.

(191)

Anchorages

(192) Deep-draft vessels may anchor 1 to 2 miles south or southeast of the sea buoy, weather permitting. Anchorage for vessels up to 15-foot draft is available in Mississippi Sound east of the channel.

(193) **Explosives anchorages** are north and south of the west end of Petit Bois Island. (See **33 CFR 110.1** and **110.194b**, chapter 2, for limits and regulations.)

(194)

Caution

(195) Petit Bois Island and Horn Island are poor radar targets when approaching Pascagoula Harbor from

seaward. Caution should be exercised when making landfall at night and during poor visibility.

(196)

Dangers

(197) Spoil areas are along the sides of the dredged channels leading to Pascagoula. Vessels should not enter the channel before the pilot boards, especially light vessels during periods of strong winds and adverse weather.

(198)

Currents

(199) In Horn Island Pass, the tidal current is reported to flood north and ebbs south averaging 1.2 knots at strength. In the dredged cut across the bar, the ebb and flood follow the direction of the cut. Winds greatly affect the velocity and direction of the currents, as well as the rise and fall of the tides. It is reported that strong east winds and seas create strong currents along the shore. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(200)

Weather

(201) Pascagoula is in a low-lying area heavily wooded with pines and live oaks. Its climate is characterized by warm, humid summers and relatively mild winters. This is reflected by the temperatures that climb to 90°F or more on about 70 summer days, while falling below 32°F on only about 15 days each winter. Precipitation is frequent year round, but most likely from July through September. This is due, in part, to thunderstorms, which occur on about 9 to 16 days per month in June, July and August. Strong winds, which can occur in thunderstorms or tropical cyclones, are most frequent from November through April when winter storms and cold fronts are prevalent. Gales are unlikely, but sustained winds of 17 to 33 knots occur 3 to 5 percent of the time. Poor visibilities are most likely during this same period and fall below 0.5 mile on 3 to 8 days per month. The tropical cyclone threat, which is rare in May and November, gradually increases through June, July and August, reaching a peak in September and then falling off in October. During hurricane Katrina in August 2005, the Gulf coast was battered by wind gusts up to 175 mph along with severe flooding. During hurricane Camille in August 1969, the Northrup Grumman Ingalls (formerly Ingalls Shipbuilding Corporation) recorded a peak gust of 181 mph, while storm tides in the area rose to 11.2 feet above mean sea level. During Frederic in September 1979, Pascagoula was battered by gusts of 127 mph, 11 inches of rain and 6-foot storm tides.

(202)

Pilotage, Pascagoula

(203) Pilotage is compulsory for all foreign vessels and all U.S. vessels over 250 tons under register in foreign trade. Pilotage is optional for U.S. coastwise vessels that have on board a pilot licensed by the federal government. Pilotage is available from Pascagoula Bar Pilots' Association, 3309 Frederick Street, Suite 3, Pascagoula, MS 39567, telephone 228–762–1151, FAX 228–762–0660. Pilots board vessels about 1 mile south to southeast of Horn Island Pass Lighted Whistle Buoy HI, day or night. Shoaling in certain areas of the channel restricts movement of larger vessels to daylight hours only, and the narrowness of the channels limits ocean traffic to one way at all times.

(204) There are three pilot boats, 55 feet long M/V "Singing River Island" and 39 feet long M/V "Horn Island" and 38 feet long M/V "Round Island". All pilot boats have unpainted aluminum hulls with PILOT in black lettering. The pilot station monitors VHF-FM channels 74 and 16 and the pilots work harbor traffic on VHF-FM channels 13 and 16 while transiting the channel. Vessels to be boarded should contact the pilot boat for vessel speed and boarding side. The pilot ladder should be rigged 2 meters above water for "Singing River Island" and 1 meter above water for "Horn Island" and "Round Island". Pilots can be arranged for by telephone (228–762–1151), VHF-FM channel 16 or through ships' agents. A minimum of 2 hours advance notice is requested.

(205)

Towage

(206) Tugs up to 6,000 hp are available at Pascagoula. Full shipyard repair services and a 600-ton marine travel lift are also available. Arrangements should be made in advance through the ship's agent.

(207)

Quarantine, customs, immigration and agricultural quarantine

(208) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(209) Quarantine laws are enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(210) The Singing River Hospital, which is operated by Jackson County, is at Pascagoula.

(211) Pascagoula is a **customs port of entry.**

(212)

Coast Guard

(213) **Pascagoula Coast Guard Station** is on the north side of Singing River Island at the entrance to the Pascagoula River.

(214)

Harbor regulations

(215) The Port of Pascagoula is under the control of the Jackson County Port Authority, which is responsible jointly with the Jackson County Board of Supervisors for the industrial development of the port. The Jackson County Port Authority through its **Port Director** is responsible for port and harbor improvement, harbor management and regulation enforcement. The office of the Harbormaster assigns berths; telephone 228–762–4041.

(224)

Facilities at the Port of Pascagoula, Mississippi

Name	Location	Berthin Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Facilities on Pascagoula River, west side						
Jackson County Port Authority, Terminal A Wharf	30°21'40"N., 88°33'58"W.	500	38	10	Receipt and shipment of conventional general cargo, lumber, wood pulp and line board	Jackson County Port Authority
Jackson County Port Authority, Terminal B Wharf	30°21'46"N., 88°33'58"W.	544	38	10½	Receipt and shipment of conventional general cargo, lumber, wood pulp and lineboard	Jackson County Port Authority
Jackson County Port Authority Terminal C Wharf	30°21'52"N., 88°34'00"W.	718	38	13	Shipment of general cargo lumber ETC	Jackson County Port Authority
Jackson County Port Authority Terminal D Wharf	30°21'54"N., 88°34'03"W.	732	38	13	Receipt and shipment of conventional and roll-on/roll-off general cargo	Jackson County Port Authority
Facility on Pascagoula River, east side:						
National Marine Fisheries Service, Pascagoula Wharf	30°21'59"N., 88°33'46"W.	535	20	9	Mooring oceanographic research vessels	U.S. Government and Department of Commerce, NOAA, NMFS
Facilities on Bayou Casotte						
Chevron Texaco Refinery, Pascagoula Refinery, Berth No. 6	30°20'05"N., 88°30'37"W.	260	42	15	Receipt of crude oil and naphtha	Chevron Texaco Refinery
Chevron Texaco Refinery, Pascagoula Refinery, Berth No. 7	30°19'56"N., 88°30'48"W.	765	42	15	Receipt of crude oil and coker feed	Chevron Texaco Refinery
Chevron Texaco Refinery, Pascagoula Refinery Wharf No. 1 Berths 1-5	30°20'27"N., 88°30'30"W.	1,433	38	12	Receipt and shipment of liquified petroleum gas, methanol, clean oil, chemicals and asphalt	Chevron Texaco Refinery
Jackson County Port Authority, Terminals G and H	30°20'42"N., 88°30'27"W.	516	38	12	Receipt and shipment of conventional general cargo and miscellaneous dry bulk materials	Jackson County Port Authority
Jackson County Port Authority, Terminals E and F	30°20'48"N., 88°30'22"W.	737	38	12	Receipt and shipment of conventional general cargo and miscellaneous dry bulk materials	Jackson County Port Authority and First Chemical Corp.

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

(216)

Speed limit

(217) No oceangoing vessel shall proceed in excess of 5 mph in Pascagoula River or Bayou Casotte.

(218)

Bridges

(219) No bridges cross the channel from the Gulf to the municipal wharf. The CSX railroad bridge crossing the Pascagoula River about 1.5 miles above the mouth has a bascule span with a clearance of 8 feet. The bridgetender monitors VHF-FM channel 13; call sign KQ-7197. U.S. Route 90 highway bridge 0.2 mile above the railroad bridge has a fixed span with a clearance of 80 feet.

(220) Overhead power cables 1.5 miles and 2.6 miles above the mouth of the river have clearances of 68 feet and 80 feet, respectively.

(221)

Wharves

(222) The **Port of Pascagoula**, which includes the lower 5.9 miles of the Pascagoula River, the lower 5.2 miles of the Escatawpa (Dog) River and Bayou Casotte, has more than 60 piers, wharves and docks. The principal facilities are on both sides of the Pascagoula River and at the Bayou Casotte. General cargo piers operated by the Jackson County Port Authority are on the west side of the Pascagoula River and on the east side of Bayou Casotte. The other major deep-draft facilities are privately operated by petroleum, chemical and shipbuilding/repair companies. Only the deep-draft facilities are listed in the facilities table for Pascagoula. All the piers described have direct highway connections, and most have railroad connections. Water connections are available at most of the piers, and shore power is available at a few of the wharves described.

(223) General cargo at the port is usually handled by ship's tackle; special handling equipment, if available, is mentioned in the description of the particular facility. Floating cranes to 50 tons and mobile cranes to 150 tons are normally available. Cranes to 400 tons may be obtained by special arrangement.

(225)

Supplies

(226) Marine supplies of all kinds are available in Pascagoula. Bunker fuel, diesel oil and lubricants are available. Large vessels are bunkered at their berths by barge. Water is available at most of the berths.

(227)

Repairs

(228) Ingalls Shipbuilding is engaged primarily in new construction and major overhauls. Their facilities are on the east and west sides of Pascagoula River just above the mouth and include shipbuilding and launching ways, outfitting piers and electrical, electronic, sheet metal, hull, pipe and machine shops. The shipyard's floating drydock on the west side of the river has a docking capacity of 70,000 long tons with a depth of 41 feet over the deck. The west bank also supports a deep water 400-foot by 1,300-foot launch pit with a depth of approximately 74 feet. The shipyard also supports seven outfitting berths with crane capacities of up to 300 tons.

(229) Several other shipbuilding and repair yards are in Pascagoula where numerous tugs, barges and offshore vessels are built. Signal International operates two yards and Halter Marine concentrates operations at one yard at the Jackson County Port Authority. Providing multiple cranes with lifting capacities to 550 tons and service to semi-submersible and jack-up oil rigs as well as a vast assortment of ships and boats. There are other independently operated repair yards, one of which is on the south side of Krebs Lake. A floating drydock at the yard can handle vessels to 190 feet long and 45 feet wide, has a depth of 12 feet over the keel blocks and has a lifting capacity of 800 tons. A 100-ton marine railway that can handle most vessels to about 100 feet long and a 60-ton mobile hoist are at the yard. Other yards have marine lifts and facilities with marine ways for handling vessels and barges. Machine shops are available. Several of the smaller yards build wooden and steel vessels up to 140 feet and barges up to 250 feet.

(230)

Communications

(231) The port is served by freight service of Class I and Class II railroads that connect with a Class II railroad at **Evanston** about 35 miles north of the city. Trent Lott International Airport, which provides charter or private aircraft service but no scheduled airline services, is about 2 miles northeast of the city. Major bus lines and several motor freight lines serve the city.

(232)

Small-craft facilities

(233) There is a municipal boat basin with berths for small craft up to 40 feet at the head of Lake Yazoo, which is entered through a channel on the east side of the river entrance. In 1983, a reported depth of 5½ feet could be carried to the basin. There are no services. An unlighted buoy marks the entrance. There are several marinas, service wharves and boatyards along the Pascagoula River, above and below the bridges at Pascagoula. Berths, electricity, gasoline, diesel fuel, water, ice, marine supplies and launching ramps are available. Hull, engine and electronic repairs can be made, and dry storage is available.

(234) A dredged channel in **Pascagoula (Singing) River** leads from the deep-draft turning basin just below the CSX railroad bridge at Pascagoula to a junction with **Escatawpa (Dog) River**, thence to the State Route 613 highway bridge crossing the river 0.7 mile above the mouth, thence to a commercial, industrial park about 3.5 miles above the State Route 613 bridge. The channel is marked by lights and daybeacons.

(235) Pascagoula River is navigable to the confluence of **Leaf River** and **Chickasawhay River** about 64 miles above its junction with Escatawpa River. In 1982, the reported controlling depth was 12 feet to **Caswell Lake** about 18 miles above the junction with Escatawpa River, thence 2 feet to the confluence of the Leaf and Chickasawhay Rivers.

(236) A privately dredged channel leads from the dredged channel in Pascagoula River about 0.3 mile north of U.S. Route 90 highway bridge to a shipyard pier at the southwest corner of **Krebs Lake**. The channel is marked by buoys and a daybeacon.

(237) **Moss Point** is a city on the Escatawpa River about 2 miles above the junction with the Pascagoula River. There are industries in chemicals, rubber, paper products, shipbuilding, fertilizer, seafood processing and lumber. State Route 613 highway bridge crossing the river about 0.7 mile above the mouth has a fixed span with a clearance of 77 feet. Above the bridge are shipyards that build vessels up to 185 feet and several menhaden processing plants. State Route 63 fixed highway bridge with a clearance of 73 feet crosses the river about 2.4 miles above the mouth. About 2.6 miles above the mouth, the Mississippi Export railroad bridge has a swing span with a clearance of 5 feet. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.) Overhead power cables crossing at the bridge have clearances of 80 feet.

(238) About 0.5 mile north of the highway bridge at Pascagoula, a privately dredged canal, with a reported controlling depth of about 6 feet in 1982, leads from Pascagoula River through **Marsh Lake** to West Pascagoula River. The canal is unmarked.

(239) About 2.5 miles north of the U.S. Route 90 highway bridge at Pascagoula, a cutoff leads from Pascagoula River through **Bayou Chemise** and **West Pascagoula River** to Mississippi Sound. It is marked by a daybeacon at its east entrance and a daybeacon in Bayou Chemise. The controlling depth is about 7 feet. An overhead power cable crossing Bayou Chemise has a clearance of 80 feet. West Pascagoula River is crossed about 0.8 mile above the mouth by a CSX bridge with a fixed span with a clearance of 7 feet, and about 1 mile from the mouth by U.S. Route 90 highway bridge with a fixed span with a clearance of 13 feet. Overhead power cables just above and 1.1 miles above the highway bridge have clearances of 33 and 80 feet, respectively.

(240) In 1986, unmarked pilings extending 2 feet above water were reported to be at the mouth of West Pascagoula River, in about 30°21'18"N., 88°36'06"W.

(241) **Mary Walker Bayou** enters West Pascagoula River about 0.2 mile north of the highway bridge. Several marinas are along the south side of the bayou and on the west side of West Pascagoula River.

(242)

ENCs - US5MS11M, US4MS12M
Charts - 11372, 11373

(243) **Dog Keys Pass** forms a connection between Mississippi Sound and the Gulf at the west end of Horn Island. The pass has a depth of about 13 feet over the bar and is used primarily by local fishing craft. Most vessels entering from the Gulf prefer to use Ship or Horn Island Pass over Dog Keys Pass. The pass is marked by lighted and unlighted buoys.

(244)

COLREGS Demarcation Lines

(245) The lines established for Dog Keys Pass are described in **33 CFR 80.815**, chapter 2.

(246) **Little Dog Keys Pass**, about 2.5 miles west of Dog Keys Pass, is used by sport fishermen and some fishing craft. Depths of 14 feet or more were reported available in the pass, and it was often used in preference to Dog Keys Pass.

(247) **Biloxi** is a city on a peninsula jutting east into Mississippi Sound about 40 miles west of Mobile Bay and 11 miles east of Gulfport. It is an important sport fishing center and resort with a large commercial seafood industry. Hundreds of shrimp and oyster boats operate from the port in the season. Numerous hotels and casinos are along the east part of the waterfront on the sound and in Back Bay of Biloxi. Keesler Air Force Base and a large veterans hospital are at the west end of the city. The waterfront on the sound is protected by **Deer Island**. The port is accessible from the Gulf through Dog Keys Pass and Little Dog Keys Pass and from the Intracoastal Waterway, which passes through Mississippi Sound about 6 miles south of the city. (See chapter 12 for Intracoastal Waterway.) Principal shipments through the port are seafood, coal, building materials, wood products, petroleum products, machinery, iron and steel.

(248)

Prominent features

(249) The tank and radio tower at Ocean Springs, five tanks at **Keesler Field**, the Biloxi Lighthouse and several large hotels in and west of Biloxi are prominent from offshore. At night the aviation light at Keesler Field is conspicuous. **Biloxi Light** (30°23'42"N., 88°54'06"W.), 61 feet above the water, is shown from a 53-foot white conical tower with black balustrade on the shore in the southwest part of Biloxi proper.

(250)

Shipping safety fairways

(251) Vessels bound for Biloxi via Dog Keys Pass should approach the pass through the Biloxi Safety Fairway. (See **33 CFR 166.100** through **166.200**, Chapter 2.)

(252)

Channels

(253) Two channels connect Mississippi Sound and the Biloxi waterfront and Biloxi Bay. **Biloxi East Channel**, a dredged channel, leads from a point in Mississippi Sound 2.5 miles north of Dog Keys Pass, through Biloxi Bay east of Deer Island, to U.S. Route 90 highway bridge. The channel is marked by lights and daybeacons. **Biloxi Channel**, a dredged channel, leads north from Mississippi Sound west of Deer Island, thence east along the south Biloxi waterfront to a junction with Biloxi East Channel at a point about 1 mile southeast of U.S. Route 90 highway bridge. The channel is marked by lights and daybeacons.

(254) A privately dredged side channel leads northeast from Biloxi East Channel, about 1 mile southeast of U.S. Route 90 highway bridge, to a small-craft basin at **Ocean Springs**. In 1984, the controlling depth in the entrance channel was 7 feet. The channel is marked by a light.

(255) A dredged channel leads from the junction with Biloxi East Channel at the U.S. Route 90 highway bridge through **Back Bay of Biloxi** and **Big Lake** to the entrance to Industrial Seaway. The channel is marked by lights and daybeacons.

(256) A channel leads north from Biloxi East Channel, about 0.5 mile above the U.S. Route 90 highway bridge, to the entrance of **Old Fort Bayou**, just north of **Fort Point**. The natural channel in the bayou is marked by private daybeacons for about 1.2 miles above Fort Point.

(257) A dredged branch channel leads southwest from the dredged channel in Back Bay of Biloxi, about 0.2 mile above U.S. Route 90 highway bridge, to a turning basin in **Ott Bayou**; daybeacons mark the channel. The East Harrison County Canal Channel, an unmarked dredged channel 0.8 mile above the U.S. Route 90 highway bridge, leads south from the channel to a turning basin.

(258)

Anchorages

(259) Small craft can anchor off the waterfront north of Deer Island or in Back Bay of Biloxi where there is excellent anchorage in depths of 5 to 15 feet, soft bottom, and good protection from all directions. A general anchorage for unmanned barges and scows is in Mississippi Sound south of Biloxi. (See **33 CFR 110.1** and **110.194a**, chapter 2, for limits and regulations.)

(260)

Dangers

(261) A visible wreck was reported about 1.5 miles southeast of Biloxi Channel Light 2, in 30°20.2'N., 88°53.6'W.

(262)

Weather

(263) Biloxi winters are mild and moist, while summers are hot and humid. The Gulf of Mexico is the primary moisture source and moderating influence. Severe weather is usually in the form of tropical cyclones or thunderstorms with damaging winds. Large hail and

(267)

Structures across Back Bay of Biloxi and Tributaries

Name•Description•Type	Location	Horizontal Clearance (feet)	Vertical Clearance at Mean High Water (feet)	Information
Back Bay of Biloxi				
US Route 90 bridge (fixed)	30°24'20"N., 88°50'45"W.	150	95	Note 2
CSX Railroad bridge (swing)	30°24'31"N., 88°51'10"W.	132	14	Notes 3 and 4
Overhead power cable	30°24'29"N., 88°51'03"W.			Submerged at the draw of railroad bridge. Reported missing in 1987.
Overhead power cable	30°25'15"N., 88°53'25"W.	97		
Interstate 110 bridge (bascule)	30°25'21"N., 88°53'40"W.	132	60 (center)	Note 1
Overhead power cable	30°25'24"N., 88°56'25"W.	40		84 feet across the main channel
Popps Ferry Road bridge (bascule)	30°24'50"N., 88°58'35"W.	180	25	Notes 1 and 5
Industrial Seaway				
Overhead power cables	30°25'21"N., 89°01'23"W.	81		
Overhead power cable	30°25'27"N., 89°01'49"W.	97		
Wilkes Bridge (bascule)	30°25'29"N., 89°01'51"W.	132	35	
Overhead power cable	30°25'52"N., 89°05'00"W.	80		
Old Fort Bayou				
Washington Avenue bridge (bascule)	30°25'09"N., 88°49'40"W.	85	20	25 feet at center
Overhead cable	30°25'10"N., 88°49'42"W.	73		
Bernard Bayou				
Overhead power cable	30°24'44"N., 89°00'42"W.	80		
Highway Bridge (fixed)	30°24'19"N., 89°01'40"W.	80	28	

Note 1 – See **33 CFR 117.1** through **117.49** and **117.675**, chapter 2, for drawbridge regulations.
Note 2 – The swing span of a former highway bridge just above the US Route 90 bridge has been removed; approach structures remain and are used for public recreation.
Note 3 – The bridgetender monitors VHF-FM channel 16 and works on channel 13; call sign KQ-7197
Note 4 – The clearances listed are for the west side of the swing span. The east side is not dredged and is obstructed by piles awash at low water.
Note 5 – The bridgetender monitors VHF-FM channel 16; call sign WXZ-590

tornado outbreaks are usually confined to the interior, although there are occasional reports of waterspouts and tornadoes throughout the year. During winter, freezing precipitation and temperatures are much more frequent inland than at Biloxi.

(264) During winter, there are usually three types of weather problems that affect navigation in this area. Low-pressure systems sometimes develop off Texas and move northeast across the area. These systems can bring drizzle, fog and thunderstorms. Polar outbreaks usually bring cool, dry weather. The most impressive cold front is one that accompanies continental polar air. It is rare, except in a decayed state, but if active can bring extremely cold temperatures and snow. Usually there is little weather associated with it except for gusty winds. Most of the cold fronts are of the maritime variety that push in from west accompanied by widespread precipitation and often squall lines with thunderstorms. Advection fog creates a third winter weather problem in the Biloxi area. It is caused by the coastal waters being cooled by cold river discharges. When warm air flows across these waters a fog blanket forms. Visibilities may improve somewhat by midday, with fog returning before evening. A less common problem is the formation of a fog bank if a south flow persists. These banks can fluctuate between the shore and offshore for a period of several days.

(265) From late spring through early fall, the Bermuda High brings warm, moist air to this coast. This air mass is responsible for the thunderstorms that develop almost daily. They usually form inland during the day and, if conditions are right, move toward the coast during the afternoon or early evening, sometimes bringing winds gusting to 30 knots or more. If the air mass is unstable, nocturnal thunderstorms may develop offshore after midnight and intensify to a peak just before sunrise. The most severe thunderstorms to affect Biloxi are those that move southwest from inland areas northeast of the city. They often form late in the afternoon and bring strong winds.

(266) Tropical cyclones are a threat from June into November. Usually one passes within 500 miles of Biloxi each year, on average, but a direct hit is likely once every 10 years, on average. In September 1979, hurricane Frederic generated sustained winds of 61 mph and gusts to 98 mph at Biloxi. During Camille in August 1969, storm tides between Biloxi and Gulfport reached 20 feet in some spots.

(268)

Pilotage, Biloxi

(269) See Pilotage, Gulfport, indexed as such, later this chapter.

(270)

Towage

(271) The nearest tugs are based at Gulfport.

(272)

Quarantine, customs, immigration and agricultural quarantine

(273) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(274) Quarantine laws are enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(275) The city has three hospitals and numerous clinics.

(276)

Harbor regulations

(277) The harbor is controlled by the Biloxi Port Commission, headed by a Port Director, who establishes regulations. A **harbormaster** enforces the regulations and assigns berths at the small-craft harbor.

(278)

Wharves

(279) The south waterfront has many docks. Some of these are private facilities for fishing companies, but several are open to the public. The Biloxi small-craft harbor is a basin protected by breakwaters and located north of the west end of Deer Island. Private lights mark the entrance to the harbor. In 1982, the reported controlling depth in the basin and the channel leading to it was 8 feet.

(280)

Supplies

(281) Gasoline, diesel fuel, water, ice, provisions and marine supplies are available at Biloxi.

(282)

Repairs

(283) Several shipyards are located on the waterfront and in Back Bay of Biloxi. A yard on Back Bay of Biloxi, about 0.4 mile east of Rhodes Point, has a 60-ton mobile hoist. Boats up to 140 feet are built at Biloxi.

(284)

Small-craft facilities

(285) Berths, electricity, gasoline, diesel fuel, water, ice, launching ramps and marine supplies are available, and hull, engine and electronic repairs can be made at small-craft facilities at Biloxi proper, Ocean Springs and Back Bay of Biloxi.

(286)

Communications

(287) The CSX Railroad has freight service to the city. U.S. Route 90 passes through the city, and State Route 15 leads north to the central part of the state. Interstate Route 110 serves Biloxi by joining U.S. Route 90 to Interstate Route 10. Scheduled airline service is available at Gulfport-Biloxi International Airport, about 8 miles west of the city. Bus lines and several motor freight lines serve the city.

(288) **Biloxi River** empties into the northeast side of Big Lake and is reported navigable for a draft of 6 feet for 6 miles and for a draft of 3 feet for an additional 5 miles.

(289) **Tchoutacabouffa River** empties into Biloxi River about 1 mile north of Big Lake from the northeast. The river is reported navigable for drafts up to 5 feet to **New Bridge**, about 7.2 miles above the mouth, and for drafts of 3 feet for an additional 6 miles.

(290) **Bernard Bayou** empties into Big Lake from the west. A dredged channel leads from the entrance at Shallow Point in Big Lake to a junction with Industrial Seaway at Gulfport Lake, north-northeast of Gulfport-Biloxi Regional Airport. Overhead power cables cross the bayou about 0.5 mile above the mouth and have a clearance of 80 feet. The highway bridge at Handsboro has a fixed span with a clearance of 28 feet.

(291) Small-craft facilities about 1.5 and 1.8 miles above the mouth of the bayou can provide berths with electricity, gasoline, water, ice, a launching ramp, open and dry storage, pump-out station, marine supplies and complete engine and hull repairs. A 110-foot marine railway and a 70-ton fixed lift are also available.

(292) **Industrial Seaway**, a canal privately dredged by the Harrison County Development Commission, affords access to industrial areas along the seaway and Bernard Bayou north of Gulfport. The canal leads from a junction with the dredged channel section at the west end of Big Lake through a landcut from Shallow Point on the north side of the entrance to Bernard Bayou for about 2.5 miles, thence through Bernard Bayou and Gulfport Lake for about another 2 miles to a turning basin in the vicinity of Three Rivers Road. The channel is marked by lights. Plans provide for the extension of the seaway farther west to Wolf River and Bay St. Louis at a later date. Pilots for the seaway are available at Gulfport.

(293) About 1.1 miles west of Shallow Point, overhead power cables crossing the seaway have a minimum clearance of 81 feet. An overhead power cable about 4.5 miles west of Shallow Point has a clearance of 80 feet.

(294) **Beauvoir**, part of the city of Biloxi about 6 miles west of Biloxi Bay, has a large domed convention center and a tank that are prominent. A privately dredged channel leads north from Mississippi Sound to a yacht basin in front of the hotel. This area has suffered significant hurricane damage; local knowledge is advised.

(295) Mariners are advised to use caution while transiting between Biloxi Channel and Beauvoir due to various wrecks, oyster reefs and possible shoaling.

(296)

ENCs - US4MS12M, US5MS11M
Charts - 11373, 11372

(297) **Ship Island** Pass lies immediately west of **Ship Island**, about 50 miles west of Mobile Bay entrance and 11 miles north of the northernmost of the Chandeleur Islands. The pass is approached from the Gulf through

(299)

a dredged channel about 6 miles long and is marked by lighted buoys.

(298) **Gulfport**, the seat of Harrison County, is a seaport and tourist center. It is about midway between Mobile and New Orleans by rail, and on U.S. Route 49 and 90 highways. Fishing, steel products, construction of barges and heavy cranes, chemicals, canning, glass making and aluminum are some of the city's important industries. Waterborne commerce includes frozen meats and poultry, bananas, shell, sisal and jute, fertilizers, chemicals, seafood, flour, woodpulp and products, lumber, general and containerized cargo and scrap iron. A cotton compress is at Gulfport.

(300) **Gulfport Harbor Basin** is a state-owned and controlled harbor about 10 miles northwest of Ship Island Pass. The rectangular deepwater ship basin is between two moles at the head of Gulfport Channel.

(301)

Prominent features

(302) On a clear day vessels from the east, bound for Ship Island Pass, usually sight the light on a skeleton tower and **Fort Massachusetts**, a semicircular brick fort with sodded parapet, located near the west end of Ship Island.

(303) On the approach to Gulfport, the three 270-foot tall gantry cranes and 150-foot tall silos at the end of the port's western mole are the most conspicuous landmarks. Various tall buildings and a few water tanks in Gulfport are also visible. At night the occulting red lights on the tops of the three gantry cranes at the port and several radio towers can be seen from the sound. An aviation light is shown from a 62-foot tower at the municipal airport.

(304) **Ship Island Light** (30°12'45"N., 88°57'59"W.), 82 feet above the water, is shown from a skeleton tower on a concrete block. The light is on the same structure as Ship Island Range Rear Light.

(305)

Shipping Safety Fairways

(306) **Vessels should approach Ship Island Pass and Gulfport through the prescribed Safety Fairways**. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(307)

COLREGS Demarcation Lines

(308) The lines established for Ship Island Pass are described in **33 CFR 80.815**, chapter 2.

(309)

Channels

(310) **Ship Island Bar Channel** leads for 10 miles northwest from the Gulf in a dredged cut to Ship Island Pass; it is marked by lighted buoys. **Gulfport Ship Channel** leads 10 miles northwest through a dredged cut from the pass through Mississippi Sound to Gulfport Harbor Basin; it is marked by lighted ranges, lights and lighted and unlighted buoys. Federal project depths are 38 feet for Ship Island Bar Channel, 36 feet for Gulfport Ship Channel, and 32 to 36 feet for the Anchorage Basin.

For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.

(311) A dredged commercial small-craft harbor and entrance channel are just west of Gulfport Harbor Basin. The entrance channel leads northwest from Gulfport Ship Channel for about 1.7 miles to the small-craft harbor. The channel is marked by daybeacons, lights and an unlighted buoy.

(312)

Anchorages

(313) Large vessels can anchor outside the sound anywhere west of a line between the northern end of Chandeleur Islands and Ship Island Light and have rather smooth water. Deep-draft vessels generally anchor within a 2-mile radius of Gulfport Ship Channel Lighted Buoy GP in depths of about 36 feet.

(314) **Ship Island Harbor**, north of Ship Island, is one of the best natural harbors on the Gulf Coast and is easily accessible at all times for vessels with drafts up to 20 feet, but there is swinging room for only one large vessel. Depths in the harbor range from about 20 to 30 feet with a soft bottom.

(315)

Dangers

(316) Ship Island was cut into two parts by Hurricane Camille in August 1969. The water between the existing parts is shoal with depths of 2 to 5 feet.

(317) The shoal off the west end of Ship Island at **West Point** is moving west and is unmarked. Mariners should use caution if passing between the shoal and the edge of Gulfport entrance channel.

(318)

Currents

(319) Northeast to south winds raise the level of the water, and southwest to north winds lower the level. A continued norther makes a current on Ship Island Bar of as much as 3 knots. Current velocities up to 1.5 knots have been measured in Ship Island Pass during normal weather.

(320)

Weather

(321) Gulfport, located on Mississippi Sound, is sheltered somewhat from temperature extremes of winter and summer by these waters and the Gulf of Mexico. At the port, summer temperatures climb to 90°F or above on about 68 days, while winter readings fall to freezing or below on just 17 days, on average. The average annual temperature for Gulfport is 68.2°F with an average high of 77.3°F and an average low of 58.6°F. July is the warmest month within an average temperature of 82.3°F and January is the coolest with an average temperature of 51.9°F. The warmest temperature on record is 103°F recorded in July 1980 and the coolest temperature on record is 4°F recorded in January 1985. Each month from June through September has recorded temperatures of 100°F or greater while each month, November through March has recorded temperatures below freezing. Precipitation is frequent year round, but most likely during summer when showers and thunderstorms are numerous. Twenty-eight percent of the annual rainfall occurs during the summer months of June, July and August. The average annual precipitation at Gulfport is 63.77 inches. The wettest month is July, averaging 7.22 inches and October, the driest, averaging 2.92 inches. The wettest 24-hour period occurred in October 1967 when 10.7 inches accumulated. Extreme winds, both sustained and gusts, are most often associated with tropical cyclones and thunderstorms. However, extratropical cyclones and fronts produce a greater frequency of windspeeds in the 17- to 33-knot range (3 to 5 percent) from February through April. Visibilities are restricted mainly in precipitation and fog. Fog is most likely during winter and spring; visibilities fall below 0.5 mile on about 4 to 7 days per month from November through April.

(322) The hurricane season represents a serious threat to marine activities at Gulfport. Between 1998 and 2018, there have been nine tropical cyclones that have come within 60 miles of Gulfport. During the 21st century, through the 2018 hurricane season, tropical cyclone storm tides have exceeded 8 feet three times along this section of the coast; during Katrina, a 28-foot storm tide was produced. The hurricane season extends from late May through early November, in general, while September is the major threat month. Most storms approach Gulfport from southeast, south, and southwest. Gulfport Harbor is not considered a hurricane haven. There is an absence of sheltered facilities and anchorages for deep-draft vessels, and there is the danger of severe shoaling in the narrow Gulfport Channel. It is recommended that deep-draft vessels, if unable to leave the region entirely, anchor in the shallow waters adjacent to the sand barrier islands about 10 miles offshore. Shallow-draft vessels, if not removed from the water, should seek shelter in the Back Bay of Biloxi and the creeks, bayous and rivers leading inland.

(323)

Pilotage, Gulfport

(324) Pilotage is compulsory for all foreign vessels and U.S. vessels over 250 net registered tons under register in the foreign trade. Pilotage is optional for American vessels laden with coastwise cargo not destined for foreign ports. Pilotage is available from Gulfport Pilots Association, Inc., 2300 Twentieth Street, Gulfport MS 39501, 228–863–6559 (Administrative only), FAX 228–863–6952. The Association services vessels bound for or from the state Port at Gulfport via Gulfport Ship Channel; also small vessels transiting Biloxi Channel when requested. Pilots board vessels in the vicinity of Gulfport Ship Channel Lighted Buoy GP (30°07'10"N., 88°52'40"W.) to 2 miles south of the west end of Ship Island. Buoy GP is about 18 miles southeast of Gulfport Harbor or about 8 miles southeast of west end of Ship

Island. The aluminum hull pilot boats have a grey or white hull with white superstructure with PILOT clearly displayed in black letters on the superstructure. The pilot boat monitors VHF-FM channels 16 and 10; works on channel 10. For boarding, the pilots request that the pilot ladder be rigged 2 meters (about 6 feet) above the water on the lee side and dead slow speed. The Mississippi State Port Authority at Gulfport monitors VHF-FM channels 16 and 10 (voice call "KJC-768 State Port"), 24-hours; works on channel 10. Arrangements for pilots may be made through ships' agents. A 24-hour advanced notice of ETA is requested; then at minus 12 hours, then at minus 2 hours if practical; minimum initial request not less than minus 2 hours of ETD for an outbound ship, and not less than 4 hours of ETA for an inbound ship.

(325)

Local Pilotage Regulations, Gulfport

(326) The following regulations have been issued by the Mississippi State Port Authority at Gulfport.

(327) It shall be unlawful for any vessel of over 250 tons net registered tonnage to enter the harbor or passes leading thereto without being piloted and under the direction of a licensed pilot, and all such vessels shall be subject to compulsory pilotage, except American vessels laden with coastwise cargo not destined for foreign ports.

(328) Any vessel which by reason of its size or draft would be unable to leave the deep water channel to avoid collision with an outbound or inbound ocean-going vessel shall be subject to compulsory pilotage.

(329) All vessels transporting class A, B or C explosives or other dangerous cargoes shall be navigated under the direction of a licensed pilot. Vessels navigated under the direction of a pilot shall have preferential use of the Gulfport Harbor and Ship Channel.

(330) All vessels shall contact the Port Authority on VHF-FM channel 16 to obtain permission to navigate the Gulfport Harbor and Ship Channel. The Port Authority may at its discretion impose additional requirements in the event of severe weather or other extraordinary circumstances.

(331)

Towage

(332) A tug of 2,250 hp and a tug of 3,000 hp are based at Gulfport. They monitor VHF-FM channel 16, use channel 10 as a working frequency, and have portable radiotelephone equipment to communicate with the pilots. Arrangements for tugs are usually made in advance by ships' agents or through Gulfport Towing, 228–864–0171 or email Gulfport@enbisso.com. Vessels usually enter or leave under their own power and use tugs only for docking, undocking and shifting berths.

(333)

Quarantine, customs, immigration and agricultural quarantine

(334) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(335) **Quarantine** laws are enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) There are hospitals and clinics in Gulfport.

(336) Gulfport is a **customs port of entry**.

(337)

Coast Guard

(338) Coast Guard patrol boats moor on the west side of the Bert Jones Yacht Basin at Gulfport.

(339)

Harbor regulations

(340) Gulfport Harbor is administered and controlled by the Mississippi State Port Authority at Gulfport. The Port Director is in charge of all operations and assigns berths. Berthing arrangements can be made through the Director of Operations at 228-865-4318 or online at www.shipmspa.com. Mississippi State Port Authority (MSPA) line handlers are required for all vessel arrivals/departures; at least a 2-hour advance notice is required by contacting the radio operator on VHF-FM channels 16 or 10; or by telephone at 228-865-4323, 228-323-1539, 228-323-0299 or 228-323-0314.

(341)

Speed limit

(342) All craft passing other vessels, boats, barges, scows, etc., in motion, moored or anchored, shall slow down and take every precaution to avoid damage.

(343)

Wharves

(344) The **Port of Gulfport** is a container, bulk and break-bulk seaport. The facilities here encompass 300 acres (110 acres of open storage and 400,000 square feet of covered warehouse storage.) The open storage areas, used principally for dry container and refrigerated container storage, are on the North Harbor and West Pier. A specialized ramp for roll-on/roll-off shallow draft (drawing less than 20 feet) vessels, and one 100-ton mobile harbor crane and three ship-to-shore gantry cranes are available for handling cargo. The port facilities have rail/highway connections and water connections.

(345) **East Pier Terminal** has two warehouses equipped with a dry pipe sprinkler system and constructed of concrete and metal. Shed 50 has a total storage area of 230,000 square feet. Shed 53 has 60,240 square feet and is currently leased to McDermott.

(346)

East Pier Terminal Berths		
Berth 1	700 feet (length overall)	36 feet alongside
Berth 2	767 feet (length overall)	36 feet alongside
Berth 3	767 feet (length overall)	36 feet alongside

(347) **West Pier Terminal** has two warehouses: Shed 16 and the West Pier Terminal Warehouse; leased by Dole, Chiquita and Crowley.

(348)

West Pier Terminal Berths		
Berth 1	700 feet (length overall)	36 feet alongside
Berth 2	600 feet (length overall)	36 feet alongside
Berth 3	600 feet (length overall)	36 feet alongside
Berth 4	550 feet (length overall)	36 feet alongside
Berth 5	550 feet (length overall)	36 feet alongside
Berth 6	740 feet (length overall)	36 feet alongside
Berth 7/catwalk	1,100 feet (length overall)	36 feet alongside
RoRo Berth	767 feet (length overall)	about 20 feet alongside

(349)

Supplies

(350) Blended fuel is available by barge. Fuel oil is available at several commercial wharves by truck. Freshwater is piped to all berths. Marine supplies of all kinds are available.

(351)

Repairs

(352) Gulfport has no shipyard facilities. Above- and below-the-waterline repairs are available.

(353)

Small-craft facilities

(354) The Bert Jones Yacht Basin, in the yacht harbor close east of the Gulfport Harbor Basin, has facilities for yachts and party fishing vessels. Berths, electricity, gasoline, ice, water, pump out, launching ramps and marine supplies are available. In 1982, the reported controlling depth in the privately dredged channel to the basin was 7 feet. A channel **dockmaster** is on duty at the yacht basin 24 hours/day.

(355)

Communications

(356) Gulfport has regular steamer connections with Europe, South and Central America and Far East ports. Banana ships call frequently at the port. The port is served by a Class I railway. Bus and motor freight lines connect the city with all points. The Gulfport Municipal Airport, about 3 miles northeast of the port, has regular airline service.

(357)

ENC - US5MS11M
Chart - 11372

(358) **Cat Island Channel** and its extension **South Pass**, lying between Cat Island and Isle au Pitre, form the most west connection between the Gulf and Mississippi Sound. The marked channel has a depth of about 12 feet, but leads to lesser depths in the sound. The passage is little used, except by small local craft; the chart is the best guide. Cat Island is wooded nearly its whole length east and west. The east shore of the island extends in a south-southwest direction for 4.5 miles with Raccoon Spit off the northernmost point, and low and narrow South Spit and Phoenix Spit on the south. A light is off Phoenix Spit.

(359) **Isle au Pitre**, on the south side of Cat Island Channel, is low and marshy with scattered clumps of bushes.

(360) The Intracoastal Waterway leads through the shoals in the west part of Mississippi Sound about 2 miles northwest of Cat Island. (See chapter 12 for Intracoastal Waterway.)

(361) **Pass Marianne** is an alternate passage through the shoals extending across the west end of Mississippi Sound; natural depths are 7 to 18 feet. The pass is south of **Tail of the Square Handkerchief Shoal** and **Square Handkerchief Shoal** and is frequently used by tugs and barges. The channel is marked by lights and daybeacons. Caution should be exercised when navigating this channel as it is subject to change. In 1966, a depth of 4 feet was reported about 0.3 mile west-southwest of Merrill Shell Bank Light. **Grand Pass**, about 7 miles south of Merrill Shell Bank Light, connects Mississippi Sound with Oyster Bay.

(362) **Long Beach** is a resort city on Mississippi Sound about 2.5 miles west of Gulfport Harbor. There is some industry in commercial fishing and candy making.**Gulf Park College**, at the east end of the city, has a 1,000-foot pier. The buildings at the college and a white church near the waterfront are prominent. The Long Beach small-craft harbor, formed by a long mole and jetty west of the college pier, has berths with water and electricity, ice and launching ramps. The entrance to the small-craft harbor is marked by private lights and daybeacons. In 1982, the reported controlling depth in the channel to the basin was 6 feet. In 1987, a pile of rocks was reported obstructing the entrance to the harbor in about 30°20'31"N., 89°08'32"W. An unmarked visible wreck was about 1 mile southeast of the harbor entrance in about 30°20'12"N., 89°07'30"W. U.S. Route 90 highway passes through the city. Clinics and medical service are available. Buses serve the city.

(363) **Pass Christian** is a city and summer resort 8 miles west of Gulfport on the north shore of Mississippi Sound. A dredged entrance channel leads from Mississippi Sound to a harbor formed by two moles and protected from the south by two breakwaters extending from the moles. A light marks the seaward end of the east breakwater. The harbor entrance can be approached from the east or southwest; both approaches are marked by lights. Sunken wrecks are in the harbor approaches. A large white church just east of the harbor is prominent.

(364) Pass Christian Yacht Club is at the outer end of the east mole. Fishing vessels unload at the bulkhead of the City Wharf on the east mole. Berths, gasoline, diesel fuel, water, electricity, ice and launching ramps are available in the harbor. The **harbormaster** assigns berths in the harbor and has an office on the west mole.

(365) There is some industry in fishing and garment making. U.S. Route 90 highway passes through the city. Clinics and medical services are available. Buses serve the city.

(366) **Henderson Point** is at the west extremity of Pass Christian and on the east side of the entrance to St. Louis Bay. Just north of the point, and between the bridges over

the bay, is a small bayou that is connected to Mallini Bayou. A marina is on the north side of the entrance. In 2002, a reported depth of 3 feet could be carried to the marina. An obstruction covered about 3 feet was reported in about 30°18'46"N., 89°17'37"W.; caution is advised. Berths, electricity, gasoline, diesel fuel, water, ice, pump-out station, a launching ramp, dry storage and marine supplies are available at the marina. Engine repairs can be made. Above the marina the channel is crossed by several fixed highway bridges with a minimum width of 10 feet and clearance of 4 feet.

(367) In 1985, a sunken wreck was reported about 0.5 mile southeast of Henderson Point in about 30°17'42"N., 89°16'54"W.

(368) **St. Louis Bay** is an indentation in the north shore of Mississippi Sound, 11 miles west of Gulfport. Depths in the bay vary from 4 to 7 feet and decrease gradually toward the shore. The bottom is soft. An unmarked submerged wreck, covered 5 feet, is southeast of the entrance to the bay about 1.2 miles south of Henderson Point and about 0.4 mile north of Square Handkerchief Shoal. Two bridges cross the entrance to St. Louis Bay, the first, CSX bridge, has a swing span with a clearance of 13 feet through the west draw. The bridgetender monitors VHF-FM channel 16 and works on channel 13; call sign KUF-721. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.) And the second, the four-lane U.S. Route 90 highway bridge has a fixed span with a clearance of 85 feet.

(369) **Bayou Portage**, which empties into the east side of St. Louis Bay, is used by small craft as a harbor of refuge during minor storms. The Harrison County Development Commission has dredged a channel from the bay through Bayou Portage to a dredged slip that extends about 0.8 mile south-southeast to Pass Christian. Lights, buoys and daybeacons mark the channel. A bascule bridge about 2 miles above the mouth of the bayou has a clearance of 29 feet. An overhead power cable crossing just east of the bridge has a clearance of 48 feet. A marina on the north side of the bayou, across from the dredged slip, has berths, electricity, launching ramp, wet and dry storage, water and ice available.

(370) **Wolf River** empties into the east side of St. Louis Bay just above Bayou Portage. A dredged entrance channel leads north from a junction with Bayou Portage Channel for 1.6 miles to the mouth of the river. The channel is marked by a daybeacon, a light and a lighted buoy.

(371) **De Lisle**, a small village on **De Lisle Bayou** about 1.4 miles above the mouth of the Wolf River, has a fish camp at which berths and ice are available. A natural launching ramp and gasoline are available nearby. The reported controlling depth from the Wolf River to the yard was about 5½ feet in 1982; local knowledge is advised.

(372) The highway bridge over Wolf River, mile 1.3, near De Lisle has a fixed span with a clearance of 28 feet. Overhead power cables at the bridge have a least clearance of 73 feet. A fixed highway bridge about 6.8 miles above the river mouth has a clearance of 16 feet. An overhead power cable about 0.4 mile west of the bridge has a clearance of 83 feet.

(373) The dome of a private school at **Shell Beach**, about 3 miles west of De Lisle, is prominent from seaward.

(374) **Jourdan River** empties into the west side of St. Louis Bay. A dredged channel leads west in St. Louis Bay for 1.7 miles above the mouth of the river. A marina on **Joes Bayou**, just inside the river entrance, has berths, electricity, water, ice, a launching ramp and wet storage available.

(375) **Watts Bayou** empties into Jourdan River about 1 mile above the latter's mouth. In 1982, the reported controlling depth in the bayou was about 5 feet; local knowledge is advised. A boatyard on the south side of the Jourdan River, between Joes Bayou and Watts Bayou, has a 50-ton lift for boat storage or hull, engine and electronic repairs.

(376) **Edwards Bayou** flows into Watts Bayou at the mouth. In 2002, the unmarked channel leading to the marina about a mile above the mouth had a reported controlling depth of about 5 feet. Berths, electricity, gasoline, diesel fuel, water, ice, pump-out station, a launching ramp and marine supplies are available. Craft to 30 feet can be hauled out on a trailer for hull, engine and electronic repairs or covered storage.

(377) **Bayou La Croix** enters Jourdan River from the west about 2.9 miles above the mouth. State Route 603 highway bridge crossing the bayou about 1.6 miles above the mouth has a 38-foot fixed span with a clearance of 12 feet. Overhead power cables on either side of the bridge have a clearance of 40 feet.

(378) **Bay St. Louis** is a city and summer resort on the west side of St. Louis Bay. A depth of 7 feet can be carried to within 0.3 mile of the town. The city has a hospital and several clinics. The Class I railroad has freight service, and through bus service is available on U.S. Route 90 highway, which passes through the city.

(379) The small-craft harbor of Bay and Waveland Yacht Club about 0.4 mile northwest of U.S. Route 90 highway bridge is protected by two moles. In 1982, a reported depth of 4 feet could be taken to the harbor. The harbor facilities, including berths and gasoline, are available to club members and friends.

(380) **Bayou Caddy**, also known as **Cadet Bayou**, empties into Mississippi Sound 7 miles southwest of St. Louis Bay. The bayou is entered from the sound through a dredged channel to a turning basin just inside the mouth, thence continues for about 1.6 miles to a second turning basin, thence about 0.1 mile to the head of the project. The channel is marked by lights and daybeacons to the mouth of the bayou. Diesel fuel, water and ice are available at the fuel dock. Berths, gasoline, pump-out station, wet and dry storage, marine supplies, a launching ramp and an 8-ton mobile hoist that can handle craft for hull and minor engine repairs are available at the marina.

(381) **Three Mile Pass** and **Blind Pass** lead to Bay Boudreau from the south part of the extreme west end of Mississippi Sound. The channels are little used.

Bayou Boudreau is a shallow body of water enclosed by irregularly shaped, low, swampy islands and other shallow bays.

(382)

Chandeleur Sound to Black Bay

(383) **Chandeleur Sound** and **Breton Sound** lie south of Mississippi Sound and north of the Mississippi River Delta; no clear line of demarcation lies between them–Chandeleur is the north of the two sounds.

(384) **Chandeleur Islands**, forming the east boundary of Chandeleur Sound, comprise a narrow, crescent-shaped chain of low islands starting 15 miles south of Ship Island and continuing in a general south-by-west direction for a distance of 20 miles. Southwest from these islands are **Curlew Island**, **Grand Gosier Islands** and **Breton Islands**. The Breton Islands mark the east limit of Breton Sound. Chandeleur Sound offers smoother water than the passage east of the islands to shallow-draft vessels bound from Mississippi Sound to Mississippi River.

(385) **North Islands**, **Freemason Island**, **New Harbor Islands** and **Old Harbor Islands Shoal** are on the east side of Chandeleur Sound. Only fishermen and trappers frequent these, which are separated from each other by shallow unmarked channels. Protected anchorage for small boats in stormy weather can be found in **Shoalwater Bay**, **Smack Channel** and other passages.

(386) An unmarked sunken wreck is about 1.9 miles south-southwest of Old Harbor Island Shoal, in about 29°42.5'N., 89°03.0'W.

(387) Chandeleur Islands, Curlew Island, Grand Gosier Islands, Breton Islands, North Islands, Freemason Islands, New Harbor Islands and Old Harbor Island Shoal lie within the **Breton Island Wildlife Refuge** and are subject to the rules and regulations prescribed by the U.S. Department of Interior.

(388) **Ostrica Canal** extends north from the Mississippi River at the village of **Ostrica** about 25.5 miles above Head of Passes. The canal, together with channels through **Bayou Tortillon** and **Quarantine Bay**, affords passage to Breton Sound. The lock at the south end of Ostrica Canal is 247 feet long and 40 feet wide with a depth of 10 feet over the sills. The lock operates 24 hours a day. Red and green traffic lights at each end of the lock should be obeyed by all vessels waiting to enter the lock. The lock foreman can be contacted on VHF-FM channel 16 and uses channel 10 as a working frequency. In 1994, the controlling depth was 4½ feet from the Mississippi River to the lock, thence 4 feet from the lock through Quarantine Bay to Light 16. The channel through Quarantine Bay is marked by private lights and buoys. A cluster of partially submerged pilings is reported in 29°25'15"N., 89°27'00"W., about 1 mile east of the entrance to Quarantine Bay channel from Breton Sound.

(389) The west shore of Breton Sound consists of a network of marshy islands separated by shallow bayous and bays. The land is so low that extremely high tides will submerge it in some sections nearly to the banks of the Mississippi River. Of the several shallow canals leading from the south part of Breton Sound to the river bank, only the Ostrica Canal and Baptiste Collette Bayou lead into the river. These canals are used by the large fleet of oyster boats operating in the sound to deliver their catch to canneries and packing houses on the river bank or to highways for trucking to New Orleans, and by oil companies for the development of oil fields. Oil drilling equipment will be found throughout the area. There are numerous unlighted oil well structures in Chandeleur and Breton Sounds and the waters to the west.

(390) The waterways connecting Lake Borgne and Chandeleur Sound via Lake Eloi are discussed under Lake Borgne.

(391) The entrance to **Bayou Terre aux Boeufs**, on the northeast side of Black Bay, is marked by daybeacons. Local knowledge is advised. Overhead power cables crossing the waterway have a minimum clearance of 30 feet. **Delacroix** is a small settlement on the waterway about 8 miles south of Lake Borgne. There is a marine lift at Delacroix that can handle craft up to 25 feet. Gasoline, diesel fuel, water, ice and limited marine supplies may be obtained. From Delacroix, a highway extends to Poydras on the Mississippi, and thence to New Orleans. The marshlands about **Black Bay** are used extensively for hunting, trapping and oil development. Private lights, buoys and daybeacons mark oil company channels in Black Bay.

(392)

ENCs - US6LA36M, US5LA36M
Chart - 11367

(393) **Lake Borgne**, the west extension of Mississippi Sound is partly separated from Mississippi Sound by **Grassy Island**, **Half Moon (Grand) Island** and **Le Petit Pass Island** and their outlying shoals. Between the islands and shoals are several navigable passages including St. Joe and Le Petit Passes. In 2008, Grassy Island was reported to be submerged; caution is advised. Lake Borgne is separated from Lake Pontchartrain by a low marsh through which the Rigolets and Chef Menteur Pass are the principal passages. Lake Borgne is about 23 miles in length, 5 to 10 miles in width, and 6 to 10 feet in depth. Charted and uncharted obstructions are in the lake; caution is advised. The shores of the lake are low, marshy and sparsely populated. The lake is of importance chiefly as a connecting link for the Intracoastal Waterway. (See chapter 12 for Intracoastal Waterway.) Lake Borgne is tidal, but the tides are small and greatly modified by the winds. The tidal currents through St. Joe Pass have velocities exceeding 1.5 knots at times.

(394) Vessels coming from the east generally enter Lake Borgne through **St. Joe (Grand Island) Pass**, which leads between Half Moon (Grand) Island and **Lighthouse Point (Lower Point Clear)**. The channel is marked and

is a portion of the Intracoastal Waterway. (See chapter 12 for Intracoastal Waterway.)

(395) **Le Petit Pass**, between Le Petit Pass Island and **Malheureux Point**, is little used. In 2005, Le Petit Pass Island was reported to be submerged except at extreme low tide; caution is advised.

(396) **Pearl River** empties into Lake Borgne from the north. The river serves as a boundary between the States of Mississippi and Louisiana. A dredged channel leads from north of the Intracoastal Waterway in Lake Borgne for 1.1 miles to the mouth of the Pearl River. In 1980, the controlling depth from Lake Borgne to deeper water in the river was 6½ feet. The channel is marked by lights and daybeacons. The CSX swing bridge, with a clearance of 14 feet, crosses Pearl River at **Baldwin Lodge**, about a mile above the mouth; the channel is through the east draw. (See **33 CFR 117.1** through **117.59**, **117.488**, chapter 2, for drawbridge regulations.)

(397) About 3.5 miles above the mouth, Pearl River joins with **Little Lake Pass**, which leads west to **Little Lake**. **East Pass**. at the west end of Little Lake, connects the lake and The Rigolets. A dredged channel extends from The Rigolets east-northeast through the East Pass, Little Lake and Little Lake Pass, thence up the Pearl River to a turning basin and slip at the **NASA National Space Technology Laboratory** near Gainesville, about 14 miles above the mouth of Pearl River.The channel is marked by lights and daybeacons.

(398) **Port Bienville Industrial Park**, a dredged slip and waterfront industrial park under development by the Hancock County Port and Harbor Commission, is entered through a privately dredged channel on the east side of the river about 1.5 miles above Little Lake Pass. The channel is marked by a light and daybeacons. Several shipyards at the park can perform complete repairs to barges to 150 tons and above-the-waterline repairs to ships at their berths using portable equipment.

(399) U.S. Route 90 highway bridge across the Pearl River at **Pearlington**, 4 miles above the mouth, has a swing span with a clearance of 10 feet through the east draw. About 5.3 miles above this swing bridge, Interstate Route 10 fixed bridge with a clearance of 73 feet crosses the river. An overhead power cable just south of the fixed bridge has a clearance of 99 feet.

(400) A marina just above U.S. Route 90 highway bridge has berths, electricity, gasoline, water, ice, a launching ramp and a 3-ton hoist that can haul out craft for covered dry storage.

(401) From the north side of Little Lake, just west of Little Lake Pass, a marked channel leads to **North Pass** and a junction with **West Middle River**. From North Pass an unmarked channel leads west to **East Mouth**, which connects to the mouth of the West Pearl River, thence, through **West Mouth**, to The Rigolets; about 7 feet can be carried over this route to the mouth of West Pearl River, thence about 8 feet to The Rigolets.

(402) A highway bridge crossing **East Middle River**, a tributary of **Old Pearl River**, about 3.4 miles above Pearl River has a 45-foot fixed span with a clearance of 11 feet; an overhead power cable is at the bridge. A highway bridge crossing **Middle River**, a tributary of Old Pearl River, about 3.9 miles above Pearl River, has a fixed span with a clearance of 10 feet; an overhead power cable is at the bridge. A highway bridge crossing West Middle River about 5 miles above North Pass has a fixed span with a clearance of 10 feet; an overhead power cable is at the bridge.

(403) **West Pearl River** empties through West Mouth into the east end of The Rigolets. About 5 miles above the junction of East Mouth and West Mouth there is a vertical lift bridge (U.S. Route 90) with a clearance of 10 feet down and 50 feet up. The bridgetender monitors VHF-FM channel 16 and works on channel 13; call sign KTD-552. The overhead cable 1.9 miles above this bridge has a clearance of 55 feet. At **Gauss Bluff**, about 11 miles above the mouth, the twin fixed spans of Interstate Route 10 highway bridges with clearances of 35 feet cross the river. Near the town of **Pearl River**, 19 miles above the mouth, there are three bridges; the first two are the twin fixed spans of the Interstate Route 59 highway bridge with clearance of 35 feet. About 200 yards farther upstream, the Norfolk Southern Railroad bridge has a fixed span with a clearance of 7 feet. The overhead power cables at the railroad bridge have clearances of 60 feet.

(404) **The Rigolets** is a deep passage 7 miles long and about 0.4 mile wide connecting Lake Borgne and Lake Pontchartrain. The pass is bounded by low, marshy shores. In 2005, the controlling depth was 11.2 feet. The entrance from Lake Borgne is 8 miles west of St. Joe Pass. The CSX swing bridge crosses The Rigolets about 0.4 mile north of **Catfish Point** in Lake Borgne and has a clearance of 11 feet; navigation is through the east draw. The bridgetender monitors VHF-FM channel 16 and works on channel 13; call sign KQ-7197. (See **33 CFR 117.1** through **177.49**, chapter 2, for drawbridge regulations.) About a mile east of Lake Pontchartrain is U.S. Route 90 fixed highway bridge that has a clearance of 66 feet. Submerged obstructions are along the southeast side of the bridge with a least depth of 9 feet; caution is advised.

(405)

Currents

(406) **Currents** are very irregular and greatly influenced by winds. They set with great velocity through The Rigolets at times, and especially through the draws of the bridges. Velocities of 2.5 knots off Rigolets Light 5 and 3.8 knots at the railroad bridge have been observed. At the railroad bridge westerly currents set west-southwest onto the fender on the southwest side of the draw, and easterly currents set east by north onto the fender on the northeast side. The current has an average velocity of 0.6 knot.

(407) The bridge should not be approached closely until the draw is opened, and then only with caution.

(408) Good anchorage for small craft is available in **Blind Rigolets** either north or south of the Intracoastal

Waterway crossing. Depths of 12 feet or more are available for vessels entering Blind Rigolets via the Intracoastal Waterway. Piles cross the width of the channel approximately 300 feet south of the Chesapeake Seaboard X Transportation, Inc. (CSX) bridge, which crosses Blind Rigolets 0.3 mile north of the Intracoastal Waterway. Mariners are cautioned not to attempt passage of this bridge. An overhead power cable, 250 feet north of the bridge, has a clearance of 25 feet.

(409) **Fort Pike**, an old circular brick fort with sodded top, is just inside the west entrance to The Rigolets.

(410)

Small-craft facilities

(411) Small-craft facilities on **Fort Pike Canal**, east of the fort, and on **Geoghegan Canal**, northeast of the fort, can provide berths, electricity, gasoline, diesel fuel, water, ice, storage, launching ramps and hull, engine and electronic repairs. The largest mobile hoist, on the northwest side of Geoghegan Canal just above the entrance, can haul out craft to 63 feet.

(412) In 1982, the reported controlling depths were 4½ feet in Fort Pike Canal and 8 feet in Geoghegan Canal.

(413) **Lake St. Catherine** can be reached through Fort Pike Canal or through a natural unmarked channel in **Sawmill Pass**. The lake has numerous oil well structures.

(414) Chef Menteur Pass, a connecting passage between Lake Borgne and Lake Pontchartrain, is located about 10 miles southwest of The Rigolets. The pass is about 6 miles long and 0.2 mile wide. There is a considerable range in depths in the pass with shallow water off the entrances. The pass, used by pleasure and fishing craft, is usually entered through the Intracoastal Waterway. A light marks the entrance from Lake Borgne, and another light marks the entrance from Lake Pontchartrain; two lights mark the Intracoastal Waterway crossing. An Intracoastal Waterway alignment channel crosses Chef Menteur Pass 1 mile southeast of the original Intracoastal Waterway crossing. Two swing bridges cross the Chef Menteur Pass. The Chesapeake Seaboard X Transportation, Inc. (CSX) bridge has a clearance of 10 feet. The U.S. Route 90 highway bridge, crossing 0.3 mile northwest of the railroad bridge, has a clearance of 10 feet. (See 33 CFR 117.1 Through 117.49 and 117.436, chapter 2, for drawbridge regulations.) Various obstructions with a least depth of 7 feet are just north and south of the CSX railroad bridge; caution is advised. The town of Chef Menteur is between the bridges. A large spherical tank 0.4 mile northwest of the highway bridge is conspicuous.

(415) In 2007, shoaling to 3 feet was reported across the entrance from Lake Borgne and the entrance from Lake Pontchartrain.

(416)

Small-craft facilities

(417) Several small-craft facilities are on both sides of the pass from the highway bridge north for about 1 mile. Berths, electricity, gasoline, diesel fuel, water, ice, storage, launching ramps and marine supplies are available, and hull and engine repairs can be made. The largest mobile hoist, at a boatyard about 0.9 mile northeast of the highway bridge, can handle craft to 20 tons.

(418) **Bayou Sauvage** is an important waterway leading about 2.7 miles west from Chef Menteur Pass about 0.3 mile northwest of the highway bridge. In 2001, depths of 13 feet were reported in the bayou. There are fish camps, marinas and a shipyard on the bayou. Several oil companies maintain marine bases on the bayou. The shipyard builds steel tugs and crew boats to 228 feet. Gasoline, diesel fuel, water, ice, launching ramps and marine supplies are available.

(419)

ENCs - US4LA39M, US6LA36M, US5LA36M
Charts - 11369, 11367

(420) **Bayou Bienvenue** empties into the west side of Lake Borgne about 5 miles southwest of Chef Menteur Pass. The bayou connects Lake Borgne with the Mississippi River-Gulf Outlet Canal, thence leads west for about 6.3 miles. At the junction with the Mississippi River-Gulf Outlet Canal, the bayou is crossed by a swing bridge/floodgate with a vertical clearance of 8 feet. The bridge is maintained in the open to navigation position. About 2 miles west of the Mississippi River-Gulf Outlet Canal, the State Route 47/Paris Road bridge has a 17-foot fixed channel span with a clearance of 3 feet. An overhead power cable with an unknown height is immediately west of the bridge. Another overhead power cable with a clearance of 60 feet crosses the bayou about 1 mile west of the Mississippi River-Gulf Outlet Canal.

(421) **Bayou Dupre** empties into the southwest end of Lake Borgne at **Martello Castle**, about 3.5 miles south-southeast of Bayou Bienvenue. A dredged channel leads from Lake Borgne into and through Bayou Dupre and **Violet Canal** to **Violet**. An overhead power cable with a clearance of 60 feet crosses the canal about 1.2 miles east of Violet. Twin fixed highway bridges with a clearance of 35 feet are about 0.4 mile east of Violet. Petroleum products and fish are the principal commerce on the bayou. Shrimp fishermen report that the canal is difficult to navigate during winter low water. A light and daybeacons mark the entrance to the bayou. A small marina at Violet provides gasoline, berths, water, electricity, ice and a hoist that can handle small craft to 3 tons.

(422) **Bayou Yscloskey** empties into the southernmost part of Lake Borgne. A dredged channel leads from Lake Borgne to the mouth of Bayou Ysclosky. The channel is marked by a light and daybeacons. From the mouth of the bayou, the channel is privately maintained for 2 miles to Bayou la Loutre at the settlement of **Yscloskey**. Overhead power cables crossing Bayou Yscloskey have a minimum clearance of 30 feet. Gasoline, diesel fuel, water, ice and limited marine supplies are available on the bayou. From Yscloskey, **Bayou la Loutre** flows southeast for 25 miles to Eloi Bay. The dredged channel in the bayou

is privately maintained from Yscloskey to Hopedale, a small settlement 3 miles southeast. The bridge over Bayou la Loutre at Yscloskey has a vertical lift span with a width of 45 feet and clearance of 2 feet down and 53 feet up. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.) An overhead power cable crossing at Hopedale has a clearance of 68 feet. **Hopedale** has several wharves at which gasoline, diesel fuel, water, ice and marine supplies are available. A small boatyard at Hopedale has a mobile hoist that can haul out craft to 45 tons. Repairs are normally made by the boat owners.

(423) From Hopedale, Bayou la Loutre Channel is a federal project. In 1997, the controlling depths were 5 feet to Bayou St. Malo, thence 5 feet through **Bayou Eloi** and the bar channel to deep water in **Lake Eloi**.

(424) **Bayou St. Malo**, a dredged channel, leaves Bayou la Loutre 5 miles east of Hopedale and flows northwest for 5 miles to Lake Borgne. Principal traffic on the waterway consists of commercial fishing boats, oil well equipment and support vessels.

(425)

ENC - US4LA39M
Chart - 11369

(426) **Lake Pontchartrain**, roughly elliptical in shape, is 36 miles long, 22 miles wide at the widest part, 10 to 16 feet deep, and lies north of the Mississippi River at New Orleans. The lake connects with the Mississippi River through the Inner Harbor Navigation Canal, with Lake Borgne through The Rigolets and Chef Menteur Pass, and with Lake Maurepas through Pass Manchac and North Pass. Considerable commerce is carried on Lake Pontchartrain, the principal items being sand and gravel, shell, stone, petroleum products, lumber, cement, chemicals, steel products and foodstuffs.

(427) The periodic tide is negligible, but the variation in the water level due to winds has an extreme range of 3.5 to 4 feet. It is reported that the surface of the lake is lowered at least 2 feet during the winter when northwest winds prevail.

(428) There are numerous well platforms, piles, pipes and other reported obstructions in Lake Pontchartrain. Caution is advised.

(429) Three causeways cross the east end of Lake Pontchartrain. U.S. Interstate Route 10 highway causeway, about 3.5 miles west of The Rigolets and crossing between **Pointe aux Herbes** and **Howze Beach**, has a bridge with a fixed span over the navigation channel about 1.2 miles from its northeast end with a clearance of 73 feet. U.S. Route 11 highway causeway, west of U.S. Interstate Route 10 highway causeway and crossing from Pointe aux Herbes to **North Shore**, has two bascule bridges; one, about 1 mile southwest of North Shore, has a clearance of 13 feet; the other, about 0.4 mile northeast of Pointe aux Herbes, has a clearance of 12 feet. The north span is equipped with a radiotelephone. The bridgetender can be contacted on VHF-FM channel 13; call sign, KMC-226. The overhead power cable just west of this bridge has a clearance of 94 feet. The Southern Railway causeway, west of U.S. Route 11 highway causeway and crossing between **South Point** and North Shore, has a bascule bridge about 1 mile southwest of North Shore. The bridge has a clearance of 4 feet closed and 106 feet open (leaf overhangs the channel). The bridgetender monitors VHF-FM channel 13; call sign KA-5070. The overhead power cable just west of this bridge has a clearance of 12 feet but is submerged at the channels. (See **33 CFR 117.1** through **117.59** and **117.467**, chapter 2, for drawbridge regulations.)

(430)

Small-craft facilities

(431) Small-craft facilities at the north and south ends of U.S. Interstate Route 10 highway causeway can provide berths, gasoline, water, ice, launching ramps and some marine supplies.

(432) **Lake Pontchartrain Causeway**, twin toll highway bridges, extends 20.9 miles across Lake Pontchartrain from Indian Beach on the south shore to Lewisburg on the north shore. Five bridge openings, four twin fixed and one twin bascule, are at intervals of about 3.5 miles along the causeway. The first three openings north from Indian Beach are crossed by twin fixed bridges with clearances of 22 feet, 50 feet and 22 feet, respectively. The next opening is crossed by twin bascule spans with clearances of 42 feet, and the northernmost opening is crossed by a twin fixed bridge with a clearance of 22 feet. (See **33 CFR 117.1** through **117.59** and **117.467**, chapter 2, for drawbridge regulations.)

(433)

NOTICE TO COMMERCIAL MARITIME INTEREST IN LAKE PONTCHARTRAIN

(434) **Local Regulations**.

(435) Effective July 14, 1988, the Louisiana Legislature passed and Governor Roemer signed into law La. Acts (1988) No. 552, regulating navigational safety near the Lake Pontchartrain Causeway Bridges. Key features of this Act:

(436) (1) Require all tugs, towboats, self-propelled dredges, jack-up barges, jack-up rigs and all self-propelled vessels of one hundred net tons or greater, or one hundred feet in overall length or greater, and all vessel flotillas of one hundred aggregate net tons or greater operating on Lake Pontchartrain to be equipped with Loran C Equipment suitable for use with the Lake Pontchartrain Collision Avoidance Warning System (CAWS);

(437) (2) Establish a "prohibited zone" paralleling each side of the entire length of the Lake Pontchartrain Causeway Bridge and extending outward for a distance of one mile from the easterly and westerly outboard sides of the causeway bridge twin spans;

(438) (3) Prohibit all privately-owned vessels within the classes listed in paragraph (1), above, from entering, navigating, mooring, or anchoring in any manner within the "prohibited zone," except: (a) as required to navigate

through the Lake Pontchartrain Causeway Bridge openings upon such course and upon such directions as may be given by the causeway bridge tender, (b) as required in an emergency to protect against loss of life or property, or (c) as otherwise permitted in accordance with permitting procedures set forth by the Act and the Rules and Regulations of the Greater New Orleans Expressway Commission;

(439) (4) Provides for the assessment of a civil penalty in the amount of up to $1000 per vessel per violation against the owner, operator, or charterer of any vessel within the classes listed in paragraph (1), above, which impermissibly enters the "prohibited zone," or which enters the "prohibited zone" without the Loran C equipment required by the Act;

(440) (5) Requires that all collisions, accidents or other casualties involving a vessel within any of the classes listed in paragraph (1), above, be reported to the Greater New Orleans Expressway Commission within 48 hours if such casualty has resulted in death or injury, or within 5 days, if such casualty resulted in property damage exceeding $200.

(441) At its regular meeting on October 4, 1988, the Greater New Orleans Expressway Commission adopted rules and guidelines for the administration and enforcement of Act No. 552.

(442) **ALL MARINERS ARE ADVISED THAT THE GREATER NEW ORLEANS EXPRESSWAY COMMISSION STRICTLY ENFORCE THE PROVISIONS OF ACT NO. 552.**

(443) Three pipelines, marked by private lights, cross the lake. The first extends from the east shore about 1 mile south of The Rigolets west to Pointe aux Herbes. The second begins at a point about 0.75 mile west-southwest of South Point and extends across the lake in a north direction. The third crosses the lake beginning at a point in the vicinity of **Bayou Piquant** and extends in a northeast direction to Mandeville.

(444) **Middle Ground** is the shoal portion of Lake Pontchartrain near The Rigolets. **North Shore Channel** extends across the northeast part of Middle Ground between The Rigolets and deeper water in the vicinity of U.S. Interstate Route 10 fixed bridge. In 1999, the reported controlling depth was 11 feet. The channel is marked by daybeacons and a light.

(445) **Bayou Bonfouca**, which empties into Lake Pontchartrain 3 miles northwest of the Southern Railway causeway north swing bridge, is the approach to the town of Slidell. There is some waterborne commerce in shell, sand and gravel. A dredged channel leads for about 6 miles from deep water in Lake Pontchartrain to Slidell. The channel across the bar is marked by lights, buoys and daybeacons. The bridge at Slidell has a swing span with a clearance of 6 feet.

(446) The bridgetender monitors VHF-FM channel 13; call sign KMC-226. The bridgetender lives near the bridge and will open on signal, but there may be a slight delay. The overhead power cable at the bridge has a clearance of 58 feet. In 1982, the cable was reported to have been removed. (See **33 CFR 117.1** through **117.59** and **117.433**, chapter 2, for drawbridge regulations.) An overhead power cable about 0.4 mile above the bridge has a clearance of 59 feet.

(447) **Slidell** is a town on U.S. Route 11 highway and the Southern Railway leading to New Orleans. A well-equipped shipyard has facilities for construction or repair of steel or wooden vessels including a commercial graving dock 350 feet long, 70 feet wide, with 20 feet over the sill, two marine ways that can handle craft up to 225 feet, and a 60-ton gantry crane, and a 300-ton floating crane. Tugs, barges and diving equipment are available for towing or salvage work. Other facilities at the yard include several loading slips and a railroad siding. Gasoline and water are available at a marina on the west side of the river just above the highway bridge.

(448) **Bayou Liberty** (Liberty Bayou) joins Bayou Bonfouca 0.5 mile above the mouth. In 1994, the controlling depth was 3½ feet for about 5.2 miles to **Camp Salmen**, thence 4 feet to the railroad bridge at the head of the channel. A swing bridge crosses the bayou about 1.5 miles above its junction with Bayou Bonfouca and has a vertical clearance of 7 feet. (See **33 CFR 117.1** through **117.59** and **117.469**, chapter 2, for bridge regulations.) An overhead power cable just below the swing bridge has a clearance of 75 feet. Small-craft facilities on the south side of the bayou below the highway bridge provide berths with water and electricity, ice, a launching ramp and marine supplies. A 30-ton mobile hoist can haul out craft for complete repairs.

(449) **Lacombe Bayou** empties into Lake Pontchartrain 4.5 miles west of Bayou Bonfouca. A dredged channel leads from the entrance bar in Lake Pontchartrain to a fish hatchery about 7.1 miles above the mouth of the bayou. In 1994, the controlling depth was 5½ across the bar, thence 7½ feet for 5.9 to the highway bridge, thence in 1984, 4 feet to Mile 7.8. The channel is obstructed by submerged logs and overhanging trees above this point. The entrance channel is marked by a light.

(450) The former railroad bridge, about 5.2 miles above the mouth, has a bascule span with a clearance of 9 feet. The U.S. Route 190 highway bridge at **Lacombe** has a swing spans with a minimum channel width of 45 feet and a clearance of 5 feet. (See **33 CFR 117.1** through **117.59** and **117.463**, chapter 2, for drawbridge regulations.) Overhead power cables crossing at the bridges have a minimum clearance of 60 feet. Commerce on the bayou includes shipments of shell, sand and gravel and drilling equipment. The bayou has several fish camps and a seaplane base.

(451) **Mandeville** is a summer resort on the north shore of Lake Pontchartrain 20 miles north of New Orleans. Many of the boat landings on the north shore are in ruins. A protected landing is in **Bayou Castine**. The entrance to the bayou is protected by jetties and a detached breakwater west of the channel. Lights mark the entrance to the bayou and the east end of the breakwater. An overhead power

cable with a clearance of 60 feet crosses the bayou. In 1994, the controlling depth was 5 feet across the bar and in the bayou.

(452) Launching ramps and a municipal wharf at which berths, water and electricity are available are on the west side of the entrance. A marina and boatyard on the bayou has a 15-ton mobile hoist that can haul out craft for complete repairs. Berths, electricity, water, a sewage pump-out facility and marine supplies are available. In 1982, the basin had reported depths of 5 feet.

(453) **Tchefuncta River** flows into Lake Pontchartrain about 21 miles north of New Orleans. Commerce on the river is in shell and steel products. A dredged channel leads from the 10-foot depth in Lake Pontchartrain for about 12.2 miles up Tchefuncta River and its tributary, **Bogue Falaya**, to the town of **Covington, LA**. In 2001, the controlling depth was 6 feet across the bar, through the entrance; thence in 1994, 10 feet for about 1.7 miles to Madisonville, thence 4 feet to Abita River, thence 3 feet for about 1.1 miles. In 1993, shoaling to 4 feet was reported between Daybeacons 4 and 6 in about 30°22'24"N., 90°10'12"W. The entrance is marked by a light, a lighted range and daybeacons. State Route 22 highway bridge crossing the river at Madisonville has a swing span with a clearance of 1 foot. (See **33 CFR 117.1** through **117.49** and **117.500**, chapter 2, for drawbridge regulations.) An overhead power cable with a clearance of 85 feet crosses the river about 6 miles above the bridge at Madisonville.

(454) The twin fixed spans of Interstate Route 12 highway bridge with a clearance of 30 feet cross the river about 9.4 miles above the mouth.

(455) Tows through the bridges are limited to one barge. The towing vessel must be made up rigid, astern of the barge, and the barge shall be pushed through the draw at dead slow speed and under full control.

(456) **Madisonville**, a town 1.5 miles up Tchefuncta River, has berths at public landings above and below the west side of the bridge. Two shipyards build commercial vessels and barges, and another repairs company-owned dredging equipment. There are several marinas above the highway bridge. Berths, electricity, gasoline, diesel fuel, water, ice, marine supplies and launching ramps are available.

(457) An overhead power cable extends generally around the perimeter of the west and southwest part of Lake Pontchartrain, from the shore near Madisonville to a point about 6.4 miles west of New Orleans. Clearance is 40 feet throughout except for 60 feet where the cable crosses over the entrance to the bar channel to Tangipahoa River and 90 feet over the entrance to Pass Manchac. Private lights partly mark the cable.

(458) **Tangipahoa River** is a narrow stream flowing into Lake Pontchartrain 6 miles southwest of Tchefuncta River. A dredged channel leads from Lake Pontchartrain across the bar to the river mouth. In 1997, the controlling depth was 1 foot across the bar, thence 5½ feet for 7.4 miles to Lee Landing. Trees obstruct the river above this point. In 1993, shoaling to 1 foot reportedly extended about 100 feet in a southwest direction from Light 8. Lights and daybeacons mark the entrance channel. Gasoline, berths, water, electricity, ice and launching ramps are available at Lees Landing. There are numerous overhead power cables, with minimum clearance of 60 feet, over Tangipahoa River up to Lees Landing.

(459) **Bedico Creek** branches east from Tangipahoa River about 2.3 miles above its mouth. In 1994, the controlling depths in the creek were 3 feet to Traino (Wallace) Landing.

(460) **Pass Manchac** is a passage 5.5 miles long connecting Lake Pontchartrain with Lake Maurepas. Principal commerce is in shell and petroleum products. The approaches in both lakes are across long bars, which limit the utilization of the relatively deep water inside the pass. From Lake Pontchartrain there are two approach channels, **North Channel** and **South Channel**. The east side of the entrance to each is marked by a light. Both lead to Pass Manchac Light on the north point at the east end of the pass.

(461) Once over the bar, midchannel courses should be followed through Pass Manchac. **Stinking Bayou** and **North Pass** branch from the north side of Pass Manchac about 1.3 miles west of the east entrance. Stinking Bayou leads east-northeast. North Pass meanders west-northwest parallel with Pass Manchac and connects with Lake Maurepas.

(462) At the west end of North Pass just east of the bridges is **Port Manchac**, a shallow-draft freight terminal on the north shore owned by the South Tangipahoa Parish Port Commission. The facility is about 6 miles west of Lake Pontchartrain. The 160-foot wharf is operated by South Tangipahoa Parish Port Commission, which handles general and containerized cargo. Warehouses to 30,000 square feet and a 60-foot lower docking facility are available. Barges with a 9-foot draft are loaded and discharged by heavy lift cranes and lift trucks. A 1,800-foot railroad siding with three in-car trans-loading ramps is at the port. Easy highway access is available via Interstate Route 55 and U.S. Route 51. Mainline railroad service is provided by a Class I railroad on a daily basis. General and containerized cargo, such as lumber, plywood, agriculture products, paper, steel, fertilizers, gravel, oil field supplies and equipment and machinery for export/import of domestic markets are trans-loaded.

(463) At the west end of the pass, a marked northerly channel and an unmarked southerly channel separated by a shallow middle ground lead into Lake Maurepas. In 1995, the controlling depth in the north channel was 7½ feet.

(464) Overhead power cables crossing over the pass about 0.3 mile and 2 miles from the east entrance have clearances of 90 feet and 76 feet respectively. Three bridges and the remains of two former bridges cross the west end of the pass. The easternmost bridge, the Illinois Central Railroad bridge, has a bascule span with a clearance of 56 feet and is equipped with a radiotelephone. The

bridgetender monitors VHF-FM channel 16 and works on channel 13; call sign KC-9501. (See **33 CFR 117.1** through **117.59** and **117.484**, chapter 2, for drawbridge regulations.) An overhead power cable at the bridge has a clearance of 64 feet. Immediately west of the Illinois Central Railroad bridge are the remains of the former railroad and highway bridges (center portions removed), and U.S. Interstate Route 55 fixed highway bridge with a clearance of 51 feet. A fixed highway bridge immediately west of the U.S. Interstate Route 55 highway bridge has a clearance of 50 feet.

(465) **Note:** Tows passing through Pass Manchac bridges are limited to no more than two barges, not to exceed a combined tow length of 400 feet, excluding the towboat. Operators wishing to pass tows exceeding these limits must request and receive permission from the Captain of the Port, New Orleans. (See **33 CFR 162.75(b)(5)(vi)**, chapter 2.)

(466) Gasoline, diesel fuel by truck, water, ice and some marine supplies are available at wharves just east of the north and south ends of the U.S. Interstate Route 55 highway bridge.

(467) **Lake Maurepas**, lying west of Lake Pontchartrain, is 11.5 miles long in a northeast and southwest direction and from 4 to 8 miles wide. Depths range between 7 to 12 feet, but numerous submerged tree stumps are reported along the lake shore. Strangers are advised to keep at least a mile offshore and to approach the entrances to the tributaries with caution. No cities or towns are along the lake shores, which are low and thickly wooded. Other than Port Manchac on the north shore at the west end of North Pass just east of the bridges (described earlier in this chapter, under Pass Manchac), the lake is of little commercial importance except as the approach to Tickfaw and Amite Rivers, which have some trade to New Orleans.

(468) **Tickfaw River** flows into the north end of Lake Maurepas about 3.5 miles northwest of Pass Manchac. The entrance is marked by a light and a daybeacon on the west side of the mouth. A large shoal extends south of the light on the west side of the entrance, and stumps are on the east side. In 1996, the controlling depth was 5½ feet across the bar, thence 12 feet to Blood River, thence 6 feet to Horse Bluff Landing. Above this point, snags and trees obstruct the river. State Route 22 highway bridge crossing the river about 6.2 miles above the mouth, just below the junction with Blood River, has a fixed span with a vertical clearance of 50 feet. Two overhead power cables, just west and parallel to the swing bridge and about 2 miles west of the bridge, have clearances of 70 feet. A marina just below the south side of the bridge has berths, gasoline, diesel fuel, electricity, water, ice, launching ramps and marine supplies.

(469) **Natalbany River**, a tributary of Tickfaw River, in 1996, had a controlling depth of 7½ feet for about 4.5 miles, thence 2 feet for 3.5 miles to the head of the federal project, about 1.3 miles above the highway bridge at **Springfield**.

(470) **Ponchatoula River**, a tributary of Natalbany River, joins that river about 3.3 miles above the mouth. In 1994, the controlling depth was 2 feet for 3.3 miles; the river is blocked by fallen trees at this point. State Route 22 highway bridge at **Wadesboro** has an 18-foot fixed span with a clearance of 4 feet.

(471) **Blood River**, a tributary of Tickfaw River, joins that river 6.3 miles above the mouth. In 1994, the controlling depth was 8 feet for 3.5 miles; overhanging trees prevent navigation above this point. Blood River has several small marinas about 0.9 mile above its junction with the Tickfaw River at **Warsaw Landing**. Berths, water, electricity, gasoline, ice, limited marine supplies and launching ramps are available.

(472) Principal shipment on Tickfaw, Natalbany, Pontchatoula and Blood Rivers is shell.

(473) **Amite River** empties into Lake Maurepas 8 miles west of Pass Manchac. The entrance is marked by a light. Principal shipment on the river is shell.

(474) In entering Amite River, pass well to the east of the light; submerged stumps are reported in an area extending 0.4 mile south of the light and up to 0.4 mile offshore. In 1994, the controlling depth was 5½ feet across the bar, thence 6½ feet to Port Vincent, and thence 4½ feet to the junction with its tributary Bayou Manchac about 31 miles above the mouth. Above a point about 12 miles above the mouth there are overhanging trees and snags. Overhead power cables crossing Amite River about 0.1 mile, 2.6 miles, 3.0 miles and about 13.9 miles above the mouth have clearances of 70 feet, 60 feet, 60 feet and 42 feet, respectively. Three highway bridges cross the river between the mouth and **Port Vincent**, about 27 miles above the mouth. The bridge at **Clio**, about 5 miles above the mouth, has a swing span with a clearance of 4½ feet. The bridge at **French Settlement**, about 19 miles above the mouth, has a swing span with a clearance of 15 feet. An overhead power cable at this bridge has a clearance of 60 feet. Another overhead power cable crosses the river about 27.6 miles above the mouth; clearance is 70 feet. The bridge at Port Vincent has a swing span with a clearance of 7 feet. (See **33 CFR 117.1** through **117.59** and **117.422**, chapter 2, for drawbridge regulations.)

(475) Berths with water and electricity, gasoline, ice, a launching ramp and some marine supplies are available at a small marina about 2.5 miles above the mouth of Amite River. Launching ramps are on either side of the river above the highway bridge.

(476) **Bayou Manchac** joins Amite River about 4.2 miles above Port Vincent. In 1994, the controlling depth in the bayou was 4 feet for about 5.2 miles. Submerged logs are reported above this point; caution is advised.

(477) Bayou Manchac is crossed by two highway bridges and a railroad trestle. The bridge at **Hope Villa**, about 5.8 miles above the mouth of the bayou, has a fixed span with a clearance of 11 feet. The Airline Highway (U.S. Route 61) bridge, about 6.5 miles above the mouth, has a fixed span with a width of 30 feet and a clearance of 6 feet, and is at the head of navigation in the bayou. The Louisiana

and Arkansas Railroad trestle is about a mile above the Airline highway bridge.

(478) **Blind River** enters Lake Maurepas 5.7 miles south of Amite River. In 1994, the controlling depth was 5 feet across the bar, thence 10 feet to the Airline Highway, the head of navigation. A light and a daybeacon mark the best water. Caution is advised when entering the river. Numerous overhead power cables with a least known clearance of 66 feet cross the river.

(479) The **Bonnet Carre Spillway** is located on the southwest side of Lake Pontchartrain. When the spillway is in operation, as a result of high stages of the Mississippi River, vessels in the vicinity of the discharge end are cautioned to be on the lookout for possible logs or stumps that may enter the lake and should give that end a wide berth.

(480) The city limits of New Orleans extend from Lake Pontchartrain to the Mississippi River. Pleasure resorts and suburbs are on the lake front. A concrete seawall is along the south shore of the lake from the protected yacht harbor about 2 miles east of the Lake Pontchartrain Causeway to Lakefront Airport. The protected yacht harbor, which is entered from east, is just east of the New Orleans city limits.

(481) The **Municipal Yacht Harbor**is the outer basin, which has direct access to the lake. The Southern and the New Orleans Yacht Clubs, and the New Orleans Power Squadron are in the Municipal Yacht Harbor. There are numerous private beach homes with covered boat slips on the breakwater. Lights mark the entrance to the harbor. The **Orleans Marina**, owned and controlled by the Levee Board, is the inner basin which has access to the lake through **New Basin Canal**. In 1982, the controlling depth in the canal and basins was reported to be about 8 feet. There are several boatyards in Orleans Marina and several marinas along the east bank of New Basin Canal. There are cranes and lifts that can handle craft to 35 tons for hull and engine repairs or open or covered dry storage. Electronic repairs can be made. Berths for vessels up to 100 feet, electricity, gasoline, diesel fuel, water, ice, marine supplies and launching ramps are available.

(482)

Coast Guard Station

(483) **New Orleans Coast Guard Station** is close west of the Municipal Yacht Harbor on Lake Pontchartrain.

(484) The Lake Pontchartrain entrance to the Inner Harbor Navigation Canal is 4.1 miles east of New Canal Light. An aerolight at the Lakefront Airport is east of the entrance.

88°30'W
89°W
89°30'W
90°W
90°30'W
91°W
91°30'W
92°W
30°30'N
30°N
29°30'N
29°N
MISSISSIPPI
LOUISIANA
Biloxi
Gulfport
MISSISSIPPI SOUND
ST. LOUIS BAY
PEARL RIVER
Chandeleur Islands
CHANDELEUR SOUND
BRETON SOUND
PASS A LOUTRE
SOUTH PASS
SOUTHWEST PASS
MISSISSIPPI RIVER
BARATARIA BAY
LAKE PONCHARTRAIN
LAKE MAUREPAS
New Orleans
Gramercy
Thibodaux
Houma
TERREBONNE BAY
Baton Rouge
Port Allen
Plaquemine
Donaldsonville
ATCHAFALAYA RIVER
ATCHAFALAYA BAY
11374
11368
11369
11354
11352
11358
Chart Coverage in Coast Pilot 5—Chapter 8
NOAA's Online Interactive Chart Catalog has complete chart coverage
http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml

Mississippi River

(1) This chapter describes the Mississippi River from the delta passes at the Gulf of Mexico to Baton Rouge, 217 miles via Southwest Pass, 211 miles via South Pass, above the Gulf. Also described are the deepwater ports of New Orleans and Baton Rouge, as well as the facilities at the many small communities along the river.

(2) **Note**: All mileage distances given in this chapter are in statute miles unless otherwise indicated. Historically, distances on the Mississippi River are in statute miles, referred to an origin at the Head of Passes. Distances in this system are suffixed AHP (i.e., above Head of Passes).

(3)

COLREGS Demarcation Lines

(4) The lines established for this part of the coast are described in **33 CFR 80.820** and **80.825**, chapter 2.

(5)

ENCs - US3GC05M, US3GC03M, US3GC04M
Charts - 11360, 11340, 11366

(6) **Mississippi River** empties into the north central part of the Gulf of Mexico through a number of mouths or passes which, taken together, form the delta of the river. The river and its tributaries form the largest network of navigable waters in the world. The two principal passes, South Pass and Southwest Pass, are about 1,600 nautical miles from New York, 500 nautical miles from Key West, 300 nautical miles east of Galveston and 440 nautical miles east of Corpus Christi. The river is the access to the Ports of New Orleans and Baton Rouge and the numerous cities in the central part of the United States located in the Mississippi River Valley and along its tributaries, the Ohio, Missouri, Red, Tennessee and other rivers flowing into it. From the mouth, at the entrance to Southwest Pass, it is about 1,840 miles to Minneapolis, 1,960 miles to Pittsburgh, 1,680 miles to Knoxville and 1,530 miles to Chicago via the Illinois Waterway. (See the publication *Distances Between United States Ports* for more detailed information.)

(7) The shape of the delta is somewhat like the foot of a bird, with its four toe-like extensions protruding into the Gulf. The passes consist of narrow-banked deposits of sand and clay brought down by the river current that continuously adds them to the seaward margins of the delta. In this manner the delta is being built seaward at an estimated average rate of 300 feet a year. Numerous bays between the passes are changing through wave and tidal action and filling up with the immense amounts of material carried down by the river. The upper half of **Garden Island Bay** has been filled in so that now it is a marsh.

(8)

Prominent features

(9) The most conspicuous objects, when approaching the passes, are the lights, which are easily recognized. **Southwest Pass Entrance Light** (28°54'21"N., 89°25'43"W.), 122 feet above the water, is shown from an 85-foot tower on a white dwelling on piles; a racon is at the light. **Southwest Pass East Jetty End Light 4**, 38 feet above the water, is shown from a red skeleton tower on piles with a red triangular daymark. A lighted buoy (Sea Buoy) is 1.6 miles south of the east jetty.

(10) The numerous oil well structures in **East Bay**, some of which extend about 3 miles southeast of a line between the jetties at South and Southwest Passes, are also prominent.

(11)

Anchorages

(12) Vessels should anchor in the Fairway Anchorage, northeast of South Pass. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(13) Numerous oil well structures off the entrances to the Mississippi River Delta passes and in East Bay can be seen for some distance offshore. Smoke from burning gas from some of these wells is seen from far offshore.

(14) The discolored water discharge from Mississippi River usually provides mariners with their first indication that they are approaching land. However, this is not a sure indication; during high river stages and with north winds the discolored water will be encountered in some directions 60 miles or more from land, and at times the water will appear broken from 15 to 20 miles from the passes. The land near the entrances to the passes is low marsh covered with tall, coarse grass and weeds.

(15)

COLREGS Demarcation Lines

(16) The lines established for Mississippi Passes are described in **33 CFR 80.825**, chapter 2.

(17)

Special Notices

(18) Special Notices affecting locking procedures in the New Orleans Corps of Engineers District are issued through navigation bulletins by the Corps as conditions warrant. These bulletins announce maintenance projects, hazards to navigation and other pertinent information of importance to mariners. these bulletins are posted at *www.*

mvn.usace.army.mil/Missions/Navigation/Navigation-Bulletins/.

(19)

Shipping safety fairways

(20) **Vessels should approach the Southwest Pass and South Pass (Mississippi River) through the prescribed safety fairways.** (See **33 CFR 166.100** through **166.200**, chapter 2.)

(21)

Channels

(22) The improved ship channels into Mississippi River are through Southwest Pass and South Pass. Several minor passes can be used only by small craft. A federal project provides for a 50-foot channel over the bar and through Southwest Pass, to Head of Passes. The project is under constant maintenance dredging. The project further provides for a 50-foot channel from Head of Passes to Mile 175, thence 45 feet to Mile 232.4, thence 40 feet to Mile 233.8. The channels are well marked. Contact the New Orleans District, Corps of Engineers, for controlling depths. See Appendix A for mailing address and contact information.

(23)

Note

(24) The Associated Branch Pilots, Port of New Orleans, advised that South Pass has a recommended draft limit of 15 feet. The pilots further advised that a recommended deadweight tonnage limit of 21,000 DWT. and/or 15 feet is in effect for ships using South Pass. The deadweight tonnage limit is recommended because ships of large tonnage do not steer well. The tonnage limit is subject to a larger limit as the draft limit deepens.

(25) Southwest Pass has a recommended draft limit of 45 feet. There is no limit on deadweight tonnage for ships using Southwest Pass.

(26) The **Mississippi River-Gulf Outlet Canal** project was officially de-authorized in June 2008 and closed to navigation in 2009. Rocks have been placed across the channel at Mile 36.0 and navigational aids below Mile 36.0 have been removed, with exception of MRGO Lighted Buoy 11. Mariners should not attempt to navigate through this area.

(27)

Bridges

(28) There are no bridges across the Mississippi River below New Orleans. One bridge and two cables cross the Mississippi River-Gulf Outlet Canal below the junction with the Inner Harbor Navigation Canal at New Orleans.

(29) The **Paris Road Bridge** (State Route 47), about 4.4 miles east of the junction with Inner Harbor Navigation Canal, is a fixed bridge, with a clearance of 138 feet at mean high water (140 feet at mean sea level) for a 500-foot mid-width. Clearance at center of span is 140 feet at mean high water (142 feet at mean sea level). The Louisiana Department of Transportation and Development has installed vertical clearance gauges on the Paris Road Bridge; the clearances posted are for the middle 500-foot channel between the fixed red channel lights on the bridge. Mariners desiring **present** Paris Road Bridge clearances before entering the Mississippi River-Gulf Outlet Canal are advised to seek **competent** local knowledge for water heights and bridge information. The **present** vertical clearance above mean sea level may be determined for the 500-foot midwidth of Paris Road Bridge by using a **present**, **reported** and **nearby water height**, in feet, **relative** to mean sea level clearance of 140 feet. A positive (higher) water height reading should be subtracted from 140 feet, and a negative (lower) water height reading should be added to 140 feet.

(30) The overhead power cables across the canal, near the Paris Road Bridge and near the junction with the Inner Harbor Navigation Canal, have a minimum clearance of 170 feet.

(31)

Caution

(32) The Coast Guard advises that because of constantly changing river stages mariners should carefully review and validate mast height data and air draft to ensure adequate clearance under the bridges and overhead cables on the Lower Mississippi River. It is recommended that maximum vessel height be determined for various drafts and trim of the vessel and be kept readily available on the bridge of the vessel. Bridge clearance data for various river stages can be obtained from the Coast Guard.

(33)

Anchorages

(34) Vessels should anchor in Southwest Pass Anchorage southeast of the entrance to Southwest Pass, South Pass Anchorage northeast of the entrance to South Pass or in the Mississippi River-Gulf Outlet Canal Fairway Anchorages east and north of the Mississippi River-Gulf Outlet. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(35) In heavy weather, craft in the vicinity of South Pass seek refuge in the pass. Vessels may anchor off South Pass and Southwest Pass as appropriate, weather permitting.

(36) There are numerous designated anchorages on both sides of the river below New Orleans, and temporary anchorages may be prescribed by the Commander, Eighth Coast Guard District and published in the Local Notice to Mariners. (See **33 CFR 110.1** and **110.195**, chapter 2, for anchorage limits and regulations.)

(37)

Caution

(38) The Coast Guard advises that during high-water conditions mariners should give anchored vessels a particularly wide berth. Fast river currents may cause anchored vessels to swing in wide arcs. Under these conditions, it is important that the mariner be aware of the location of anchor chains.

(39)

Dangers

(40) An area bounded by latitude 28°20'N., to latitude 28°30'N., between longitude 88°50'W., and longitude

89°00'W., has been established as a dumping ground for ammunition and explosives.

(41) A shoal with depths of 8 to 15 feet extends along the west side of the approach channel to Southwest Pass for about a mile beyond the end of the west jetty. The position of this shoal and its depths are rather constant except for changes during and after high-river stages in the spring.

(42) A shoal with depths of 2 to 17 feet extends along the west side of the entrance to South Pass. Vessels should not close the passes before the pilot boards.

(43) **Flocculation**, locally known as **slush,** is a living mass of jellied material, or muck, deposited in the lower part of the Mississippi, during low stages of the river. It consists of the suspended material which, after being carried downstream by the current, comes into contact with the relatively still salt water that backs into the passes. This muck has been observed to be as much as 10 to 15 feet deep. It remains where deposited until flushed out during high-water stages of the river. Although slowed down by this muck, deep-draft vessels are able to pass through it. Accordingly, and because it will be flushed out during high-water stages, the Corps of Engineers does not consider it necessary to remove the material during low stages.

(44) **Sand waves**, the material brought down during high stages, on the contrary, is of a sandy nature such that, if not removed, builds up bars and reduces controlling depths. These sand bars or waves are dredged out during high stages.

(45) **Mud lumps** are the small oval-shaped mounds or islands no more than 8 feet high that are peculiar to the Mississippi River delta. They are caused by upward forces of the static pressure exerted by sedimentary deposits accumulating underneath; most of them never rise above the surface but remain as subsurface mounds. Their cores of plastic clay may arise from depths as much as 300 to 500 feet. Fissures or cracks develop in the islands, through which mud, gas and salt water discharge and often build up low flat cones. In South and Southwest Passes, which have been jettied, there are arcs of mud lumps outside of and parallel with the peripheries of the bar deposits. In natural passes, the mud lumps are affected by submerged natural levees as well as by the bar deposits. Generally, the lumps appear within only a few weeks' time and, unless affected by succeeding periods of uplift, will wash away within a few years or be overrun by the encroaching marshland.

(46)

Current off the passes

(47) Currents in the Gulf of Mexico are discussed in chapter 3. The currents are variable in direction and velocity depending to a great extent upon the velocity and direction of the wind, and near the entrance to the passes upon the stage of the river.

(48) A vessel on the course from Dry Tortugas to the Mississippi River generally will encounter an opposing or southeast current for a distance of about 300 miles after leaving Dry Tortugas. For the last 125 miles before reaching the mouth of the river, the current will usually set between north and east.

(49) During a light south wind a northeast set of 2.2 knots has been observed 13 miles southeast of South Pass entrance, and at the same time there was an east set of 0.5 knot at the lighted bell buoy off the entrance.

(50) At **Southwest Pass Entrance Lighted Buoy SW**, the current is due chiefly to the discharge of the river. In general it sets southwest and its velocity varies from 0 to 4 knots, the average being about 1.7 knots. At times, however, there is said to be a southeast current of nearly a knot at this location.

(51)

Currents in the river

(52) The current due to the tide is not strong at any point, and for purposes of navigation it is rarely taken into account. The average date of high-river stage occurs in April and of low-river stage in October. At Baton Rouge the extreme difference between high and low stages of the river is 40 feet; the mean difference is about 21 feet. At New Orleans, the extreme difference between high and low stages is 17 feet; the mean difference is about 8 feet. Zero on the Baton Rouge and New Orleans gage is the National Geodetic Vertical Datum of 1927 (NGVD).

(53) Currents for Baton Rouge and New Orleans are given below for high water flow of 1,100,000 cubic feet per second (cfs), medium water flows of 520,000 cfs and low water flow of 180,000 cfs. Baton Rouge: 3.8 mph (3.3 knots), 2.6 mph (2.3 knots), and 1.3 mph (1.1 knots). New Orleans: 4.0 mph (3.5 knots), 2.8 mph (2.4 knots) and 1.4 mph (1.2 knots).

(54) At several places in the lower part of the river countercurrents or eddies often are found near the banks and, if taken advantage of, can greatly assist vessels bound up the river.

(55) At South Pass outside the jetties the current from the river frequently has a west set. At Southwest Pass it sets straight out from between the jetties, thence spreading out fan shaped, with slightly greater velocity to west.

(56)

Weather

(57) The Gulf of Mexico moderates the climate of this region throughout the year. It reduces the range between extremes of temperature, increases humidity and influences the wind speed and direction. East through south winds prevail for all months except January. These tempering Gulf winds carry warm, moist air that is favorable for sporadic, often quite localized, development of thunderstorms, particularly from May through October. From November through March, the area is subjected to fluctuations between tropical air and cool continental air. From December to June, the Mississippi River waters are usually colder than the air temperature, favoring the formation of river fogs, particularly with weak south winds. These fogs may be encountered anywhere from 60 miles off the delta passes to the city of New Orleans.

(58) Polar air masses and their fronts penetrate the Gulf of Mexico from the North American continent each winter. About 15 to 20 of these systems bring strong north winds, cold temperatures and adverse weather. Winds of 60 knots or more may occur in severe "northers." Northers are most likely from November to March and usually last about a day and a half; severe storms may endure for 3 or 4 days.

(59) The tropical cyclone season runs from late May into early November. On average, hurricanes move through this region once every 4 years. In August 1969, Camille generated winds estimated at 175 knots. At Boothville, gusts climbed to 107 mph before the anemometer failed, and storm tides reached 15 feet. Surge heights varied at different locations because of the shape of the bays and inlets. Water levels reached 9 feet above mean sea level near the mouth of the Mississippi at Garden Island. In several places from the Empire Canal south to Buras, Boothville and Venice, the surge poured over the east and west bank Mississippi River levees and was trapped by the back levee, leaving the built-up areas between the levees severely flooded. The highest actual wind measurement in Camille was a gust of 172 mph recorded on a Transworld Drilling Co. rig east of Boothville.

(60)

Routes

(61) Approaching the mouth of the river from Florida Straits, deep-draft vessels usually set a course direct for the entrance to the shipping safety fairways off the passes from a position 10 or 12 miles southwest of Dry Tortugas Light on Loggerhead Key. Low-powered vessels of moderate draft sometimes pass north from Florida Straits through Rebecca Channel, to the west of Rebecca Shoal Light, and for 200 miles set a course 10° to 20° north of the course to the passes of the river, and then change course for the entrance to the safety fairways off the passes. This keeps them out of the strongest part of the Gulf current.

(62) Going to the Straits of Florida, a course usually is set for a point 10 or 12 miles southwest of Dry Tortugas.

(63) Since in either direction soundings are of little value in determining position, observations should be relied upon. The currents vary considerably, so that even with the closest navigation a vessel bound for South Pass may make a landfall at Pass a Loutre or Southwest Pass.

(64) Vessels bound to Southwest Pass sometimes fall west of the Mississippi River delta, a situation that the mariner can quickly ascertain by soundings. The water shoals much more gradually along this part of the coast than off the delta.

(65) Approaching South Pass, a vessel uncertain of her position can set a course so as to pick up the 20-fathom curve from 5 to 20 miles northeast of the lighted bell buoy off South Pass and then follow the curve southwest to the entrance to the safety fairway. During thick weather, vessels might ground northeast of South Pass and north of Southwest Pass because of infrequent sounding. Due consideration should be given to the possible occurrence of mud lumps.

(66) Vessels approaching South Pass or Southwest Pass should become fairly certain of their positions in any weather by using radar or radio bearings in conjunction with soundings.

(67) In thick or foggy weather, Southwest Pass is more accessible and more easily navigated than South Pass because the former's channel is marked better, has greater width and is nearly straight. Furthermore, a vessel is not set off course to the same extent by currents at the entrance.

(68)

Pilotage, Mississippi River

(69) Pilotage is compulsory at the bar and on the river for all foreign vessels over 100 tons and U.S. vessels over 100 tons under register in foreign trade. Pilotage is optional for coastwise vessels that have on board a pilot licensed by the federal government. There are four pilot associations: the Associated Branch Pilots for the bar from sea to Pilottown, the Crescent River Port Pilots for the river between Pilottown and New Orleans, the New Orleans-Baton Rouge Steamship Pilots for the river between New Orleans and Baton Rouge and the Associated Federal Pilots and Docking Masters of Louisiana, L.L.C., for public vessels and vessels in coastwise trade from Southwest Pass to Baton Rouge.

(70)

Note

(71) The Associated Branch Pilots, Port of New Orleans, advised that South Pass has a recommended draft limit of 15 feet. The pilots further advised that a recommended deadweight tonnage limit of 21,000 and/or 15 feet is in effect for ships using South Pass. The deadweight tonnage limit is recommended because ships of large tonnage do not steer well. The tonnage limit is subject to a larger limit as the draft limit deepens.

(72) Southwest Pass has a recommended draft limit of 45 feet. There is no limit on deadweight tonnage for ships using Southwest Pass.

(73) Pilots for South Pass and Southwest Pass board vessels in areas up to 3 miles off the sea buoys at the passes, depending on the weather. The **Associated Branch Pilots** have 65-foot diesel-powered tenders with red hulls and white housing. They fly the International Code flag "P" and are equipped to handle radio traffic on VHF-FM channels 6, 9, 16 and 67. VHF-FM channel 67 is the working channel. There is a pilot station at Southwest Pass off the West Jetty about 2 miles inside the entrance. There is a pilot station at South Pass at a small settlement on the west side about 0.5 mile above the ends of the jetties. Both pilot stations are equipped to handle radio traffic on the same VHF-FM channels as the pilot boats. They have radiotelephone communication with the pilot office in New Orleans. Pilots may be obtained by making a signal off the bar, as both pilot stations maintain lookouts, or on advance notice by radio, radiotelephone

through the New Orleans Marine Operator, telephone (504–524–3384) or through the ships' agents. Vessels are boarded and taken in day or night. For boarding, the pilots request that the pilot ladder be rigged 6 feet above the water on the lee side of the vessel. All bar pilots carry portable radiotelephones. The pilots request a 24-hour advance notice of arrival.

(74) The pilots for the river between Pilottown and New Orleans have an office in New Orleans that is manned 24 hours a day year round. Vessels requiring a Crescent River Port Pilot shall provide an estimated time of arrival (ETA), draft, deadweight tonnage and speed at least 24 hours prior to arrival off the South Pass Lighted Buoy 2 or the Southwest Pass Entrance Lighted Buoy SW. If the original ETA changes by more than 2 hours, an amended ETA is required 12 hours in advance of arrival, or if the arrival time is later than the original ETA, an amended ETA is required 12 hours prior to the original ETA. Vessels arriving without the required notice may be delayed if a pilot is not available in addition to the penalties specified in the tariff. Vessels may notify the Crescent Pilots, 24 hours a day, by telephone (504–392–8001), by fax (866–569–4138), by email (dispatch@crescentpilots.com), by telex (6737841), or cable (CRES-PILOTS, New Orleans, via radio station WNU). The river pilots board vessels off Pilottown, about 2.3 miles above Head of Passes Light. The pilot station, on the east side of the river at Pilottown, maintains a lookout and is equipped to handle radio traffic on VHF-FM channels 9 and 67. The **Crescent River Port Pilots** have fast motorboats painted white with the names RIVERPILOT, PORTPILOT or CRESPILOT in black on the sides. The Crescent River Port Pilots take vessels from Pilottown upriver to New Orleans. The river pilots boarding vessels at Pilottown rarely have information from the vessel's agent pertaining to the vessel's destination or working schedule while in port. It is advised that vessel masters contact their agent via radio station WNU or preferably through the New Orleans Marine Operator to obtain information on the vessel's exact destination and to advise the agent of the vessel's ETA in order that the agent can arrange for tugs, line handlers, boarding party or, if necessary, a New Orleans-Baton Rouge Pilot. All Crescent River Port Pilots carry portable radiotelephones for bridge-to-bridge communications with other vessels on the river and canal.

(75) The **New Orleans-Baton Rouge Steamship Pilots** usually board vessels continuing upriver off **The Point** at about Mile 91.0. The pilots board vessels from commercial launches. Two launch stations are in Arabi, LA, on the east side of the river about 1 mile and 1.6 miles below the Inner Harbor Navigation (Industrial) Canal. All the upriver pilots carry portable radiotelephones and communicate with other vessels on the river. Their working frequency is VHF-FM channel 67. They can be obtained by notifying the Crescent River Port Pilots at Pilottown, by prior notice by radio, radiotelephone through the New Orleans Marine Operator, telephone (504–466–7881 or 466–7882) or through ships' agents. The pilots request a 3-hour advance notice of time of sailing for all downriver bound vessels departing berths above Norco, about 126 miles AHP.

(76) The **Associated Federal Pilots and Docking Masters of Louisiana L.L.C.** provide service for public vessels and U.S. Flag vessels not sailing under registry from Southwest Pass (21.8 BHP) to Baton Rouge (233.7 AHP). The pilot station monitors VHF-FM stations 9 and 16. Pilots are embarked in the vicinity of **Southwest Pass Entrance Lighted Buoy SW**. The pilot station should be contacted on VHF-FM channel 9 prior to arriving at the pilot boarding area for boarding arrangements and boarding speed. Pilot ladder height is typically 6 feet above the water. The pilots have three pilot boats all with gray hulls and white superstructures: FEDERAL PILOT 1, 48 feet; FEDERAL PILOT 2, 50 feet; and FEDERAL PILOT 3, 40 feet. The pilot boats fly International Code flag P by day and monitor VHF-FM channels 9, 16 and 67, with channels 9, 6, 67 and 79A used as working frequencies. Arrangements for pilots are generally made in advance by telephone 504–456–0787 or through vessel agents. The Associated Federal Pilots e-mail address is *fedpilot@federalpilots.com*. The Federal Pilots request a 24-hour advance notice of arrival.

(77)

Towage

(78) Tugs of about 2,400 hp are normally used for assisting in docking, undocking, towing in the harbor and canals and towing to sea. Tugs of up to 4,600 hp are available. Two tugs must be employed on all towing to and from the drydocks and should be employed on all ships towed around Algiers Point when the traffic lights are operating and by large vessels going through the Inner Harbor Navigation Canal. The tugs are equipped to handle radio traffic on VHF-FM channel 67. There are two diesel-powered fireboats in the harbor.

(79)

Quarantine

(80) **Quarantine** on the river is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) A 4,000-foot **quarantine anchorage** is on the west side of the river at New Orleans, about 1.5 miles downriver of the Inner Harbor Navigation (Industrial) Canal. The upper end is marked by a quarantine anchorage sign at about Mile 91.6 (See **33 CFR 110.1** and **110.195**, chapter 2, for limits and regulations.) The quarantine station is at the New Orleans National Airport, and officials maintain regular service for marine inspections from 0600 to 1800. Outside of these hours, vessels may be boarded on request, but a charge is made for services. Quarantine clearance is granted by the New Orleans station for all vessels destined to all ports on the Mississippi River or to ports reached via the Mississippi River. Vessels are usually cleared either at anchor or at the dock.

(81) **Agricultural quarantine** is enforced in accordance with regulations established by the Animal and Plant

Health Inspection Service of the U.S. Department of Agriculture. Officials making inspections for the ports on the Mississippi River, from the mouth to Gramercy, have an office at the U.S. Customhouse in New Orleans. (See Appendix A for address.) Vessels are inspected at anchor and alongside the docks. Arrangements are usually made through the ships' agents.

(82)

Customs

(83) New Orleans and Baton Rouge are ports of entry. Vessels are generally boarded at berth; however, arrangements can be made for boarding anywhere within the port limits.

(84)

Immigration services

(85) The **U.S Citizenship and Immigration Service** maintains a field office and a port of entry at New Orleans and serves the port facilities from the mouth of the Mississippi River to Remy, about 150.7 miles AHP. (See Appendix A for addresses.)

(86)

Coast Guard

(87) **District, Sector** and **Captain of the Port** offices are in New Orleans. (See Appendix A for addresses.)

(88)

Harbor regulations

(89) Federal regulations for navigation of the river are given in **33 CFR 162.80**, **165.1** through **165.40**,**165.803**,**165.810**,**165.839**, and **207.200**, chapter 2.

(90)

Supplies

(91) An unlimited supply of ships' stores, marine supplies and provisions can be obtained at New Orleans. Water is available at all piers and wharves. Bunker C fuel oil and diesel fuel can be supplied at the oil terminals or from tank barges while vessels are alongside the wharves.

(92)

Repairs

(93) New Orleans has facilities for all types of above- and below-water hull and engine repairs. The largest floating drydock has a capacity of 81,000 tons for a length of 900 feet. Shipbuilding and ship repair plants are well equipped with machine shops and foundries. Floating cranes up to a capacity of 660 tons are available. There are smaller drydocks, marine railways and boatyards for repair of medium and small craft.

(94)

Salvage facilities

(95) Equipment necessary for heavy salvage work at sea or in the port is available at New Orleans, including floating derricks, dredges, barges, pumps, diving equipment and ground tackle. Oil salvage barges are at the shipyard at Avondale and Baton Rouge.

(96)

Southwest Pass to Boothville

(97) **Southwest Pass**, the westernmost of the passes of the Mississippi, is 18 miles west-southwest of South Pass entrance and 295 miles east of Galveston entrance. The pass has been improved by the construction of jetties on both sides at the entrance. Wooden pile dikes, or wingdams, extend channelward from along the inner bulkhead of the jetties. Near the ends of the jetties the depths are somewhat changeable, although there appears to be deep water in the Gulf from nearly every direction up to within 2 miles of the entrance.

(98) The approach to Southwest Pass is marked by a lighted buoy, 1.6 miles south from the jetty ends. From the buoy to abreast of Southwest Pass Entrance Light, the channel leading northward is marked by a lighted buoy on the west side of the channel and by lighted ranges. The first turn in the channel towards the northeast is also marked by ranges ("B" Range).

(99) Depths in Southwest Pass Entrance are subject to some change. Contact the New Orleans District Office, Corps of Engineers, for controlling depths; the office is located at the foot of Prytania Street, New Orleans; telephone (504–865–1121). The Associated Branch Pilots, Port of New Orleans, advise that Southwest Pass has a recommended draft limit of 45 feet. The current, so far as is known, can be depended upon to set nearly straight out from between the jetties—crosscurrents can be present due to winds and seas.

(100) The sides are a sufficient guide once inside the pass. Lights mark the channel to Head of Passes. There are several wharves—used mainly for transferring petroleum products from wharf to barge—on both sides of the pass. Most of these wharves are marked by privately maintained lights. Lights from wharves may be difficult to see as they can get lost in the background lighting.

(101) **Burrwood Bayou** is on the east bank 5 miles above the jetties.

(102) **South Pass** lies 425 miles northwest of Dry Tortugas and 90 miles southwest of Mobile Bay entrance. Jetties are on both sides of the entrance. The area in the approach and inside the entrance channel between the jetties is subject to considerable change and severe shoaling. The latest information on controlling depths can be obtained through the Office of the District Engineer, Corps of Engineers New Orleans. In 2014, the east jetty was reported to be completely submerged. Several vessels have been damaged attempting to cross this jetty in order to bypass the shoaling at the entrance. In 2007, the west jetty was reported to be visible at high tide; however during rough sea conditions, it could become submerged; extreme caution is advised.

(103) Federal project depth is 17 feet. Contact the New Orleans District Office, Corps of Engineers, for controlling depths; the office is at the foot of Prytania Street, New Orleans; telephone (504–865–1121).

(104) **Note**—the Associated Branch Pilots, Port of New Orleans, advise that South Pass has a recommended draft limit of 15 feet.

(105) The entrance approach is marked by a lighted buoy, 1.5 miles southeast of the end of the rock jetties. A buoy marks the shoal ground between 0.2 and 0.5 mile off the end of the jetties on the west side of the channel. This dangerous shoal has depths of 2 to 17 feet over it. The buoy marks the east portion of the shoal. Except for changes during and after high-river stages, the position of this shoal and depths on it are fairly constant. This shoal, coupled with strong river currents, makes navigation of South Pass difficult for strangers. A bend in the channel near Head of Passes also adds to the difficulty. Depths in the channel at the entrance to South Pass are subject to frequent change; local knowledge is advised. The current has considerable velocity, which tends to carry a vessel upon the shoal on the west side of the channel.

(106) **Head Range Channel** leading from the head of Southwest Pass into the river is part of the 45-foot federal project for the Southwest Pass and Mississippi River. **Cypress Range Channel** leading from the head of South Pass into the river is part of the 17-foot federal project for South Pass. Dredging is necessary to maintain both channels to near project depths. Contact the New Orleans District Office, Corps of Engineers, for controlling depths; the office is at the foot of Prytania Street, New Orleans; telephone (504–865–1121). Lights mark Cypress Range Channel and lighted ranges mark Head Range Channel.

(107) At **Head of Passes**, three of the river's important passes come together; South Pass, Southwest Pass, and Pass a Loutre. This point of confluence is at **Head of Passes Junction Light** (29°08'53"N., 89°15'06"W.). From this point, measurement is made of all distances on the river south or below the mouth of the passes, referred to as below Head of Passes (BHP), and north of or above Head of Passes (AHP) to Cairo, IL. Head of Passes Junction Light separating Southwest Pass and South Pass is shown from a skeleton tower on piles.

(108) **Pass a Loutre** and its branches**, Southeast Pass, North Pass**, **Northeast Pass**, flow east into the Gulf. These passes are deep from the Head of Passes to within a short distance of the Gulf, but the mouths are obstructed by bars. Small local craft occasionally use these passes, but strangers should avoid them. Pass a Loutre and North Pass have depths of about 7 feet over the bars; the others are much shallower. The approaches to North Pass and Pass a Loutre are marked by lighted buoys.

(109) An abandoned lighthouse is on the north side of Pass a Loutre, 2.3 miles inside the entrance. Another abandoned lighthouse, a grayish-white tower, is 1.7 miles west of the entrance to Northeast Pass.

(110) The marsh lands from Main Pass southward are used extensively for hunting and oil operations; some oyster camps are located in the **Redfish Bay** area.

(111) From Head of Passes northward to New Orleans, the river has a least width of 600 yards and a clear unobstructed channel with depths of 31 to 194 feet. There are a few shoals along the river banks. The outer limits of a shoal on the east side of river, 8.2 miles AHP, is marked by lighted buoys. On both sides of the river the land is dry, and in the lower reaches it is covered mostly with coarse grass and willows.

(112) Above Bohemia on the east side, at about Mile 45, and The Jump on the west side, at about Mile 10.0, levees prevent overflow at high water. Below Bohemia, the absence of levees permit floodwaters to flow east into the Gulf. On both sides of this break are levees extending from the river to the Gulf, to prevent the flooding of adjacent land. Below this break the levee continues to Baptiste Collette Bayou.

(113) The land back of the levees on the east side, formerly laid out in sugar and rice plantations, now is given over to pasturage and market gardens. Orange groves are back of the levees on the west side. New Orleans is reached by river boats and also by railroads and highways which extend down the west side to Venice (The Jump), at about Mile 10.0, and down the east side to Bohemia, about Miles 10.4 and 45.8, respectively, AHP.

(114)

Caution during high stages of the river

(115) Vessels navigating the Mississippi River at flood stages, when passing habitations or other structures, partially or wholly submerged and subject to damage from wave action, shall proceed slowly and keep as far away from such structures as circumstances permit and shall also proceed slowly when passing close to levees. In low river stages, vessel bow wave and suction may be more pronounced due to calmer, less-flowing waters. Caution is advised when nearing facilities and moored/anchored vessels as their own suction may cause hazard and damage.

(116) Under these conditions, between Baton Rouge, Mile 232.0, and Head of Passes, Mile 0.0, mariners are directed to steer a course as close as possible to the center of the river and to proceed at a speed sufficiently slow so that levees and revetments will not be endangered by wave wash. Careful observation by mariners of the effects of the vessel's wash is a vital element in this control. Mariners are also advised to exercise extreme caution when navigating or mooring their vessels in the forebays of Algiers, Harvey, Inner Harbor Navigation Canal, Port Allen and Old River locks to prevent vessels and tows from coming in contact with the controlling levee line in those areas.

(117) Strong currents and shifting eddies in the vicinity of Algiers Point will be encountered during high stages of the river. These conditions may make hazardous the operation of a tow that could normally be handled with ease. It is accordingly requested that operators and masters exercise every precaution when operating in the area controlled by the New Orleans Harbor traffic lights. Size of tows and tugs should be considered in view of conditions that may be expected.

(118) The river is marked with lights, and for the most part the banks are sufficient guides. The distance from Head of Passes to New Orleans is 95 miles.

(119) **Pilottown**, a small village on the east side of the river 2 miles AHP, is the exchange point for bar pilots and river pilots for both inbound and outbound vessels. A wingdam about 1.6 miles AHP is marked by a light. The pilots' wharf about 2 miles AHP and a wingdam inshore on the east side are marked by private lights.

(120) **Cubits Gap** is an opening on the east side of the river about 3.5 miles AHP, at which **Raphael Pass**, **Main Pass**, **Octave Pass** and **Brant Bayou** meet and connect with the river. These passes are navigable for small craft, but Main Pass is the only one having a navigable connection with the Gulf. A sill of willow brush weighed down by rocks has been laid across the entrance to each of these passes. With local knowledge, certain spots along the sills may be crossed by drafts of 5 to 9 feet.

(121) **Cubits Gap Light 4**, on the southeast side of the gap, is shown from a skeleton tower with a red triangular daymark.

(122) **Main Pass**, in 1984, had a controlling depth of 4 feet from the Mississippi River for about 2.1 miles, thence there was shoaling to Breton Sound. In August 1984, it was reported that vessels of 3-foot draft could navigate the pass at high water. This pass is used considerably by fishing vessels and oil companies operating in Chandeleur and Breton Sounds.

(123) The buildings of the Department of Interior's Delta National Wildlife Refuge and a lookout tower at the old quarantine station on the east side just above the gap are conspicuous but abandoned and no longer in use.

(124) **The Jump** is an opening on the west side 10.6 miles AHP, where Grand Pass, Tiger Pass and several smaller passes connect with the river.

(125) **Tiger Pass**, close west of Grand Pass, connects the Mississippi River via the Jump with the Gulf. The entrance from the Gulf is protected by jetties. Lights and daybeacons mark the entrance and the lower 5 miles of the pass. **Venice Coast Guard Station** is on the west side of the head of the pass at Venice.

(126) **Venice** is a fishing and marine repair center on the west side of Grand Pass just inside The Jump. Oil companies have service and repair bases, and drilling mud, pipe and equipment are loaded here for the offshore drilling rigs in the Gulf. Boatyards have a 150-ton lift and cranes to 100 tons; hull and engine repairs are made. Oil well platforms are built at Venice. Gasoline, diesel fuel, water, ice, provisions, marine supplies, berths, a 3-ton lift and ramps are available at marinas. An abandoned Corps of Engineers wharf is on the west side just north of The Jump, Mile 10.7 AHP. Wharves and small-craft landings are at Venice on Grand Pass and on the west side of the river between Venice and Boothville.

(127) Plains Marketing Petroleum, Mile 11.9, ships crude oil from a wharf on the west side of the river about 1.6 miles above The Jump. The wharf has 40 feet reported alongside and berthing space for 785-foot vessels.

(128) **Baptiste Collette Bayou**, on the east side of the river 11.5 miles AHP, connects the Mississippi River with Breton Sound. The entrance from Breton Sound is protected by jetties.The channel is marked by lights and daybeacons.

(129) **Boothville** is a small town on the west side of the river about 16.1 miles AHP.

(130)

Fort Jackson to Algiers

(131) **Fort Jackson** is on the west side of the river on the point of the river about 19.6 miles AHP. Here the river takes a southwest trend for about 2.3 miles, then trends west-northwest.

(132) **Ostrica** is a small village on the east bank of the river about 24.7 miles AHP. The State-owned **Ostrica Canal**, which connects the river with Quarantine Bay, enters the river 25 miles AHP. (See chapter 7 for a description of the canal and lock.)

(133) **Buras** is a small town and fruit shipping center on the west bank of the river about 25.7 miles AHP. A water tank is prominent.

(134) **Empire** is a town on the west bank of the river about 29.5 miles AHP; a church spire is prominent. **Empire Canal** leads from the river at Empire to the Gulf west of the river. The canal, lock and dam and the port facilities on the canal at Empire are described in chapter 9.

(135) **Port Sulphur** is on the west bank of the river about 39.4 mile AHP. The Morgan Energy dock is well lit at about 29°28'24"N., 89°41'05"W.

(136) **Bohemia** is a small village on the east bank of the river about 45.8 miles AHP. State Route 39 leads along the east bank of the river behind the levee from Bohemia to New Orleans. Several wrecks lie on the west side, across the river from Bohemia.

(137) **Pointe a la Hache**, 49 miles AHP and about 46 miles below New Orleans, is the seat of Plaquemine Parish which embraces most of the lower Mississippi River. Gasoline, water and some marine supplies can be obtained in the town. The courthouse clock tower, a water tank, and several radio and microwave towers are very prominent. A ferry crosses the river at Pointe a la Hache and can be contacted on VHF-FM channel 67. Bass Enterprises Production Co., Pointe a la Hache Wharf (29°34'46"N., 89°48'03"W.) has 280 feet of berthing space, 30 feet alongside and a deck height of 14 feet. In 2020, a submerged obstruction was reported with a least depth of 15 ft in about 29° 34' 48.6"N., 89° 48' 04.6" W. On the west bank of the river, opposite Pointe a la Hache about 48.9 miles AHP, there is an oil transfer barge wharf and fresh water diversion piping.

(138) At **Bellevue**, on the east bank of the river about 55.2 miles AHP, TECO Energy Co. operates four bulk-material handling wharves marked by private lights. TECO Bulk Terminal, Berth No. 2 (29°36'55"N., 89°53'23"W.) has 1,164 feet of berthing space with dolphins, 50 feet alongside; 1,182 feet of berthing space with dolphins in

rear of face, 30 to 40 feet alongside and a deck height of 15 feet. TECO Bulk Terminal, Berth No. 1 (29°37'00"N., 89°53'32"W.) has 1,851 feet of berthing space with dolphins, 55 to 70 feet alongside, 30 to 60 feet alongside in rear of face and a deck height of 16.5 feet. TECO Bulk Terminal, Davant Barge Unloading Station No. 1 (29°36'59"N., 89°53'21"W.) has 1,200 feet of berthing space, 12 to 20 feet alongside and a deck height of 15 feet. TECO Bulk Terminal, Davant Barge Unloading Station No. 2 (29°37'05"N., 89°53'30"W.) has 1,250 feet of berthing space, 12 feet alongside and a deck height of 15 feet. Mooring buoys are located just up and down river from TECO docks. Davant anchorage is located about 2 miles down river from TECO docks.

(139) On the west bank of the river about 57 miles AHP, International Marine Terminals (IMT) operates three bulk-material handling wharves marked by private lights. International Marine Terminals, Shiploader Wharf (29°37'18"N., 89°54'54"W.) has 1,044 feet of berthing space, 46 feet alongside, 1,044 feet of berthing space in rear of face, 40 feet alongside, and a deck height of 15 feet. Traveling shiploader is served by electric conveyor system with a rate of 7,000 tons per hour; used for shipment of dry bulk commodities and mooring barges at rear of face. International Marine Terminals, Myrtle Grove Bulk Commodities Wharf (29°37'23"N., 89°55'01"W.) has 1,271 feet of berthing space, 671 feet of berthing space with dolphins in rear of face, 40 feet alongside and a deck height of 15 feet; receipt and shipment of dry bulk commodities. International Marine Terminals, Myrtle Grove Crane Wharf (29°37'26"N., 89°55'07"W.) has 1,271 feet of berthing space, 600 feet of berthing space with dolphins in rear of face, 46 feet alongside, a deck height of 15 feet; revolving crane to 25 tons with 100-ton receiving hopper; transfer of dry bulk commodities.

(140) A grain elevator and wharf operated by Cenex Harvest State Cooperatives (29°40'27"N., 89°57'51"W.) is on the west bank of the river 61.8 miles AHP. The wharf has a 536-foot face, 790 feet of berthing space with dolphins, 40 feet alongside, and a deck height of 23.5 feet. Four revolving ship loaders have a combined loading rate of 50,000 bushels per hour. The wharf is marked by private lights.

(141) An offshore barge wharf and an offshore oil transfer tanker wharf operated by Conoco Phillips 66 Co. are at **Alliance** on the west bank of the river of 62.5 and 63 miles AHP. Conoco Phillips 66 Co., Alliance Refinery, Coke Wharf (29°41'02"N., 89°58'11"W.) has 740 feet of berthing space with dolphins, 40 feet alongside, deck height of 12 feet and a conveyor and loading tower with a rate of 35 tons per hour. Conoco Phillips 66 Co., Alliance Refinery, Tanker Dock No. 1 (29°41'26"N., 89°58'28"W.) has 1,320 feet of berthing space with dolphins, 60 feet alongside, a deck height of 12 feet and storage capacity of 5.014-million barrels. The dolphins and wharf are marked by privately maintained lights.

(142) At **Oak Point**, on the west bank of the river 72.3 miles AHP, Chevron Oronite ships and receives chemicals. The wharf at (29°48'32"N., 90°00'26"W.) has 675 feet of berthing space with dolphins, 44 feet alongside, and a deck height of 10 feet. The dolphins are marked by private lights.

(143) **Belle Chasse** is on the west bank of the river about 75.5 miles AHP. A T-shaped wharf (29°51'05"N., 89°58'59"W.) operated by Alphine Mud Products, Inc. has 280 feet of berthing space with dolphins, 25 feet alongside and a deck height of 18 feet. The wharf is used for mooring vessels. The dolphins are marked by private lights. A ferry crosses the river from Belle Chasse on the west bank to **Scarsdale** on the east bank of the river. The ferry landings are marked by privately maintained lights.

(144) **Port Nickel** is on the east bank of the river about 76.5 miles AHP.

(145) **Braithwaite**, on the east bank of the river about 79.7 miles AHP just above **English Turn Bend-Shingle Point**, has two wharves at about (29°52'14"N., 89°56'34"W.) owned and operated by Stolthaven New Orleans, LLC, for the receipt and shipment of liquid bulk goods. The lower berth has 754 feet of berthing space with dolphins, the upper berth has 460 feet of berthing space with dolphins and both have 50 feet alongside and a deck height of 20.4 feet.

(146) **Meraux**, on the east bank of the river about 87.5 miles AHP, has an oil refinery with facilities for receipt and shipment of crude oil and petroleum products by tanker and barge. The tall stacks and cracking towers of the refinery are prominent.

(147) **Algiers Alternate Route** and **Algiers Lock**, on the west bank of the river about 88.4 miles AHP, connect the Mississippi River with an extensive network of inland waterways west of New Orleans. The route is an alternate route of the Intracoastal Waterway leading west of New Orleans. (See chapter 12 for description of canal and lock.)

(148) **Chalmette**, on the east bank of the river about 88.9 miles AHP, has several large oil refineries, ExxonMobil Chalmette Refinery, CCI Carbon and an aluminum plant. The stacks and cracking towers of the refineries and the aluminum plant are conspicuous. Several wharves between mile 88.3 and 89.1 AHP are used for the receipt and shipment of petroleum products and for bunkering vessels.

(149) A ferry crosses the river from Chalmette on the east bank to Algiers on the west bank about 88.6 miles AHP.

(150) **Chalmette Slip** indents the east bank of the river at about 90.7 miles AHP. Chalmette National Monument, a tall white obelisk, is conspicuous close east of the slip. Berthing for deep-draft cargo vessels is available on the north and south sides of the slip.

(151) **Arabi**, a suburb of New Orleans, is on the side bank of the river just upriver of Chalmette. A deep-draft wharf and a smaller wharf are at a large sugar refinery. One wharf is used by ship service boats and the other by the refinery company.

(152) Just upriver of the sugar refinery wharf, at the Port Ship Service boat wharf about 91.0 miles AHP, is the

landing for the pilot boat. The upriver pilots board vessels off the landing in the section of the river known as **The Point**. Here, vessels bound for destinations above New Orleans discharge the river pilot and take on board the New Orleans-Baton Rouge Steamship Pilot or upriver pilot. Launch service is also available from Belle Chasse Marine Transport at the St. Maurice Street Wharf about 91.7 miles AHP.

(153) On the west bank of the river opposite Chalmette and Arabi at **Algiers** are barge moorings, towing company wharves, the large floating drydocks of a large ship repair firm, the U.S. Naval Station, and other towing company wharves and barge moorings.

(154) The Inner Harbor Navigation Canal entrance is on the north side of the river about 92.7 miles AHP. The Intracoastal Waterway enters the river through the canal. There are numerous industries along both sides of the Inner Harbor Navigation Canal, including shipbuilding and ship repair yards, cement and concrete mixing plants, chemical, fertilizer, steel fabrication, glass making, instant coffee, and drilling mud manufacturing plants, boatyards, shipwrecking and salvage yards, oil well and dredging company supply bases and shell-handling wharves.

(155) The vessel is now approaching the crescent shape in the river that encompasses the city of New Orleans on three sides, and ahead are the numerous tall buildings in the main part of the city. Most of the commercial wharves of the Port of New Orleans are on both sides of the river in this section.

(156)

ENCs - US4LA39M, US5LA37M
Charts - 11369, 11368

(157) **Port of New Orleans** is one of the largest ports in the United States. It is located on both sides of the Mississippi River with its lower limit about 80.6 miles AHP and its upper limit about 115 miles AHP. The limits of the port encompass the parish of Orleans and the river frontage of the parishes of St. Bernard and Jefferson. This includes the city of New Orleans; the towns and communities of Violet, Meraux, Chalmette, Arabi, Southport, Harahan and Kenner on the east bank; and Algiers, McDonoghville, Gretna, Harvey, Marrero, Westwego, Bridge City and Avondale on the west bank. The frontage for deep-draft vessels within the port limits includes approximately 58 miles along the river banks, about 11.5 miles on the Inner Harbor Navigation Canal and the Mississippi River-Gulf Outlet Canal. The Intracoastal Waterway above the Inner Harbor Navigation Canal and below Harvey Lock offers frontage for barges and small vessels.

(158) The city of **New Orleans** is the major commercial area within the port limits. It is one of the largest cities on the Gulf and is a natural gateway to and from the vast central and south portions of the nation and particularly to the entire Mississippi Valley with which it is connected by numerous inland water routes. From New Orleans, main-route air and rail lines fan out to all parts of the country. Foreign and coastwise trade are extensive. The chief imports are crude petroleum, coffee, iron and steel products, metalliferrous ores and scrap, nonferrous metals, sugar, crude rubber, meat and meat products and manufactures of metal. The chief exports are grain, machinery, oilseeds, animal feeds, nonferrous metals, organic chemicals, oils and fats, metal ores and scrap, iron and steel products, containers and coal.

(159) New Orleans is a popular resort with many fine hotels, theaters, restaurants, parks and places of historical interest. Among the latter is the famous French Quarter (Vieux Carre), which is kept in as near its original state as possible.

(160) The city proper is bounded on three sides by the Mississippi River. The city limits extend north to Lake Pontchartrain, which is connected to the river by the Inner Harbor Navigation Canal along the east side of the city. Strong levees protect the city from flood waters of the Mississippi River, which at times rise to a level higher than that of the city streets.

(161) Abreast of New Orleans on the opposite bank of the river are **Algiers**, which is part of the city of New Orleans, **McDonoghville, Gretna, Harvey, Marrero** and **Westwego**. Algiers and Gretna are connected with New Orleans by ferries.

(162) The Port of New Orleans has over 28 miles of public and private wharves and other related facilities. The public docks can handle as many as 85 ships at a time. The port is mainly a general cargo port, and the first objective is to give shippers whatever facilities and services they need to handle any type of cargo. Modern handling devices suitable for the varied commodities entering the port are provided on the wharves and in the transit sheds. Almost all wharves have rail connections.

(163) Most of the wharves along the waterfront of the city of New Orleans are public facilities under the control of the Board of Commissioners (Dock Board) of the Port of New Orleans. Virtually all these wharves parallel the river bank, and for about 10 miles along the bank there is an almost continuous quay. Transit sheds cover much of the wharf area. Depths at the wharves range from 6 to 45 feet, with about 35 feet alongside most wharves. It is the Dock Board's responsibility to keep sufficient depths alongside the wharves for ships to berth. The board controls the area from the faces of the wharves to 100 feet into the stream. The dock areas silt up rapidly and change from day to day. The Dock Board's dredge is working continually to keep the docks open.

(164) The offices of the Dock Board are in the Port of New Orleans Building at the foot of Thalia Street Wharf, east bank, 95.7 miles AHF, under the Crescent City Connection Upper bridge.

(165)

Channels

(166) The main deepwater channels leading to and in the Port of New Orleans are in the river and the Inner Harbor Navigation Canal. (See Channels at the beginning of this

(168)

New Orleans – Inner Harbor Navigation Canal, Louisiana
Image courtesy of the Army Corps of Engineers (2000)

chapter.) Secondary channels for shallow-draft vessels and barges are on Algiers, Harvey and other canals and waterways that radiate from the river in all directions.

(167) The **Inner Harbor Navigation Canal (Industrial Canal)** offers a deepwater connection between Mississippi River and Lake Pontchartrain, a distance of about 5.8 miles. The lock is about 0.6 mile north of the Mississippi River Levee; inside dimensions are 626 feet long, 74 feet wide and 31 feet over the sills at low water in the Mississippi River. Approaching craft are directed by loudspeaker, lights and radiotelephone. VHF-FM channels 14 and 16 are continuously monitored.

(169)

Caution

(170) A submerged drainage line is reported crossing the Inner Harbor Navigation Canal just south of the Florida Avenue bridge; maximum permissible draft over the line is 30 feet.

(172) **New Orleans Coast Guard Base** is on the west side of the Inner Harbor Navigation Canal, just north of the lock.

(173) **Harvey Canal** is opposite New Orleans about 98.2 miles AHP. The canal and locks connect the Mississippi River with an extensive network of inland waterways southwest of New Orleans. The canal is the route of the Intracoastal Waterway. (See chapter 12 for description of canal and locks.)

(174)

Anchorages

(175) General, quarantine and emergency anchorages are on the west side of the river at New Orleans. (See **33 CFR 110.1** and **110.195**, chapter 2, for limits and regulations.) Vessels may also take anchorage as directed by the Coast Guard District Commander.

(176)

Dangers

(177) Submerged revetments are located on the river bottom on both sides in the port area; anchorage is prohibited in these areas. See **33 CFR 207.200**, chapter 2, for revetment areas and regulations.

(178)

Bridges

(179) The Crescent City Connection Bridges (Route 90), high-level fixed highway bridges connecting Algiers and New Orleans, about 0.7 mile above Canal Street, have clearances of 150 feet over a central 750-foot width. The Huey P. Long Bridge, a combined highway and railroad bridge crossing the river 11 miles above Canal Street, has a clearance of 132 feet through the west span for a channel span width of 500 feet. These are the only bridges over the Mississippi River in the vicinity of New Orleans. The other bridges and tunnels in the port are covered in the description of the respective waterways which they cross.

(171)

Structures across the Inner Harbor Navigation Canal, New Orleans

Name•Description•Type	Location	Clearance (feet) Horizontal	Clearance (feet) Vertical*	Information
State Route 46 / St. Claude Avenue bridge (bascule)	29°57'50"N., 90°01'39"W.	70 (open) 75 (closed)	0	**Notes 1 and 2** Call sign WG-401.
State Route 39 / Judge Seeber / Claiborne Avenue bridge (vertical lift)	29°58'09"N., 90°01'32"W.	302	156 (up) 40 (down)	**Note 1**
Florida Avenue and Southern Railway combination bridge (vertical lift)	29°58'50"N., 90°01'19"W.	300	156 (up) 0 (down)	**Notes 1 and 2** Call sign WUG-409.
Overhead power cable			166	
Gentilly Road and Seaboard System Railroad (L&N) combination bridge (bascule)	30°00'16"N., 90°01'33"W.	90 (open) 96 (closed)	0	**Note 2** Call sign KZV-719.
U.S. Interstate 10 bridge (fixed)	30°00'17"N., 90°01'33"W.	250	115 120 (middle 200 feet)	
Overhead power cable			136	
Chef Menteur / U.S. Route 90 bridge (vertical lift)	30°00'30"N., 90°01'37"W.	313	120 (up) 50 (down)	**Notes 1 and 2** Call sign KRS-864.
Southern Railway railroad bridge (bascule)	30°01'53"N., 90°02'03"W.	93	1	
Senator Ted Hickey / Leon C. Simon Blvd. / Seabrook bridge (bascule)	30°01'54"N., 90°02'04"W.	84 (open) 95 (closed)	44	**Notes 1 and 2** Call sign KZV-819.

* Vertical clearance measured at Mean High Water
Note 1 – See **33 CFR 117.1** to **117.49 and 117.458**, chapter 2, for drawbridge regulations.
Note 2 – The bridgetender monitors VHF-FM channel 16 and works channel 13

(180)

Cables

(181) Overhead power cables with clearances of 155 feet and 176 feet cross the river just below Nine Mile Point, about 103.6 and 104.1 miles AHP, respectively.

(182)

Regulated Navigation Areas

(183) The Mississippi River from 88 to 240 miles AHP is a regulated navigation area, as are portions of the Inner Harbor Navigation Canal, the Harvey Canal and the Algiers Canal. (See **33 CFR 165.1** through **165.13**, **165.803**, **165.838**, and **165.845** in chapter 2, for limits and regulations.)

(184)

Weather

(185) The climate at New Orleans and the surrounding suburbs is influenced, in a large degree, by the many water surfaces provided by lakes and streams and by the proximity to the Gulf of Mexico. Throughout the year, these water areas modify the relative humidity and temperature conditions, decreasing the range between the extremes; when south winds prevail, these effects are increased, imparting the characteristics of a marine climate. Relative humidities of less than 50 percent occur in each month of the year; however, they are less frequent in the summer months than in other seasons.

(186) During mid-June to mid-September, the prevailing southeast to southwest winds carry inland warm, moist air favorable for sporadic, often quite localized, development of thundershowers. In the New Orleans area, these showers tend to occur most frequently around 1300–1400 and keep the temperature from rising much above 90°F. At times, a thunderstorm will develop over Lake Pontchartrain in the early evening and move over the city. Occasionally the pressure distribution changes to bring in a flow of hotter and drier air. However, there is only an average of about 71 days per year when the temperature rises to 90°F (32.2°C) or higher.

(187) From about mid-November to mid-March, the area is subjected alternately to tropical air and cold continental air in periods of varying length. About 80 percent of the December–February hourly temperatures range from 41°F to 69°F. The mean date of the first occurrence of 32°F or lower is about December 12, while the mean date of the last occurrence is about February 13. Between those dates, there is, on the average, more than 6 days out of 7 entirely above freezing, with some afternoons having temperatures in the seventies and eighties. The mean length of the freeze-free period is about 302 days, and the average number of days with a recorded temperature below freezing is 13.

(188) The usual track of winter storms is to the north of New Orleans, but occasionally one moves into the area, bringing large and rather sudden drops in temperature, but the cold spells seldom last over 3 or 4 days. In about two-thirds of the years, one can expect the annual lowest temperature to be 24°F or warmer, with some years entirely above freezing. The lowest recorded temperature was 7°F on February 13, 1899, at Audubon Park while the coolest temperature on record at the airport is 11°F recorded in December 1989.

(189) The average annual temperature at New Orleans is 68.7°F with an average high of 77.8°F and an average low of 59.1°F. July is the warmest month with an average temperature of 82.4°F while January is the coolest month with an average temperature of 52.8°F. Each month June through September has had temperature at or greater

than 100°F while each month, November through April, has had temperatures at or below freezing. The warmest temperature on record at the airport is 102°F recorded in August 1980.

(190) From December to May, the water of the Mississippi River is usually colder than the air temperature, favoring the formation of river fogs, particularly with weak south winds. The nearby lakes also serve to modify the extremes of temperature and to increase fogginess over narrow strips along the shores. From April through October, the occurrence of fog is not frequent enough to ordinarily consider them operationally significant. In other months, particularly in winter (December through February), the occurrences increase, with the greatest frequency in February. Visibility at times is reduced by smoke from the industrial plants along the river. Smoke, particularly during the fall and winter, also occurs when marshland areas are burned.

(191) A fairly definite rainy period is from mid-December to mid-March and convective activity is apparent during the summer months. Thunderstorms can be expected about 72 times each year with a pronounced peak in June, July and August. About 30% of the annual rainfall of 61 inches occurs during this three-month period. Measurable precipitation occurs on about one-third of the days during the winter season and usually falls to the north of a warm front or a cold front which has stalled over the northern Gulf of Mexico. It is as apt to fall in one hour as another, generally slow, steady and relatively continuous, often lasting for several days. The wettest month is July averaging 6.6 inches and October is the driest averaging 2.7 inches. Snowfall amounts are generally small, with the snow usually melting as it falls. The average annual snowfall total is less than one inch and the greatest 24-hour snowfall total was only 2.7 inches, which occurred in December 1963. The pattern of spring rains is similar to that of winter, while fall rains are distributed in much the same manner as summer rains. April, May, October and November are generally dry, but there have been some extremely heavy showers in those months.

(192) While thunder usually accompanies summer showers, thunderstorms with damaging winds are relatively infrequent. The most damaging thunderstorms are those that move over the city from Lake Pontchartrain, usually in connection with cold fronts and line squalls. Hail of a damaging nature seldom occurs, and tornadoes are extremely rare. Since 1900, the centers of three hurricanes have passed over the city, and since 1950, 14 tropical cyclones have passed within 50 miles of New Orleans. New Orleans is in the belt where a mean recurrence interval of 50 years gives an extreme wind speed of 95 to 100 mph or more. The most recent significant storm to affect New Orleans was hurricane Katrina in August 2005. Winds gusted to over 100 mph and levees broke, which produced massive flooding. It was one of the strongest storms to impact the United States coast during the past 100 years. Hurricane Elena in September 1985 passed about 70 km northeast of the city with 60-knot winds. Hurricane Camille provided New Orleans with 75-knot gusts when it rammed Gulfport, MS, in August 1969, and hurricane Betsy caused 90-knot winds when it passed about 70 km west of the city in September 1965.

(193) The lower Mississippi River floods result from runoff upstream. Rainfall within the State of Louisiana has little influence on these stages. If the water level in the river becomes dangerously high, the Bonnet Carre Spillway, some 33 miles above the city, may be opened to divert the floodwaters.

(194) The National Weather Service maintains a forecast office located near the airport in Slidell, Louisiana. (See Appendix A for address.)

(195)

Pilotage

(196) Pilotage is discussed under the general description of the river at the beginning of this chapter.

(197)

Towage

(198) Tugs up to 4,600 hp are available at New Orleans for towing and docking. (See detailed description at the beginning of this chapter.)

(199)

Quarantine

(200) **Quarantine** procedures are discussed at the beginning of this chapter. Numerous public and private hospitals are in New Orleans.

(201) **Agricultural quarantine** procedures are discussed at the beginning of this chapter.

(202)

Customs

(203) New Orleans is a customs port of entry with a customhouse on Canal Street. Vessels are generally boarded by customs officers at berth; however, arrangements can be made for the officers to board vessels at any point within the port limits. The customhouse serves the area from the Mississippi River entrance to Reserve, a small town about 138.1 miles AHP.

(204)

Immigration services

(205) The **U.S. Citizenship and Immigration Service** maintains a field office at New Orleans. (See Appendix A for address.) Inspectors board vessels at anchor or alongside the wharves. Arrangements should be made through ships' agents.

(206)

Coast Guard

(207) **New Orleans Coast Guard Air Station** is at the naval air station about 2.8 miles southwest of Belle Chasse.

(208)

Harbor regulations

(209) The navigation of vessels in the Mississippi River and the Inner Harbor Navigation Canal to its junction with the Mississippi River-Gulf Outlet Canal are under the

jurisdiction of the U.S. Coast Guard. The development, operation, and control of the Port of New Orleans is regulated by The Board of Commissioners of the Port of New Orleans.

(210)

Movement of Vessels in Vicinity of Algiers Point

(211) New Orleans Vessel Traffic Center controls traffic flow in the vicinity of Algiers Point, about 94.6 miles AHP, and is subject to regulations stated in **33 CFR 165.1** through **165.13**,**165.803** and **165.810**, chapter 2. In addition to the traffic lights at Governor Nicolls Street Wharf, about 94.6 miles AHP, and at Gretna, about 96.6 miles AHP, described in that regulation, there is a traffic light at **Westwego**, about 101.4 miles AHP, 6.5 miles above Canal Street, which indicates to downbound traffic whether the Gretna traffic control light, about 96.6 miles AHP, 1.7 miles above Canal Street, is red or green.

(212) At a conference of representatives of navigation interests in New Orleans, it was agreed that high stages on the Mississippi River require special precautionary measures in the operation of vessels in New Orleans Harbor, particularly in the vicinity of Algiers Point where high river stages produce strong currents and powerful shifting eddies.

(213) The following recommendations were made for the operation of vessels and other craft when the stage of the river is 10 feet or above on the Carrollton Gage. All underpowered vessels should be assisted by a tug around Algiers Point; further, underpowered vessels should not leave the harbor unless they can clear Algiers Point during daylight. Terminal operators and fleet owners should observe extra precaution in the mooring of barges to prevent the possible breaking loose of such craft to the danger of all installations downstream.

(214) The attention of all navigation interests, masters, pilots and operators is invited to the urgent necessity for observance of these policies and meticulous adherence to good seamanship and sound operating practice in order to minimize navigational hazards during the period of high stages of the river.

(215) **Note:** When emergency conditions exist due to the velocity of the flow of the Mississippi River in the vicinity of New Orleans, the Commander, Eighth Coast Guard District, will issue special orders and notices restricting the size and make up of tows, movement of vessels and the use of anchorages.

(216) **Control of the Port of New Orleans:**

(217) The **Board of Commissioners of the Port of New Orleans**, generally known as the **Dock Board**, has full control of the port except for matters pertaining to the levees and the yacht harbor on Lake Pontchartrain, which are under control of the **Levee Board,** and the **New Orleans Public Belt Railroad**, which is a terminal railroad owned and operated by the city of New Orleans through the **Public Belt Railroad Commission**.

(218) The Dock Board consists of members selected by the Governor of the State of Louisiana from a list of nominees compiled by eighteen business and civic associations. The board is charged with the development, operation and control of the Port of New Orleans and establishes rules and regulations for the various terminals and the part of the Inner Harbor Navigation Canal under its control. The office of the Port of New Orleans is located at 1350 Port of New Orleans Place, on the Thalia Street Wharf, under the Crescent City Connection.

(219)

Fire prevention

(220) Smokestacks of vessels moored to the wharves and landings must be equipped with spark arrestors, and every precaution must be taken to avoid an issue of sparks. Smoking in the holds or on the decks of vessels, while loading or discharging cargo while alongside the wharves, is prohibited.

(221) **Extracts from the rules and regulations for the Inner Harbor Navigation Canal are as follows:**

(222)

General

(223) No vessels shall berth at any wharf, landing or mooring, or move from one point to another in the canal, or load or unload cargo elsewhere than at a regularly established wharf, except by authority of the Superintendent.

(224)

Obstructing Navigation–Anchoring and Mooring

(225) No vessel shall anchor in the channel of the canal or in the approaches thereto, except in case of distress or emergency or while waiting the opening of a drawbridge, and such stoppages shall be only for such periods as may be absolutely necessary by reason of such causes. Vessels moored at wharves, landings, clusters, etc., shall be so placed and tied up as not to interfere with safe passage of other vessels navigating the canal. No warp line shall be passed across the channel, wharf, or landing, so as to obstruct passage or to cause interference with the discharging of cargoes.

(226) Vessels shall not be berthed two abreast alongside any wharves, bulkheads, or clusters, except that small barges or other small craft may be moored two or more abreast when necessary clearances for proper operation of the canal can be maintained, and permission of the Superintendent shall have been obtained.

(227) Vessels, lighters, barges, launches, other watercraft, timbers, rafts, or similar floating objects moored or tied to and alongside vessels, wharves, bulkheads, or clusters, shall be placed so as not to obstruct the channel, and shall be made fast securely at both ends to prevent swinging out or breaking loose, and shall display conspicuously suitable lights at night.

(228) Under no circumstances shall vessels or other watercraft be anchored or moored within 100 feet of the centerline of the Inner Harbor Navigation Canal channel as determined by the Engineering Department of the Board.

(245)

Facilities at Port of New Orleans, Louisiana

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Facilities on east bank of river, from Meraux to Inner Harbor Navigation Canal						
Murphy Oil USA Meraux Refinery Wharf	29°55'30"N., 89°56'15"W. (87.0 miles AHP)	757	35 to 40	24	• Receipt of crude oil • Shipment of petroleum	Murphy Oil USA, Inc.
Chalmette Refining Crude Wharf	29°55'36"N., 89°57'56"W. (88.3 miles AHP)	580	35	21	Receipt of crude oil	Chalmette Refining, LLC/ ExxonMobil Corp.
Chalmette Refining No. 5 Dock	29°55'34"N., 89°57'54"W.	380	12	20	Receipt of crude oil	Chalmette Refining, LLC/ ExxonMobil Corp.
Chalmette Refining No. 6 Dock	29°55'38"N., 89°58'10"W.	310	25	20	Receipt and shipment of petroleum by barge	Chalmette Refining, LLC/ ExxonMobil Corp.
Chalmette Refining No. 4 Dock	29°55'45"N., 89°58'39"W.	390	42 to 50	27	• Receipt of crude oil • Shipment of petroleum products and petrochemicals	Chalmette Refining, LLC/ ExxonMobil Corp.
CCI Carbon Chalmette Coke Dock	29°55'53"N., 89°58'52"W.	300	55		Receipt and shipment of coke by barge	CCI Carbon, LLC, a division of Calciner Industries, Inc.
Chalmette Slip Dock No. 2	29°56'33"N., 89°59'47"W.	1,680	32 to 36	20	Receipt and shipment of conventional and containerized cargo	St. Bernard Port, Harbor and Terminal District/International Ship Services, Inc.
Chalmette Slip Dock No. 1	29°56'42"N., 89°59'50"W.	1,280	30 to 36	20	Receipt and shipment of general bulk cargo	St. Bernard Port, Harbor and Terminal District/International Ship Services, Inc.; Bulk Material Transfer, Inc.
Tate and Lyle North American Sugars, Chalmette Refinery Wharf	29°56'36"N., 90°00'05"W.	1,115	45	21.8	• Receipt of raw sugar • Shipment of refined sugar	Tate and Lyle North American Sugars, Inc.
Pacorini USA Wharf	29°57'10"N., 90°01'06"W.	1,314	27 to 33	20	• Receipt and shipment of conventional general cargo • Landing for water taxis serving anchored vessels	Board of Commissioners of the Port of New Orleans/Pacorini USA, Inc., and Belle Chasse Marine Transportation, Inc.
Facilities on east side of Inner Harbor Navigation Canal and Industrial Canal						
Southern Scrap Material Co. Industrial Canal, Main Wharf	29°59'00"N., 90°01'13"W.	451	32	7	Receipt and shipment of scrap metal by barge	Port of New Orleans/Southern Scrap Material Co., LLC.
Dwyer Road Wharf	30°01'14"N., 90°01'50"W.	340	22	7	Mooring of transient vessels	Board of Commissioners of the Port of New Orleans
United States Gypsum Co. Industrial Canal Wharf	30°01'17"N., 90°01'49"W.	362	25	7½	Receipt and shipment of gypsum and limestone	Board of Commissioners of the Port of New Orleans/United States Gypsum Co.
Morrison Yard Wharf	30°01'29"N., 90°01'53"W.	970	28 to 30	7	Mooring of transient vessels	Board of Commissioners of the Port of New Orleans
Halliburton/Baroid Drilling Fluids, Industrial Canal, Ore Wharf	30°01'48"N., 90°02'00"W.	490	23	6	Receipt of baroid ore by barge	Board of Commissioners of the Port of New Orleans/Halliburton; Baroid Drilling Fluids, Inc.
Facilities on west side of Inner Harbor Navigation Canal and Industrial Canal						
Holcim (US), New Orleans Cement Wharf	30°01'08"N., 90°01'51"W.	560	17	5	Receipt of bulk cement by barge	Board of Commissioners of the Port of New Orleans/Hocim (US), Inc.
France Road Terminal Berth No. 5	29°59'31"N., 90°01'22"W.	900	30 to 33	10	Receipt and shipment of containerized and roll-on/ roll-off cargo	Board of Commissioners of the Port of New Orleans/P&O Ports Louisiana, Inc.
France Road Terminal Berth No. 4	29°59'18"N., 90°01'18"W.	700	30 to 33	10	Receipt and shipment of containerized and roll-on/ roll-off cargo	Board of Commissioners of the Port of New Orleans/Ceres Gulf, Inc.
France Road Terminal Berth No. 1	29°59'00"N., 90°01'19"W.	830	32	10.8	Receipt and shipment of containerized cargo	Board of Commissioners of the Port of New Orleans/Universal Maritime Service Corp.
Florida Avenue Wharf	29°58'46"N., 90°01'30"W.	482	30	9	Mooring of barges	Board of Commissioners of the Port of New Orleans/The Kearney Co.
Lafarge Corp. New Orleans Cement Wharf	29°58'40"N., 90°01'33"W.	600	11	10	Receipt of cement by barge	Board of Commissioners of the Port of New Orleans/Lafarge Corp.
Namasco Corp. New Orleans Wharf	29°58'36"N., 90°01'30"W.	180	12	12	• Receipt of structural steel shapes • Flat-rolled steel and wire products by barge	Board of Commissioners of the Port of New Orleans/Namasco Corp.
Facilities on the Mississippi River-Gulf Outlet Canal						
Entergy Corp., Michoud Electric Station, Oil Dock	30°00'18"N., 89°56'10"W.	590	12	7		Entergy Corp.

Facilities at Port of New Orleans, Louisiana

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Facilities on Michoud Canal						
Vulcan/ICA Distribution Co., Michoud Canal Wharf	30°01'20"N., 89°54'21"W.	585	38	3	Receipt of crushed limestone by self-unloading vessel	Vulcan/ICA Distribution Co.
Lone Star Industries Michoud Plant Ship Wharf	30°01'30"N., 89°54'21"W.	840	34	10	Receipt of bulk cement, urea, ammonium nitrate, fertilizer and granulated slag by ship	Lone Star Industries, Inc.
Lone Star Industries Michoud Barge Slip	30°01'39"N., 89°54'21"W.	324	15	4.4	Shipment of fertilizer by barge	Lone Star Industries, Inc.
Facilities on the east bank of river from Inner Harbor Navigation Canal west to Southport						
Poland Avenue Wharf Berths Nos. 4 and 5	29°57'32"N., 90°02'08"W.	932	35	22	Receipt and shipment of conventional general cargo	U.S. Government/Board of Commissioners of the Port of New Orleans
Pauline Street Wharf	29°57'36"N., 90°02'16"W.	581	35	22	Receipt and shipment of conventional general cargo	Board of Commissioners of the Port of New Orleans
Esplande Avenue Wharf	29°57'38"N., 90°03'20"W.	584	35	22	Shed used for ware-housing	Board of Commissioners of the Port of New Orleans
Governor Nicholls Street Wharf	29°57'33"N., 90°03'28"W.	1,210	35	22	Receipt and shipment of conventional general cargo	Board of Commissioners of the Port of New Orleans
Bienville Street (Aquarium Landing) Wharf	29°57'03"N., 90°03'46"W.	580	30 to 35	22	Boarding and discharge of passengers for excursion vessels	Board of Commissioners of the Port of New Orleans/New Orleans Steamboat Co.
International Rivercenter Excursion Vessel Landing	29°56'49"N., 90°03'42"W.	840	35	22	Boarding and discharge of passengers for excursion paddlewheeler	Board of Commissioners of the Port of New Orleans/New Orleans Paddlewheels, Inc.
Julia Street Wharf	29°56'32"N., 90°03'40"W.	1,189	35	22	Boarding and discharge of cruise ship passangers	Board of Commissioners of the Port of New Orleans
Erato Street Wharf	29°56'19"N., 90°03'39"W.	1,067	35	22	Mooring transient vessels	Board of Commissioners of the Port of New Orleans
Thalia Street Wharf	29°56'13"N., 90°03'39"W.	860	35	22	Mooring transient vessels	Board of Commissioners of the Port of New Orleans
Robin Street Wharf	29°56'04"N., 90°03'40"W.	1,216	35	22	Passenger landing for excursion vessels	Board of Commissioners of the Port of New Orleans/Delta Queen Stamboat Co.
First Street Wharf	29°55'19"N., 90°04'20"W.	1,275	35	22	Receipt and shipment of conventional and containerized general cargo	Board of Commissioners of the Port of New Orleans/Empire Stevedoring (LA), Inc.
Seventh Street Wharf	29°55'07"N., 90°04'50"W.	1,196	35	20½	Receipt and shipment of conventional general cargo	Board of Commissioners of the Port of New Orleans/Coastal Cargo Co., Inc.
Harmony Street Wharf	29°55'04"N., 90°05'00"W.	1,231	35	20½	Receipt and shipment of conventional and containerized general cargo	Board of Commissioners of the Port of New Orleans/Coastal Cargo Co., Inc.
Louisiana Avenue Wharves E, F and G	29°54'58"N., 90°05'18"W.	1,590	35	24	Receipt and shipment of conventional general cargo	Board of Commissioners of the Port of New Orleans/Coastal Cargo Co., Inc.
Milan Street Wharf	29°54'49"N., 90°05'53"W.	1,271	35	24	Receipt and shipment of conventional general cargo	Board of Commissioners of the Port of New Orleans/Stevedoring Services of America
Napoleon Avenue Open Wharf	29°54'45"N., 90°06'03"W.	375	35	24	Receipt and shipment of conventional general cargo and heavy-lift items	Board of Commissioners of the Port of New Orleans/Stevedoring Services of America
Napoleon Avenue Wharf C	29°54'44"N., 90°06'11"W.	1,000	35	24	Receipt and shipment of conventional general cargo	Board of Commissioners of the Port of New Orleans/Stevedoring Services of America
Napoleon Avenue Container Terminal Wharf	29°54'42"N., 90°06'03"W.	2,000	35	24		Board of Commissioners of the Port of New Orleans/Ceres Gulf and P&O Ports of LA
Nashville Avenue Wharf C,	29°54'42"N., 90°06'45"W. (99.8 miles AHP)	1,658	35	22	Receipt and shipment of conventional general cargo	Board of Commissioners of the Port of New Orleans/P&O Ports of Louisiana
Nashville Avenue Wharf B	29°54'42"N., 90°07'08"W.	1,785	35	22	Receipt and shipment of conventional general cargo	Board of Commissioners of the Port of New Orleans/P&O Ports of Louisiana
Nashville Avenue Wharf A	29°54'46"N., 90°07'27"W.	2,759	35	22	Receipt and shipment of conventional general cargo	Board of Commissioners of the Port of New Orleans/P&O Ports of Louisiana

(229) In the event any vessel or other floating equipment, including any logs or lumber assembled in rafts or separated therefrom, or any large sinkable object on any such vessel shall sink, or in any manner obstruct navigation in the canal, the owner or agent of said vessel shall promptly remove same. In case the owner or agent fails for any cause to remove any such obstruction promptly upon demand, the Board may remove it or cause it to be removed at the cost, risk, and expense of said vessel, its owner, or agent.

(230) **Responsibility for Vessel**

(231) Masters of vessels in Canal waters shall be responsible for safe handling and proper navigation of vessels under their charge. Masters of vessels shall abide by the rules and regulations of the canal, as interpreted by the Superintendent.

(232) No vessel, even if moored and tied up, shall be left without sufficient crew to care for it properly. Lights shall be displayed at all times, both when tied up and navigating the canal, in accordance with the provisions of the Inland Rules.

(233) The dropping of anchors, weights, or other ground tackle, within the areas occupied by submarine cables or pipe crossings, is prohibited. Such crossings will be marked ordinarily by signboards on each bank.

(234) The master or other party in charge of the movement of an oceangoing vessel or craft of unusual height, including piledrivers, derricks, etc., shall before passing through the canal bridge openings, make certain that such craft and every part of the superstructure or any equipment or cargo beyond the gunwales will clear all parts of the bridge structure.

(235) As it may see fit, the Board reserves the right to place its own pilot on any vessel passing through the canal. The canal pilot will serve only in an advisory capacity.

(236) Vessels shall exercise due care in navigating the canal, as to **speed** and otherwise, in order to avoid damage to the canal structures or equipment, or to other vessels.

(237) The making of trial runs in the canal by speed boats and other such motorcraft is prohibited. Under no circumstances shall any watercraft navigate in the canal at a **speed exceeding 10 m.p.h.**

(238) Vessels shall be liable for any damage to canal structures, equipment, and/or appurtenances while passing through the canal.

(239) The Board has noted that some masters ground their vessels bow-on while waiting lockage in the forebay of the lock. As such contact endangers the levees, mariners are directed to discontinue the practice.

(240) Steel-pile dolphins and other facilities are on the east and west banks downstream from the lock forebay to provide "ready" mooring areas for barges and tows awaiting lockage. These craft are under the direction and control of the lockmaster.

(241) A port-wide radiotelephone system using VHF-FM channel 16 and 67 connects all terminals, bridges, tugs, pilots, and the yacht harbor with the Harbor Police.

(242)

Wharves

(243) The Port of New Orleans has more than 100 berths and wharves located on both sides of the Mississippi River, the Inner Harbor Navigation Canal and the Mississippi River-Gulf Outlet Canal. More than 100 additional facilities for small vessels and barges are on Harvey Canal, Algiers Canal, Michoud Canal and Bayou Barataria—only the deep-draft facilities are listed in the facilities table. The alongside depths are reported; for information on the latest depths contact port authorities or the private operators. All the facilities listed have direct highway connections, and most have plant trackage with direct railroad connections. Water is available at most of the wharves, but electrical shore power connections are available at only about 25 percent of the wharves. General cargo at the port is usually handled to and from vessels by ships' tackle. Cargo on the wharves, particularly the public facilities, is handled by a wide range of equipment furnished by various stevedoring companies. Shore-based hoisting equipment with capacity up to 300 tons is available to the public at New Orleans; floating cranes and derricks up to 700-ton capacity are available.

(244) Of the facilities listed, about one-half are for public use operated by the Board of Commissioners of the Port of New Orleans. They operate general and containerized cargo wharves, heavy lift and bulk material handling wharves, and a grain elevator. Nearly half of the private facilities are for handling petroleum and chemical products. Most of the rest are for handling general, bulk and liquid cargo.

(246)

Supplies

(247) An unlimited supply of purified river water is available at nearly all piers and wharves. This water, while excellent for drinking purposes, contains a small percentage of sulfate which causes some scale when used in stationary boilers. Several concerns furnish bunker oil from tank barges to vessels alongside the wharves. The bunkering capacity ranges from 1,000 to 3,500 barrels per hour. Bunker C and diesel oil can be obtained at a number of oil terminals on both sides of the river. Marine supplies of all kinds are obtainable, and ice and provisions are plentiful.

(248)

Repairs

(249) New Orleans has numerous commercial plants that can handle vessels for underwater repairs. Most plants have equipment at wharves for making repairs above the waterline or portable equipment for working on vessels anywhere in the harbor. The largest floating drydock, on the west bank of the river about 1.5 miles above Huey P. Long Bridge, has a capacity of 81,000 tons, a length of 900 feet over the keel blocks, and a maximum clear width of 220 feet. It can lift vessels up to 906 feet long. Also available are numerous other floating drydocks, small graving docks, and marine railways. The largest

Facilities at Port of New Orleans, Louisiana

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Henry Clay Avenue Wharf	29°54'53"N., 90°07'49"W.	842	38	22	Receipt and shipment of conventional general cargo	Board of Commissioners of the Port of New Orleans/P&O Ports of Louisiana
Facilities on west bank of river from Algiers Alternate Route west to Avondale						
Perry Street Wharf	29°56'02"N., 90°03'19"W.	1,100	50	24½	Mooring vessels for repairs and maintenance	Board of Commissioners of the Port of New Orleans/Boland Marine Services and Delta Queen Steamboat Co.
John W. Stone Oil Distributor, Gretna Dock No. 5 (SP Dock)	29°55'23"N., 90°03'43"W.	590	28 to 29	20	• Shipment of molasses • Receipt of petroleum products by ship and barge	John W. Stone Oil Distributor, LLC/CHR Hansen Ingredient Technology Co.
John W. Stone Oil Distributor,Gretna Dock No. 8 Mooring Wharf	29°55'15"N., 90°03'49"W.	180	30	20	Mooring vessels in transit to and from nearby John W. Stone docks	John W. Stone Oil Distributor, LLC.
International Matex Tank Terminals, Gretna Lower Dock	29°55'00"N., 90°04'16"W.	900	45 to 55	3	• Receipt and shipment of petroleum products • Bunkering vessels	International-Matex Tank Terminals, Ltd.
Delta Terminal Services Harvey Wharf No. 3	29°54'40"N., 90°05'15"W.	240	38	24	Receipt and shipment of petroleum products, chemicals, and misc. bulk liquids by vessel and barge	Delta Terminal Services, Inc.
Delta Terminal Services Harvey Wharf No. 2	29°54'39"N., 90°05'20"W.	700	38	24	Receipt and shipment of petroleum products, chemicals, and misc. bulk liquids by vessel and barge	Delta Terminal Services, Inc.
Delta Terminal Services Harvey Wharf No. 1	29°54'36"N., 90°05'27"W.	700	32	20	Receipt and shipment of petroleum products, chemicals, and misc. bulk liquids by vessel and barge	Delta Terminal Services, Inc.
Delta Terminal Services Harvey Wharf No. 4	29°54'31"N., 90°05'38"W.	326	60	19	Receipt and shipment of petroleum products, chemicals, and misc. bulk liquids by vessel and barge	Delta Terminal Services, Inc.
Marlex Terminal Harvey Mooring Pier	29°54'31"N., 90°05'44"W.	460	35	24	Mooring large commercial vessels	Diversified Group, Inc.
Fuel and Marine Marketing Marrero Terminal Wharf	29°54'23"N., 90°06'09"W.	746	34	18	Receipt and shipment of petroleum products by barge	Fuel and Marine Marketing, LLC.
Williams Energy Partners Marrero Terminal Dock No. 1	29°54'21"N., 90°06'18"W.	850	48	8	• Receipt of crude oil • Receipt and shipment of petroleum products by vessel and barge	Williams Energy Partners, LLC.
ST Services Westwego Terminal Wharf	29°54'49"N., 90°08'16"W.	250	30	24	Receipt and shipment of molasses, misc. chemicals, bulk liquids, fats and oils	ST Services, LLC.
National Gypsum Co., and Vopak Terminal Westwego Plant Wharf	29°55'19"N., 90°08'34"W.	720	29	23	• Receipt of synthetic gypsum by barge • Receipt of misc. bulk liquids by vessel and barge	National Gypsum Co./Vopak Terminal Westwego, Inc.
Cargill Westwego Elevator Wharf	29°56'18"N., 90°08'30"W.	1,837	45	22	Receipt and shipment of grain	Board of Commissioners of the Port of New Orleans/Cargill, Inc.
International–Matex Tank Terminals, Dock No. 1	29°55'18"N., 90°11'41"W.	700	40	7	Receipt and shipment of petroleum products, liquid chemicals, petrochemicals, lard, vegetable, fish and tung oils by barge and vessel	International–Matex Tank Terminals, Ltd.
International–Matex Tank Terminals, Dock No. 2	29°55'20"N., 90°11'35"W.	400	40	6	Receipt and shipment of petroleum products, liquid chemicals, petrochemicals, lard, vegetable, fish and tung oils by barge and vessel	International–Matex Tank Terminals, Ltd.

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

marine railway, at Braithwaite, about 80.7 miles AHP, has a capacity of 2,000 tons and can handle vessels up to 300 feet long. Marine repair plants are operated in connection with drydocks, the larger plants having well-equipped shops and other facilities necessary for complete repairs to wooden or steel vessels. A large shipbuilding plant at Avondale builds all types of vessels up to 900 feet long.

(250)

Salvage facilities

(251) Practically any equipment necessary for heavy salvage work at sea or in port is procurable at New Orleans. This includes floating derricks, dredges, barges, pumps, deep-sea divers and diving equipment and ground tackle.

(252)

Communications

(253) New Orleans is the terminus for six Class I railroads including the Canadian National Railroad, the CSX Railroad, the Union Pacific Railroad, the Southern Railway System, Southern Pacific Lines and Kansas City Southern Lines. The New Orleans Public Belt Railroad is a city-owned switching railroad that expedites the handling of rail freight in the port. About 100 shipping lines operate on regular schedules out of the port. Coastwise service and intracoastal service reaches all important Gulf, Atlantic and Pacific coast ports, and foreign service includes all world ports, particularly West Indian, Caribbean, the Panama Canal, Central and South American, European, West, South, and East African and Far Eastern ports.

(254) Inland barge lines operate on the Mississippi River and its tributaries as far as Minneapolis and St. Paul on the Mississippi, Chicago on the Illinois River, Kansas City on the Missouri River and Pittsburgh on the Ohio River. There is also barge-line service to Mobile and to Port Birmingham, the port for Birmingham, AL, on Black Warrior River. The barge-line terminals are on the Inner Harbor Navigation Canal, just above the locks and on both banks of the river above and below the city. There are inside freight routes on the Intracoastal Waterway out of New Orleans east to Mobile, Pensacola, Panama City and Apalachicola and west to New Iberia, Port Arthur, Galveston, Houston, Texas City, Port Lavaca, Corpus Christi, Port Mansfield and Brownsville.

(255) New Orleans International Airport (Moisant Field) about 12.7 miles northwest of the center of the city is served by several airlines, which offer scheduled service to all parts of the country and overseas destinations. New Orleans Lakefront Airport is on Lake Pontchartrain on the east side of the north end of the Inner Harbor Navigation Canal. Alvin Callender Field is a naval reserve training facility on the south side of the river east of Algiers.

(256) Radiotelephone service is available through the New Orleans Marine Operator.

(257)

Small-craft facilities

(258) Most small-craft facilities are on the canals inside the locks from the river, at Chef Menteur, or at the Municipal Yacht Basin and Orleans Marina at the yacht harbor, about 4.6 miles west of the Inner Harbor Navigation Canal, on Lake Pontchartrain. Covered and open berths with electricity for over 800 craft up to 100 feet long are available at the yacht harbor. Two yacht clubs, several boatyards and service wharves in the yacht harbor have gasoline, diesel fuel, water, ice, provisions, marine supplies and ramps. Marine lifts and cranes can lift out craft to 35 tons for hull and engine repairs or dry open or covered storage. Electronic repairs can be made. Fuel, water and supplies are also available on the Inner Harbor Navigation Canal, Harvey Canal and on the Algiers Alternate Route of the Intracoastal Waterway.

(259)

ENCs - US4LA39M, US3LA02M, US4LA20M, US4LA22M
Charts - 11369, 11352, 11354

(260) Above New Orleans, the Mississippi River is used by oceangoing vessels to Baton Rouge, about 135 miles above Canal Street.

(261)

Channels

(262) The river channel between New Orleans and Baton Rouge is for the most part deep and clear. However, at low river stages, there are sections of the river that have been improved by dredging to accommodate deep-draft vessels. These sections are called crossings. There are 11 **Mississippi River Crossings** and they are located at:

(263) Fairview Crossing, 116.0 miles AHP;

(264) Lower Belmont Crossing, 152.3 miles AHP;

(265) Rich Bend Crossing, 156.4 miles AHP;

(266) Smoke Bend Crossing, 174.4 miles AHP;

(267) Philadelphia Crossing, 183.0 miles AHP;

(268) Alhambra Crossing, 189.3 miles AHP;

(269) Bayou Goula Crossing, 197.0 miles AHP;

(270) Granada Crossing, 203.0 miles AHP;

(271) Medora Crossing, 211.3 miles AHP;

(272) Sardine Point Crossing, 218.9 miles AHP;

(273) Red Eye Crossing, 223.2 miles AHP;

(274) Federal project depth for the crossings is 45 feet. The controlling depths are published in Navigation Bulletins issued periodically by the Army Corps of Engineers, New Orleans District. (See Appendix A for contact information.) Lighted ranges mark the channels at most of the crossings. In some cases the channel edges are marked by lighted and unlighted buoys that are maintained only at low river stages.

(275) **River gages** are maintained at New Orleans, 102.8 miles AHP; Bonnet Carre, 127.1 miles AHP; Reserve, 138.7 miles AHP; Donaldsonville, 175.4 miles AHP; and Baton Rouge 228.4 miles AHP.

(276)

Anchorages

(277) There are numerous designated anchorages on both sides of the river between New Orleans and Baton Rouge. Temporary anchorages may be prescribed by the Commander, Eighth Coast Guard District and published in the Local Notice to Mariners. (See **33 CFR 110.1** and **110.195**, chapter 2, for anchorage limits and regulations.)

(278)

Dangers

(279) Logs and other floating debris are likely to be encountered in the river at all times. Operators of small craft are advised to maintain a sharp lookout. Night travel by small craft is not recommended because of the hazard of floating obstructions.

(280)

Ferries

(281) Vehicular ferries cross the river at Reserve, 138.0 miles AHP; White Castle, 191.2 miles AHP; and Plaquemine, 207.7 miles AHP.

(282)

Bridges

(283) High-level highway bridges with a minimum clearance of 125 feet cross the river above New Orleans at Luling, 121.8 miles AHP; Wallace, 146.1 miles AHP; Union, 167.4 miles AHP; and Baton Rouge, 229 mile AHP.

(284)

Cables

(285) Overhead power cables with a minimum clearance of 145 feet cross the river near Harahan, between 107 and 108 miles AHP; about 0.9 mile above the Huey P. Long Bridge at Bridge City.

(286)

Pilotage, above New Orleans

(287) Pilots to destinations above New Orleans are obtainable at New Orleans. See Pilotage, Mississippi River, indexed as such, early this chapter.

(288)

Towage

(289) Tugs are available at Gramercy, Burnsides and Baton Rouge to assist vessels in docking and undocking.

(290)

Facilities on the Mississippi River above New Orleans to Baton Rouge

(291) Private and public terminals for handling oil and other products are on both sides of the river; most places have only bankside landings.

(292) At **Avondale**, on the west bank of the river 107.7 miles AHP, the ways and fitting out wharves of a large shipyard are equipped to build, convert or repair vessels up to 900 feet long. The yard has machine and fabricating shops and thermite welding facilities and can turn out shafts and steel forgings up to 20,000 pounds. The yard has a floating drydock that can accommodate vessels up to 81,000-ton displacement, 220-foot beam and 35-foot draft. The yard has a marine railway that can handle vessels up to 300 feet. The yard has barges and facilities for gas freeing and tank cleaning.

(293) On the west bank of the river 108.5 miles AHP, a wharf is operated by an oil-handling facility, and 108 miles AHP two wharves and storage facilities are operated by a tank terminal company. (See Wharves under Port of New Orleans for descriptions.)

(294) **Harahan** is on the east bank of the river at 108.9 miles AHP, above the Huey P. Long bridge.

(295) At **Ama**, on the west bank of the river 117.6 miles AHP, ADM/Growmark operates a 5-million-bushel grain elevator with a wharf (29°56'27"N., 90°18'39"W.) that has 1,000 feet of berthing space with dolphins, 50 feet alongside, and a deck height of 28 feet. A marine leg serves a conveyor with an unloading rate of 85,000 bushels per hour.

(296) **St. Rose**, on the east bank of the river 118.5 miles AHP, has a bulk liquids terminal and is operated by International-Matex Tank Terminals, Ltd. (29°56'19"N., 90°19'28"W.). The terminal has seven berths with a total of 2,135 feet of berthing space with dolphins, 15 to 30 feet alongside, and deck heights of 4, 6 and 28 feet.

(297) East of **Luling**, on the west bank of the river 120.0 miles AHP, a large chemical plant (29°55'56"N., 90°20'54"W.) is owned by the Monsanto Co. Railway connection in rear of plant.

(298) **Destrehan**, on the east bank of the river opposite Luling, is the site of two large grain elevators. The Bunge North America, Destrehan Elevator Wharf (29°56'17"N., 90°20'53"W.), 120 miles AHP, has 1,000 feet of berthing space with dolphins, 45 feet alongside, and a deck height of 26 feet. The facility, with a storage capacity of about 7.5 million bushels, can load vessels at a rate of 60,000 bushels per hour. The ADM/Growmark grain elevator (29°56'22"N., 90°21'24"W.), 120.5 miles AHP, has 1,000 feet of berthing space with buoys, 40 feet alongside, and a deck height of 28 feet. The facility has storage for 5 million bushels of grain and can load vessels at a rate of 60,000 bushels per hour.

(299) About 121.8 miles AHP, Interstate Route 310 fixed highway bridge crosses the river between Destrehan and Luling. The clearances are 133 feet under the 1,200-foot main span and 117 feet under the 460-foot auxiliary span.

(300) **Good Hope**, on the east bank of the river 125.3 miles AHP, is the site of a large oil storage area. Valero Refining Corp. operates five wharves for the receipt and shipment of crude oil and petroleum products. Dock No. 5 (29°58'52"N., 90°23'39"W.) has 1,135 feet of berthing space with dolphins, 25 feet alongside and a deck height of 4 feet. Dock No. 4 (29°58'59"N., 90°23'43"W.) has 800 feet of berthing space with dolphins, 55 feet alongside and a deck height of 25 feet. Dock No. 3 (29°59'12"N., 90°23'55"W.) and Dock No. 2 (29°59'20"N., 90°24'03"W.) both have 900 feet of berthing space; 45 to 50 feet alongside and a deck height of 24 feet. Dock No. 1 (29°59'24"N., 90°24'09"W.) has 800 feet of berthing space with platforms, 45 to 50 feet alongside and a deck height of 24 feet.

(301) At **Norco**, on the north side of the river 126.1 miles AHP, an oil-transfer wharf is operated by Motiva Enterprises. The wharf (29°59'39"N., 90°24'38"W.) has 750 feet of berthing space with fender and 45 feet alongside at Berth 1; 465 feet of berthing space with fender and 25 feet alongside at Berth 1A, and a deck height of 35 feet. About 1 mile above the oil wharf, the large Shell Oil chemical plant has a barge wharf.

(302) The **Bonnet Carre Spillway** is on the north bank of the river 127.9 miles AHP. When the spillway is in operation due to high stages of the river, all vessels and particularly heavily loaded tows passing the site are directed to steer a course sufficiently close to the south bank to avoid possible crosscurrents or draw resulting

from water being diverted through the spillway and flowing toward and into Lake Pontchartrain.

(303) **Taft**, on the west bank of the river about 128.1 miles AHP, is the site of the Union Carbide Corp., Taft Plant, Dock No. 1 (29°59'30"N., 90°26'45"W.). The wharf has 500 feet of berthing space with dolphins, 30 feet alongside, and a deck height of 4 feet.

(304) On the west bank of the river 128.9 miles AHP, Occidental Chemical Corp. and IMC Phosphates, receives ammonia and ships caustic soda from a wharf (29°59'39"N., 90°27'33"W.) and has 810 feet of berthing space with platforms, 50 feet alongside and a deck height of 30 feet.

(305) Two overhead power cables about 0.5 mile apart cross the river near Montz, about 129.5 miles AHP. The minimum clearance of the cables is 160 feet.

(306) On the east bank of the river 132.4 miles AHP, Bayou Steel Corp. receives scrap metal and ships steel products from a wharf (30°02'20"N., 90°28'13"W.) and has 600 feet of berthing space with dolphins, 40 feet alongside and a deck height of 30.5 feet.

(307) **LaPlace**, on the north bank of the river 134 miles AHP, is a truck-farming center and prosperous sugar section. About 2 miles above LaPlace on the north side at 135.5 miles AHP is the large DuPont refinery and chemical plant. A 321-foot barge wharf at the plant has pipelines for handling caustic soda and fuel oil. The cracking towers and tanks at the refinery and chemical plant are prominent.

(308) **Edgard**, on the west bank of the river about 137.9 miles AHP, has a large brick church with twin towers.

(309) **Reserve**, 138.5 miles AHP, has a large sugar refinery with two tall stacks and a grain elevator. The town is the trading center and shipping point for a very productive sugarcane region. A wharf operated by various companies (30°03'13"N., 90°33'57"W.), has 692 feet of berthing space with dolphins, 60 feet alongside and a deck height of 34 feet. Two gantry unloaders are available. A ferry crosses the river from Reserve to Edgard. Globalplex Terminal (30°03'15"N., 90°34'10"W.) a 205-acre intermodal terminal 138.7 miles AHP, has 711 feet of berthing space with dolphins, 45 feet alongside and a deck height of 34 feet, two gantry cranes with hoppers and a conveyor system capable of loading rate of 1,800 tons per hour. The complex has facilities for about 250,000 square feet of covered storage.

(310) A river gauge is at Reserve, mile 138.7 AHP.

(311) A fireboat is moored adjacent to the ferry landing at The Port of South Louisiana, Reserve. The fireboat is on call 24 hours and can be contacted on VHF-FM channels 16 or 67.

(312) Several wharves are on the east bank of the river from 139.2 to 140.2 miles AHP. At the lower end, about 139.2 miles AHP, ADM/Growmark operates a 4-million-bushel grain elevator wharf (30°03'16"N., 90°34'38"W.) providing 1,000 feet of berthing space with platforms, 50 feet alongside and a deck height of 15 feet. Three vessel-loading spouts operate at a rate of 85,000 bushels per hour, and a marine leg can discharge barges at the rear of the wharf face at 50,000 bushels per hour. Close up river, about 139.6 miles AHP, Cargill, Inc., receives and ships grain from a wharf (30°03'13"N., 90°35'00"W.) and provides 1,450 feet of berthing space with dolphins, 45 feet alongside and a deck height of 35 feet. The grain elevator has a capacity of 6.8 million bushels. Four vessel-loading spouts have a maximum rate of 100,000 bushels per hour, and a bucket elevator can discharge vessels at 180,000 bushels per hour. Cargill, Inc., about 139.8 miles AHP, also receives and ships vegetable oils from a wharf (30°03'09"N., 90°35'18"W.) and has 650 feet of berthing space with dolphins, 50 feet alongside and a deck height of 35 feet. At the upper end of this stretch, Marathon Ashland Petroleum, LLC about 140.6 miles AHP, operates two wharves (30°03'06"N., 90°35'28"W.) and (30°03'01"N., 90°35'39"W.) for the receipt and shipment of crude oil, asphalt, and petroleum products. Each wharf has 1,000 feet of berthing space, 65 feet alongside and a deck height of 5 to 35 feet.

(313) A tank is prominent in **Garyville**, 141.7 miles AHP.

(314) Gramercy-Wallace fixed highway (SR 3213) bridge has a clearance of 139 feet. The bridge crosses the navigable river, 146.1 miles AHP.

(315) **Gramercy**, 146.6 miles AHP, has a large aluminum reduction and chemical plant and a sugar refinery on the east bank. A molasses dock (30°02'45"N., 90°40'40"W) operated by Imperial Sugar Co., has 800 feet of berthing space, 45 feet alongside and a deck height of 33 feet. Pipelines extend to three storage tanks with a capacity of 2.5 million gallons. Cll-Carbon, Coke Dock (30°03'03"N., 90°40'04"W), has 1,165 feet of berthing space with platforms, 42 feet alongside and a deck height of 35 feet. Kaiser Aluminum Corp., Bauxite Dock (30°03'07"N., 90°39'50"W) has 760 feet of berthing space with platform, 40 feet alongside, and a deck height of 35 feet.

(316) Gramercy is a **customs port of entry**.

(317) **Lutcher**, 147.8 miles AHP, has a lumber mill and a factory for processing perique tobacco.

(318) At **Remy**, on the east bank of the river about 150.5 miles AHP, Peavey Co. receives and ships grain from a wharf (30°01'01"N., 90°44'07"W.) and has 900 feet of berthing space with dolphins, 45 feet alongside and a deck height of 35 feet. A vessel-loading spout has a rate of 45,000 bushels per hour, and a marine leg can discharge vessels at 40,000 bushels per hour.

(319) Several crude oil wharves are on the west bank of the river from 158.0 to 160.7 miles AHP. At the lower end, Equilon Pipeline Co. LLC receives crude oil at four wharves. The first two wharves, Equilon Sugarland Dock No. 2, about 158.0 miles AHP and Dock No.1, about 158.4 miles AHP, (30°00'12"N., 90°50'08"W.) and (30°00'30"N., 90°50'10"W.) have 940 feet of berthing space with dolphins, 50 feet alongside and a deck height of 42 feet. The next two wharves, Capline Terminal Dock No. 1, about 158.8 miles AHP and Dock No. 2, about 159.0 miles AHP, (30°00'51"N., 90°50'15"W.) and (30°01'02"N., 90°50'17"W.) have 1,000 feet of berthing

space with dolphins, 42 feet alongside and a deck heights of 25 and 35 feet. About 159.7 miles AHP, Koch Supply and Trading, LP, receives and ships crude oil at three wharves. The lower wharf No. 1 Dock, about 159.7 miles AHP, (30°01'38"N., 90°50'23"W.) has 500 feet of berthing space, 32 feet alongside and a deck height of 35 feet. The middle wharf Dock No. 2. about 159.8 miles AHP, (30°01'44"N., 90°50'25"W.) has 850 feet of berthing space, 35 feet alongside and a deck height of 35 feet. The upper wharf Dock No. 5, about 160.0 miles AHP, (30°01'53"N., 90°50'28"W.) has 950 feet of berthing space, 42 feet alongside and a deck height of 36 feet.

(320) At **Uncle Sam Landing**, on the east bank 160.4 miles AHP, a wharf (30°02'19"N., 90°50'06"W.) is used for the receipt of phosphate rock, shipment of phosphoric acid, receipt and shipment of sulfur and sulfuric acid, and is operated by IMC Phosphates MP, Inc. The wharf has 625 feet of berthing space, 40 feet alongside and a deck height of 35 feet.

(321) IC Railmarine Terminal Wharf, about 160.9 miles AHP, (30°02'43"N., 90°50'15"W.) 745 feet of berthing space; 50 feet alongside; deck height, 33 feet; receipt and shipment of miscellaneous dry bulk commodities by vessel and barge; owned by Canadian National/Illinois Central Railroad and operated by IC Railmarine, a subsidiary of Canadian National/Illinois Central Railroad.

(322) At **Romeville**, on the west bank of the river 161.5 miles AHP, Occidental Chemical Corp. receives and ships ethylene dichloride and caustic soda from a wharf (30°03'47"N., 90°50'22"W.). The wharf has 740 feet of berthing space, 55 feet alongside, and a deck height of 37 feet.

(323) At **Central**, on the north side of the river 163.8 miles AHP, Zen-Noh Grain Corp. receives and ships grain from a wharf (30°03'53"N., 90°52'28"W.) that has 1,200 feet of berthing space with dolphins, 50 feet alongside, and a deck height of 38 feet. Four vessel-loading spouts have a rate of 80,000 to 120,000 bushels per hour, and a marine leg can discharge barges at 100,000 bushels per hour.

(324) At **Salsburg**, on the west bank of the river 166.9 miles AHP, IMC Phosphates MP receives phosphate rock, liquid sulfur and ammonia and ships phosphates and ammonia from a wharf (30°05'23"N., 90°54'48"W.). The wharf has 800 feet of berthing space with dolphins, 40 feet reported alongside and a deck height of 37 feet. A gantry shiploader can load vessels at 1,000 tons per hour.

(325) Just above **Union**, about 167.4 mile AHP, the **Sunshine/SR 70 Bridge** has a fixed span with a vertical clearance of 133 feet and a horizontal clearance of 750. The lower limit of the Port of Baton Rouge is about 0.8 mile above the bridge. Shell Oil Co. has two wharves on the east side of the river 168.2 miles AHP. The lower wharf (30°06'33"N., 90°54'40"W.) has 820 feet of berthing space with platforms, 40 to 50 feet alongside and a deck height of 35 feet. The upper wharf (30°06'44"N., 90°54'44"W.) has 900 feet of berthing space with dolphins, 40 feet alongside and a deck height of 32 feet.

(326) **Burnside**, on the east bank of the river 169.6 AHP, has a bulk-handling terminal owned by the Greater Baton Rouge Port Commission and operated by Ornet bulk-handling terminal main deepwater wharf, about 169.7 miles AHP, has 858 feet of ship berthing space with 40 feet reported alongside. A 190-foot barge wharf, just north of the ship wharf, has 2,575 feet of berthing space with dolphins with 12 feet reported alongside. The ship wharf has two unloader gantries, each with a capacity of 1,000 tons per hour, and a vessel-barge loader with a capacity of 1,500 tons per hour. Loading spouts at the barge wharf have a capacity of 1,500 tons per hour. Bulk material handled at the terminal include bauxite, alumina, raw sugar, coal, phosphate, iron ore, manganese and chrome ores, zinc, salt and coke. Liquid caustic soda is transferred by pipeline from barges to storage tanks at rear of ship wharf. A tug is available for docking and undocking vessels.

(327) A cement dock, owned and operated by River Cement Co., is on the east bank just north of the barge wharf at Burnside. The cement dock has 370 feet of berthing space with dolphins, a reported depth of 25 feet alongside and a deck height of 29 feet. Bulk cement is transferred by two 10-inch pneumatic pipelines from the dock to three silos having a total capacity of 10,000 tons. The unloading rate is 250 tons per hour.

(328) **Donaldsonville**, on the west bank of the river 175.4 miles AHP, is a town at the former junction of the river and Bayou Lafourche. A river gage is at Donaldsonville. Three chemical wharves are at Donaldsonville. The first, operated by Triad Chemical 173.5 miles AHP, has 650 feet of berthing space with dolphins and reported depths of 40 to 50 feet alongside. The wharf is used for receipt and shipment of liquid ammonia and shipment of dry bulk urea. Conveyor and pipelines extend from wharf to storage facilities. CF Industries Ship Dock, 173.7 miles AHP, has 720 feet of berthing space with dolphins and a reported depth of 40 feet alongside. The dock is used for shipment of liquid ammonia and dry bulk urea. Conveyor and pipelines extend from wharf to storage facilities. CF Industries Barge Dock, 173.8 miles AHP, has 843 feet of berthing space with dolphins and a depth of 20 feet alongside. The dock is used for receipt and shipment of ammonia and urea ammonia hydrate and receipt of fuel oil for plant consumption. Pipelines extend from wharf to storage facilities. A rice mill is in the town. A church with twin spires and a tank are prominent.

(329) **Geismar**, on the east bank of the river 184.6 miles AHP, has several chemical plants with wharves for handling liquid chemicals, two petroleum wharves used to receive petroleum products and ship petrochemicals and one floating offshore wharf used to receive shell and limestone and to ship fertilizer. The floating wharf, operated by Hall-Buck Marine Services Co. 183.2 miles AHP, has 250 feet of berthing space with a reported depth of 25 feet alongside. The floating wharf has a revolving crane with clamshell bucket and conveyor belt equipment. The petroleum wharf, operated by the

Shell Chemical Co. 183.3 miles AHP, has 940 feet of berthing space at the face with dolphins with 38 feet reported alongside and 450 feet of berthing space at rear of face with 34 feet reported alongside. Pipelines at the wharf lead to storage tanks. The BASF Wyandotte Chemical Corp. Wharf, 183.9 miles AHP, has 615 feet of berthing space with dolphins with 50 feet reported alongside. The Borden Chemical Wharf, 185.0 miles AHP, has 350 feet of berthing space with dolphins and 20 feet reported alongside. Pipelines lead from the wharf to storage tanks in the rear. Liquid anhydrous ammonia and methanol are shipped. The petroleum barge wharf, operated by the El Pasco Field Services, Inc. 186.0 miles AHP, has a 225-foot face with 80 feet reported alongside. The wharf has facilities for loading barges with gasoline and liquid propane gas. The General Electric Co., PCS Nitrogen Dock Wharf, 187.0 miles AHP, has 1,175 feet of ship berthing space with dolphins at the face with 50 feet reported alongside and 700 feet of barge berthing space at rear of face with 10 to 15 feet reported alongside. Pipelines and bulk material handling equipment at the wharf are used for handling receipts of phosphate, ammonia, sulfuric acid and liquid sulfur and for loading shipments of liquid fertilizer, ammonia, sulfuric acid and petrochemicals. The ATOFINA, Cos-Mar Plant Wharf, operated by ATOFINA Petrochemical Co. 188 miles AHP, has 802 feet of berthing space with dolphins with 45 feet reported alongside for receipt and shipment of petrochemicals. Pipelines lead from the wharf to storage tanks at plant in rear.

(330) The **White Castle** ferry crosses the river to **Carville** about 191.2 miles AHP.

(331) **St. Gabriel**, on the east bank 200.7 miles AHP, has a chemical plant with a large wharf used for receipt of bulk salt and shipment of chlorine and caustic soda and a small floating petroleum wharf used for receipt of crude oil by barge. The chemical wharf, operated by Pioneer Americas, Inc., 199.9 miles AHP, has 595 feet of berthing space with dolphins and 55 to 90 feet reported alongside.

(332) The Gulf States Utilities Co. is at **Sunshine**, on the east bank of the river 201.3 miles AHP. The plant has a wharf with 1,035 feet of berthing space with platforms and a reported alongside depth of 39 feet. The wharf is used for receipt of fuel oil for plant consumption. Pipelines lead from wharf to storage tanks of about 2½-million-barrel total capacity. A chemical company wharf on the east bank of the river 203.4 miles AHP, owned and operated by LCB PetroUnited Terminals, Inc., has 400 feet of berthing space with dolphins at the face and a reported depth of 42 feet alongside. The wharf is used for receipt and shipment of chemicals, petroleum products and petrochemicals; occasional receipt of crude oil. Pipelines lead from wharf to storage tanks in the rear.

(333) **Plaquemine**, on the west bank of the river about 208.8 miles AHP, is at the junction of the Mississippi and Bayou Plaquemine. A vehicular ferry crosses the river just below Plaquemine. The town has a foundry, and several sugar mills are in the vicinity. A petrochemical wharf is operated by Ashland Chemical Co. on the west bank 204.9 miles AHP. The wharf has 450 feet of berthing space with dolphins with 60 feet reported alongside. Georgia Pacific Corporation has two wharves on the west side 205.7 and 205.8 miles AHP. The downstream wharf has 320 feet of berthing space with dolphins and a depth of 42 feet alongside. The wharf is used for receipt and shipment of petrochemicals and shipment of caustic soda. Pipelines extend from the wharf to storage tanks. The upstream wharf has 410 feet of berthing space at the face. A reported depth of 25 feet is alongside. The wharf is used for receipt of vinyl chloride. A pipeline extends from the wharf to storage tanks. Dow Chemical Co. has a large chemical plant and wharf on the west bank about 209.9 miles AHP. The wharf has 575 feet of berthing space with platforms and 35 to 40 feet reported alongside. Pipelines at the wharf lead to bulk liquid storage tanks at the plant. A second wharf, owned and operated by Dow Chemical Co., is on the west side about 221.8 miles AHP. The wharf has 998 feet of berthing space with dolphins and a reported depth of 35 feet alongside. It is used for receipt and shipment of petroleum products and receipt of naphtha and fuel oil for plant consumption.

(334) An overhead power cable crossing the river at Lukeville, 224 miles AHP, has a clearance of 150 feet.

(335)

Baton Rouge

(336) The **Port of Greater Baton Rouge** is located adjacent to the capital city of Louisiana with its deepwater general cargo docks located on the west bank of the river at 229.5 miles AHP in Port Allen, Louisiana. The port is a deepwater river port of considerable importance, which serves the petrochemical corridor along the Mississippi River system. The port is situated at the convergence of the Mississippi River (part of the Inland Waterways System) and the Gulf Intracoastal Waterway (GIWW). Port limits extend from Union 168.3 miles AHP to Point Menoir 255 miles AHP. All port facilities have intermodal access to general cargo docks, rail and U.S. Interstates 10, 12, 55 and 49 and state highways. The port's short sea shipping terminal features container-handling equipment and cross-dock bagging facilities. Foreign trade zone services and delivery areas are available.

(337) Public port facilities, including deep-draft and shallow-draft terminals, are owned and operated by the Greater Baton Rouge Port Commission. General cargo docks are located on the west bank of the river at Port Allen and have a grain elevator, molasses terminal and petroleum terminal. The bulk terminal is located at the head of the Baton Rouge Harbor Canal and the east bank of the river at 235.3 miles AHP, about 6.5 miles above Baton Rouge. The port's Inland Rivers Marine Terminal is located on a slack water canal just off the GIWW near the Port Allen Lock. The terminal features short sea shipping services, project cargo, heavy lifts, container handling equipment and cross-dock bagging facilities. Foreign

trade zone services and delivery areas are available. The port can handle a variety of bulk and breakbulk products such as forest and paper products to general cargo and steel.

(338) The principal industries in the Baton Rouge port region are petrochemicals, petroleum, synthetic rubber, chemicals, pipe, steel coils, rail, steel products, building and construction materials, lumber and wood products, stone gravel, clay, cement, steel fabricating, aluminum, agriculture and food products, machinery and transportation equipment. The principal shipments from the port include wheat, corn, sorghum, soybeans, animal feeds, petroleum products, scrap iron, aluminum, lumber, steel products, pipe and rail, rubber, liquid bulk chemicals and sulfuric acid. The principal receipts are sugar, molasses, coffee, vegetable oil, manganese, chrome and zinc ores, bauxite, phosphate rock, caustic soda, sulfur, sodium hydroxide, alcohol, sulfuric acid, newsprint and containerized cargo.

(339) At **Port Allen**, the north end of the Intracoastal Waterway (Port Allen to Morgan City Alternate Route) connects with the Mississippi River at Port Allen Lock about 228.1 miles AHP. (See chapter 12.) Baton Rouge is the site of Louisiana State University and is the cultural center of the state.

(340)

Prominent features

(341) The most conspicuous object in the city is the State Capitol Building, a 520-foot white structure that dominates the area. Several tall buildings and the Louisiana State University and stadium are prominent. The Interstate Route 10 fixed highway bridge, with a clearance of 135 feet at the center and 125 feet elsewhere, crosses the river between Baton Rouge and Port Allen about 229 miles AHP.

(342)

Channels

(343) Federal project depth for the river is 45 feet to 232.4 miles AHP, about 1.5 miles below the Baton Rouge Railroad and U.S. 190 Highway Bridge. This bridge is the 232.4 miles AHP, about 1.5 miles below the Baton Rouge Railroad and Highway Bridge. This bridge is the limit of deepwater navigation on the river. Federal project depth for the Baton Rouge Harbor Canal is 12 feet for 2.9 miles. The channels are maintained and well marked.

(344)

Anchorages

(345) Anchorages are at Baton Rouge on the west bank of the river below the Port Allen Locks and in midriver immediately below and above the U.S. Interstate 10 bridge. Temporary anchorages may be prescribed by the Commander, Eighth Coast Guard District and published in the Local Notice to Mariners. (See **33 CFR 110.1** and **110.195**, chapter 2, for anchorage limits and regulations.)

(346)

Dangers

(347) Mariners departing Greater Baton Rouge Port Commission Dock No. 2 are advised to use extreme caution when turning vessels downstream. Strong currents associated with high water have caused vessels departing this facility to be set down upon the fender system of the Interstate Route 10 fixed highway bridge, causing extensive damages. The New Orleans-Baton Rouge Steamship Pilots report that currents in excess of 7 knots have been observed. Mariners should consider moving vessels well above or below the bridge before turning downstream.

(348)

Bridges

(349) Besides the U.S. Interstate 10 fixed highway bridge crossing the river between Baton Rouge and Port Allen, the combination Airline Highway (U.S. Highway Route 190) and Kansas City Southern Railroad bridge crosses the river 233.8 miles AHP, about 4.6 miles above Baton Rouge. The bridge, known as the Baton Rouge Railroad and Highway Bridge, has a 748-foot fixed span over the channel with a clearance of 65 feet. Strong river currents and a bend upstream render the bridge susceptible to collision by overburdened downbound tows. Vessel owners and operators should ensure that sufficient horsepower is available for the size of the tow and the river conditions. Special precaution should be taken during high water stages. Mariners are urged to use extreme care when passing the bridge, particularly downbound tows.

(350)

Cables

(351) An overhead power cable with a clearance of 150 feet crosses the river about 232.8 miles AHP.

(352)

Weather

(353) Located on the east bank of the Mississippi River, the area is near the first evident relief north of the deltaic coastal plain. Marsh and swamp terrain stretch south to the Gulf of Mexico. The general climate is humid subtropical, but the city is subject to significant polar influences during winter, as masses of cold air periodically move south across the plains and the Mississippi Valley. The prevailing winds are from a south direction during much of the year. These breezes help to temper the extremes of summer heat and shorten winter cold spells. They also provide a source of abundant moisture and rainfall. Winds are usually light; 80 percent of the hourly observations during the year are less than 10 knots. Rainfall is plentiful year round, with a slight minimum in September and October. Most is of the showery type, except occasionally during winter when steady rain is produced by a stalled cold front. The average annual rainfall at Baton Rouge is 58.5 inches. July is the wettest month averaging 6.6 inches while October is the driest month averaging 3.1 inches. Twenty-eight percent of the annual rainfall occurs

(370)

Facilities at Port of Baton Rouge, Louisiana

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
East Bank						
ExxonMobil Refining & Supply Co., Baton Rouge Marine Terminal Wharf	30°28'54"N., 91°11'39"W.	• 3,000 face • 1,250 rear	• 60-70 • 15	50	• Receipt and shipment of petroleum products and petrochemicals • Loading barges for fueling tugboats in midstream	ExxonMobil Refining & Supply Co.
Formosa Plastics Corp., Baton Rouge Plant Wharf	30°30'04"N., 91°11'40"W.	763	40-60	50	• Receipt and shipment of liquid caustic soda • Shipment of ethylene dichloride	Formosa Plastics Corp., USA
Baton Rouge Harbor						
Carmeuse Lime and Stone, Inc.	30°33'06"N., 91°12'48"W.	250	17	6	Receipt of limestone by barge	Dravo Lime Co.
Greater Baton Rouge Port Commission, Baton Rouge Harbor, Kinder Morgan Bulk Terminals Coke Dock	30°33'23"N., 91°13'05"W.	• 399 east • 490 west	12	• 47 east • 50 west	Receipt and shipment of coal; coal handling facility	Kanorado Corporation
Facilities at Port Allen (west bank)						
Intercontinental Terminals Co., Anchorage Chemical Terminal Wharf	30°28'55"N., 91°12'00"W.	520	40		Receipt and shipment of butadiene	ExxonMobil Corp.,/Inter-continental Terminals Co.
Placid Refining, Tanker Wharf	30°28'35"N., 91°12'00"W.	820	50	4	Receipt of petroleum products, petro-chemicals and crude oil	Placid Refining, LLC
Greater Baton Rouge Port Commission Petroleum Terminal Wharf	30°26'40"N., 91°12'00"W.	864	45		• Receipt and shipment of petroleum products and asphalt • Occasional bunkering of vessels	Greater Baton Rouge Port Commission/Petroleum Fuel and Terminals Co., Division of Apex Oil Co.
Greater Baton Rouge Port Commission, Dock No. 2 Wharf	30°26'33"N., 91°12'00"W.	831	45	50	Receipt and shipment of conventional general cargo and dry bulk materials	Greater Baton Rouge Port Commission
Greater Baton Rouge Port Commission, Dock No. 1 Wharf	30°26'13"N., 91°12'01"W.	• 1,408 face • 400 rear	• 45 • 50	12	Receipt and shipment of conventional general cargo, dry bulk cargo, molasses, and chemicals by barge	Greater Baton Rouge Port Commission and Westway Trading Corp.
Cargill, Greater Baton Rouge Port Commission, Grain Wharf	30°26'00"N., 91°12'02"W.	600	40	47	Receipt and shipment of grain	Greater Baton Rouge Port Commission/Cargill, Inc.

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

during the summer months of June, July and August and the most of this amount falls during convective activity. Baton Rouge averages 73 thunderstorm-days; 52% of these occur during this same three-month period.

(354) The winter months are normally mild, with cold spells of short duration. The typical pattern is weather turning cold with rain one day, reaching the lowest temperatures after the sky clears on the second day, and warming on the third day. Temperatures fall below freezing on about 21 days annually. This ranges from fewer than 10 days to more than 30 days in individual years. The average annual temperature at Baton Rouge is 68°F with an average maximum of 78°F and an average minimum of 57°F. The warmest temperature on record is 103°F, recorded in June 1954, and the coolest temperature on record is 8°F, recorded in December 1989. Each month October through April has recorded extreme minimum temperatures at or below freezing while June, July and August each have had temperatures in excess of 100°F.

(355) Summers are warm but maximums rarely exceed 100°F because of the high humidity, cloudiness and scattered showers and thunderstorms, which are primary features of the weather during these months. Showers and thunderstorms are present in the area on about one-half of the days during June, July and August. Severe local storms, including hailstorms, tornadoes and local windstorms have occurred in all seasons but are most frequent in spring. Large hail of a damaging nature very rarely occurs, and tornadoes in this section of Louisiana are unusual. Since 1900, the centers of four tropical cyclones have passed within 10 miles of Baton Rouge and ten have passed within 25 miles of the city. The area can expect 75-knot winds about once every 50 years, on average.

(356)

Pilotage, Baton Rouge

(357) Pilotage is compulsory on the river between Baton Rouge and the Gulf of Mexico. (See Pilotage, Mississippi River (indexed as such) at the beginning of this chapter.)

(358)

Towage

(359) Tugs up to 4,000 hp are available at the Port of Baton Rouge to assist during docking.

(360)

Quarantine, customs, immigration and agricultural quarantine

(361) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(362) Baton Rouge is a **customs port of entry**.

(363) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(364) A general hospital and several private hospitals are in the city.

(365)

Harbor regulations

(366) Federal regulations for the navigation of the Mississippi River are given in **33 CFR 161.402**, **162.80**, and **207.200**, chapter 2. The Greater Baton Rouge Port Commission, consisting of members appointed by the governor of the state, establishes rules and regulations for the Port of Baton Rouge. The Executive Director of the commission is the Port Director who is in charge of the management and operation of the port facilities under control of the commission, and the facility manager assigns berths at the various pubic terminals.

(367)

Wharves

(368) The Port of Baton Rouge has over 70 piers and wharves located on both sides of the Mississippi River and in Baton Rouge Harbor Canal. More than half of these facilities are for barges with depths less than 15 feet alongside. Only the deep-draft facilities and the larger barge facilities are listed in the facilities table for Baton Rouge. All the facilities listed have direct highway and railroad connections. Water and electrical shore power connections are available at most piers and wharves.

(369) General cargo at the port is usually handled by ship's tackle. Cranes up to 150 tons, warehouses and open storage facilities are adjacent to the waterfront.

(371)

Supplies

(372) Gasoline, diesel fuel, provisions and marine supplies are available. Vessels can receive bunker fuel from tank barges while alongside the wharves or at the ExxonMobil Refining & Supply Co. Wharf, about 1.7 miles below the Baton Rouge Railroad and State Route 190 highway bridge. Water is piped to many of the wharves.

(373)

Repairs

(374) Baton Rouge has no facilities for making major repairs or for drydocking large, deep-draft vessels; the nearest facilities are at New Orleans. Several above-the-waterline repair wharves are equipped to make repairs to tugs, fishing boats, barges and other small vessels. Above-the-waterline hull and engine repairs can be made. Cargo hold cleaning, gas freeing and tank cleaning facilities are available in the port.

(375) A shipyard on the Port Allen Canal, about 7.2 miles above its junction with the Mississippi River, has two floating drydocks; the largest drydock can handle vessels up to 2,500 tons.

(376)

Small-craft facilities

(377) Small-craft facilities are limited to temporary berthage at some of the barge docks and floating docks along the river bank.

(378)

Communications

(379) The port is served by the numerous steamship lines to all domestic and overseas ports of the Caribbean, West Indies, Central and South America, Europe, Africa and the Far East. Three Class I railroads offer direct service to the port and a fourth by reciprocal switching. The Canadian National, the Kansas City Southern and the Union Pacific Railroads serve the area. Numerous truck lines serve the port. Local and interstate bus service is available. Several airlines offer service at the Baton Rouge Metropolitan Airport about 5 miles north of the city.

(380)

Mississippi River to Illinois River at Grafton

(381) In 1978, depths of 9 feet were being maintained between Baton Rouge and the junction with the Illinois River at Grafton, IL, about 1,200 miles AHP. Greater depths are available during high river stages. Limiting clearances between Baton Rouge and Grafton are: fixed bridges, 50 feet above extreme (record) high water; swing bridge at Alton, IL, 36 feet above normal pool level closed, 96 feet above normal pool level open; overhead cables, 62 feet above extreme (record) high water; locks, 600 feet long, 110 feet wide.

(382) The Illinois Waterway from Grafton to Chicago is described in United States Coast Pilot 6, Great Lakes.

(383) Navigation maps of the Mississippi River and its tributaries are published by the Corps of Engineers. (See Appendix A.)

(384)

ENCs - US4LA20M, US4LA22M
Chart - 11354

(385) **Old River**, about 73.7 miles above Baton Rouge and 303.1 miles AHP, is a 6-mile-long stream that formerly connected the Mississippi River with the Red and Atchafalaya Rivers. In 1963, a dam was constructed about a mile from its east entrance to prevent the Mississippi from flowing uncontrolled into the Atchafalaya Basin. Outflow channels with control structures are on the west side of the Mississippi River about 5 and 10 miles upstream of the entrance to Old River. These structures regulate and divert the flow of water from the Mississippi River into the Red River.

(386)

Caution

(387) The outflow channels are not navigation channels. A flashing amber light on the south point of each of the outflow channels indicates when the control structures

are in operation. Very dangerous currents exist at the sites, especially during the high water season. Vessels transiting this reach of the Mississippi are cautioned to navigate within the buoyed navigation channel to avoid possible crosscurrents and being drawn down into the control structures.

(388) The upper Old River control structure, at mile 314.5 AHP, is within a **safety zone.** (See **33 CFR 165.1** through **165.7**, **165.20** through **165.25**, and **165.802**, chapter 2, for limits and regulations.)

(389) **Old River Navigation Canal and Lock**was built to bypass the dam and permit navigation between the three rivers. The federal project provides for a dredged channel 12 feet deep and about 2.3 miles long from the Mississippi to Old River about 1.6 miles west of the dam, thence 12 feet to the junction at Barbre Landing with the Red and Atchafalaya Rivers at A.R. Mile 0.0. The lock is 1,200 feet long (1,190 feet usable), 75 feet wide and 11 feet over the sill. Red and green combination traffic lights and daybeacons are at each end of the lock. The lockmaster monitors VHF-FM channels 12 and 14. State Route 15 highway vertical lift bridge over the lock has a clearance of zero feet down and 53 feet up.

(390) **Atchafalaya River Route** flows south into the Gulf of Mexico from its confluence with the Red and Old Rivers. The 116.8-mile section, the confluence to Morgan City, has a federal project depth of 12 feet. (The Atchafalaya Bay Ship Channel from the Gulf of Mexico and the Lower Atchafalaya River to Morgan City are described in chapter 9 with a federal project depth of 20 feet and width of 400 feet.) There is considerable commerce on the river in shell, logs, sand and gravel, petroleum products, liquid sulfur, alcohol, industrial chemicals, fertilizer, sugar and molasses.

(391) The minimum clearance of the overhead power cables and pipelines is 51 feet. The minimum clearance of the drawbridges crossing the river is 3 feet. The minimum clearance of the fixed highway bridges is 40 feet.

(392) During periods of high water, strong currents exist at the river junction with the Intracoastal Waterway.

Chart Coverage in Coast Pilot 5—Chapter 9
NOAA's Online Interactive Chart Catalog has complete chart coverage
http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml
LOUISIANA
MISS.
GULF OF MEXICO
New Orleans
MISSISSIPPI RIVER
Baton Rouge
Plaquemine
Thibodaux
Houma
Morgan City
New Iberia
Lafayette
Lake Arthur
Lake Charles
BARATARIA BAY
ATCHAFALAYA BAY
VERMILLION BAY
CALCASIEU LAKE
SABINE LAKE
SABINE PASS
11367
11358
11355
11354
11351
11350
94°W
93°30'W
93°W
92°30'W
92°W
91°30'W
91°W
90°30'W
90°W
89°30'W
30°30'N
30°N
29°30'N
29°N
28°30'N
28°N

Mississippi River to Sabine Pass

(1) This chapter describes the coast of Louisiana from the delta of the Mississippi River to Sabine Pass, TX. Also discussed are Barataria, Timbale, Terrebonne, Atchafalaya, East and West Cote Blanche and Vermilion Bays and the interconnecting rivers and bayous that form a network of waterways in this section of Louisiana. The deepwater port of Lake Charles as well as many smaller ports and cities are described.

(2)

COLREGS Demarcation Lines

(3) The lines established for this part of the coast are described in **33 CFR 80.830** and **80.835**, chapter 2.

(4)

ENCs - US3GC02M, US3GC03M
Charts - 11330, 11340

(5) From the delta of the Mississippi River to Sabine Pass, a distance of 250 miles, the coast has a general west trend with several deep indentations or bays somewhat separated from the Gulf by chains of long narrow islands. It is characterized by a fringe of low sandy beaches backed for many miles by vast stretches of marshy ground.

(6) The off-lying water is shoal for long distances from the beach and, except for the first 50 miles west of Southwest Pass, the 10-fathom curve is 25 to 40 miles offshore. Numerous shallow areas, irregular in outline and well out of sight of land, are serious menaces to navigation of vessels of even moderate draft.

(7) With the exception of Barataria Pass, the numerous shallow passes east of Atchafalaya Bay are dangerous to enter except during fair weather. The channels change frequently because of storms, and local knowledge is generally necessary.

(8) Calcasieu Pass is the only deep-draft channel from the Mississippi River west to Sabine Pass. An extensive network of bayous and canals with depths of 2 to 9 feet covers the country up to about 75 miles back from the coast. The waterways from Empire and Venice to the Gulf are the only canals entering the Mississippi between New Orleans and Southwest Pass.

(9) The low swampy coastal country is sparsely settled and is frequented principally by fishermen and muskrat trappers. Through the canals and bayous the bottom is deep mud, usually so soft that it is often possible to push through with drafts of about 1 foot in excess of the depths.

(10) Between Atchafalaya Bay and Vermilion River are several mounds, or islands, from which commercial salt is produced.

(11) Extensive oil exploration has occurred along the coast, inland in the lakes and swamps as well as to seaward. The offshore derricks and structures are required to be well marked and lighted, however, mariners should exercise caution as some structures may be unlit. They extend up to 125 miles offshore.

(12) Inside the 100-fathom curve from Southwest Pass to Sabine Pass the currents set west with an average velocity of about 0.2 knot. A clockwise eddy having a velocity of about 0.2 knot covers most of the bay formed by the curving coastline between Southwest Pass and Timbale Bay.

(13)

Weather

(14) The climate along this stretch of coast is a mixture of tropical and temperate zone conditions. The area receives abundant rainfall and moderate temperatures, with only a few short periods where temperatures fall to freezing or below. The Gulf of Mexico helps modify the relative humidity and temperature conditions, decreasing the range between extremes. When south winds prevail these marine effects are increased. However, continental heat and cold waves penetrate the area at times. Port Arthur has recorded temperature extremes of 11°F and 107°F. This range narrows rapidly to seaward. During summer, prevailing southeasterlies help cool the air and produce showers.

(15) Navigation is hampered at times by extratropical or winter systems, fog, thunderstorms, and tropical cyclones. This area is located south of the mean track of continental extratropical cyclones. During winter, this track reaches its south limit, and some 15 to 20 associated fronts reach the Gulf of Mexico. These “northers” are common from October through February. The mixing of cold and warm air may also trigger the formation of an extratropical cyclone in the Gulf. The cold fronts and winter storms result in gale-force winds blowing 1 percent of the time and winds of 22 knots or more occurring 7 to 12 percent of the time. Waves of 10 feet or more are common, while 20-foot seas have been encountered. Tropical cyclones are a threat to navigation from late May into early November. On average, a tropical cyclone (winds 34 knots or more) will move through the region every 1 to 2 years, while a hurricane (winds 64 knots or more) can be expected every 4 to 5 years. Winds can be expected to reach 100 knots about every 25 years. These systems can also generate rough seas. Carla and Audrey produced 28- to 30-foot seas. On average, maximum significant wave heights of about 40 feet can be expected once every 25 years

(17)

METEOROLOGICAL TABLE – COASTAL AREA OFF NEW ORLEANS, LOUISIANA
Between 27°N to 31°N and 89°W to 92°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	1.4	1.0	0.9	0.5	0.1	0.1	0.1	0.4	0.9	0.8	1.0	0.8	0.6
Wave Height > 9 feet [1]	4.9	4.8	3.5	1.9	0.8	0.7	0.3	1.0	2.5	2.9	3.3	3.9	2.4
Visibility < 2 nautical miles [1]	1.3	1.3	1.4	0.9	0.5	0.3	0.4	0.4	0.5	0.5	0.4	0.7	0.7
Precipitation [1]	4.1	4.6	3.1	2.1	1.9	2.3	3.2	3.5	4.3	3.0	3.6	3.9	3.3
Temperature > 69° F	26.6	28.0	40.4	70.0	96.2	99.9	100.0	100.0	99.7	90.6	62.1	38.1	72.6
Mean Temperature (°F)	64.3	65.7	68.2	72.5	77.5	82.0	83.9	83.9	82.3	77.2	71.2	66.8	75.1
Temperature < 33° F [1]	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean RH (%)	78	78	79	80	80	79	77	76	78	74	75	77	78
Overcast or Obscured [1]	28.5	27.6	24.0	18.5	12.1	8.4	9.1	10.4	14.7	12.9	19.6	24.0	17.1
Mean Cloud Cover (8ths)	4.8	4.7	4.4	3.9	3.6	3.6	3.9	4.0	4.3	3.8	4.3	4.7	4.2
Mean SLP (mbs)	1020	1018	1017	1016	1015	1016	1017	1016	1015	1017	1019	1020	1017
Ext. Max. SLP (mbs)	1039	1041	1035	1033	1030	1032	1032	1031	1029	1036	1037	1044	1044
Ext. Min. SLP (mbs)	992	990	993	998	996	999	1002	1001	994	994	998	996	990
Prevailing Wind Direction	N	SE	SE	SE	SE	SE	SE	SE	E	E	E	N	SE
Thunder and Lightning [1]	0.8	1.1	1.1	1.1	1.2	2.0	2.9	3.2	2.4	1.2	1.0	0.8	1.6

[1] Percentage Frequency

in deep waters. Storm season lasts from June 1 through November 30 of each year. In the event of major storm or hurricane, Port Fourchon has developed a detailed set of protocols and restrictions. Visit: //portfourchon.com/news-events/weather-storm-info/ .

(16) While fog occurs throughout the year, it is much more likely in winter and early spring; February is often the foggiest month. Port Arthur averages 42 days annually when visibilities fall below 0.4 mile. These monthly averages range from less than 1 day in the summer months to 8 days in January. Offshore visibilities fall below 2 miles about 2 to 3 percent of the time from December through April. On average, sound signals operate more than 100 hours per month in December and January. Visibilities may also be restricted by precipitation and smoke.

(18)

ENC - US4LA32M
Chart - 11358

(19) From Southwest Pass to Barataria Pass, at the entrance of Barataria Bay, the shoreline is broken by numerous small passes and shallow bays, frequented only by small craft and shallow-draft vessels, and never approached by seagoing vessels.

(20) **Grand Pass**, 10 miles north of Southwest Pass, permits craft drawing up to 4 feet to proceed from West Bay via The Jump (see chapter 8) and Ostrica Canal (see chapter 7) to Quarantine Bay and Breton Sound.

(21) **Buras**, a town on the Mississippi River 21.5 miles above Head of Passes, has a boat harbor at the north end of **Bay Pomme d'Or** where open and covered berths, water, gasoline, diesel fuel and a launching ramp are available. Ice and some marine supplies are available in the town. Numerous fishing boats operate in the waters to the west of the river. Rail, highway and bus communications extend to New Orleans.

(22) **Scofield Bayou**, about 23 miles north of Southwest Pass, provides an entrance from the Gulf to the lakes and bayous to the south of and through the Fasterling Canal to Buras. An entrance channel was dredged in 1957. A schooner wreck is just west of the channel. Local knowledge is required.

(23) **Empire** is a small town on Doullut Canal and Empire Waterway, about 3.5 miles northwest of Buras and 25.6 miles above Head of Passes. There are a number of bases for the offshore oil wells in the vicinity. A church spire north of the lock and a microwave tower south of it are prominent. Empire has several marinas. Berths, gasoline, diesel fuel, marine supplies and launching ramps are available. A 60-ton mobile hoist is available to handle vessels for hull and engine repairs.

(24) The state-owned Empire Waterway Lock through the Mississippi River levee at Empire is 197 feet long and 40 feet wide and has a depth of 10 feet over the sill. Red and green traffic lights at each end of the lock should be obeyed by all vessels waiting to enter the lock. The lock foreman can be contacted on VHF-FM channel 16 and uses channel 10 as a working frequency. Overhead power cables at either end of the lock have reported clearances of about 80 feet.

(25) The **Empire Waterway** provides for a passage from the Gulf of Mexico to the Mississippi River via Doullut Canal at Empire. The waterway leads north from the Gulf through a cut in Pelican Island and through the east side of **Adams Bay** to Empire. A floodgate is across the north part of the waterway near Empire. The Gulf entrance is marked by lights off the ends of the jetties and a lighted buoy about 1.5 miles south of the jetties. The channel is not well defined due to erosion and local knowledge is advised.

(26) **Vessels should approach the Empire Waterway from the Gulf through the Empire Safety Fairway.** (See **33 CFR 166.100** through **166.200**, chapter 2.)

(27)

COLREGS Demarcation Lines

(28) The lines established for the Empire Waterway are described in **33 CFR 80.830**, chapter 2.

(29) **Doullut Canal** is crossed by a highway swing bridge with a clearance of 3 feet about 0.2 mile west of its east entrance. A fixed highway bridge with a clearance of 53 feet (55 feet for a midwidth of 100 feet) crosses the canal about 0.4 mile southwest of the swing bridge.

(30) Considerable commerce in seafood, shell, petroleum products, oil well supplies, clay, drilling mud and industrial chemicals moves on the waterway between the Gulf and Mississippi River.

(31) The waterway, in conjunction with the Ostrica Canal, offers a water route for craft across the Mississippi River Delta between Barataria Bay and Breton Sound.

(32) Another route to the Gulf from Doullut Canal with depths of about 3 feet is across Adams Bay, marked by private lights, thence through **Meyers Canal** and**Grand Bayou**. Somewhat less draft can be carried via Bayou Cook and Bastian Bay. Barataria Bay, west of Adams Bay, can also be reached from Doullut Canal by following Grand Bayou north to its junction with the Freeport Sulphur Company Canal, which connects with Lake Grande Ecaille, and then with Barataria Bay. Depths of about 3 feet can be carried to Barataria Bay.

(33) **Port Sulphur** is a small town about 11 miles above Buras on the west bank of the river. **Freeport Sulphur Company Canal** extends from the river levee to **Lake Grande Ecaille**, a distance of about 8 miles. Craft drawing up to 3 feet can pass through the lake into Barataria Bay and adjacent waters, but there is no connection with the Mississippi River. The canal is marked by private buoys. In 1979, several unlighted pile clusters were reported in the canal near the junction with Rattlesnake Bayou, in about 29°24.0'N., 89°46.3'W.

(34) Several other canals, having depths of about 3 feet, lead from behind the levees to adjacent waters and to the canneries and the highway on each side of the river, but do not connect with the river. **Socola Canal** at Fosters Canal leads to Grand Bayou, and thence either to the Gulf or to Barataria Bay. **Wilkinson Canal** at Myrtle Grove leads to Barataria Bay.

(35) **Vessels should approach Bastian Bay and Grand Bayou from the Gulf through Grand Bayou Pass Safety Fairway**. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(36)

COLREGS Demarcation Lines

(37) The lines established for Grand Bayou Pass are described in **33 CFR 80.830**, chapter 2.

(38) **Bastian Bay**, 26 miles northwest of Southwest Pass, is 1 to 3 feet deep. The bay is separated from the Gulf by **Bastian Island. Bastian Pass**, east of the island, is not navigable. **Grand Bayou Pass**, west of the island, is the main entrance to Bastian Bay and also to Grand Bayou. Controlling depth in the dredged channel over the bar in the pass was 6 feet in 1961.

(39) **Grand Bayou**, is used considerably by local fishing boats. On a favorable tide, about 3 feet can be carried through Grand Bayou and Meyers Canal and thence across Adams Bay to the Doullut Canal connecting with the Mississippi River at Empire, a distance of 9 miles. A depth of 3 feet can be carried to the canals along the east side of Adams Bay northwest of Empire that lead to the river levee and the New Orleans-Buras Highway. This depth likewise can be taken to Barataria Bay via the Freeport Sulphur Company Canal and Lake Grande Ecaille.

(40) **Bayou Cook**, emptying into the north end of Bastian Bay, leads to Adams Bay and thence through Doullut Canal, which connects with the Mississippi River. The shallow depths across the south portion of Bastian Bay limit this route to about 2 feet on a favorable tide.

(41) **Chaland Pass** is a shallow, unfrequented pass 3 miles west of Bastian Bay.

(42) **Quatre Bayou Pass**, 5.5 miles east of Barataria Bay Light, is the approach to **Bay Ronquille, Cat Bay**, and **Lake Grande Ecaille**. This pass, Grand Bayou Pass to Grand Bayou and the pass to the Empire Waterway are the only passes east of Barataria Bay used extensively by local fishermen. Bay Ronquille is separated from Cat Bay by a group of islands through which is a pass known as **Four Bayous Cutoff** about 1.3 miles northwest of the light at the entrance. Bay Ronquille and Cat Bay are shallow. On a favorable tide, a depth of about 3 feet can be carried to Barataria Bay through Four Bayous Cutoff and Cat Bay. This same depth can also be taken across Bay Ronquille to Lake Grande Ecaille and thence to the Freeport Sulphur Company Canal, which leads to the Mississippi River via the Doullut Canal.

(43) Quatre Bayou Pass is unmarked entering from the southeast; caution is advised. Barataria Bay is entered following the southwest shore of Bay Ronquille for 1.3 miles to Four Bayous Cutoff. Go through this cutoff into Cat Bay, leaving some small reefs to the west. The passage from Cat Bay into Barataria Bay is about 1.1 miles northwest of the cutoff.

(44)

Currents

(45) The **tidal currents** in Quatre Bayou Pass average 1.3 knots and in Pass Abel average 0.9 knot on the flood and 1.6 knots on the ebb. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(46) **Barataria Bay** is a large marsh-fringed, shallow lake, separated from the Gulf by two low, narrow sand islands known as **Grand Terre Islands**. The bay has

general depths of 4 to 6 feet and is frequented chiefly by oilmen, fishermen and oystermen, who use launches of 3 to 4 feet in draft. Except for fishing camps, the only settlement on the bay is Grand Isle.

(47)

ENCs - US4LA32M, US3LA02M, US6LA36M, US5LA36M
Charts - 11358, 11352, 11367

(48) **Barataria Waterway**, extends in a north direction from the Gulf for about 34 miles through Barataria Bay to an intersection with the Intracoastal Waterway at the towns of Barataria and Lafitte.

(49) **Vessels should approach Barataria Waterway and Bay through Barataria Pass Safety Fairway**. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(50)

COLREGS Demarcation Lines

(51) The lines established for Barataria Pass are described in **33 CFR 80.830**, chapter 2.

(52)

Channels

(53) A dredged channel leads across the bar at Barataria Pass into Barataria Bay, thence in landcuts through Beauregard, Mendicant and other islands on the west side of Barataria Bay, thence through **Mud Lake**,**Bayou St. Denis**and **Bayou Cutler**, thence through a landcut known as **Dupre Cut**, and thence through **Bayou Barataria** to the Intracoastal Waterway.

(54) **Barataria Pass** is the main entrance to Barataria Bay. A jetty, marked off its outer end by a private light, extends southeast from the east tip of **Grand Isle** on the west side of the pass.

(55) Oil derricks are conspicuous in the general vicinity of Barataria Pass, in 5 to 10 fathoms of water. A lighted whistle buoy, about 3 miles southeast of the end of the jetty, marks the approach to the dredged channel across the bar.

(56) Hard sandbars with from 2 to 5 feet over them extend for about 1 mile offshore on each side of the channel. The bar off the entrance channel shows in extremely heavy winds. Inside the bar, depths up to 12 feet extend north as far as **Queen Bess Island**. The tidal currents in Barataria Pass average about 1.4 knots. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(57) **Bayou Rigaud**, on the north side of Grand Isle, is the approach to the town of Grand Isle, 4 miles west of Barataria Pass. A dredged channel leads southwest from just inside the pass for about 3.7 miles through Bayou Rigaud to the town of Grand Isle. It is reported that the entrance is subject to shoaling; caution is advised. The channel is marked by lights, buoys and daybeacons.

(58) A privately marked channel leads north through Barataria Bay, east of Queen Bess Island and the daybeacon marking Shell Reef to a point southwest of Big Island, thence east to Rattlesnake Bayou and the Freeport Sulphur Company Canal. About 3 feet can be carried in the channel.

(59) Former routes north through **Grand Bayou, Little Lake, Turtle Bay, Harvey Cutoff** and **Bayou Rigolettes** are little used as shoaling has occurred. Both Grand Bayou and Bayou St. Denis lead into Little Lake with depths of about 5 feet reported in 1982. This depth reportedly can also be carried across the lake.

(60) Passage to the east is possible from the junction of Dupre Cut with Bayou Cutler across **Round Lake** and **Lake Laurier** into **Lake Judge Perez**. Local knowledge is advised.

(61) **Wilkinson Canal** enters Barataria Bay about 1.5 miles east of Bayou St. Denis. The canal, 11 miles long, leads to Myrtle Grove on the Mississippi River but does not enter the river. The canal depth is about 3 feet. Other similar canals north of Port Sulphur can be reached via Grand Bayou.

(62) From Barataria Bay the islands separating the bays from the Gulf, as well as the entrance channels between the islands, are undergoing continual changes. There are few aids to navigation, and local knowledge is necessary.

(63) Considerable commerce moves on Barataria Waterway in seafood, shell, lumber and piles, clays and drilling mud, liquid sulfur, oil well pipe and supplies, petroleum products, cement, sand and gravel and machinery.

(64) **Grand Isle**, the only town on Barataria Bay, is in the center of a long, narrow island of the same name. Its residents, most of whom speak French, either work for the oil industry or engage in fishing. **Grand Isle Coast Guard Station** is on the northeast corner of the island. Several oil companies have marine repair bases at which oil well structures and barges are built or repaired, a shipyard, and several service wharves. Many shrimp, oil well supply, and crewboats operate from Grand Isle. There is a 20-ton mobile hoist at the shipyard that can handle craft to 55 feet for hull repairs. Berths, electricity, gasoline, diesel fuel, water, ice, pump-out station, wet and dry storage, marine supplies, launching ramps and a 5-ton hoist are available at marinas near the bridge. Hull, engine and electronic repairs can be made.

(65) A paved highway connects Grand Isle with the main coastal road and New Orleans via Bayou Lafourche. The local heliport is owned by an oil company. Passengers are transported to New Orleans, the offshore oil wells or nearby oil company bases.

(66)

Pilots

(67) There are no licensed pilots at Grand Isle, but local fishermen may be engaged as guides for fishing and hunting parties. Charter boat captains act as pilots on request.

(68)

Note

(69) In the Barataria Bay area the name Grand Bayou appears on two bodies of water. The first is to the west of Bastian Bay, and the second is off the northwest side of Barataria Bay.

(70) **Lafitte**, along the east bank of the waterway about 29 miles above the entrance at the junction of Bayous Rigolettes, Dupont, and Barataria, is a small settlement that borders the waterway for about 6 miles. Several small marinas and an oil company supply base and wharf are at Lafitte. Berths, gasoline and diesel fuel are available. A paved highway along the east bank of the waterway connects with Lafitte, Crown Point and New Orleans.

(71) **Bayou des Oies**, locally known as **Goose Bayou**, enters Barataria Waterway about 3.5 miles south of Lafitte. State Route 45 highway bridge crosses the entrance to Bayou des Oies and has a 40-foot fixed span with a clearance of 10 feet. A large marina at the bridge and in a slip close east of the bridge has a marine lift that can handle craft to 10 tons for hull and engine repairs or storage. Berths, electricity, gasoline, diesel fuel, water, ice, launching ramp and marine supplies are available at the marina.

(72) Oil and gas terminals, shrimp docks and service wharves are on both banks of the waterways between Lafitte Village and the head of the waterway at its junction with the Intracoastal Waterway and Bayou Villars.

(73) There are several shipyards that build commercial vessels and repair commercial and pleasure craft along the east bank of the waterway at Lafitte. Boats up to about 70 feet are hauled out using marine railways or a marine lift for general repairs. Machine, wood and metal shops and welding equipment are available.

(74) **Barataria**, on the west bank, and **Lafitte**, on the east bank, are fishing and agricultural communities at the head of Barataria Waterway. A highway bridge crossing the waterway between Lafitte and Barataria has a swing span with a clearance of 7 feet. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.) There are shrimp and oil company docks and service wharves. Gasoline, diesel fuel, water, ice, marine supplies and berthage are available at the shipyard and at the service wharves.

(75) **Bay des Ilettes, Bay Joyeux, Bay Tambour** and **Caminada Bay** are on the west side of Barataria Bay from which they are partially separated by low, marshy islands. These are shallow bodies of water 2 to 4 feet in depth and of the same characteristics as Barataria Bay. These bays provide approaches to the Southwestern Louisiana Canal, which connects Barataria Bay with Bayou Lafourche and Timbale Bay. The channel through the bays is marked by privately maintained buoys.

(76) **Caminada Pass**, about 7 miles southwest of Barataria Bay, connects Caminada Bay with the Gulf. The pass is little used, as every storm shifts the entrance channel. Usually a depth of 4 to 5 feet can be taken into the pass, but only 2 or 3 feet into the bay. A private light marks the jetty on the north side of the entrance. Just inside the pass, an old highway bridge with its midsection removed is used as fishing piers. The southeast fishing pier is in ruins and partially submerged with debris; extreme caution is advised. A fixed highway bridge on the northeast side of the fishing piers has a clearance of 47 feet. An overhead power cable crossing at the bridge has a clearance of 23 feet.

(77)

Currents

(78) The tidal current in Caminada Pass averages 1.5 knots with higher speeds reported. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(79) Several wrecks are in the vicinity of the pass. The pass is not recommended for strangers. In May 1986, a sunken wreck was reported close north of the fixed bridge in about 29°12'30"N., 90°02'42"W.

(80)

ENCs - US3GC03M, US4LA32M
Charts - 11340, 11358

(81) The **Louisiana Offshore Oil Port (LOOP)** is a deepwater marine terminal in the Gulf of Mexico about 19 miles south of Caminada Pass. The terminal comprises an offshore pumping platform complex (PPC) and three single-point moorings (SPMs) about 1.3 miles east, southeast, and south of the pumping platform complex. The pumping platform complex, marked by private lights and equipped with two sound signals, consists of a control platform connected by a walkway bridge to a pumping platform. A racon is at the pumping platform.

(82) The LOOP site is within a **deepwater port safety zone** approached through a 78-mile-long **safety fairway**. The entrance to the safety zone from the safety fairway is marked by private lighted buoys. The PPC and each SPM is within an **area to be avoided**. An anchorage area, marked by private lighted buoys, is in the northeast part of the safety zone east of the PPC and SPMs. (See **33 CFR 150.301** through **150.345** and **150.900** through **150.940**, chapter 2, for limits and regulations.) The LOOP Vessel Traffic Supervisor, in addition to VHF-FM channels 10 and 74, monitors channel 16; voice call LOOP RADAR.

(83)

Caution

(84) Heavy runoff from the Mississippi River may cause strong west currents, often in excess of 2 knots, in the vicinity of LOOP. These currents may sometimes be recognized by the difference in color caused by the sediment in the runoff water.

(87)

Belle Pass and Port Fourchon, Louisiana
Image courtesy of Port Fourchon (2009)

(85)

ENC - US3LA02M
Chart - 11352

(86) **Belle Pass** (29°05.1'N., 90°13.5'W.), about 12 miles southwest of Caminada Pass, is the entrance from the Gulf of Mexico to Bayou Lafourche and Pass Fourchon. The dredged channel through the pass is marked by a **011.1°** lighted range, buoys and lights and the approach by a lighted bell buoy. The old entrance channel between the jetties close east of the dredged channel is closed by a dam.

(88) **Vessels should approach Bayou Lafourche and Pass Fourchon through the Belle Pass Safety Fairway.** (See **33 CFR 166.100** through **166.200**, chapter 2.)

(89)

COLREGS Demarcation Lines

(90) The lines established for Belle Pass are described in **33 CFR 80.830**, chapter 2.

(91) **Pass Fourchon** empties into the east side of Bayou Lafourche about 2 miles above the entrance to Belle Pass.

(92) **Port Fourchon** encompasses Pass Fourchon, Belle Pass and Bayou Lafourche for about 4 miles above its entrance. The Greater Lafourche Port Commission administers Port Fourchon. Visit: www.portfourchon.com. The port is the base of a large fishing fleet, offshore energy service and support companies, the LOOP operations and some shipping interests. Public facilities at the port include a commercial fishermen's marina and recreational boats launching ramps. Other facilities available are restaurants, stores, numerous fuel docks with crane and other services, charter fishing services, seafood and ice plants, oilfield service companies and a large repair yard. The entrance to the E-Slip, which has three legs and resembles the letter E, is about 0.6 mile north of Pass Fourchon on the southeast side of Port Fourchon and has charted depths of 18 to 27 feet. The port extends to the **Flotation Canal** on the east side of Bayou Lafourche, about 4 miles above the entrance. This canal has a reported depth of 25 to 27 feet and is the entryway to Port Fourchon's Northern Expansion area. The Northern Expansion includes Slips A, B, C, and D which are developed port waterways to the north of the E-Slip. A federal project provides for an improved channel in the entrance and through Belle Pass to Port Fourchon. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A. In the event of major storm or hurricane, Port Fourchon has developed a detailed set of protocols and restrictions. Visit: //portfourchon.com/news-events/weather-storm-info/.

(93)

(94) **Bayou Lafourche**, formerly an outlet of the Mississippi River at Donaldsonville, 70 miles above Canal Street, New Orleans, is blocked off from the river by a levee. The bayou extends from Donaldsonville in a southeast direction for 93 miles and empties into the Gulf at Belle Pass, 19 miles southwest of Barataria Bay Light. The Intracoastal Waterway crosses the bayou at Larose. The bayou is navigable to Thibodaux, about 63 miles above the entrance at Belle Pass; above this point it is closed by a dam.

(95) A floodgate is about 2.5 miles south of Golden Meadow; horizontal clearance is 56 feet with 9 feet over the sill. Another floodgate with clearances of 56 feet horizontally and 10 feet over the sill is just below the intersection with the Intracoastal Waterway at Larose.

(96) Numerous shrimp boats base at **Leeville**, **Golden Meadow, Galliano**, and **Larose**. Crew boats based at Leeville operate out of the bayou to the offshore oil wells. There are seafood canneries and shipyards along the bayou and oil company terminals and wharves at Leeville. There is considerable commerce on the bayou in seafood products, sugar, petroleum products, cement, lumber and piles, clays and drilling mud, liquid sulfur, sand and gravel, oil well pipe, machinery and supplies, caustic soda, chemicals and general cargo.

(97) There are numerous private warehouses, wharves and marine railways along the bayou. The banks of Bayou Lafourche are thickly settled throughout the greater part of its length. **Lockport**, **Raceland** and **Thibodaux** are principally agricultural towns. On the lower part of the bayou there is considerable commerce in oil barges.

(98) Many bridges and overhead power cables cross Bayou Lafourche and are described in order of ascension. (See **33 CFR 117.1** through **117.59** and **117.465**, chapter 2, for drawbridge regulations.)

(99) At **Leeville**, on the west side of the bayou about 11 miles above the entrance, a fixed highway bridge crosses the bayou with a clearance of 73 feet. Severe tidal rips have been reported under the bridge. **Extreme caution is advised:** Water and current conditions at the Leeville Bridge may represent a hazard to navigation. Tide and other high water exchanges that may occur in the channel under the bridge pose the potential to create conditions that could cause vessels to lose adequate navigational control and impact the bridge or associated structures. Vessels traveling this waterway must be alert for high current conditions, the influence it may have on their vessel and the ability of the vessel to transit the waterway and under the bridge with power and steerage capable of responding to possible high current conditions. The vessel operator must also report any incidents involving the vessel and any contact with the bridge or associated structures. Also at Leeville, there are shrimp docks, seafood packing plants, and oil company terminals and bases. Gasoline, diesel fuel, water, ice, launching ramps and limited marine supplies are available. The

Southwestern Louisiana Canal crosses the bayou at Leeville.

(100) An overhead power cable with unknown clearance crosses the bayou about 3.3 miles north of Leeville.

(101) **Golden Meadow**, 20 miles above the entrance, is the principal fishing settlement on Bayou Lafourche. A highway vertical lift bridge with a clearance of 73 feet up and 2 feet down crosses the bayou at Golden Meadow. (See **33 CFR 117.1** through **117.59** and **117.465a**, chapter 2, for drawbridge regulations.) A boatyard, on the west side about 0.6 mile below the bridge, has marine railways that can handle craft up to 35 feet for general repairs. A shipyard, on the west side about 2 miles below the bridge, has a marine railway that can handle craft to 145 feet for hull repairs. Gasoline, diesel fuel, water, ice and marine supplies are available at Golden Meadow.

(102) Two overhead power cables cross the bayou between Golden Meadow and Galliano; minimum clearance is 65 feet. In 1982, the cables were reported to have been removed.

(103) At **Galliano**, about 23.5 miles above the entrance, a highway pontoon bridge crosses the bayou. (See **33 CFR 117.1** through **117.59** and **117.465a**, chapter 2, for drawbridge regulations.) Gasoline, diesel fuel and supplies are available at Galliano. Galliano is a **customs station**.

(104) A highway vertical lift bridge with a clearance of 73 feet up and 3 feet down and a pontoon bridge cross the bayou about 3 miles and 5.5 miles, respectively, above the pontoon bridge at Galliano. (See **33 CFR 117.1** through **117.59** and **117.465a**, chapter 2, for drawbridge regulations.)

(105) At **Cut Off**, about 30.8 miles above the entrance, a highway vertical lift bridge with a clearance of 73 feet up and 4 feet down crosses the bayou. (See **33 CFR 117.1** through **117.59** and **117.465a**, chapter 2, for drawbridge regulations.) On the west side of the bayou at Cut Off are several shipyards with marine railways that can handle craft up to 60 feet for repairs. An overhead power cable with a clearance of 91 feet crosses the bayou just above the pontoon bridge.

(106) At **Larose**, about 34 miles above the entrance to Bayou Lafourche, the Intracoastal Waterway crosses the bayou. A vertical lift bridge is about 0.5 mile southeast of the waterway with a clearance of 2 feet in the closed position and 73 feet in the open position. A lift bridge about 1.0 mile west of the waterway junction has a clearance of 2 feet in the closed position and 73 feet in the open position. There are two wharves on the southwest side of the intersection. Larose has several shipyards and boatyards. One shipyard with a 1,500-ton floating drydock is on the Intracoastal Waterway just southwest of its junction with Bayou Lafourche; general repairs can be made. Marine railways that can handle craft up to 60 feet for general repairs are available at the boatyards. Machine shops and radio repair facilities are also available. Fuel, water, ice and marine supplies can be obtained. A shipyard builds barges on the north side of the bayou just above the intersection.

(107) Mooring to the bulkheads in the vicinity of the intersection of Bayou Lafourche and the Intracoastal Waterway is **prohibited**.

(108) Two overhead power cables cross the bayou between Larose and Valentine; minimum clearance is 68 feet.

(109) At **Valentine**, about 39 miles above the entrance, a highway pontoon bridge crosses the bayou. (See **33 CFR 117.1** through **117.59** and **117.465b**, chapter 2, for drawbridge regulations.) Valentine has a large sugar mill and paper mill. A shipyard that builds commercial vessels to 180 feet is on the east side of the bayou about 2 miles above Valentine. Marine railways at the yard can handle vessels to 170 feet for hull and engine repairs.

(110)

Pontoon bridges

(111) The pontoon bridges that cross Bayou Lafourche at Galliano, 5.5 miles above Galliano, and at Valentine are operated by cables that are suspended just above the water when the bridges are being opened or closed. The cables are dropped to the bottom when the bridges are in the fully opened or closed position. The pontoon bridge at Larose just east of the junction with the Intracoastal Waterway is operated by cables that are suspended just above or below the water when the bridge is being opened or closed. The cables are dropped to the bottom when the bridge is in the fully open position, but remain suspended while the bridge is fully closed. Extreme caution is advised in the area of these bridges. **Do not attempt to pass through the bridges until they are fully opened and the cables are dropped to the bottom**.

(112) State Route 3220 highway swing bridge with a clearance of 6 feet, connecting State Routes 1 and 308, crosses Bayou Lafourche about 1.5 miles below Company Canal. (See **33 CFR 117.1** through **117.59** and **117.465c**, chapter 2, for drawbridge regulations.)

(113) **Lockport**, about 44 miles above the entrance, is a town at the intersection of Company Canal with Bayou Lafourche. State Route 655 highway swing bridge with a clearance of 6 feet crosses the bayou just below the intersection. (See **33 CFR 117.1** through **117.59** and **117.465c**, chapter 2, for drawbridge regulations.) An overhead power cable with a clearance of 90 feet crosses the bayou just below the swing bridge.

(114) Lockport has a large shipyard and a boatyard. The shipyard builds boats, tugs and barges to 176 feet. Gasoline, diesel fuel, water, ice and marine supplies are available. A Class II railroad connects Lockport with Valentine and New Orleans.

(115) Several overhead power cables cross the bayou between Lockport and Mathews; minimum clearance is 60 feet. Twin fixed highway bridges with clearances of 42 feet cross the bayou about 1.6 miles above the vertical lift bridge at Mathews.

(116) At **Mathews**, about 47 miles above the entrance, State Route 654 vertical lift bridge crosses the bayou with

a clearance of 50 feet. (See **33 CFR 117.1** through **117.59** and **117.465d**, chapter 2, for drawbridge regulations.) Several overhead power cables cross Bayou Lafourche between Mathews and Raceland; minimum clearance is 60 feet. Twin fixed highway bridges with clearances of 42 feet cross the bayou about 1.6 miles above the vertical lift bridge at Mathews.

(117) At **Raceland**, about 51 miles above the entrance, Bayou Lafourche is crossed by two vertical lift bridges about 0.5 mile apart. The more southerly bridge (SR 3199) has a clearance of 59 feet up and 7 feet down, and the northerly bridge (SR 3198) has a clearance of 50 feet up and 7 feet down. (See **33 CFR 117.1** through **117.59** and **117.465e**, chapter 2, for drawbridge regulations.)

(118) Several overhead power cables cross the bayou between Raceland and Lafourche; minimum clearance is 60 feet.

(119) At **Lafourche**, State Route 649 highway swing bridge with a clearance of 10 feet and a railroad swing bridge with a clearance of 19 feet cross the bayou about 57.4 and 59.9 miles, respectively, above the mouth. (See **33 CFR 117.1** through **117.59** and **117.465f** and **117.465g**, chapter 2, for drawbridge regulations.) In 1993, a replacement State Route 649 highway bridge with a fixed span and design clearances of 18 feet-horizontal and 8 feet-vertical was under construction just above the existing highway bridge. Several overhead power cables cross the bayou between Lafourche and Thibodaux; minimum clearance is 33 feet.

(120) At **Thibodaux**, about 63 miles above the entrance, State Route 20 vertical lift bridge, kept in a closed position and with a clearance of 11 feet, crosses the bayou. (See **33 CFR 117.1** through **117.59**, chapter 2, for drawbridge regulations.)

(121)

ENCs - US4LA32M, US3LA02M
Charts - 11358, 11352

(122) **Southwestern Louisiana Canal** connects Barataria Bay with Timbalier Bay and affords a protected inside passage for small boats. The canal crosses Bayou Lafourche at Leeville, about 11 miles above the bayou mouth. In 1982, it was reported that with a favorable tide about 6 feet could be carried through both Caminada Bay, the east approach, and Little Lake, the west approach. In 1992, the controlling depth was 2½ feet from Caminada Bay to Leeville, thence in 1982, 6 feet was reported from Leeville to Little Lake, except for shoaling at the west entrance. The east entrance to the canal is marked by a light.

(123) A privately marked channel leads across **Little Lake** to **Bayou Rosa**, thence through **Rosa Bay** to Lake Raccourci. **Deep Bayou** and **Bayou Blue** also connect Little Lake with **Lake Raccourci**. These approaches sometimes are staked but generally are difficult for a stranger. The main route to the canal from Barataria Bay is through **Bayou Fifi**, **Bay des Ilettes**,**Bayou Andre**or **Bay Joyeux** and **Caminada Bay**. The channel is marked by lights and daybeacons. Another route is through **East Champagne Bay**, Bay des Ilettes and **Bay Tambour** via a cut between the last named bays. Because this channel is not marked, strangers should hire fishermen as pilots.

(124) State Route 1 fixed highway bridge crosses the middle of the Southwest Louisiana Canal, making it necessary to enter the canal from Bayou Lafourche through a short cutoff.

(125)

Greys Canal to Cat Island Pass

(126) **Greys Canal**, 3 miles south of Leeville, with a connecting channel through Bayou Blue, offers the deepest and most used route from Bayou Lafourche to Lake Raccourci and Timbalier Bay. On a favorable tide, about 8 feet can be taken through the channel; the best water is reportedly found in midchannel. Bayou Blue also joins Little Lake.

(127) **Havoline Canal**, 6 miles south of Leeville, is a privately dredged canal that extends from Bayou Lafourche into Timbalier Bay. In 1982, the canal had a reported controlling depth of 7 feet. The approach channel leading through Timbalier Bay to the canal is marked by lights and private buoys that reportedly should be followed closely. Havoline Canal is open to the public without charge.

(128) **Timbalier Bay** and **Terrebonne Bay** are large shoal-water bays separated from the Gulf by a chain of low sand islands. These waters are accessible from the Gulf through several passes having depths of 4 to 14 feet; however, the depths in Timbalier and Terrebonne Bays range from 4 to 9 feet. There are no settlements of importance in the area, but the bays are frequented by large numbers of fishing and oystering craft which carry their catch through the inside passages to New Orleans and Houma. This area has numerous oil well structures.

(129) **Lake Barre**, north of Terrebonne Bay, has general depths of 4 to 6 feet. **Seabreeze (Lake Barre) Pass** provides a passage marked by a light into Bayou Terrebonne and to **Lake la Graisse** at the northwest end of Terrebonne Bay. **Pass Barre** connects with Terrebonne Bay, and several passages at the northeast corner of the bay lead to Lake Felicity.

(130) **Old Lady Lake** is a shoal body of water between Lake Raccourci and Lake Barre and south of Lake Felicity. Numerous passages connect with these lakes and with Timbalier Bay. The lake has depths of 3 to 4 feet, but the passes are very shallow and restrict entry to boats drawing 1 or 2 feet.

(131) **Lake Felicity**, with depths of 5 to 6 feet, is north of Old Lady Lake. Many bayous and passes connect with adjacent bays and lakes. Most of the bayous to the east and north of Lake Felicity are used as oyster bedding grounds and, accordingly, contain numerous oyster reefs. The water in the bayous shoals rapidly where the bayous widen, and the channels are difficult to follow

without local knowledge. An inside route between Bayou Terrebonne and Bayou Lafourche passes through Lake Felicity; thence through Bayou Jean Lacroix, Cutoff Canal, Grand Bayou Canal and Canal Blue. The entrance to Lake Felicity is marked by a light.

(132) **Lake Raccourci** is a shoal body of water lying north of Timbalier Bay. The general depths are 4 to 5 feet. The area around **Philo Brice Islands** and **Jacko Camp Bay** contains many oyster beds and fish traps. The oyster beds are marked by iron or brush stakes. Deep Bayou and Bayou Blue lead to Little Lake, and **Grand Pass Felicity** leads to Lake Felicity.

(133)

Dangers

(134) There are numerous oil well structures in and about Timbalier and Terrebonne Bays. Privately marked channels lead from Cat Island Pass to Bayou Terrebonne and Bayou Lafourche. Drilling operations are in progress near Caillou Island, **Brush Island** and East Timbalier Island. Mariners should use the waters in this area only with local knowledge.

(135)

Secondary channels in Timbalier Bay and Terrebonne Bay

(136) An unmarked channel leads west across Timbalier and Terrebonne Bays to Troiscent Piquets Bay and into Bayou Petit Caillou, south to Cat Island Pass or west into Lake Pelto.

(137) From the east and west channel crossing Terrebonne and Timbalier Bays, a channel extends northeast into Lake Raccourci passing through Philo Brice Islands northwest of the light and thence continuing east to the entrance to Bayou Blue leading to Bayou Lafourche. On a favorable tide a depth of about 5 feet can be carried into Lake Raccourci and about 4 feet into Bayou Blue.

(138) From inside Cat Island Pass, a channel extends north across the central portion of Terrebonne Bay to **Pass Barre**, which connects with Lake Barre. Depths of 7 feet can be carried into Lake Barre. A group of small low islands exists about 2.5 miles south of Pass Barre with shoaling to 5 feet close west.

(139) The route to Bayou Terrebonne is through the south entrance to Lake la Graisse. The channel through the lake is marked by lights, and a depth of about 3 feet can be carried into the bayou. A second route to Bayou Terrebonne from Lake Barre through Seabreeze Pass is good for 3 feet.

(140) A route leads from Seabreeze Pass across Lake Barre into Lake Felicity, thence to Grand Pass Felicity and across Lake Raccourci to Bayou Blue or Deep Bayou, and thence through either Southwestern Louisiana Canal or Greys Canal to Bayou Lafourche. An unmarked channel leads through Lake Chien, north of Lake Felicity, to Bayou Jean Lacroix. A light marks the east side of the entrance to Lake Chien.

(141) **Timbalier Island** and **East Timbalier Island** are the two largest islands in the chain separating Timbalier and Terrebonne Bays from the Gulf. In recent times the east end of Timbalier Island has been washed away and the west end built up to the west a like amount. East Timbalier Island has built up especially to the west, all but closing Grand Pass Timbalier. Several fish camps are reported on Timbalier Island and East Timbalier Island.

(142) **Grand Pass Timbalier**, at the west end of East Timbalier Island, has been filling up and is little used. The channel is narrow, winding and difficult to navigate; with local knowledge about 4 feet can be taken through the pass into Timbalier Bay.

(143) The structures of two abandoned lighthouses are off the southwest end of East Timbalier Island.

(144) **Little Pass Timbalier**, 2 miles west from Grand Pass Timbalier, is a wider and straighter channel used to enter Timbalier Bay. The pass has a depth of 6 feet on the outer bar and 4 feet on the inner bar. The channel branches at the inner end, the west branch being considered the safer and more generally used. It is reported that this pass is working west.

(145) **Caillou Pass** is a shallow passage between the north side of Timbalier Island and Caillou Island; local knowledge is advised.

(146) **Vessels should enter Terrebonne Bay through Cat Island Pass Safety Fairway**. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(147)

COLREGS Demarcation Lines

(148) The lines established for Cat Island Pass are described in **33 CFR 80.830**, chapter 2.

(149) **Cat Island Pass**, 60 miles west of Southwest Pass, connects the deepest part of Terrebonne Bay with the Gulf and is the principal entrance into Terrebonne Bay. The pass is marked by several lighted and unlighted buoys. In 2010, the controlling depth through the pass was 17 feet. The current in Cat Island Pass averages about 1.1 knots on the flood and 1.5 knots on the ebb; however, greater velocities have been reported.

(150)

ENCs - US3LA02M, US5LA27M, US5LA23M
Charts - 11352, 11355

(151) **Houma Navigation Canal** extends in a northwest direction from Cat Island Pass for about 8 miles across Terrebonne Bay, thence in a landcut in a north direction for about 23 miles to an intersection with the Intracoastal Waterway about 1 mile below Houma. The canal is maintained by the Corps of Engineers. The entrance and the section through Terrebonne Bay is marked by lights, lighted ranges and lighted and unlighted buoys.

(152) Bayou Petit Caillou crosses the canal about 9.8 miles above the entrance, and Bayou Grand Caillou crosses about 17.5 miles above the entrance. No other major waterways cross the canal. A pontoon bridge crosses the canal about 20 miles above the entrance. The bridge is operated by cables that are suspended just above the water when the bridge is being opened or closed. The cables are dropped

to the bottom when the bridge is in the fully open position but remain suspended while the bridge is fully closed. Extreme caution is advised in the area of the bridge. **Do not attempt to pass through the bridge until it is fully opened and the cables are dropped to the bottom**. The bridgetender monitors VHF-FM channel 13. State Route 661 highway bridge crossing the canal about 0.2 mile below the Intracoastal Waterway has a swing span with a clearance of 1 foot. (See **33 CFR 117.1** through **117.59** and **117.455**, chapter 2, for drawbridge regulations.) The bridgetender monitors VHF-FM channel 13; call sign, WDT-573.

(153) There is considerable commerce on the navigation canal in seafood products, shell, lumber and piles, oil well drilling equipment, machinery and supplies, petroleum products, cement, sand and gravel and chemicals.

(154) **Bayou Pelton** joins the canal about 5.5 miles below Houma and extends southeast to Bayou Grand Caillou, described later in this chapter. In 1982, the controlling depth through Bayou Pelton and Bayou Grand Caillou to Dulac was 5 feet. Overhead power cables crossing Bayou Pelton about 0.2 mile southeast of its junction with Houma Navigation Canal have a least clearance of 62 feet.

(155) A highway bridge crossing the bayou about 0.5 mile south of the Intracoastal Waterway has a vertical lift span with clearances of 3 feet down and 73 feet up. (See **33 CFR 117.1** through **117.59** and **117.460**, chapter 2, for drawbridge regulations.) An overhead power cable about 0.3 mile south of the bridge has a clearance of 60 feet. There is considerable commerce on the bayou in petroleum products, shell, clay, shellfish and seafood, oil well pipe and building cement. The bayou has a large shipyard.

(156) **Houma**, the parish seat of Terrebonne Parish, is at the head of the Navigation Canal, about 32 miles above the entrance. The principal industries are seafood, petroleum, natural gas, sulphur and sugar and molasses. The area is important in agriculture and cattle raising. The area has numerous offshore oil company supply bases and shipyards. A large shipyard on Bayou la Carpe builds steel vessels and barges to 300 feet. A 4,000-ton floating drydock at the yard can handle vessels to 200 feet long, 92 feet wide and 16-foot draft. A 1,000-ton marine lift can haul out craft to 310 feet long. Marine railways at the yard can handle craft to 225 feet for hull and engine repairs; a 150-ton crawler crane is available. The city has seafood canneries, a sugar mill and cold storage facilities.

(157) U.S. Route 90, the main coastal highway, passes through the town, and a Class II railroad offers railway freight service. Southern Pacific Railroad bridge over the Intracoastal Waterway at the junction with Bayou la Carpe has a vertical lift span with clearances of 70 feet up and 4 feet down. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.) An overhead power cable with a clearance of 90 feet is close south of the bridge. The Houma airport and an industrial park are southeast of the city. Berths, gasoline, diesel fuel, water, ice and marine supplies of all kinds are available.

(158) **Bayou Terrebonne** is navigable to the town of Houma, 33 miles above its south mouth. For the lower 4 miles of its course, the bayou flows through a long, narrow delta separating Lake Barre and **Lake Jean Pierre** and **Lake Saint Jean Baptiste**. At its south end, Bayou Terrebonne empties into Pass Barre. From each of these are several entrances into the bayou. **Seabreeze (Lake Barre) Pass**, connecting Lake Barre and Lake la Graisse, crosses the north end of the delta and provides the main entrance into the bayou from both Lake Barre and Terrebonne Bay. A dredged channel in the bayou leads from Bush Canal to Houma. In 1986–1992, the controlling depth was 3½ feet from Lake Barre through Seabreeze Pass to the bayou; thence in 2006 shoaling to less than 2 feet was reported across the entire channel about 1 mile north of Light 7; thence in 1992, 5½ feet to the junction with Bush Canal; thence in 1996, 4½ feet to bayou Petit Caillou; thence in 1986, 2 feet to the junction with the Intracoastal Waterway at Houma, thence in 1979, 6 feet for about 0.4 mile to the Barrow Street bridge at Houma.

(159) In 1986–1992, the controlling depth was 3½ feet through Seabreeze Pass and Lake la Graisse to Terrebonne Bay. Between Seabreeze Pass and Pass Barre, **Bayou Jose** and another opening form a connection between Lake Barre and Lake Jean Pierre which can be used by boats drawing up to 2½ feet. In 1988, a submerged obstruction was reported in Bayou Terrebonne close northwest of Light 7.

(160) Lights mark the entrances to the bayou from Lake la Graisse and from Lake Barre.

(161) Bayou Terrebonne has considerable barge traffic in shell, seafood, sugar, petroleum products, building cement, clays and drilling mud, oil well pipe, machinery and supplies and general cargo.

(162) The banks of Bayou Terrebonne are thickly settled throughout the upper half, in which section mariners may find numerous settlements selling gasoline, oil and provisions. State highway 55 extends along the east bank of the bayou for 6 miles below Montegut to Lapeyrouse.

(163) Bayou Terrebonne crosses the Intracoastal Waterway at Houma and is joined by Bayou Petit Caillou 3 miles below Houma. At Bourg, 7 miles below Houma, a section of the **Company Canal**, knownas **Bourg Canal**, furnishes a cutoff between the bayou and the Intracoastal Waterway. In 1986, the controlling depth in Bourg Canal was 3 feet. State Route 24 vertical lift bridge crosses Bourg Canal just north of its intersection with Bayou Terrebonne and has clearances of 50 feet up and 5 feet down. In 2015, the bridge is unable to lift to the published clearance of 50 feet and can provide a reduced clearance of 25 feet. (See **33 CFR 117.1** through **117.59** and **117.438**, chapter 2, for drawbridge regulations.) Overhead power cables crossing the canal have a least clearance of 80 feet. Another section of Company Canal extends north from the Intracoastal waterway and connects with Bayou

Lafourche at Lockport; in 1995, the controlling depth was 4½ feet.

(164) State Route 1 vertical lift highway bridge with clearances of 50 feet up and 5 feet down crosses Company Canal about 0.2 mile southwest of the canal's intersection with Bayou Lafourche. (See **33 CFR 117.1** through **117.59** and **117.438**, chapter 2, for drawbridge regulations.) Several other canals enter Bayou Terrebonne and are used by small boats. **Bush Canal**, witha reported controlling depth of 4 feet in 1982, connects Bayou Terrebonne with Bayou Petit Caillou about 12 miles above the entrance.

(165) Bayou Terrebonne is crossed by several highway bridges with swing and lift spans with ample openings and by numerous overhead cables with minimum clearance of 57 feet.

(166) **Lapeyrouse**, about 14 miles above the entrance, has a fish wharf with a service wharf at which diesel fuel, gasoline and ice are available, and a grocery store with a service wharf at which gasoline is available.

(167) **Point Barre**, about 16 miles above the entrance, has facilities for launching outboard motor boats and a commercial fish wharf.

(168) **Montegut**, about 20 miles above the entrance, has a boatyard with marine railways capable of handling craft to 50 feet for general repairs; the yard has a machine shop. Diesel fuel, water and limited marine supplies are available. A highway bridge at Montegut has a 45-foot vertical lift span with clearances of 3 feet down and 48 feet up. (See **33 CFR 117.1** through **117.49** and **117.505**, chapter 2, for drawbridge regulations.) A road connects Montegut with Bayou Petit Caillou.

(169) A highway bridge crossing the bayou at **Klondyke**, about 1 mile below Bourg, has a vertical lift span with a channel width of 45 feet and clearances of 3½ feet down and 47 feet up. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.) Gasoline in cans and some groceries can be obtained just above the bridge.

(170) A highway bridge with a 40-foot swing span and a clearance of 5 feet crosses Bayou Terrebonne at **Bourg**, about 25 miles above the entrance and just above the Bourg (Company) Canal. In 2012, a replacement swing bridge was under construction close east. Bourg Canal is crossed at Bourg by a highway vertical lift bridge with clearances of 5 feet down and 50 feet up. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.) Several overhead power cables cross Bourg Canal in the vicinity of this bridge; least clearance is 80 feet.

(171) Several overhead power cables with a least clearance of 50 feet cross Bayou Terrebonne between Bourg and Presquille.

(172) At **Presquille**, about 27 miles above the entrance to Bayou Terrebonne, State Route 24 highway bridge with a 45-foot fixed span and a clearance of 3 feet. A least clearance of 60 feet is available for the overhead power cables crossing the bayou between Presquille and Houma.

(173) At **Mechanicville**, about 29 miles above the entrance, State Route 3087 highway bridge with a 40-foot vertical lift span and clearances of 5 feet down and 50 feet up crosses Terrebonne Bayou. The highway bridge just east of Houma has a 40-foot swing span and a clearance of 3 feet. (See **33 CFR 117.1** through **117.59** and **117.505**, chapter 2, for drawbridge regulations.)

(174) **Bayou Petit Caillou** empties into **Troiscent Piquents Bay** on the west side of Terrebonne Bay, about 5 miles north of Wine Island Pass. A private light marks the south side of the passage between Terrebonne and Troiscent Piquets Bays.

(175) Bayou Petit Caillou is 29 miles long to its junction with Bayou Terrebonne 4 miles east of Houma. Several canals enter the bayou: Bush Canal leading to Bayou Terrebonne, and Boudreaux Canal and **Robinson Canal** connecting with Bayou Grand Caillou. Two miles above Cocodrie is a connecting route to Bayou Terrebonne through **Sevin Canal**, **Bay Negresse** and Lake la Graisse, good for 3 feet on a favorable tide. About 5 miles above the entrance the bayou crosses the Houma Navigation Canal. In 1996, the controlling depth in Bayou Petit Caillou was 5½ feet from its junction with Houma Navigational Canal to Boudreaux Canal; thence in 1986, 1 foot to Bayou Terrebonne.

(176) The lower portion of Bayou Petit Caillou is used considerably by local oystermen and fishermen. The bayou has considerable commerce in petroleum products and oil well pipe casing, machinery and supplies.

(177) A highway extends south along the west shore to **Cocodrie**, 6 miles above the mouth of the bayou. There are several oil company bases and fish wharves. Gasoline, diesel fuel and ice are available. A marina on a bayou about 0.2 mile west of Bayou Petit Caillou, at Cocodrie, has open and covered berths, gasoline, diesel fuel, a paved launching ramp, a 6½-ton fixed lift for handling boats up to 30 feet, ice, water and marine supplies. The marina is accessible with Bayou Petit Caillou through a channel with a reported controlling depth of 10 feet in 1982.

(178) Robinson Canal enters the bayou from west about 11 miles above the entrance. There is a shipyard on the bayou here and an oil refinery about 0.5 mile above it. **Bush Canal** enters the bayou from east about 3 miles above Robinson Canal. At **Boudreaux Canal**, 15 miles above the mouth, is a shrimp and oyster cannery.

(179) Several boatyards near **Chauvin** have marine railways that can haul out craft to 60 feet for general repairs; one has a machine shop. Gasoline, diesel fuel, lubricants, water, ice and marine supplies can be obtained at several places along the bayou.

(180) Six drawbridges cross Bayou Petit Caillou between its mouth and the junction with Bayou Terrebonne. The bridges with swing spans have a minimum width of 40 feet and a minimum clearance of 3 feet, and the limiting clearances at the lift bridges are 3 feet down and 47 feet up. (See **33 CFR 117.1** through **117.59** and **117.475**, chapter 2, for drawbridge regulations.) Overhead power

cables crossing the waterway have a minimum clearance of 50 feet.

(181) A channel from Bayou Petit Caillou through Boudreaux Canal, **Lake Boudreaux** and **Bayou Dulac** to Bayou Grand Caillou is marked with lights, buoys and daybeacons. In 1975, controlling depths were 8 feet in Boudreaux Canal and 5 feet through Lake Boudreaux; thence in 2009, 2 feet was reported through Bayou Dulac.

(182) **Wine Island Pass** is 3.5 miles west of Cat Island Pass and forms a passage between Wine Island and Isles Dernieres from the Gulf to Lake Pelto and Terrebonne Bay. The pass has depths of 5 to 9 feet over the bar and 7 to 8 feet inside where good anchorage is available. The channel lies close to Isles Dernieres, and, when any sea is running, breakers clearly outline the edges of the channel. The pass is unmarked.

(183)

Currents

(184) At Wine Island Pass, the tidal current at strength averages 1.7 knots on the flood and 1.9 knots on the ebb. At **Caillou Boca** at the west end of Lake Pelto the tidal current strength averages 1.3 knots on the flood and 0.7 knot on the ebb. The flood flows east and the ebb west. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(185) **Whiskey Pass** forms another passage from the Gulf to Lake Pelto through Isles Dernieres. The depths are 4 to 5 feet at the north end of the unmarked pass. In 2005, severe shoaling was reported in the pass; extreme caution is advised.

(186) The main passage from Terrebonne Bay to Lake Pelto, marked by buoys, lies between **Wine Island** and **Point Mast** and has a general depth of 6 to 7 feet. Another passage through Pass la Poule, which is good for a draft of 3 to 4 feet, is marked by private buoys.

(187) **Lake Pelto**, west of Terrebonne Bay and north of **Isles Dernieres**, has general depths of 5 to 7 feet. A protected inside route is afforded small craft drawing 4 to 5 feet from Timbalier and Terrebonne Bays west through Lake Pelto and **Caillou Boca** to Caillou Bay. The channel is marked by lights, buoys and a daybeacon.

(188)

ENC - US3LA02M
Chart - 11352

(189) An extensive network of lakes, bayous and canals extends inland between Terrebonne Bay and Atchafalaya Bay. Though sparsely populated, this area is frequented by local fishermen, trappers and oil development personnel. The principal entrances from the Gulf are described as follows:

(190) **Caillou Bay**, a large bight with general depths of 5 feet, is north and east of **Raccoon Point** at the west end of Isles Dernieres. An anchorage site with a depth of 7 to 8 feet is close inside Raccoon Point.

(191) **Coupe Colin**, 3 miles east of Raccoon Point, is shallow, changeable and difficult to follow and is not used even by local fishermen.

(192) **Vessels should approach Bayou Grand Caillou through the Bayou Grand Caillou Safety Fairway**. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(193) **Bayou Grand Caillou** empties into Caillou Bay 6.5 miles north of Raccoon Point. The entrance is marked by lights. In 1995, the controlling depth in the bayou was 5 feet from the entrance to **Dulac**, about 20 miles above the mouth. The bayou channels are marked by daybeacons and buoys for about 15 miles above the mouth.

(194) Bayou Grand Caillou crosses Houma Navigation Canal about 2.3 miles below Dulac and is joined by Bayou Dulac at Dulac.

(195) A dredged channel in Bayou Grand Caillou leads from Dulac to Bayou Pelton, thence through Bayou Pelton to Houma Navigation Canal.

(196) State Route 57 extends south along the east bank of Bayou Grand Caillou to below Dulac and connects with State Route 56 along Bayou Petit Caillou about 1.7 miles below Robinson Canal. A vertical lift highway bridge with clearances of 10 feet down and 73 feet up crosses the bayou at Dulac. A vertical lift highway bridge at Boudreaux has clearances of 3 feet down and 73 feet up.

(197) An overhead cable, 3 miles above the highway bridge at Boudreaux, has a clearance of 60 feet. Another overhead cable, 6 miles above the bridge and about 0.3 mile above the crossing with Ashland Canal, has a clearance of 25 feet.

(198) The highway bridge over Bayou Dulac, at Dulac, has a swing span with a clearance of 7 feet. Fixed bridges crossing Bayou Grand Caillou above the highway bridge have a minimum horizontal clearance of 15 feet and a vertical clearance of 1 foot.

(199) Bayou Grand Caillou has considerable commerce in seafood products, shell, petroleum products, clays and drilling mud, oil well pipe casing, machinery and industrial chemicals.

(200) Dulac has several oil company bases and wharves. A boatyard has marine railways, one of which is capable of handling craft up to 70 feet for hull repairs. On the bayou between Dulac and Boudreaux are numerous shrimp docks, seafood packing plants and ice plants. Gasoline, diesel fuel, water, ice and some marine supplies are available at the docks. A boatyard at **Boudreaux**, about 23 miles above the mouth, has four marine railways that can handle craft up to 50 feet for hull repairs. A machine shop is close by.

(201) **Grand Bayou du Large** extends between **Caillou Lake** and Caillou Bay. Depths of 5 to 6 feet are off the south entrance and 3 to 4 feet through a buoyed channel across Caillou Lake to **Grand Pass** connecting with **Bayou du Large** and with **Lake Mechant**. In 1992, a visible wreck was reported in the intersection of Grand Pass and

Bayou du Large in about 29°15'54"N., 90°56'10"W. A draft of 3 to 4 feet can be carried up Bayou du Large to **Falgout Canal** andthence into **Lake de Cade**. Lesser drafts can go to **Theriot** and thence to **Lake Theriot** through **Marmande Canal.**

(202) Bayou du Large is not navigable north of the public ramp at Theriot. Several overhead power cables cross the bayou south of Theriot; the clearance is 35 feet. Any of the cables can be removed, upon advance notice of 24 hours, for vessels requiring greater clearance. State Route 315 extends south along the east side of the bayou for several miles below Falgout Canal. This section of the bayou is heavily populated, and at several places gasoline and provisions are available. A boatyard on Bayou du Large, about 5 miles below Falgout Canal, has marine railways that can haul out craft to 65 feet for hull and engine repairs. A marina on the north side of Falgout Canal just west of its junction with Bayou du Large has gasoline, diesel fuel, open and covered berths, ice, launching ramps and marine supplies.

(203) The highway drawbridges in the Theriot area have a minimum channel width of 27 feet and a minimum clearance of 3 feet. Above Theriot, the bayou narrows and is crossed by fixed bridges with little or no clearance. (See **33 CFR 117.1** through **117.59** and **117.443**, chapter 2, for drawbridge regulations.)

(204) Bayou du Large empties into **Taylors Bayou**, which flows into the Gulf 4 miles west of Bayou Grand Caillou entrance. A daybeacon marks the mouth of Taylors Bayou.

(205) **Oyster Bayou**, 13 miles northwest of Raccoon Point, connects the Gulf with Fourleague Bay, an arm of Atchafalaya Bay. This bayou affords a protected route for craft 3 to 3½ feet in draft going to Atchafalaya Bay from Caillou Bay or waters to the east. The bayou has several oyster reefs, which are usually marked by poles.

(206) The route across the south end of Fourleague Bay is marked by lights and daybeacons. Boats follow close along the east side of the daybeacons in a channel slightly deeper than the general bay depths. A light off Halters Island Point marks the entrance to Fourleague Bay from Atchafalaya Bay. **Blue Hammock Bayou** on the east side of Fourleague Bay is another entrance to the network of shallow inside waters in this vicinity. Boats drawing 3 to 4 feet can reach the Intracoastal Waterway on a favorable tide by way of **Lost Lake**, **Bayou de Cade**, Lake de Cade and **Minors Canal**. Blue Hammock Bayou also connects with Lake Mechant.

(207)

Ship Shoal

(208) **Ship Shoal**, lying about 9 miles south of Raccoon Point, is about 7 miles long in a general east-west direction and about 1.5 miles wide at the west end and has depths ranging from 9 to 12 feet. Depths of 13 to 30 feet and wrecks with a least depth of 5 feet over them extend about 23.5 miles east of the east end of Ship Shoal. In stormy weather the shoal may be distinguished at some distance off by a choppy or breaking sea. In calm weather its position is not indicated by natural phenomena and can best be avoided by using the lead or fathometer. Heavy rips have been reported about 15 miles southwest of Ship Shoal.

(209) Oil drilling structures, marked by lights, are located on all sides of Ship Shoal and up to 60 miles offshore as well as throughout the delta section. Wrecks and other obstructions, covered and unmarked, may exist on the shoal and in the surrounding areas; mariners are advised to exercise extreme caution.

(210) **Ship Shoal Obstruction Light** (28°54'52"N., 91°04'16"W.), a brown skeleton structure (an abandoned light house) on piles, is in 10 feet of water on the northwest part of Ship Shoal and about 86 miles west of Southwest Pass. The structure is marked by two quick flashing white obstruction lights, displayed at a height of 17 feet above water from the perimeter of the lower platform.

(211)

Currents

(212) Current predictions for four passes into Barataria Bay, two passes into Terrebonne Bay and several inside stations may be obtained from the Tidal Current prediction service at *tidesandcurrents.noaa.gov*. Weather conditions often modify considerably the tidal currents in these passes.

(213)

ENCs - US4LA21M, US3LA02M, US4LA20M, US4LA22M
Charts - 11351, 11352, 11354

(214) **Atchafalaya Bay** is a large indentation in the coast of Louisiana 112 miles west of Southwest Pass, Mississippi River. The bay is about 28 miles long in nearly an east-west direction, averages 7 miles in width, is full of shoals and oyster reefs, and has general depths ranging from 3 to 9 feet. A fringe of reefs partially separates the bay from the Gulf, the east end being known as Point au Fer Shell Reef. The bay is the approach to Lower Atchafalaya River and the Port of Morgan City, with depths of 25 feet or less extending 25 miles off the channel entrance. **Belle Isle**, on the north shore of the bay, is 75 feet high and conspicuous for some distance offshore. Oil well structures and obstructions are throughout the area.

(215)

COLREGS Demarcation Lines

(216) The lines established for Atchafalaya Bay are described in **33 CFR 80.835**, chapter 2.

(217) **Vessels should enter Atchafalaya Bay through the Atchafalaya Pass Safety Fairway**. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(218)

Channels

(219) Atchafalaya Bay Ship Channel extends in a northeast direction from the Gulf to near the mouth of the Lower

Atchafalaya River. A federal project provides for a 20-foot by 400-foot dredged channel from the 20-foot contour in the Gulf to about 4 miles southwest of the mouth of the Lower Atchafalaya River. (See Notice to Mariners and latest editions of the charts for controlling depths.) The federal project depth of 20 feet and width of 400 feet continues into the mouth of the Lower Atchafalaya River to the Avoca Island Cutoff, thence northeast through the cutoff to Bayou Chene, thence through Bayou Chene to the junction with the Intracoastal Waterway, thence northwest along the Intracoastal Waterway through Bayou Beouf to the vicinity of the U.S. Highway Route 90 bridge at Morgan City.

(220) Lights and buoys mark Atchafalaya Bay ship channel. Point au Fer Reef Light marks the cut through Point au Fer Shell Reef. Strong currents will be encountered in the channel through Point au Fer Shell Reef, especially during north winds and extreme low tides.

(221) **Deer Island**, on the east side of the Lower Atchafalaya River entrance, can be approached through a short dredged channel just southwest of the island. The entrance is marked by a daybeacon. The channel has a reported depth of 4 feet.

(222)

Weather

(223) Fog is most frequent during January, February and March. South winds bring it in, and north winds clear it away.

(224)

Currents and freshets

(225) Freshets occur frequently during May and June, at which times the river overflows its banks and the current has considerable velocity, making it difficult to keep in the channel. During ordinary stages of the river, the current has a velocity of about 0.5 knot. When there are freshets in the rivers, the water in Atchafalaya Bay is quite fresh and that in the Cote Blanche Bays is nearly so. The discolored water coming out of the mouth of the river will be encountered well offshore, the distance depending much upon the direction of the wind.

(226) **Lower Atchafalaya River** flows south into the northeast corner of Atchafalaya Bay; it is the outlet for an extensive system of south Louisiana lakes and bayous known as the Atchafalaya navigation system, an inside passage to the Mississippi River about 180 miles above New Orleans.

(227) The Lower Atchafalaya River leads north from Atchafalaya Bay through Berwick Bay, thence west through Berwick Lock, and joins Bayou Teche 8 miles above the Berwick Lock near Patterson. The section of the river from Atchafalaya Bay to Berwick Lock has a crooked channel with depths from 21 to 113 feet over widths from 300 to 600 yards; the deepest water is generally in midstream.

(228) **That part of the Lower Atchafalaya River route from Mile 122 to mile 113 and from Berwick Lock northwest 1 mile into Bayou Teche is within the area of the Berwick Bay Vessel Traffic Service (VTS). (Berwick Bay VTS is discussed later in this chapter.)**

(229) **Bayou Shaffer** is a passage branching northeast to Bayou Boeuf from Sweetbay Lake in the Lower Atchafalaya River. An overhead power cable with a clearance of 113 feet crosses Bayou Shaffer near the junction with Bayou Boeuf. The bayou serves as a cutoff for vessels bound east from Atchafalaya Bay to the Intracoastal Waterway. In 1994, the controlling depth was 5½ feet.

(230) **That part of Bayou Shaffer for 1 mile below the junction with Bayou Boeuf is within the area of the Berwick Bay Vessel Traffic Service (VTS). (Berwick Bay VTS is discussed later in this chapter.)**

(231) **Avoca Island Cutoff** is a narrow channel joining Lower Atchafalaya River with Bayou Chene. The cutoff enters the east side of the river about 4 miles above the mouth. The channel has a federal project depth of 20 feet and width of 400 feet.

(232) **Bayou Chene** extends from Avoca Island Cutoff to join and become part of the Intracoastal Waterway. The channel has a federal project depth of 20 feet with a width of 400 feet.

(233) **Little Wax Bayou**, which branches west from the Lower Atchafalaya about 13.5 miles above the mouth, is part of the Intracoastal Waterway and is described later in this chapter.

(234) **Bayou Boeuf**, also part of the Intracoastal Waterway and described in chapter 12, joins the Lower Atchafalaya from east at Morgan City. The Intracoastal Waterway follows Lower Atchafalaya south for 2.5 miles to Little Wax Bayou.

(235) An alternate route of the Intracoastal Waterway, from Morgan City north to Port Allen on the Mississippi River and Bayou Grosse Tete, is described in chapter 12.

(236)

ENCs - US5LA27M, US5LA23M, US4LA20M, US4LA22M
Charts - 11355, 11354

(237) **Berwick Bay** is the section of the Lower Atchafalaya from Morgan City north to Sixmile Lake. Morgan City is on the east side of the bay and Berwick on the west side.

(238) Three bridges across Berwick Bay link Morgan City and Berwick. The Southern Pacific railroad vertical lift bridge has a clearance of 4 feet down and 73 feet up. The bridgetender monitors VHF-FM channel 13; call sign KW-4440. The U.S. 90 fixed highway bridges, about 400 and 500 yards above the railroad bridge, have clearances of 73 feet and 50 feet, respectively. A lighted approach danger range is shown from the west abutments of the fixed bridges. The range is visible only to downbound vessels and is designed to mark the west boundary of the suggested downbound course for approaching the bridges. **The range is not designed to be steered on. Mariners are cautioned not to rely solely on the range to safely navigate through the bridges**.

(244)

(239) **Vessel Traffic Service, Berwick Bay**, is operated by the U.S. Coast Guard to enhance the safety of navigation in the Berwick Bay area and consists of a communications network, vessel reporting points and a Vessel Traffic Center (VTC).

(240) When high-water conditions exist in this area, limitations as to the size and makeup of tows, and of certain types of cargo carried, are put into effect.

(241) Based upon information provided by masters of vessels and the bridgetender of the Southern Pacific Railroad Bridge over Berwick Bay, the VTC may make recommendations to coordinate the flow of traffic in the vicinity of and through the bridges across Berwick Bay. While the recommendations of the VTC to coordinate the traffic flow are advisory in nature, compliance with reporting requirements, operating procedures and high-water vessel and traffic limitations is mandatory for those vessels which must participate in the VTS.

(242) Navigation safety information will be relayed by the VTC. Mutual planning by vessels using the bridge-to-bridge radiotelephone is encouraged. The purpose of the Berwick Bay Vessel Traffic Service is not to attempt to maneuver or navigate from shore, but to coordinate the flow of traffic through the Vessel Traffic Service area. The rules governing vessels operating in the Vessel Traffic Service area are give in **33 CFR Part 161**, chapter 2. In addition, the proper operating procedures are contained in the Berwick Bay Vessel Traffic Service Users Manual, available free from Berwick Bay Vessel Traffic Service, U.S. Coast Guard, 800 David Drive, Room 232, Morgan City, LA 70380-1304.

(243) **Port of Morgan City** is at the confluence of Atchafalaya River and the Intracoastal Waterway about 35 miles from deep water in the Gulf of Mexico. The port limits include the east quarter of the Parish of St. Marys from 91°17.4'W. to Bayous Boeuf and Chene, and from Sixmile Lake to the mouth of Atchafalaya River. Numerous inland waterways that radiate from the port make it a center for offshore oil exploration and development. There is considerable commerce in seafood, shell, petroleum products, building cement, sand and gravel, oil-well pipe casing, machinery and supplies and chemicals. The Port of Morgan City Harbor and Terminal District has jurisdiction over the port under a Board of Commissioners appointed by the governor of the state. The board establishes rules and regulations for the port. The Port of Morgan City can be contacted by telephone at 985–384–0850 and maintains a website at *www.portofmc.com*.

(245) **Morgan City**, on the east side of Berwick Bay, has several landings with ample depths for river boats; vessels generally go alongside, because of the depths and currents in the river. The principal industries are fishing, ship building, cement, petroleum, carbon black, chemicals, sulfur, salt, menhaden and some agriculture in the raising of rice and sugar. The city has ice and cold

storage plants. Tugs in excess of 4,500 hp operate from Morgan City.

(246) The Young Memorial Vocational Training Center, a school for navigation, seamanship and marine and electrical engineering, is located in Morgan City.

(247)

Quarantine, customs, immigration and agricultural quarantine

(248) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(249) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(250) There is a hospital at Morgan City.

(251) Morgan City is a **customs port of entry**.

(252) A 1,300-foot-long wharf with 12 feet reported alongside is on the east side of Berwick Bay between the railroad lift bridge and the U.S. 90 highway bridge. The wharf has water and electrical connections.

(253)

Repairs

(254) Several shipbuilding and repair yards are at Morgan City and on Bayou Boeuf. There are also yards on Bayou Black at West Gibson and on Bayou Teche at Avalon. These yards have floating drydocks, marine railways and machine and other repair shops and build barges, tugs, crew boats, oil well structures and shrimp boats. The largest floating drydock, at one of the yards on Bayou Boeuf, has a 6,200-ton lifting capacity and can handle vessels to 250 feet long, 110-foot beam and 20-foot draft for complete repairs; a 750-ton floating crane is also available at this yard. The smaller yards build and repair tugs, shrimp boats and other fishing craft. A 500-ton floating crane and many smaller cranes are available at these yards. Gasoline, diesel fuel, water, ice and marine supplies are available.

(255) There is a small marina at Morgan City with dockage. Additional dockage is available at the fueling piers, fishing and oil company piers and at the port dock.

(256) **Berwick**, opposite Morgan City on the west side of Berwick Bay, has several seafood, fertilizer and chemical plants, a shipyard and several oil company bases. The shipyard has several floating drydocks, the largest of which can handle vessels to 2,000 tons, 200 feet long, 79-foot beam, and 16-foot draft for general repairs; a 25-ton crane is available. Gasoline, diesel fuel, water, ice and marine supplies are available.

(257)

Communications

(258) The port is served by a Class II railroad that has connections with other trunk railroads. U.S. Route 90 passes through the city. A state-owned airport is 14 miles west of the city at Patterson. Numerous truck lines operate out of the port.

(259)

ENCs - US5LA27M, US5LA23M, US4LA20M, US4LA22M, US4LA13M, US5LA13M, US3LA02M, US3LA01M
Charts - 11355, 11354, 11350, 11352, 11345

(260) **Bayou Teche** is a navigable waterway in south Louisiana parallel to and 35 miles west of the Mississippi River, meandering northwest for about 93 miles from its junction with Lower Atchafalaya River, about 8 miles west of **Berwick Lock**, to its sources in St. Landrys Parish. The lock has a length of 300 feet, width of 45 feet, and depth over the sill of 9 feet at mean low water. The lockmaster monitors VHF-FM channel 13. The lock operates from 0600 to 2200 daily.

(261) There is considerable commerce on Bayou Teche, and that part of Lower Atchafalaya River west of Berwick Lock, in seafood, shell, sugar, molasses, petroleum products, building cement, sand and gravel, oil-well pipe casing, machinery and supplies, fertilizer and chemicals. There are shipyards and sugar mills along the bayou. Shell barges are the principal users; shrimp boats operate to Patterson.

(262) The main state highway between New Orleans and Lake Charles follows the bayou through the principal towns.

(263) A dredged channel leads from Berwick Lock west through the Lower Atchafalaya River and Bayou Teche to Arnaudville, a distance of about 100 miles.

(264) The St. Mary Parish highway bridge about 7 miles above Berwick Lock at **Patterson** has a swing span with a clearance of 6 feet. (See **33 CFR 117.1** through **117.59** and **117.477**, chapter 2, for drawbridge regulations.) An overhead power cable at the bridge has a clearance of 61 feet. An overhead power cable crossing the bayou about 8.5 miles above Berwick Lock has a clearance of 66 feet.

(265) A highway swing bridge with a clearance of 5 feet is at **Avalon** about 10.6 miles above the lock. (See **33 CFR 117.1** through **117.59** and **117.501**, chapter 2, for drawbridge regulations.)

(266) A shipyard at Avalon has a 125-foot marine railway and a 250-ton drydock that can handle vessels to 125 feet long, 30-foot beam and 8-foot draft. Hull repairs can be made to steel and aluminum vessels.

(267) Bayou Teche crosses the Wax Lake Outlet channel at **Calumet**, about 12 miles above Berwick Lock. There are floodgates, which are usually open, across both sides of Bayou Teche at its junction with Wax Lake Outlet. During high-water stages, the east gate remains closed. The west gate is manned from 0500 to 1900 and is opened upon request. The floodgates are used by small craft only. The opened widths through the floodgates are 45 feet. The overhead power cable just east of the east floodgate has a clearance of 60 feet. Local information should be obtained before attempting the alternate route through Sixmile Lake.

(268) At **Centerville**, about 17 miles above the lock, an overhead power cable with a clearance of 60 feet crosses the bayou. A highway swing bridge with a clearance of 5 feet crosses the bayou about 0.5 mile west of Centerville.

(See **33 CFR 117.1** through **117.59** and 117.501, chapter 2, for drawbridge regulations.)

(269) **Garden City**, 18.5 miles above Berwick Lock, is the site of a large lumber mill. An overhead power cable about 20 miles above the lock has a clearance of 66 feet.

(270) **Hanson Canal** is 20.2 miles above Berwick Lock; little used for navigation, it leads south from Bayou Teche at Garden City, turns west and enters and follows Bayou Portage to the Intracoastal Waterway in Bayou Bartholomew. In 1982, it was reported that the canal was used only by small outboard boats, and local knowledge was recommended. Near the junction of Hanson Canal and Bayou Teche are the remains of an abandoned lock; seven fixed bridges with minimum widths of 18 feet and clearances of 6 feet, overhead pipelines with clearances of 7 feet, and overhead power cables with clearances of 35 feet. Traffic between the Intracoastal Waterway and Bayou Teche is via the Charenton Canal discussed later in this chapter and in chapter 12.

(271) **Franklin**, about 22 miles above Berwick Lock, is an agricultural center that has several industries and is the seat of St. Mary Parish. **Franklin Canal**, southwestof Franklin, leads into **Bayou Portage** and connects with the Intracoastal Waterway at Bayou Bartholomew. In 1997, the controlling depth through Franklin Canal and Bayou Portage to Bayou Bartholomew was 4 feet. Near its north end, the canal is crossed by three overhead power cables with a least clearance of 60 feet, twin fixed highway bridges with a clearance of 50 feet and a highway swing bridge with a clearance of 7 feet. (See **33 CFR 117.1** through **117.59** and **117.445**, chapter 2, for drawbridge regulations.) In 1993, a visible wreck was reported 0.2 mile above the swing bridge in about 29°47'11.5"N., 91°31'11.0"W.

(272) An overhead power cable with a clearance of 60 feet crosses Bayou Teche just below Franklin.

(273) At the town of Franklin a highway bridge with a swing span has a clearance of 2 feet. An overhead power cable about 0.1 mile north of the bridge has a clearance of 60 feet. Another highway bridge with a swing span with a clearance of 4 feet is about 23 miles above Berwick Lock. An overhead television cable about 0.1 mile west of the highway bridge has a clearance of 60 feet. The railroad bridge that crosses the bayou 26.5 miles above the lock, with a width of 49 feet, was not being used in 1982, and its span was left in an open position. A highway bridge with a swing span crosses the bayou 27 miles above the lock and is under construction (2018). Several more bridges with swing spans cross the bayou between 31.1 and 48.1 miles above the lock; minimum clearance is 3 feet. (See **33 CFR 117.1** through **117.59** and **117.501**, chapter 2, for drawbridge regulations.) Between Franklin and Jeanerette several overhead power cables cross the bayou; least clearance is 60 feet.

(274) Launching ramps are available at Franklin on the west side of Bayou Teche and near the head of Franklin Canal.

(275) **Jeanerette** is 44 miles above Berwick Lock and is chiefly a market town; its principal products are sugar, oil, pecans and peppers. There is a large foundry in the town.

(276) About 1 mile northwest of **Hope**, 46.5 miles above Berwick Lock, a highway swing bridge with a clearance of 5 feet crosses Bayou Teche. (See **33 CFR 117.1** through **117.59** and **117.501**, chapter 2, for drawbridge regulations.)

(277) The highway bridge that crosses the bayou at **Olivier**, about 50 miles above Berwick Lock, has a swing span with a clearance of 4 feet. (See **33 CFR 117.1** through **117.59** and **117.501**, chapter 2, for drawbridge regulations.)

(278) A highway swing bridge with a clearance of 5 feet crosses the bayou about 1.5 miles above Olivier. (See **33 CFR 117.1** through **117.59** and **117.501**, chapter 2, for drawbridge regulations.)

(279) Between Jeanerette and New Iberia are several overhead power cables that cross the bayou; least clearance is 60 feet.

(280) **New Iberia**, the seat of Iberia Parish, lies on the banks of Bayou Teche, 54 miles above Berwick Lock. The town is the center of an extensive agricultural area and has food processing plants, dairies, condiment factories and several small manufacturing industries and is a supply center for the oil development of the surrounding area. New Iberia has two hospitals.

(281) Several highway bridges with swing spans, one with a vertical lift span, and one with a bascule span, cross the bayou at New Iberia; least clearance is 4 feet. (See **33 CFR 117.1** through **117.59** and **117.501**, chapter 2, for drawbridge regulations.)

(282) The **Port of Iberia (Port of New Iberia)** is located 5 miles south of New Iberia, on **Commercial Canal**, which connects with the Intracoastal Waterway through **Acadiana Navigational Channel** and Bayou Carlin. From the Intracoastal Waterway, a channel leads southwest and across the bar into Weeks Bay at the northeast corner to Vermilion Bay. In 2000, the reported depth was 6 feet across the bar to the Intracoastal Waterway; thence in 2002, 10 feet to the head of the canal at the Port of Iberia.

(283) The port is 7 miles north of the Intracoastal Waterway, about 8.5 miles from Weeks Bay, and about 35 miles from deep water in the Gulf. The port has several slips and a small turning basin, all of which are reported to have a controlling depth of 14 feet in 1982. The principal industries located in the port area are sugar, chemicals, fertilizer, shell, grain, oil-well rig and machinery construction and repair, pipe coating and shipbuilding. Loading and docking facilities are available at the public dock. Gasoline, diesel fuel, water and ice are available. A shipyard in the port has two floating drydocks, the largest of which has a 3,300-ton lifting capacity and can handle vessels to 180 feet long, 79-foot beam, and 16-foot draft for complete repairs.

(284) The canal and port are governed by the Board of Directors of the Port Commission, Port of Iberia; telephone 337–364–1065; website address: www.portofiberia.com.

(285) There are highway and railroad connections to the port area.

(286) Several highway bridges with swing spans cross Bayou Teche between New Iberia and Loreauville; minimum channel width 50 feet and minimum clearance 3 feet. The highway bridge at Loreauville 61.9 miles above Berwick Lock has a vertical-lift span with a clearance of 3 feet down and 50 feet up. (See **33 CFR 117.1** through **117.59** and **117.501**, chapter 2, for drawbridge regulations.) Overhead power cables crossing the bayou between New Iberia and Loreauville have a least clearance of 60 feet.

(287) A shipbuilding plant on the west bank above **Loreauville,** about 8 miles above New Iberia, constructs aluminum boats to 135 feet long. In an emergency, they can handle boats to 80 feet long and with 7-foot draft for complete repairs. Marine supplies can be obtained at the yard.

(288) A highway bridge about 4.5 miles above Loreauville has a swing span with a clearance of 8 feet. (See **33 CFR 117.1** through **117.59** and **117.501**, chapter 2, for drawbridge regulations.) An overhead power cable crosses the bayou between Loreauville and Keystone Lock; clearance is 60 feet.

(289) **Keystone Lock**,160 feet long and 36 feet wide with a depth of 9 feet over the sill, is 17 miles above New Iberia and 70.7 miles above Berwick Lock, and halfway, by highway, between New Iberia and St. Martinville. Traffic lights are at each end of the lock. Vessels should wait for the green light before entering the lock.

(290) The least clearance of overhead power cables between Keystone Lock and Ruth is 50 feet.

(291) A highway swing bridge with a clearance of 6½ feet is about 71.5 miles above Berwick Lock. (See **33 CFR 117.1** through **117.59** and **117.501**, chapter 2, for drawbridge regulations.)

(292) **St. Martinville** is a town on Bayou Teche about 20 miles above New Iberia. An overhead power cable crossing the bayou at St. Martinville has a clearance of 67 feet. A highway bridge over the bayou 73.1 miles above Berwick Lock has a swing span with a width of 40 feet and a clearance of 4 feet. A combination railroad-and-highway bridge at **Levert**, 75.2 miles above the lock, has a swing span with a clearance of 8 feet. (See **33 CFR 117.1** through **117.59** and **117.501**, chapter 2, for drawbridge regulations.)

(293) A highway bridge at **Parks**, 78.8 miles above Berwick Lock, has a vertical lift span with a width of 41 feet and a clearance of 5 feet down and 50 feet up. (See **33 CFR 117.1** through **117.59** and **117.501**, chapter 2, for drawbridge regulations.)

(294) A highway bridge crossing the bayou at **Ruth**, 83.6 miles above Berwick Lock, has a fixed span with a clearance of 6 feet.

(295) Several bridges and overhead power cables cross the bayou between Ruth and Arnaudville. Least clearances are: swing spans, 15 feet; vertical-lift spans, 1 foot down, 51 feet up; removable spans, 5 feet; fixed spans, 7 feet. (See **33 CFR 117.1** through **117.59** and **117.501**, chapter 2, for drawbridge regulations.) Overhead power cables between Ruth and Arnaudville have a least known clearance of 40 feet.

(296) The Lower Atchafalaya River leads north from Berwick Bay through Stouts Pass to Sixmile Lake. The marked channel north through **Sixmile Lake** and **Grand Lake** is part of the Atchafalaya River navigation system discussed in chapter 12.

(297) **Wax Lake Outlet**, a drainage canal for the Atchafalaya Floodway, is not a maintained waterway; however, it has some light barge traffic. This outlet leads south-southwest from Sixmile Lake to Atchafalaya Bay, crosses Bayou Teche near Calumet, the Intracoastal Waterway in the vicinity of Possum Point Bayou, thence through Wax Lake into the bay. An overhead pipeline bridge with a clearance of 33 feet crosses the canal 0.8 mile north of Bayou Teche. Three bridges with fixed channel spans and a minimum clearance of 2 feet control navigation in the canal south of Bayou Teche. An overhead power cable about 150 yards south of the bridges has a clearance of 60 feet. Overhead pipeline bridges 0.3 to 0.4 mile south of the bridges have a least clearance of 73 feet. An overhead telephone cable just north of the bridges has a clearance of 18 feet. In 1969 the entrance to Wax Lake Outlet from Sixmile Lake was reported to be marked by private buoys; also reported was an old sugar mill and stack on the east side of the entrance. Strong currents are reported to exist in Wax Lake Outlet.

(298)

ENC - US4LA21M
Chart - 11351

(299) **Little Wax Bayou**, branching west from Lower Atchafalaya River 2.5 miles below Morgan City, empties into **Wax Lake** and through **Wax Lake Pass** and **New Pass** into Atchafalaya Bay. The north end of the bayou has been straightened by dredged cuts to form the route of the Intracoastal Waterway west from Lower Atchafalaya River. **Big Wax Bayou** flows into Wax Lake Pass and through New Pass into Atchafalaya Bay. These bayous form an inside route from Morgan City to the west part of the bay. In 1969, shoaling to 2 feet and numerous uncharted stumps, snags and logs were reported in the approach to New Pass from Atchafalaya Bay extending about 4 miles south from a point in about 29°13.8'N., 91°26.5'W.

(300)

ENCs - US4LA13M, US5LA13M, US3LA01M, US4LA21M
Charts - 11350, 11345, 11351

(301) **Marsh Island**, on the south side of Vermilion Bay and west of Atchafalaya Bay, is low and marshy. The entire Gulf shore of the island is foul; numerous oyster reefs, some of which uncover at low water, extend for about 4.5 miles off the south point of the island. The

foul area should not be entered without local knowledge. **Shell Keys**, a low group of small islands 3 miles south-southwest of **Mound Point**, the southernmost point of Marsh Island, are only about 2 feet high.

(302) **Trinity Shoal** lies about 25 miles south of Southwest Pass, Vermilion Bay, and 60 miles 285° from Ship Shoal Obstruction Lights. The shoal is about 20 miles long in a west-southwest and east-northeast direction and has depths of 10 to 17 feet. It is fairly steep-to on its south side, the 5- and 10-fathom curves being distant only about 1 and 5 miles, respectively. In calm weather Trinity Shoal is discernible by a difference in the color of the water and in stormy weather by a choppy sea. Because of its greater depth, the sea does not break as heavily on Trinity Shoal as it does on Ship Shoal.

(303) Vessels should approach Southwest Pass through the prescribed Safety Fairway.(See **33 CFR 166.100** through **166.200**, chapter 2.)

(304)

COLREGS Demarcation Lines

(305) The lines established for Southwest Pass are described in **33 CFR 80.835**, chapter 2.

(306) **Southwest Pass**, marked by lights, extends between the west end of Marsh Island and the mainland and is the entrance to Vermilion Bay from the Gulf. Although not difficult to enter, the pass may be difficult to recognize and local assistance is advised.

(307) **East Cote Blanche Bay**, **West Cote Blanche Bay**, and **Vermilion Bay** together make up a large body of water extending west-northwest from the northwest side of Atchafalaya Bay, and are separated from the Gulf by Marsh Island. This water area is about 32 miles long and 5 to 15 miles wide, with depths averaging of 5 to 9 feet. With the exception of Cote Blanche Island, Weeks Island and Avery Island, the shores of these bays and Marsh Island are low and marshy. In recent years there has been extensive oil exploration in the bays offshore from **Burns** off **South Bend** in East Cote Blanche Bay, along the northwest shore in West Cote Blanche Bay and on Dry Reef.

(308) Boats bound from Atchafalaya Bay to East Cote Blanche Bay generally use **Morrison Cutoff**, which is between **Point Chevreuil** on the east and **Rabbit Island** on the west. Under favorable conditions a draft of 4 to 5 feet can be carried through the cutoff into East Cote Blanche Bay and thence through West Cote Blanche Bay to Vermilion Bay. Local knowledge is needed to carry the best water.

(309) **The Jaws**, at the northeast corner of West Cote Blanche Bay, is a passage connecting the bay with the Intracoastal Waterway and with **Charenton Drainage and Navigation Canal**. Knowledge of local existing conditions is advised. A passage through the bay from off **Point Marone** through The Jaws is marked by private buoys.

(310) **Cote Blanche Island**, 97 feet high, is on the north side of West Cote Blanche Bay. From the bay side, the island appears as a reddish-yellow steep bluff. **Ivanhoe Canal**, west of the island, connects West Cote Blanche Bay with the Intracoastal Waterway. In 1983, the canal had a reported controlling depth of 4½ feet. The canal is marked by private aids.

(311) **Cypremort Point**, on the east side of Vermilion Bay and northwest side of West Cote Blanche Bay, is the site of a summer resort. Several private canals, on which are homes and private docks, have been dredged into the banks on the north side of the point. Gasoline, diesel fuel, ice and a launching ramp are available at a fuel facility on the point. The canals and the channel leading to the fuel facility had reported controlling depths of about 3 feet in 1982. Private mooring slips are available. State Route 319 connects the point with the town of **Cypremort**.

(312) **Weeks Island**, 171 feet high, is east of **Weeks Bay**, the northeast extension of Vermilion Bay. The Intracoastal Waterway passes close along the west side of the island. Several storage tanks and the mine buildings make prominent landmarks from the bays; salt is mined on the island. There are rail and highway connections to **Balwin** on Bayou Teche. A large oil field is on the north side of Weeks Island.

(313) **Avery Canal** leads northwest from Vermilion Bay to a junction with Bayou Petite Anse at the Intracoastal Waterway. A dredged approach channel leads from Vermilion Bay to the canal. In 2000, the reported controlling depths were 6.9 feet in the entrance and 14.1 feet in Avery Canal. Lights mark the entrance channel.

(314) A dredged channel in **Bayou Petite Anse** leads from the Intracoastal Waterway north for about 5.3 miles to a fixed highway bridge at the north end of Avery Island.

(315) **Avery Island**, east of Bayou Petite Anse, has several mine buildings that show prominently from Vermilion Bay. A canal 9 feet deep leads from Bayou Petite Anse to a salt mine on the island. A railroad and a highway from New Iberia extend as far south as Avery Island.

(316) About 2.8 miles above the Intracoastal Waterway, the Acadiana Navigational Channel in **Bayou Carlin** branches northwest from Bayou Petite Anse for about 2.5 miles to a junction with Bayou Tigre and Delcambre Canal. The dredged channel in **Delcambre Canal** continues north to **Lake Peigneur**.

(317) **Delcambre** is on Delcambre Canal, 2 miles south of Lake Peigneur, and is the fishing center for Iberia Parish. The town has several seafood processing plants, public wharves and a shipyard with a marine railway capable of handling vessels to 65 feet. General hull and electronic repairs can be made. There is a marina where covered berthage can be obtained. Numerous shrimp boats base at the port. Gasoline, diesel fuel, water, ice and marine supplies are available. Highway and railroad bridges with vertical lift spans cross the canal at Delcambre. Each bridge has a channel width of 40 feet; the Southern Pacific railroad bridge has a clearance of zero feet down and 46 feet up, and State Route 14 bascule bridge has a reported clearance of 4 feet down and 73 feet up. (See **33 CFR 117.1** through **117.59** and **117.435**, chapter 2, for

drawbridge regulations.) An overhead power cable at the highway bridge has a clearance of 51 feet.

(318) **Jefferson Island**, on Lake Peigneur, is the site of a large salt mine. It is the head of navigation on the canal. The lake is cluttered with old piling and other obstructions.

(319) **Bayou Tigre**, navigated only by small craft at high tide, is a tortuous waterway extending from Bayou Carlin to **Erath**. Seven bridges cross the bayou; minimum width is 9 feet, and minimum clearance of fixed spans is 1 foot. (See **33 CFR 117.1** through **117.59** and **117.507**, chapter 2, for drawbridge regulations.) A shipyard at Erath has a marine lift that can haul out craft to 60 feet for hull repairs.

(320) A private light and daybeacons in Vermilion Bay mark the entrance channel into **Boston Bayou**, about 7.3 miles southwest of Avery Canal. In 1986, the reported controlling depths were 3½ feet in the entrance channel, thence in 1980, 4 feet to the Intracoastal Waterway.

(321) **Vermilion River**, also known as **Bayou Vermilion** and so marked at the bridge crossings, flows from the north and crosses the Intracoastal Waterway and enters Vermilion Bay through **Four Mile Cutoff (Vermilion River Cutoff)**.

(322) A dredged channel leads from Vermilion Bay through Four Mile Cutoff, across the Intracoastal Waterway, and north in the Vermilion River to Lafayette. Lights mark the entrance channel. A channel, marked by lights, leads across Vermilion Bay from Southwest Pass to the entrance channel to Four Mile Cutoff. The entrance shoals rapidly after dredging and may be difficult to enter during the winter when strong winds from the north lower the water in the bay. In 1983, it was reported that the river channel is subject to shoaling at its junction with a small stream about 0.8 mile below the Pinhook Highway Bridge. Mariners are advised that strong currents may be encountered in the river. In 1982, several sunken barges were reported to be along the east bank of the river about 1 mile north of the junction with the Intracoastal Waterway. Caution is advised while navigating in the area.

(323) The limiting clearances of the numerous overhead power cables crossing the river are as follows: Intracoastal Waterway to Abbeville, 60 feet (just southwest of Abbeville); and Abbeville to Lafayette, 54 feet (at Milton). The least clearance of the three swing bridges across the river is 3 feet; of the six vertical lift bridges, 4 feet down and 50 feet up; and of the two fixed bridges, on railroad and one highway, at Lafayette, 5 feet vertical and 25 feet horizontal. (See **33 CFR 117.1** through **117.59** and **117.509**, chapter 2, for drawbridge regulations.)

(324) Waterborne commerce on the Vermilion River is in petroleum products, shell, oil-well pipe casing, machinery, cement, sand and gravel and crushed rock.

(325) **Intracoastal City**, on the Vermilion River just north of the Intracoastal Waterway, has several offshore oil-well terminals and bases, a fish packing plant and wharf, boat club and several marinas and boatyards. The largest marine railway in the area can handle craft up to 50 feet for hull and engine repairs; lifts are also available. Floating cranes up to 250 tons, lifts and marine railways are available for hauling out barges for repairs at the oil company bases. Gasoline, diesel fuel, water, ice, marine supplies, a surfaced launching ramp and open and covered berthage are available. Depths of 4 to 14 feet were reported alongside the berths in 1982.

(326) A shipyard that builds and repairs tugs, party boats and barges is on the east side of the river at Bancker. The largest floating drydock at the yard has a capacity of 2,000 tons and can handle vessels to 200 feet long with 90-foot beam and 14-foot draft. Machine and welding shops, supplies and a 60-ton crane are available; fuel is available by truck.

(327) The **Port of Vermilion**, on the west side of the river just above Bancker, is the site of oilfield equipment fabrication companies. In 1982, the reported controlling depth in the port was 16 feet. A public dock at the port can provide gasoline and water.

(328) **Perry** is a small village about 16 miles above the Intracoastal Waterway. State Route 82 highway vertical lift bridge at Perry has a clearance of 10 feet down and 55 feet up. (See **33 CFR 117.1** through **117.59** and **117.509**, chapter 2, for drawbridge regulations.) A shipyard on the west side just below the bridge has marine ways capable of handling crew boats up to 65 feet long and 7 feet in draft for general repairs. Gasoline and diesel fuel can be trucked in. There are metal, joiner and welding shops at the yard, and hull and engine repairs can be made.

(329) A service wharf for tugs and crew boats is on the west side of the Vermilion River about 18 miles above the Intracoastal Waterway. Gasoline, diesel fuel, water and some marine supplies are available. A shipyard on the west side of the river at Abbeville, about 18.5 miles above the Intracoastal Waterway, builds and hauls out for repairs wooden and steel crew boats to 75 feet and steel barges to 120 feet long and 5 feet in draft. A 30-ton crane is available. Just above the yard, the Southern Pacific Railroad swing bridge with a clearance of 8 feet crosses the river. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.)

(330) **Abbeville**, about 19 miles above the Intracoastal Waterway, is the seat of Vermilion Parish. There are grain elevators, grain driers, warehouses and a rice mill. The principal industries are oil and natural gas production, shell and cement, rice, cotton, wool, sugar, molasses and syrup, dairy products, poultry and cattle raising and light industry in manufacture of consumer goods. The city has a hospital and a municipal airport and is served by freight service of the Southern Pacific Railroad and bus lines. State Route 14 and State Route 14 Bypass highway bridges crossing the river at Abbeville have lift spans with minimum clearances of 6 feet down and 55 feet up. (See **33 CFR 117.1** through **117.59** and **117.509**, chapter 2, for drawbridge regulations.) An overhead television cable just below State Route 14 highway bridge has a clearance of 60 feet. U.S. Route 167 and State Routes 14 and 82 pass through the city.

(331) Woodlawn Highway Bridge crossing the river about 27 miles above the Intracoastal Waterway has a swing span with a clearance of 13 feet. (See **33 CFR 117.1** through **117.59** and **117.509**, chapter 2, for drawbridge regulations.) An overhead power cable with a clearance of 77 feet crosses the river about 0.3 mile below the bridge. Gasoline is available at a dock near the bridge. State Route 92 highway bridge at **Milton** about 29.7 miles above the waterway has a vertical lift span with clearances of 4 feet down and 50 feet up. (See **33 CFR117.1** through **117.59** and **117.509**, chapter 2, for drawbridge regulations.) Overhead power and television cables just below the bridge have a least clearance of 28 feet.

(332) Broussard Bridge (SR 733) about 32.2 miles above the waterway has a vertical lift span with clearances of 6 feet down and 52 feet up. New Flanders (SR 3073) highway bridge about 36 miles above the waterway has a swing span with a clearance of 13 feet. (See **33 CFR 117.1** through**117.59** and **117.509**, chapter 2, for drawbridge regulations.)

(333) Pinhook Highway Bridge (State Route 182) at Lafayette and about 39.5 miles above the Intracoastal Waterway has a 40-foot vertical lift span with clearances of 10 feet down and 50 feet up. (See **33 CFR 117.1** through **117.59** and **117.509**, chapter 2, for drawbridge regulations.) In 1983, it was reported that during periods of high water, primarily during winter and spring, severe turbulence may be experienced at the bridge.

(334) **Lafayette**, about 42 miles above the Intracoastal Waterway, is the seat of Lafayette Parish. Lafayette is referred to as the administrative oil capital of the world and is the headquarters of over 600 major and associated oil companies. It is the historical and cultural center of the Acadian country and Cajun people. The University of Southwestern Louisiana is in the city. The principal industries are oil, natural gas and salt production, but the area is primarily agricultural with production of rice, cotton, soybeans, sugar, molasses, dairy products, livestock, wool and poultry. Shell is manufactured into cement, and sand, gravel and timber are important products. There are four large hospitals, two medical centers and a municipal auditorium in the city. The city is served by passenger and freight service of Amtrak and the Southern Pacific Railroad, bus lines and airlines. The Lafayette Municipal Airport is on the east side of the city. State Route 729 highway bridge at Lafayette has a 25-foot fixed span with a clearance of 5½ feet. Southern Pacific fixed railroad bridge, about 200 yards above the highway bridge, has a clearance of 21 feet. The bridges are the head of navigation for all but small shallow-draft vessels. In 1983, it was reported that during periods of high water, primarily winter and spring, severe turbulence may be encountered at the railroad bridge. A small-craft facility is on the east side of the river just above the railroad bridge, and a launching ramp is about 0.5 mile above the bridge. Fuel and supplies can be trucked to several locations in the city.

(335)

ENCs - US3LA01M, US4LA13M, US5LA13M
Charts - 11345, 11350

(336) **Freshwater Bayou Channel**, a dredged channel, leads from the Gulf to the entrance of **Freshwater Bayou Canal**. Freshwater Bayou Canal continues north to the Intracoastal Waterway near Intracoastal City. Lights and daybeacons mark the approach channel to the entrance of the canal and lights mark the canal to its junction with the Intracoastal Waterway. A saltwater barrier lock is about 1.3 miles above the entrance and is in continuous operation. The lock is 600 feet long and 84 feet wide and has depths of 16 feet over the sills. Each end of the lock on the west side of the channel has 300-foot-long timber guidewall approaches.

(337) **Vessels should approach Freshwater Bayou from the Gulf through Freshwater Bayou Safety Fairway**. (See **33 CFR166.100** through **166.200**, chapter 2.)

(338)

COLREGS Demarcation Lines

(339) The lines established for Freshwater Bayou are described in **33 CFR 80.835**, chapter 2.

(340) **Schooner Bayou** empties into the extreme west extension of Vermilion Bay and forms a part of the former inside route of Mermentau River through White and Grand Lakes and connecting passages. The best approach to Schooner Bayou is through Freshwater Bayou Canal, the dredged canal which takes off from the Intracoastal Waterway near Intracoastal City. In 2000, the controlling depth was 10 feet in Freshwater Bayou Canal from the Intracoastal Waterway to Schooner Bayou, thence in 1996, 5½ feet in Schooner Bayou to Schooner Bayou Control Structure. Isle Marrone Canal and North Prong-Schooner Bayou connect Schooner Bayou with the Intracoastal Waterway to the west of Vermilion Lock. In 1995, the controlling depth was 8 feet in North Prong-Schooner Bayou. Schooner Bayou Canal is crossed by State Route 82 highway bridge 3.3 miles east of White Lake. The bridge has a swing span with a clearance of 6 feet. (See **33 CFR 117.1** through **117.59**, and **117.494**, chapter 2, for drawbridge regulations.) An overhead power cable east of the bridge has a clearance of 95 feet.

(341) The entrance channel to the bayou from Vermilion Bay via Mud Point is no longer maintained and has a depth of about 2 feet. To enter by this route, follow the privately marked channel in the old Vermilion River entrance to the mouth of the bayou which is marked by a light.

(342) **Schooner Bayou Control Structure**, 4 miles inisde the bayou, prevents saltwater from flowing through Schooner Bayou Canal into White Lake; the floodgates are 75 feet wide and 12 feet deep over the sill at mean low water. During high water the gates will be opened to permit passage of any vessel that can navigate against the current, which can attain velocities of up to 5 knots. Vessels coming from east or west can bypass the floodgates by

going through North Prong-Schooner Bayou into the Intracoastal Waterway southeast of Forked Island.

(343) From Schooner Bayou Canal, the route crosses White, Turtle, Collicon and Grand Lakes. Several lights and daybeacons mark this route. During the dry summer months, when farmers pump water to irrigate their rice fields, water in the lakes lowers enough to hamper navigation. In 1996, the controlling depth was 4 feet from Schooner Bayou Control Structure through the lakes and connecting canals to Mermentau River.

(344) **White Lake** is 12 miles long and 6 miles wide and has depths of 4 feet or more over a mud bottom. The east and west entrances to the lake are marked by lights, both aids being on the north side of the channel. The course across the lake passes about 0.5 mile off the point in the middle of the north shore of the lake. The channel is not marked.

(345) Approach the east entrance with the line of the Schooner Bayou Canal in range ahead. The channel is narrow, and the spoil bank on the south side is marked by stakes. At the west end of the lake, pass about 10 to 15 yards south of the light just off the canal entrance.

(346) **Turtle Lake** is nearly round, with a diameter of about 0.75 mile, and is shallow. **Alligator Lake** is about the same size and depth. **Collicon Lake** is 3 miles long, 1 mile wide, and from 2 to 4 feet deep. On the west side of this lake an earth dike extends along the north side of the channel. Keep close to this dike, within 5 to 10 yards of it.

(347) **Grand Lake** is from 4 to 7 feet deep, but the entrances are subject to shoaling. At the southeast end of the lake, the entrance from Collicon Lake leads within 5 to 10 yards along the south side of an earthen dike. A light marks the outer end of the dike. There are lights on Umbrella Point and **Grassy Point** and on the east point at the entrance to the Mermentau River. From the Collicon Lake canal entrance, steer to pass about 0.5 mile off Short Point, the first point to the north, and about the same distance off **Umbrella Point**, the second point to north. From Umbrella Point, pass about 0.25 mile east of Grassy Point, and when beyond this point haul to west and pass well off the east point at the entrance to the Mermentau River, which is marked by a light. About 0.5 mile up the Mermentau River, the Intracoastal Waterway enters from east, follows the river for about 1 mile, and exits to west. The river channel is deep.

(348) A network of canals south from Schooner Bayou to Cheniere au Tigre and west to Pecan Island has been dredged through the marsh. **Sixmile Canal**, a 1.5-mile passage, leaves Schooner Bayou about 1.5 miles east of Schooner Bayou Control Structure and extends south to Freshwater Bayou Canal. **Belle Isle Bayou** enters Freshwater Bayou Canal about 5.3 miles south of Schooner Bayou.

(349) **Freshwater Bayou** and **Louisiana Fur Company Canal** enter Freshwater Bayou Canal from the west about 10 miles south of Schooner Bayou. Louisiana Fur Company Canal leads northwest for about 1.7 miles thence west and north for about 5 miles to the private facilities at a large oil field south of Pecan Island. There is a fish camp near the oil company base at which gasoline, diesel fuel, ice, groceries and a launching ramp are available.

(350) Other accesses to this network of canals is through **Deepwater Bayou**, which enters Vermilion Bay about 1.5 miles south of Schooner Bayou, or through **Fearman Lake** with outlets to Vermilion Bay on either side of **Redfish Point**. Fearman Lake is shallow, and local knowledge is necessary to carry the best water.

(351) **Belle Isle**, west of Vermilion Bay, is a low ridge with most of the area under cultivation. The elevation is only slightly above that of the marsh. The headquarters of the Audubon Society Game Preserve is at Audubon on **McIlhenny Canal** at its junction with Belle Isle Bayou at the west end of Belle Isle Lake.

(352) **Cheniere au Tigre**, 4 miles south of Belle Isle, is a wooded ridge about 3 miles long with its east end on the Gulf Coast. The 12-foot elevation on the ridge is the highest natural elevation in the locality.

(353) **Pecan Island**, south of White Lake, is a long, wooded ridge about 10 feet high. Pecan Island, a village on the south end of Pecan Island Canal, has a few stores with limited supplies. Gasoline may be obtained by portage.

(354) **Pecan Island Canal**, a dredged channel, leads south from White Lake to Pecan Island. In 1982, the reported controlling depth across the bar was 1 foot.

(355)

ENC - US3LA01M
Chart - 11345

(356) **Mermentau River** empties into the Gulf of Mexico 86 miles west of Atchafalaya Bay Entrance east of Calcasieu Pass. The entrance channel shifts frequently and should be approached with caution. From the Gulf, the Mermentau leads east through **Lower Mud Lake** and Upper Mud Lake, thence north into the southwest side of Grand Lake, out of the north end of Grand Lake to the Intracoastal Waterway and continuing on 32 miles through **Lake Arthur** to the head of navigation at the junction of **Bayou Nezpique** and **Bayou des Cannes**, where the river is formed.

(357)

COLREGS Demarcation Lines

(358) The lines established for the Mermentau River are described in **33 CFR 80.835**, chapter 2.

(359) The preferred entrance to Mermentau River is through **Mermentau River Navigation Channel**, a jettied entrance and landcut about 6 miles south-southeast of the natural entrance to Lower Mud Lake. The marked channel leads north to join the natural channel at the upper end of Lower Mud Lake.

(360) **Vessels should approach the jettied entrance to Lower Mud Lake from the Gulf through Lower Mud Lake Safety Fairway.** (See **33 CFR 166.100** through **166.200**, chapter 2.)

(361) Numerous aids mark the channel in the Mermentau River north of the Intracoastal Waterway. Near the center of Lake Arthur the channel passes through a constriction known as **The Narrows**.

(362) The control structure across Mermentau River at Catfish Point, just below Grand Lake, has dikes and three gates to prevent the inflow of saltwater. The gates are opened for passing boats. Each gate opening is 56 feet wide; the depths over the sills are 15 feet for the two southeast gates and 10 feet for the northwest gate.

(363) The principal commodities carried by barge on the river are petroleum products, oil-well pipe casing, machinery, clays and drilling mud, sand, gravel and crushed rock.

(364) Mermentau River is crossed by the following bridges; State Route 82 highway bridge has a swing span with a clearance of 13 feet. (See **33 CFR 117.1** through **117.59** and **117.480**, chapter 2, for drawbridge regulations.) State Route 14 highway bridge at Lake Arthur has a fixed span with a clearance of 50 feet. A public launch ramp is just north of the bridge on the west side of the channel. Overhead power cables crossing the river above Lake Arthur have a least clearance of 50 feet.

(365) At Mermentau, the Southern Pacific railroad bridge with a swing span has a clearance of 10 feet and the U.S. Route 90 fixed highway bridge has a clearance of 44 feet. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.) Mariners should exercise extreme caution to prevent collision when approaching and navigating through the drawspan. Tows navigating through the drawspan shall not exceed one barge, and the towing vessels shall be made rigid abreast or astern of the barge.

(366) **Creole Canal** leads northwest from the Mermentau River, about 1.3 miles above its entrance. A launching ramp, ice and gasoline are available at a grocery store at the head of the canal. A reported depth of 3 feet could be carried to the facility in 1972. Several oil company supply bases are near the State Route 82 highway bridge. Diesel fuel is available at a fuel dock on the east side of the canal about 0.3 mile below the bridge.

(367) **Grand Chenier**, a small settlement on the east side of the river between Lower and Upper Mud Lakes, has a highway connection to Lake Charles. Gasoline, water and limited quantities of provisions are available in the village.

(368) **Lake Arthur**, a town on the northwest side of Lake Arthur 13 miles above the Intracoastal Waterway, has highway and rail connections to Lake Charles. A depth of about 6 feet can be taken to the city pier at Lake Arthur. Gasoline, diesel fuel, lubricants, water, ice and supplies are available in the town. A marina is on the south side of Lake Arthur, near **Laurents Point**. Gasoline, water, ice, camping, a launching ramp and supplies are available at the marina.

(369) **Mermentau**, 16 miles above Lake Arthur, is a rice milling center that has railroad and highway connections with New Orleans and Lake Charles.

(370) **Port of Jennings**, on the west side of Mermentau River just below the railroad bridge, has slips with barge loading facilities, open storage areas for oil-well pipe casings and supplies and rail facilities. Two shipyards in the port build tugs, crew boats and barges. A marine railway at one of the yards can handle craft up to 250 feet for general repairs. Mobile cranes up to 60 tons, machine, metal, welding and joiner shops are available.

(371) The town of **Jennings**, about 4 miles west of the port, is the center of natural gas production in southwest Louisiana. It is also an important agriculture center in raising of rice and livestock and in the production of fertilizer and cement from sea shells. Jennings has a hospital and is served by a Class II railroad and several bus lines.

(372) From the head of Mermentau River, **Bayou Nezpique** and **Bayou des Cannes** were navigable for depths and distances as follows: Bayou Nezpique, 12 feet for about 6.1 miles to Interstate Route 10 highway bridge in 1997, thence in 1963, 14 feet for 5.2 miles, thence 4 feet for about 11 miles; Bayou de Cannes, 11 feet for about 4 miles to the Interstate Route 10 bridge in 1997, thence in 1963, 4½ feet for about 2.6 miles.

(373) Crossing Bayou Nezpique northeast of Jennings are Interstate Route 10 twin fixed highway bridges with channel widths of 40 feet and clearances of 28 feet and State Route 97 fixed highway bridge, which has a width of 50 feet and a clearance of 26 feet. Overhead cables at the fixed bridge have a clearance of 39 feet, and an overhead power cable south of the twin bridges has a clearance of 61 feet.

(374) **Bayou des Cannes** is crossed at **Evangeline** by the twin fixed spans of Interstate Route 10, about 4 miles above the mouth with a 35-foot span and a clearance of 14 feet, and about 7.4 miles above the mouth by State Route 97 highway bridge with a 45-foot span with a clearance of 1 foot.

(375) **Bayou Plaquemine Brule** empties into Bayou des Cannes about 1 mile above Mermentau River. A channel leads east from the mouth of the bayou to near the town of **Crowley**. The principal commodities carried on the bayou are shell and rice. Crowley has a large rice mill and elevator.

(376) A ferry crosses the bayou southwest of **Egan**. The Southern Pacific railroad bridge crossing the bayou north of **Midland** has a swing span with a clearance of 5 feet. (See **33 CFR 117.1** through **117.59** and **117.489**, chapter 2, for drawbridge regulations.) A pontoon bridge crosses the bayou north of **Estherwood**. The bridge is operated by cables that are suspended just above the water when the bridge is being opened or closed. The cables are dropped to the bottom when the bridge is in the fully open position but remain suspended while the bridge is fully closed. Extreme caution is advised in the area of the bridge. **Do not attempt to pass through the bridge until it is fully opened and the cables are dropped to the bottom**. (See **33 CFR 117.1** through **117.59** and **117.489**,

chapter 2, for drawbridge regulations.) Overhead cables crossing the bayou have a least clearance of 50 feet.

(377)

ENC - US3LA01M
Chart - 11345

(378) **Calcasieu Pass**, the outlet of Calcasieu Lake, is about 98 miles west of Atchafalaya Bay entrance and 78 miles east of Galveston entrance. It is the first and only deep-draft channel west of the Mississippi River and east of Sabine Pass.

(379)

Prominent features

(380) In the vicinity of Calcasieu Pass are the range and jetties and, at night, the occulting red obstruction lights on the many radio towers in the area. A silver elevated water tank in Cameron, two large LNG tanks at the entrance to the channel and three tall microwave towers 1.5 miles east of Cameron are very conspicuous from seaward.

(381) **Vessels should approach Calcasieu Pass through the prescribed Safety Fairways.** (See **33 CFR 166.100** through **166.200**, chapter 2.)

(382)

COLREGS Demarcation Lines

(383) The lines established for Calcasieu Pass are described in **33 CFR 80.835**, chapter 2.

(384) **Vessel Traffic Information Service (VTIS) and Pilotage**. Positive control of Calcasieu River navigation is arranged through vessel traffic scheduling procedures by calling 337–436–0372 when pilot services are required. The Lake Charles Harbor and Terminal District Harbormaster can also arrange for pilot services (337–493–3620.)

(385) **Vessel Traffic Service, Lake Charles**, operated by the Lake Charles Pilots, has been established for the Port of Lake Charles including the entire Calcasieu Ship Channel. The service extends from Calcasieu Channel Lighted Buoy CC (29°20'01"N., 93°13'18"W.) to the Interstate Route 10 Bridge at Lake Charles.

(386) This Vessel Traffic Information Service (VTIS) is designed to enhance navigational safety, security and efficiency and provides vessels with information regarding the movements and intentions of other vessels within the VTIS area. The Lake Charles Harbor and Terminal District, through its agent(s) [harbormaster], establishes navigable waterway operating controls as authorized by Louisiana State Statute, LA R.S. 34:215, and is available for receiving special priority requests and for mediating disputes. Owners or agents of vessels may make mutual agreements on the priority of certain vessels. This VTIS is not intended in any way to supersede or alter applicable Navigation Rules. The working channels for the VTIS are VHF-FM channels 16 and 66A and VHF-FM international radio channel 66. Vessels calling "VTIS Lake Charles" shall give their name, length, beam, deepest fresh-water draft, maximum air draft, destination and ETA for the appropriate pilot boarding area. This information may also be sent via email to dispatch@lakecharlespilots.com prior to arrival. Vessels entering the VTIS area will be advised by VTIS Lake Charles of the other traffic navigating within the area. All vessels are requested to advise VTIS Lake Charles 6 hours before entering the system inbound, outbound, or maneuvering between points within the VTIS, and again approximately 1 hour prior to entering the system. Vessel transit projections/priorities may be governed by tide and current and are dependent upon available under-keel clearance. Otherwise, every attempt is made to offer pilotage to best optimize channel use toward minimizing demurrage. The Lake Charles Pilots consult and cooperate with the Lake Charles Harbor and Terminal District to assist best operation of the navigable waterway system under the District's jurisdiction.

(387) Vessels shall report to VTIS Lake Charles at the following positions:

(388) 1. When entering or leaving the Calcasieu Bar Channel, time and buoy number are reported.

(389) 2. Crossing the intersection of the Calcasieu Ship Channel and the Gulf Intracoastal Waterway (GIWW), time is reported.

(390) 3. Upon arrival or departure at a terminal, or other destination, time is reported.

(391) 4. Dredges or other vessels working on the waterway will report to VTIS Lake Charles daily and at any time they change location within the VTIS area.

(392) 5. Vessels traveling in the Intracoastal Waterway and intending to cross or enter the ship channel should give a security call on VHF-FM channel 13, and call VTIS Lake Charles on VHF-FM Channel 66A 30 minutes prior to crossing or entry and adjust speed so as to enter the river when the channel is clear.

(393) 6. Vessels intending to transit the Calcasieu Ship Channel between the Intracoastal Waterway (Light 92) and Cameron (Light 48) should contact VTIS on VHF-FM 66A to check the existence and/or status of any moving safety zones or other deep-draft traffic that may require special consideration or action.

(394) **Pilotage, Calcasieu River Waterway (enroute to Lake Charles)**-State pilotage is compulsory for all foreign vessels and U.S. vessels under register in foreign trade. U.S. vessels over 1,600 tons in coastwise trade must have on board a pilot licensed by the federal government. Vessels that must use the buoyed channel due to draft constraints must embark the pilot in an area where there is sufficient water depth outside of the buoyed channel in order to provide a safe lee for pilot boarding and must have the pilot on board prior to entering the buoyed channel.

(395) Prior to disembarking pilots, vessels' draft must be such that vessels are capable of maneuvering outside the buoyed channel if necessary to provide a safe lee. Non-piloted shallow draft vessels optionally using the buoyed channel must give way to piloted deeper-draft vessels.

(396) Arrangements for pilot service are usually handled through the ships' agents, by telephone, 337–436–0372,

via email to dispatch@lakecharlespilots.com, or by radiotelephone on VHF-FM channel 16. The pilots carry portable VHF radios and use VHF-FM channel 66A as working frequency. The pilot office in Lake Charles monitors VHF-FM channels 66A and 16. The pilot office stands by for pilot orders and for the Vessel Traffic Information Service (VTIS). Traffic information can be obtained by any vessel using the traffic service. Lake Charles Pilots request notices directly from vessels requesting pilots via email to dispatch@lakecharlespilots.com or by telephone at 12 hours and six hours prior to ETA. A minimum 4-hour notice of time of arrival at one of the following designated pilot stations, where pilots will board, is required.

(397) **Multiple pilot boarding areas** exist due to the varying depths of water adjacent to the buoyed channel. Boardings and disembarkations normally are accomplished in the safety fairway outside of the buoyed channel. Vessels awaiting pilots should wait in the safety fairway, outside of the buoyed channel, in an area of sufficient water until the pilot boards the vessel.

(398) **Recommended Pilot Boarding Areas**

(399) **Station No. 1, for vessels drawing less than 30 feet**.–Near the entrance channel within 1 mile of 29°38.8'N., 93°19.5'W., and thence an area 1 mile wide extending 2.7 miles north-northwest on the east side of the channel to about 29°42.6'N. Small vessels should await the pilot in the northeast corner of the boarding area.

(400) **Station No. 2, for vessels drawing between 30 and 34 feet**.–An area on the east side of the outer approach channel 1 mile wide and extending 2.5 miles northwest and southeast from 29°34'N., 93°16'W.

(401) **Station No. 3, for vessels drawing between 34 feet and 36 feet.**–A circular area within 1 mile of a point in 29°27.3'N., 93°13.4'W., and thence an area 1 mile wide extending 2.7 miles north on the east side of the channel to about 29°31.1'N.

(402) **Station No. 4, for vessels drawing over 36 feet.**–A circular area within 1 mile of Calcasieu Channel Lighted Whistle CC (29°20'01"N., 93°13'18"W.).

(403) **Navigation Guidelines, Calcasieu River Waterway**–Substantial increasing numbers of large deeper draft oceangoing vessels navigate the Calcasieu River Channel. The channel is dredged to maintain a 40-foot depth and 800-foot bar channel and 400-foot River Channel. Based upon reported marine casualties and on navigational challenges arising from the increased traffic, and after consultation with local marine interests, certain guidelines exist to enhance safe navigation.

(404) No vessel will be required to meet another vessel within the VTIS area if, in the opinion of the master or pilot of either vessel, it would be hazardous to do so because of some special circumstance or condition.

(405) Proposed movement of drilling rigs, submersibles and other floating heavy equipment must be preapproved at least 24 hours in advance by the Lake Charles Pilots, Inc., Harbormaster and U. S. Coast Guard, Captain of the Port representative. Mooring or anchoring these vessels or units within the system or otherwise obstructing traffic is prohibited without prior approval.

(406) One Cameron ferry monitors VHF-FM channels 13 and 30. Vessels transiting this area should contact the ferry for information as necessary.

(407) Meeting and passing situations involving two vessels with combined beams exceeding 50% of the available channel width are restricted. Both involved pilots may, however, agree that conditions are such that meeting or passing can be accomplished safely.

(408) In fog, or any condition that restricts visibility, vessels will not normally be moved until conditions improve to a point where one-mile visibility is available, throughout the route to be transited.

(409) All vessels transiting the channel must be ballasted to a condition that keeps the propeller and rudder submerged to a sufficient degree to maintain control of the vessel.

(410) Liquefied Natural Gas (LNG) vessels transiting within the pilotage area shall be piloted in accordance with the current U. S. Coast Guard Liquefied Natural Gas (LNG) Vessel Management and Emergency Plan promulgated by the cognizant USCG Captain of the Port.

(411) It is recommended that all vessels, particularly those that must navigate in the channel because of draft constraints, hereafter referred to as **deep-draft vessels**, strictly adhere to these guidelines. Nothing in them shall supersede nor alter any applicable laws or regulations.

(412) For purposes of these guidelines, **low-powered vessels** are those which are unable to maintain a speed of at least 8 knots through the water; **full-powered vessels** are those which are able to maintain 8 knots or more through the water. **Poor-handling vessels** are those which, because of steering characteristics, are unable to consistently navigate within the channel half-width. In all cases, vessels towed on a hawser are considered to be poor-handling vessels if the overall length of the tow exceeds 500 feet from the stern of the towing vessel to the stern of the tow. **Tandem tows**, except for small scows and nondescript vessels that operate outside the main channel, are unmanageable and should not be attempted.

(413) The entrance channel between the jetties is marked by Range A. Tides and currents should be obtained from the Tidal Current prediction service at *tidesandcurrents.noaa.gov*. Vessels arriving at the bar should give a Security call on VHF-FM channel 13, 30 minutes before entering the jetties. So as not to delay river traffic, low-powered or poor-handling vessels intending to enter the river should be prepared to delay up to 45 minutes, if necessary, to allow full-powered and more maneuverable vessels to precede them through the jetties.

(414) During liquified natural gas (LNG)/liquid propane gas (LPG) movements in the Calcasieu River, special restrictions are placed on this waterway by the local U.S. Coast Guard Captain of the Port. Copies of the local LNG/LPG Operations Plan may be obtained from the U.S. Coast Guard, Marine Safety Unit Port Arthur, Texas

(Captain of the Port) or from Marine Safety Unit Lake Charles.

(415)

Areas of Particular Concern

(416) Three areas in the Calcasieu River are considered to be particularly troublesome. These areas are listed in order of ascension when proceeding from sea.

(417) (1) **Entrance to Calcasieu Jetties** (29°44.7'N., 93°20.5'W.). This area has been the site of many collisions and near misses due to strong cross-currents that may run across the entrance. Vessels should avoid meeting situations, particularly with ships or tows, within one-quarter mile North or South of Lights 41 and 42 at the entrance to the jetties.

(418) (2) **Monkey Island** (29°47.0'N., 93°20.8'W.). This area is used extensively by the fishing and offshore exploration industries. Numerous fishing and offshore exploration boats are homeported in this area. Vessels transiting this area may require speed reduction to reduce wake.

(419) (3) **Intracoastal Waterway** (30°05.5'N., 93°19.5'W.). This represents the point at which this waterway crosses the Calcasieu River Channel. This water is extensively used by tows. The situation is further complicated by an LNG facility located on the **Industrial Canal** which is serviced by deep-draft vessels. Tows intending to cross or enter the main river channel from the Intracoastal Waterway should give a Security call on VHF-FM channel 13, 30 minutes prior to entry and adjust speed so as to enter the river when the channel is clear. Every effort, including holding, should be made to avoid unduly restricting full-powered vessels, and allow them to clear this area when either inbound or outbound. LNG vessels frequently transit the area between the Calcasieu Intersection and the entrance to the Industrial Canal at Devil's Elbow. These vessels have a moving safety zone in effect around them when in transit. East and west bound vessels and tows should be prepared to stop and hold their vessel either west of the Calcasieu Intersection or east of Devil's Elbow if requested to by the U.S. Coast Guard or the pilot on board an LNG ship.

(420) A **regulated navigation area** has been established in Calcasieu River from the Calcasieu jetties to and including the Port of Lake Charles. (See **33 CFR 165.1** through **165.13** and **165.807**, chapter 2, for limits and regulations.)

(421) The Trunkline liquified natural gas facility on Industrial Canal is within a **safety zone**. Additionally, the waters surrounding non-gasfree LNG carriers transiting Calcasieu River are a **safety zone**. (See **33 CFR 165.1** through **165.7**, **165.20**, **165.23**, and **165.805**, chapter 2, for limits and regulations.)

(422)

Channels

(423) The Calcasieu entrance has been improved by jetties and a deepwater channel. The jetties extend seaward from the shoreline for about 1.1 miles and are mostly above normal high tide. A federal project provides for a channel 42 feet deep across the outer bar from that depth in the Gulf to the entrance jetties, thence 40 feet through the jetties, thence to and in the Industrial Canal and turning basin north of Choupique Island, thence to the Port of Lake Charles wharves, and thence 35 feet to the Interstate Route 10/U.S. Route 90 highway bridge. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.

(424) The channel is marked by lighted buoys and lights. A lighted **351°51.7'** range leads across the bar between the jetties and into the pass.

(425)

Anchorages

(426) Large vessels should anchor in Calcasieu Pass Fairway Anchorage, west of the safety fairway. (See **33 CFR 166.100** through **166.200**, chapter 2.) Vessels up to 12 feet in draft can obtain excellent anchorage in the bend in the river at Cameron. While waiting for daylight or fog to lift, ships can anchor out of the fairway anywhere in Calcasieu River. No anchorages exist in the landcuts, and ships entering cuts are expected to complete passage. Deep-draft vessels normally anchor 2 to 3 miles southeast of the Pilot Boarding Station No. 4, being cognizant to avoid charted pipelines.

(427)

Dangers

(428) Seaward of the jetties, a moderate to strong current sweeps across the channel, normally setting in a west direction; however, strong west winds will cause a current reversal; mariners should exercise caution and be on the alert. Numerous collisions have occurred at the entrance to the jetties due to this set across the channel. Meeting or overtaking situations near the entrance should be avoided. A mud slush lying on the bottom, approximately 6 feet above the hard surface, frequently will be found in the channel seaward of the jetties and at various places above the pass. A 1- to 4-foot layer of soupy material, some 8 to 10 feet above the hard bottom and 20 to 23 feet below the surface, occasionally is encountered in the same localities.

(429) **Spoil banks** of undetermined depth exist on the west side of the entrance channel and outer channel except within a mile north and south of Calcasieu Channel Lighted Buoy 29, which area, the Lake Charles Pilots report, has been left clear for Pilot Station No. 1. Mariners are advised to avoid navigating across the spoil banks, because the actual depths may be considerably less than the charted depths.

(430) Submerged obstructions exist in the fairway anchorage west of the safety fairway.

(431)

Currents

(432) Currents at Cameron may exceed 4 knots.

(433)

Weather

(434) The climate is humid subtropical with a strong maritime character. The climate is influenced to a large degree by the amount of water surface provided by lakes, bayous, flooded rice fields and the proximity of the Gulf of Mexico. These areas modify relative humidity and temperature by decreasing the range of the extremes throughout the year. When south winds prevail, these effects are increased. When wind gradients are weak, a sea breeze is evident during the warmer part of the day. The area is also subject to occasional cold air masses during winter. In general, however, winters are mild, and cold spells are usually of short duration. Temperatures drop to freezing or below on about 14 days annually. This ranges from 3 to 32 days in individual years. Snow is negligible most of the time. However, in February 1895, a record snowstorm dumped 22 inches of snow at Lake Charles. Visibilities fall below 0.25 mile on about 50 days annually; October through March are the foggiest months. July is the warmest month with an average temperature of 83°F and January is the coolest with an average temperature of 42°F. The warmest temperature on record at Lake Charles is 107°F recorded in August 2000 and the coolest temperature on record is 11°F recorded in December 1989.

(435) The summer months are warm, although temperatures rarely exceed 100°F due to the marine influences and the assistance of afternoon showers and thunderstorms. While thunderstorms occur in every month, they are most frequent in July and August, when on one-half of the days in each month thunder is heard. Temperatures reach 90°F or above on an average of 74 days each season.

(436) Severe local windstorms, hailstorms and tornadoes can occur in any season but are most frequent in spring. Tornadoes and large damaging hail are unusual. Only one major tornado has been reported in Lake Charles, causing widespread damage but no fatalities. During the warmer months, small funnel clouds may be sighted at times. Some of these may reach the ground or water as twisters or waterspouts but usually cause little or no damage. Since 1900, the centers of several hurricanes have passed very near Lake Charles. Other less intense tropical storms have also affected weather in the area. In 2020, the strongest sustained wind was during Hurricane Laura at 130 mph. However, a wind of 90 mph can be expected about every 50 years, on average. The average annual rainfall at Lake Charles is 55.6 inches. June is the wettest with an average monthly rainfall of 5.6 inches while February and March are the driest months averaging 3.4 inches. The greatest 24-hour rainfall occurred in August 1962 when 10.22 inches was recorded.

(437)

Pilotage, Lake Charles

(438) Vessels are taken to and from Lake Charles day or night. The Lake Charles Pilots have three boats; CAMERON PILOT II, CALCASIEU PASS and LAKE CHARLES PILOT; each are blue with gray trim and the word PILOT on the cabin. The boats fly the International Code flag "H" by day and show the standard pilot lights (white over red) at night.

(439) Vessels to be boarded must provide a safe lee and have a pilot ladder rigged amidships, 6 feet (2 meters) above the water. Vessels whose freeboard exceeds 29 feet (9 meters) must rig a combination ladder with the bottom of the accommodation ladder no less than 23 feet (7 meters) above the water and the pilot ladder at 6 feet (2 meters) above the water.

(440) The northwest Gulf Federal Pilots can provide pilotage to U.S. vessels within the Calcasieu Ship Channel leading to ports in Cameron and Lake Charles. A nine-hour advance notice is requested prior to sea buoy arrival. For pilot boarding, it is advised that the pilot ladder be rigged 3 to 6 feet above the water on the leeward side at 6 to 8 knots. The pilot boat monitors VHF-FM channels 13 and 16 and works on channels 68 or 72. The northwest Gulf Federal Pilots are available by telephone at 409–781–8140, and detailed information and instructions are available at *nwgulffedpilot.com*.

(441) **Cameron**, the seat of Cameron Parish, is a fishing village on the east shore of Calcasieu Pass 2.5 miles above its entrance. The village has oil-well supply bases, a LGN export facility, shrimp-packing houses and a menhaden processing plant. Gasoline, diesel fuel, water, ice and marine supplies are available; electrical and engine repairs can be made.

(442) Small craft may find berthing space or can anchor in the bend of the river near Cameron in depths of 12 to 30 feet. An auto ferry crosses the ship channel northwest of Cameron. Monkey Island was formed by the river and ship channel.

(443) **Calcasieu Lake**, at the head of Calcasieu Pass, 6 miles from the Gulf, is 15 miles long, 3 to 5 miles wide and 5 to 7 feet deep. The controlling depth off the entrance at the south end was reported to be 6 feet in 1982. The controlling depth at West Pass, at the north end, was about 3 feet, but the lake bottom is so soft that slightly greater drafts can drag through. A row of piles marks the west side of the channel across the lake. Along the south end of the lake is an old revetment, partly submerged, extending about 1.5 miles east. The shore areas on the south and west sides of the lake are part of the **Sabine National Wildlife Refuge**.

(444) **Grand Lake**, a summer resort on the northeast side of Calcasieu Lake, has numerous private piers.

(445) **Hackberry**, on the northwest side of the lake, is an oil drilling center. Both towns have highway connections to Lake Charles.

(446)

Calcasieu River

(447) **Calcasieu River** and **Ship Channel**, north of Calcasieu Pass, the ship channel cuts across points of land along the west side of Calcasieu Lake to a junction with

the Calcasieu River at **Choupique Island**. The channel is straight and well marked by lights and lighted ranges.

(448) The Intracoastal Waterway crosses the ship channel at the north end of Choupique Island, at the mouth of the Calcasieu River, and continues west through **Choupique Cutoff**. North of the intersection with the Intracoastal Waterway, **Industrial Canal** leads northeast to a turning basin. From the junction with Industrial Canal, the ship channel follows the natural channel of Calcasieu River to the north side of **Moss Lake**, thence bypassing the river through a landcut about 1 mile long to the west bend of the river just above Haymark Terminal, thence in the natural channel to Rose Bluff, thence through **Rose Bluff Cutoff** and continuing on the same course through a cut across the south end of **Coon Island**; thence, the east or right fork for about 1.5 miles to the port wharves at Port of Lake Charles. Deep water is along midchannel but, unlike most rivers, the deeper water often favors the points rather than the bends.

(449) **Calcasieu Landing** is on the west bank of the Calcasieu River just north of its junction with Choupique Cutoff. A shipyard here has two 2,000-ton floating drydocks that can handle ships up to 200 feet and barges up to 300 feet long and 55 feet wide with drafts of 14 feet for general repairs. A marine railway at the shipyard can handle vessels up to 200 feet. The yard builds tugs, crew boats, and barges up to 200 feet. There are metal, joiner, machine, and welding shops, a floating crane that can handle craft to 60 tons and tank cleaning facilities. A fuel dock adjoins the shipyard. Diesel fuel is available on a 24-hour basis at the dock or in midstream by barge. The fuel facility monitors VHF-FM channels 13 and 16 continuously.

(450) **Haymark Terminal, Vincent Landing** and **Rose Bluff** are sites of extensive oil refining, storage and shipping facilities on the Calcasieu River below Port of Lake Charles. They are discussed later in this chapter under wharves at Port Charles. An overhead power cable with a clearance of 170 feet crosses the river 0.7 mile above Vincent Landing.

(451) The I-210 highway bridge at the north end of Rose Bluff Cutoff, about 1.5 miles below Port of Lake Charles, has a fixed channel span with a clearance of 135 feet.

(452)

Note

(453) Considerable damage, including bank erosion, is being suffered by properties along the river, particularly in the vicinity of Vincent Landing and the south or lower portion of Moss Lake. The damage results principally from wave action of light tugs and light or partially loaded ships. (See **33 CFR 162.75** and **207.180**, chapter 2, for navigation regulations.) Mariners are directed to exercise every caution and to proceed at slow speed.

(454) **Bayou d'Inde**, branching west from Rose Bluff Cutoff, is crossed by State Route 108 highway bridge 3.7 miles above the cutoff. The bridge has a 38-foot removable span with a clearance of 8 feet. Just above it, the Kansas City Southern railroad bridge has a 33-foot removable span with a clearance of 6 feet. (See **33 CFR 117.1** through **117.59** and **117.441**, chapter 2, for drawbridge regulations.) Overhead power cables cross the bayou at all three bridges. The head of navigation on the bayou is 6.3 miles above the cutoff, which is 0.3 mile below Sulphur. In 1995, the controlling depth was 9½ feet to the highway bridge.

(455) **Contraband Bayou** branches east from Calcasieu River just south of Port of Lake Charles deepwater terminals. An overhead power cable with a clearance of 48 feet crosses the bayou about 1.1 miles above the mouth. A highway bridge crossing the bayou about 1.6 miles above the mouth has a fixed span with a clearance of 15 feet. The twin fixed spans of another highway bridge with a clearance of 15 feet are 0.1 mile above the first bridge. **Lake Charles Coast Guard Station** is about 1 mile inside the bayou.

(456) A cut made across a narrow neck of land left a channel that forms a complete loop around **Clooney Island**, enabling vessels to turn around and head downstream. A dredged channel leads west off the northwest side of the loop to a large alkali plant. A depth of about 18 feet can be carried to the first wharf in the channel, thence about 7 feet beyond the wharf.

(457) The **Port of Lake Charles**, about 32 miles from the Gulf, is opposite Clooney Island on the east bank of Calcasieu River and the north bank of Contraband Bayou. It is the only major port in west Louisiana. The principal imports are petroleum products, barite ores, lumber and steel products. The principal exports are petroleum coke, petroleum products, chemicals, bulk and general cargo, paper and other wood products. Other commodities handled at the port are canned foods, caustic soda, synthetic rubber, plastics, paper products and other general cargo.

(458) **Lake Charles**, the seat of Calcasieu Parish, is located around the east side of the lake about 34 miles from the Gulf. It is the center of large chemical, petroleum, natural gas, fish oil, synthetic rubber, salt, seafood and rice industries. There is a small regional airport south of the city and two private airports. McNeese State University is here. Interstate Route 10 and U.S. Route 90, the main east-west highways, pass through the city, and U.S. Routes 165 and 171 lead north out of the city.

(459)

Towage

(460) Several towing companies maintain offices at the Port of Lake Charles. Tugs up to 4,800 hp are available. Divers can be obtained.

(461)

Quarantine, customs, immigration and agricultural quarantine

(462) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(471)

Facilities at Lake Charles, Louisiana

Name	Location	Berthing Space	Depths*	Deck Height	Purpose and Owner
North side of Industrial Canal					
Lake Charles Carbon Co. Wharf	30°06'37"N., 93°17'42"W.	1,340	31	15	Receipt and shipment of green coke, calcined petroleum coke, molded carbon and anode blocks. Owned by Lake Charles Harbor & Terminal District
CMS Trunkline LNG Co. Wharf	30°06'37"N., 93°17'28"W.	936	40	18	Receipt of liquified natural gas and bunkering fuel. Owned by Lake Charles Harbor & Terminal District
Haymark Terminal					
Calcasieu Refining Co. Wharf	30°08'08"N., 93°19'16"W.	725	17	6	Receipt and shipment of crude oil and petroleum products. Owned by Calcasieu Refining Co.
Shell Pipeline, Haymarket Terminal Wharf	30°08'09"N., 93°19'09"W.	480	25	6	Shipment of crude oil. Owned by Shell Pipeline.
West side of Calcasieu River					
Venco Lake Charles Calcining Plant and Westlake Styrene Ship Wharf	30°08'46"N., 93°20'00"W.	750	40	8	Receipt and shipment of calcined petroleum coke, benzene and styrene. Owned by Venco/ Venco and Westlake Styrene, Inc.
Conoco Pecan Grov Marine Terminal Wharf	30°08'59"N., 93°20'02"W.	560	25	14	Receipt and shipment of lube oil, crude oil and caustic sodium hydrosulfide by barge. Owned by Conoco, Inc.
Conoco Clifton Ridge Marine Terminal Barge Wharf	30°09'28"N., 93°19'44"W.	350	10	6	Receipt of crude oil and bunker fuel. Owned by Conoco, Inc.
Conoco Clifton Ridge Marine Terminal Tanker Wharf	30°09'22"N., 93°19'50"W.	960	40	12	Receipt of crude oil. Owned by Conoco, Inc.
Citgo Petroleum Corp. Clifton Ridge Terminal Tanker Wharf	30°09'33"N., 93°19'34"W.	1,290	40	10	Receipt and shipment of crude oil and petroleum feed stock. Owned by Citgo Petroleum Corp.
Citgo Petroleum Corp. Refinery, Dock B	30°10'28"N., 93°19'09"W.	900	40	12	Receipt and shipment of crude oil and petroleum products. Owned by Citgo Petroleum Corp.
Citgo Petroleum Corp. Refinery, Dock C	30°10'39"N., 93°19'05"W.	950	40	12	Receipt and shipment of petroleum products and liquefied petroleum gas by barge. Owned by Citgo Petroleum Corp.
Citgo Petroleum Corp. Refinery, Dock D	30°11'01"N., 93°18'40"W.	835	40	11	Receipt and shipment of propylene and petroleum products, inlcuding liquid wax and lubricating oils. Owned by Citgo Petroleum Corp.
Lake Charles Harbor & Terminal District Bulk Terminal No. 1, Wharf	30°11'24"N., 93°18'04"W.	2,060	40	14	Receipt and shipment of dry bulk commodities, including green and calcined petroleum coke, barite ore and caustic soda. Owned by Lake Charles Harbor & Terminal District.
Old River					
PPG Industries, “A” Dock	30°12'53"N., 93°16'53"W.	400	40	8	Receipt and shipment of ethylene, vinyl chloride and ethylene dichloride. Owned by PPG Industries, Inc.
PPG Industries, “B” Dock	30°13'12"N., 93°16'45"W.	440	5 to 32	5	Receipt and shipment of liquid chlorine. Owned by PPG Industries, Inc.
PPG Industries, “C” Dock	30°13'24"N., 93°16'42"W.	880	18 to 40	7 to 13	Receipt and shipment of liquid caustic soda and organic solvents. Owned by PPG Industries, Inc.
North side of Contraband Bayou					
Lake Charles Public Grain Elevator Contraband Bayou Wharf, Ship Berth No. 10	30°12'34"N., 93°14'59"W.	675	35	14	Shipment of grain and woodchips. Owned by Lake Charles Harbor & Terminal District.
Lake Charles Harbor & Terminal District Berth No. 9A	30°12'32"N., 93°15'08"W.	926	40	14	Receipt and shipment of conventional general cargo, and shipment of bagged commodities. Owned by Lake Charles Harbor & Terminal District.
Lake Charles Harbor & Terminal District Berths Nos. 7, 8 and 9	30°12'41"N., 93°15'27"W.	1,527	35	14	Receipt and shipment of conventional general cargo. Owned by Lake Charles Harbor & Terminal District.

Facilities at Lake Charles, Louisiana

Name	Location	Berthing Space	Depths*	Deck Height	Purpose and Owner
Port of Lake Charles					
Lake Charles Harbor & Terminal District Berths Nos. 4, 5, and 6	30°13'02"N., 93°15'32"W.	1,600	35	14	Receipt and shipment of conventional general cargo. Owned by Lake Charles Harbor & Terminal District.
Lake Charles Harbor & Terminal District Berths Nos. 1, 2, and 3	30°13'07"N., 93°15'29"W.	1,676	35	14	Receipt and shipment of conventional cargo, sulphur compounds and caustic soda. Owned by Lake Charles Harbor & Terminal District.
Lake Charles Harbor & Terminal District Berth No. 15	30°13'05"N., 93°14'56"W.	850	40	14	Receipt and shipment of conventional cargo, linerboard and other paper products. Owned by Lake Charles Harbor & Terminal District.
West side of Lake Charles					
Lake Charles Harbor & Terminal District Westlake Bulk Terminal No. 4 Berth No. 13	30°13'55"N., 93°14'50"W.				Receipt and shipment of crushed stone by ship or barge. Owned by Lake Charles Harbor & Terminal District.
off-shore site		900	35	12	
upper bulkhead		325	35	12	
lower bulkhead		135	14-24	8	
Holnam, Lake Charles Docks	30°13'36"N., 93°14'44"W.	400	25	11.3	Receipt and shipment of bulk cement. Owned by Holderbank, Inc.
Cooney Island Loop					
Conoco, Westlake Products Terminal Dock No. 1	30°13'55"N., 93°15'32"W.	695	40	15	Receipt of crude oil and shipment of petroleum products. Owned by Conoco, Inc.
Conoco, Westlake Products Terminal Dock No. 2	30°13'52"N., 93°15'18"W.	695	14	15	Receipt and shipment of crude oil and petroleum products by barge. Owned by Conoco, Inc.
Conoco, Westlake Products Terminal, Dock No. 3	30°13'47"N., 93°15'13"W.	800	40	14	Receipt and shipment of crude oil, petrochemicals and petroleum products. Owned by Conoco, Inc.

Dimensions are given in feet
* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

(463) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See U.S. Public Health Service, chapter 1.)

(464) There are several hospitals in Lake Charles.

(465) Lake Charles is a **customs port of entry**.

(466)

Harbor regulations

(467) Federal regulations applicable to Lake Charles are those usually in force at most seaports of the United States as amplified specifically by Safety Zone and Regulated Navigation Area regulations at **33 CFR 165.805** and **165.807**. Local rules and regulations are enforced by the Lake Charles Harbor and Terminal District, a political sub-division of the State of Louisiana utilizing both physical and waterway operating jurisdictions.

(468)

Wharves

(469) Lake Charles has more than 70 piers and wharves. Only the deep-draft facilities are listed in the facilities table for Lake Charles. Most of the facilities have highway and railroad connections, water and electrical shore power.

(470) General cargo at the port is usually handled by ship's tackle; special handling equipment, if available, is mentioned in the description of the particular facility. Approximately 1 million square feet of transit shed space and about 22 acres of open storage are available in the port. Mobile cranes up to 150 tons are available at the port.

(472)

Supplies

(473) Marine supplies are available. Fresh water is available at most deep-draft wharves. Bunker fuels are available at several of the oil terminals and by barge from Port Arthur by prior arrangements.

(474)

Repairs

(475) Lake Charles has no facilities for making major repairs or drydocking deep-draft vessels; the nearest such facilities are at Beaumont, TX Shipyards at Calcasieu Landing and on Contraband Bayou are available for making minor above-the-waterline repairs to vessels and hull and engine repairs to smaller vessels.

(476)

Communications

(477) Three Class I railroads serve the city. Continental Express has scheduled service from the Lake Charles Regional Airport. Several bus lines and motor freight lines serve the city. Numerous steamship lines have scheduled service to all ports of the world. Several barge lines operate from the port.

(478) About 1 mile above the port docks, the river widens into **Lake Charles**. The lake is fairly circular and more than a mile in diameter. The city of Lake Charles fronts on the east shore. The river channel extends along the west side of the lake.

(479)

Small craft facilities

(480) Berthage, electricity, gasoline, diesel fuel, water, ice, wet storage, marine supplies, a 30-ton hoist for hull, engine and electronic repairs and reported depths to 8 feet are available in facilities across the river from the Port of Lake Charles, northeast of Berths 1, 2 and 3. Facilities on Contraband Bayou provide berthage, electricity, gasoline, diesel fuel, water, ice, pump-out station, launching ramp, dry storage, marine supplies and a 30-ton hoist for vessels to 80 feet for hull, engine and electronic repairs. Good anchorage is available in the lake in depths of 8 to 10 feet. A marina off the Calcasieu River, about 0.9 mile north of Lake Charles, has gasoline, launching ramp, water and ice.

(481) **Westlake** is an industrial suburb of the city of Lake Charles on the west side of the Calcasieu River about 2 miles above the Port of Lake Charles wharves. U.S. Route 90 highway bridge that crosses the river and the north part of Lake Charles near Westlake has a fixed cantilever center span with clearance of 95 feet for a width of 380 feet and a clearance of 135 feet for the middle 200 feet of span. Just north of the highway bridge, the Southern Pacific railroad swing bridge has a clearance of 3 feet. The west opening is protected by a fender system and is the prescribed draw; any craft navigating the east opening does so at its own risk. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.)

(482) **Calcasieu River Salt Water Barrier**, about 2.1 miles above the Kansas City Southern railroad bridge at Westlake, prevents salt water from flowing upriver and interfering with irrigation of the rice lands during the growing season.

(483) The barrier consists of a 56-foot-wide navigation structure with a depth of 13 feet over the sill, a floodway control structure parallel to and immediately south of the navigation structure and a dam on a loop of the river at Two O'Clock Point, about 3.9 miles above the floodway control structure.

(484) The dam prevents navigation upriver via the old river route. All traffic upriver is via the navigation structure. Mariners are cautioned not to pass through the floodway control structure under any conditions.

(485) The entrance channels to the navigation and floodway control structures are marked with large signs for the aid of navigation.

(486) The navigation and flood control structures are operated from 0600 to 2200 hours, 7 days a week. The control structure can be contacted on VHF-FM channel 14. Red and green lights and daybeacons are at each end of the navigation structure. Vessels should await the green signal before entering the navigation structure.

(487) An overhead power cable with a clearance of 136 feet crosses the river about 0.8 mile above the navigation structure.

(488) **West Fork** of Calcasieu River branches west about 0.9 mile above the navigation structure. Overhead power cables cross the fork about 3 miles above Calcasieu River, and a vertical lift bridge with a clearance of 14 feet down and 50 feet up crosses the fork about 4 miles above the river. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.) An overhead power cable is at the bridge. The U.S. Route 90 highway bridge, about 12 miles above Calcasieu River, has an 18-foot fixed span with a clearance of 10 feet.

(489) **Houston River** branches west from the West Fork of Calcasieu River. In 1995, the controlling depth was 13 feet to the fixed highway bridge at **Anthony**, about 3.8 miles above the mouth. Overhead power cables with a least clearance of 61 feet cross the river about 1 mile above the mouth. The highway bridge at Anthony has a 17-foot fixed span with a clearance of 10 feet. The Kansas City Southern railroad bridge about 5 miles above the mouth has a swing span with a channel width of 27 feet and clearance of 6 feet. (See **33 CFR 117.1** through **117.59** and **117.457**, chapter 2, for drawbridge regulations.)

(490) **English Bayou** branches east from Calcasieu River about 1.9 miles above the navigation structure. U.S. Route 171 fixed highway bridge with a clearance of 14 feet crosses the bayou about 0.7 mile above its mouth. An overhead power cable with a clearance of 45 feet crosses the bayou just above the bridge.

(491) U.S. Route 171 fixed highway bridge with a clearance of 35 feet crosses Calcasieu River about 4.6 miles above the navigation structure.

(492) In 1996, the controlling depth in Calcasieu River was 13 feet from Interstate Route 10/U.S. Route 90 bridge to the junction with **West Fork**, thence 6½ feet to **Point Fing** and to **Hecker**; above this point, the river is not navigable because of snags and trees.

(493)

Sabine Bank

(494) **Sabine Bank** is a succession of detached shoal spots parallel with and distant about 17 miles from the mainland. From the vicinity of Calcasieu Pass, the bank extends about 38 miles west to the vicinity of Sabine Pass and has several passages between the detached shoals. Depths on the shoals range from 16 to 30 feet and are subject to change.

(495) **Sabine Bank Light** (29°28'22"N., 93°43'21"W.), 30 feet above the water, is shown from a red conical tower on a cylindrical caisson, on one of the shallowest parts of the bank about 2 miles west of Sabine Bank Channel.

(496) **Sabine Bank Channel** leads through Sabine Bank through a passage locally known as **Hole in the Wall**. This is the most frequently used passage and is marked by lighted buoys. Sabine Bank Channel Lighted Buoy SB (29°25'01"N., 93°39'54"W.), marks the entrance to the

channel. There are several charted obstructions and shoal areas in the approach and around Sabine Bank Channel; mariners are advised to proceed with caution. The depths in the channel may be reduced as much as 3 feet during northers. The east part of the bank has several lighted oil well platforms.

(497) Vessels approaching the passes and entrances to the ports, or bound along the Gulf Coast between Calcasieu Pass and Brazos Santiago, should proceed in the charted shipping Safety Fairways. (See **33 CFR 166.100** through **166.200**, chapter 2.)

Chart Coverage in Coast Pilot 5—Chapter 10
NOAA's Online Interactive Chart Catalog has complete chart coverage
http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml
95°30'W
95°W
94°30'W
94°W
93°30'W
30°N
29°30'N
29°N
T E X A S
L O U I S I A N A
G U L F O F M E X I C O
Orange
Beaumont
Port Arthur
SABINE LAKE
SABINE PASS
INTRACOASTAL WATERWAY
LAKE ANAHUAC
BAY
GALVESTON
Houston
HOUSTON SHIP CHANNEL
Texas City
Galveston
CHOCOLATE BAYOU
SAN LUIS PASS
Freeport
11331
11326
11325
11324
11323
11322

Sabine Pass to San Luis Pass

(8)

METEOROLOGICAL TABLE – COASTAL AREA OFF GALVESTON, TEXAS
Between 27°N to 30°N and 92°W to 96°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	1.6	1.6	1.0	0.4	0.2	0.1	0.1	0.4	0.8	0.9	1.0	1.1	0.7
Wave Height > 9 feet [1]	5.4	5.0	3.4	2.4	1.2	1.2	0.3	0.8	2.3	3.6	3.7	4.0	2.6
Visibility < 2 nautical miles [1]	2.7	2.8	3.3	1.9	0.6	0.5	0.5	0.4	0.5	0.5	0.8	2.0	1.3
Precipitation [1]	4.5	4.9	2.6	2.3	2.0	2.3	2.6	3.1	4.2	3.4	3.7	4.6	3.3
Temperature > 69° F	17.3	16.9	26.7	61.4	94.9	99.9	99.9	99.9	99.3	86.3	55.2	27.8	68.2
Mean Temperature (°F)	61.9	63.4	66.3	71.3	76.8	81.9	84.0	84.0	82.0	76.3	69.8	64.5	74.2
Temperature < 33° F [1]	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean RH (%)	79	79	80	82	82	80	78	77	77	75	76	77	78
Overcast or Obscured [1]	33.9	32.6	30.7	24.0	16.0	8.5	9.2	9.8	14.9	15.0	21.8	30.2	19.7
Mean Cloud Cover (8ths)	4.9	4.8	4.8	4.4	4.0	3.6	3.8	4.0	4.2	3.8	4.2	4.7	4.2
Mean SLP (mbs)	1020	1019	1017	1016	1015	1015	1017	1016	1015	1017	1019	1020	1017
Ext. Max. SLP (mbs)	1041	1042	1035	1038	1031	1030	1032	1030	1030	1037	1041	1041	1042
Ext. Min. SLP (mbs)	999	990	998	989	997	992	1001	1001	987	994	994	990	987
Prevailing Wind Direction	N	SE	SE	SE	SE	SE	S	SE	E	E	SE	SE	SE
Thunder and Lightning [1]	0.5	1.0	0.8	1.0	1.5	1.6	2.2	2.4	2.6	1.2	1.3	0.9	1.5

[1] Percentage Frequency

(1) This chapter describes the 77-mile-long Texas Gulf Coast from Sabine Pass to San Luis Pass, and Port Arthur Canal, Sabine-Neches Canal, Neches River, Galveston Bay, East and West Bays, Houston Ship Channel and their tributary waterways. Also discussed are the deepwater ports of Port Arthur, Beaumont, Orange, Galveston, Texas City and Houston.

(2)

COLREGS Demarcation Lines

(3) The lines established for this part of the coast are described in **33 CFR 80.840** and **80.845**, chapter 2.

(4)

Weather

(5) The climate of this coast ranges from warm and humid in summer to moderately subtropical in winter. During the warmer months, warm humid air from the Gulf brings showers and thunderstorms and an occasional tropical cyclone. There are periods of modified continental influence during the colder months when extratropical systems to north occasionally penetrate the Gulf region of Texas. These systems and their fronts produce low temperatures and "northers," strong, cold winds from north. Cold fronts reaching this area are seldom severe. Temperatures drop to freezing or below only four times a year in Galveston, on average. Spring days are typically mild, with brisk winds and frequent showers. Early autumn is essentially an extension of summer. November brings an increase in north winds and cold spells.

(6) Navigational hazards in winter include strong winds, rough seas and poor visibilities. Winds from extratropical cyclones and their associated fronts are often "northers" and reach 40 knots or more. Gales (winds of 34 knots or more) blow about 1 percent of the time from November through March. These winds usually pose little problem to vessels lying close to the Gulf coastline, as they blow offshore. Seaward, with an increasing fetch, waves become higher. Wave heights of 12 feet or more are encountered 1 to 2 percent of the time, and waves greater than 20 feet have been reported. On average, a 32-foot significant wave height from December through April can be expected every 10 years. Visibilities drop below 2 miles 2 to 3 percent of the time during this period. Precipitation also restricts visibilities.

(7) The tropical cyclone season extends from late May into early November. There is about a 30 percent chance of a tropical cyclone (tropical storm and hurricane) and a 20 percent chance of a hurricane along this coast in any given year. The 1900 hurricane completely destroyed the city of Galveston, but the building of a 17-foot seawall on the Gulf side of the island has reduced the danger of sea and swell action. Tropical cyclones are dangerous to shipping near the coast, because the winds often blow onshore. Based on statistics, it is estimated that every 10 years, on average, sustained winds will reach 85 knots while maximum significant wave heights build to 32 feet.

(29)

Sabine-Neches Waterway Navigation Guidelines

The Sabine Pilots and VTS (Vessel Traffic Service) Port Arthur provide a coordination service to traffic in Sabine Bank Channel, Sabine Pass, Port Arthur Canal, Sabine-Neches Canal, and Neches River. They have adopted the following procedures regarding meeting situations as discussed below. The procedures are not Coast Guard regulations, but are guidelines that the Sabine Pilots have established and use to ensure that vessels meet safely.

(1) Vessels with a combined beam that equals or exceeds one-half the channel width will not meet, day or night.

(2) Above the Texaco Island intersection (29°49.5'N., 93°57.5'W.), vessels 85,000 deadweight tons or more will not meet vessels of either 30,000 deadweight tons or greater, or vessels with drafts of 25 feet or greater.

(3) Above Buoys 29 and 30, vessels of 85,000 deadweight tons or greater will not meet any vessel of 30,000 deadweight tons or more with a draft of 30 feet or greater.

(4) Vessels of 48,000 deadweight tons or more with a draft of 30 feet or greater will not meet above Buoys 29 and 30.

(5) Vessels with a combined draft of 65 feet or more will not meet in the Neches River at night.

(6) The Fina turning basin (29°59.2'N., 93°54.4'W.) and Sun Oil turning basin (30°00.6'N., 93°59.0'W.) are not used for anchorages, but for meeting situations in which the size of the two vessels or other surrounding circumstances preclude their meeting in the channel. The inbound or outbound vessel, as appropriate, should vacate turning basins as soon as possible.

(7) The project depth of the Sabine-Neches Waterway is 40 feet. This depth coupled with tidal fluctuations and weather conditions will govern policy on maximum draft limitations. Meeting situations in channel bends should be avoided whenever possible.

The Sabine Pilots request that vessels transiting the waterway check in with the Sabine Pilots Dispatcher on VHF-FM channel 20 at the following locations:

(1) Sabine Bank Channel Lighted Gong Buoy 29 and Lighted Buoy 30 (29°36'N., 93°48'W.).

(2) Port Arthur Canal Light 40 (Mesquite Point).

(3) Port Arthur turning basin, Taylor Bayou.

(4) Sabine-Neches Canal Light 65 (Neches River Intersection).

(5) Neches River Light 40 (McFadden Bend Cutoff).

Nothing in these coordination guidelines should be construed as limiting a pilot in his good judgment.

(9)

ENCs - US3GC02M, US3GC03M
Charts - 11330, 11340

(10) Sabine Pass and its connecting channels form an extensive system of deepwater routes leading inland as far as Beaumont and Orange, Texas. From Sabine Pass the coast follows a general west-southwest direction for 50 miles to Galveston Entrance. Except in the east part, deep water extends fairly close inshore. The coast is low and devoid of prominent features, with the exception of High Island. Heald Bank, off the coast, has depths of 25 to 35 feet and is a danger to deep-draft vessels.

(11) Galveston Entrance is the approach to the cities of Galveston, Texas City and Houston. Galveston Bay and tributaries form one of the larger commercial ports in the United States and have extensive foreign and coastwise trade.

(12)

Shipping safety fairways and fairway anchorages

(13) A system of shipping safety fairways has been established along the Gulf Coast to provide safe lanes for shipping that are free of oil well structures. Vessels approaching the passes and entrances to ports or bound along the Gulf Coast between Sabine Pass and San Luis Pass should proceed in the charted shipping safety fairways. Caution should be exercised when approaching or navigating in these fairways as they are unmarked.

(14) **Shipping fairways** and **fairway anchorages** have been established off the entrances to the ports. These should generally be free of oil well structures. (See **33 CFR 166.100** through **166.200**, chapter 2, for regulations governing the fairways and anchorages.)

(15)

ENC - US3GC02M
Chart - 11330

(16) **Sabine Pass**, 244 miles west of Southwest Pass, Mississippi River, and 50 miles east-northeast of Galveston Entrance, is the approach from the Gulf to Sabine Lake, Sabine and Neches Rivers and the cities of Port Arthur, Beaumont and Orange.

(17) Sabine Pass, Lake and River together form the boundary between the States of Louisiana and Texas for a distance of 275 miles north from the Gulf.

(18)

Prominent features

(19) The most prominent objects seen when approaching Sabine Pass are the east jetty light, an abandoned lighthouse, a white/brown 81-foot tower on the east side of the pass, several large storage tanks on the east and west sides of the pass and the dredging range towers. Also prominent are the entrance range lights and a radar tower at the pilot station on the west side of the pass.

(20) **Sabine Pass East Jetty Light** (29°38'41"N., 93°49'22"W.), 42 feet above water, is shown from a cylindrical steel tower on piles at the south end of the jetty.

(21) **Sabine Coast Guard Station** is on the west side of the pass, about 5.8 miles above the east jetty light.

(22) Vessels should approach Sabine Pass through the prescribed Safety Fairway. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(23)

COLREGS Demarcation Lines

(24) The lines established for Sabine Pass are described in **33 CFR 80.840**, chapter 2.

(25)

Channels

(26) The entrance to Sabine Pass is through two 3½-mile-long jetties, extending in a south direction from shore. The general depths between jetties, outside the channel, are 8 to 16 feet. There are numerous obstructions in the vicinity of, and just outside Sabine Bank Channel and Outer Bar Channel; caution is advised. Federal project depths are 42 feet in Sabine Bank Channel and Outer Bar Channel, thence 40 feet through the jetty channel to and through Port Arthur Canal, with 40 feet in the east and west turning basins and Taylor Bayou turning basin at Port Arthur. (See Notice to Mariners and latest editions of charts for controlling depths.)

(27) Outer Bar Channel is marked by lighted buoys and a **337.5°** lighted range. The channel through the jetties to Sabine Pass is marked with lighted buoys and a **347°** lighted range. Unlighted ranges, maintained by the Corps of Engineers, mark the sides of the outer bar and jetty channels and are for dredging purposes only.

(28) Inside the jetties, the pass extends northwest about 6 miles to Sabine Lake. The bottom outside the channel for the most part is soft, and vessels can touch without damage. Lighted ranges and other lighted aids mark the channel through Sabine Pass and Port Arthur Canal to Port Arthur.

(30) A **regulated navigation area** and **Vessel Traffic Service (VTS)** have been established in Sabine Neches Waterway (Sabine Pass Channel, Port Arthur Canal, Sabine-Neches Canal, Neches River, Sabine River and all navigable waterways tributary thereto). (See **33 CFR 165.1** through **165.13** and **165.806**, chapter 2, for limits and regulations.)

(31)

Anchorages

(32) Deep-draft vessels usually anchor in the Sabine Fairway Anchorages outside of the pass entrance. (See **33 CFR 166.100** through **166.200**, chapter 2.) Vessels of light draft can find good holding ground 7 to 8 miles west of the jetties as close inshore as drafts will permit. The pass affords excellent anchorage for small craft and is used by coasting vessels as a wintertime harbor of refuge.

(33) An anchorage basin, federal project depth 40 feet, is on the east side of Sabine Pass Channel opposite the town of Sabine Pass. (See **33 CFR 110.1** and **110.196**, chapter 2, for limits and regulations, and Notice to Mariners and latest editions of charts for controlling depths.) The portion of the pass off the town of Sabine Pass and southwest of the ship channel is used as an anchorage by small light-draft vessels and was reported dredged to 21 feet in 1982.

(34)

Dangers

(35) The offshore oil well structures, Sabine Bank and the spoil and dumping grounds on either side of the entrance channel are the principal dangers encountered when approaching Sabine Pass. Vessels should not approach the entrance too closely before the pilot boards.

(36) A strong westerly current known to cause groundings after tropical cyclones was reported between Sabine Bank Channel Lighted Buoys 17 and 18 and between Sabine Bank Channel Lighted Buoys 33 and 34; extreme caution is advised.

(37)

Security zones

(38) The Captain of the Port, Port Arthur has established a security zone in Sabine Bank Channel, Sabine Pass Channel and Sabine-Neches Waterway. (See **33 CFR 165.01** through **165.33** and **165.819**, chapter 2, for limits and regulations.)

(39)

Currents

(40) The currents off the entrance of Sabine Pass are dependent upon the direction and velocity of the wind. Following continued north to east winds, a southwest to west current will be found off the entrance, frequently with a velocity of 1 knot and sometimes as much as 2 knots. Following south and southwest winds, the currents will be in the opposite direction, but with less velocity. The tidal current between the jetties at strength averages 1.1 knots on the flood and 1.6 knots on the ebb, but velocities up to 2.5 knots have been observed in Sabine Pass. Tidal current predictions for Sabine Pass are available from the Tidal Current prediction service at *tidesandcurrents.noaa.gov*. Links to a user guide for this service can be found in chapter 1 of this book.

(41)

Weather

(42) Port Arthur's climate is a mixture of tropical and temperate zone conditions. Sea breezes help prevent

extremely high summer temperatures, except on rare occasions, and the area lies far enough south so that cold air usually moderates before reaching the area. Summer temperatures climb to 90°F or more on about 84 days each season while winter readings fall to 32°F and below on about 14 days annually. The average annual temperature of Port Arthur is 68.9°F. The average annual maximum is 78.1°F while the average minimum is 59.1°F. The warmest month is July with an average temperature of 83.1°F while the coolest month is January with an average temperature of 52.2°F. The warmest temperature on record is 107°F, recorded in August 1962, while the coolest temperature on record is 12°F, recorded in December 1989. Each month June through September has recorded temperatures at or above 100°F while each month October through April has recorded temperatures at or below freezing.

(43) Rain occurs year round, with minimums usually in March and April. The average annual rainfall for Port Arthur is 56.75 inches. September is the wettest month averaging 5.67 inches and March is the driest averaging 3.26 inches. The greatest 24-hour rainfall occurred in September 1963 when 12.09 inches accumulated. Winter precipitation is often steady, while in summer showers and thunderstorms are more likely. Snow and sleet are infrequent; the greatest snowfall in a single storm was 3.5 inches in February 1960. Thunderstorms are most likely in July and August, when they are observed on 13 to 14 days per month, on average. They are most violent in spring and can produce strong, gusty winds. The annual average number of thunderstorms is 69.

(44) Tropical cyclones are most likely in September, although the season runs from late May into early November. During Audrey, in June 1957, the Coast Guard station at Sabine Pass recorded sustained winds to 85 mph with gusts to 100 mph. Storm tides reached 9 feet above mean sea level. Carla, in September 1961, generated 5- to 9-foot tides in the Port Arthur area.

(45) Fog is most frequent in midwinter and rare in summer. It usually dissipates before noon, but occasionally, under stagnant conditions, it lasts into the afternoon. Along the coast, it may not develop until daybreak, but inland, where radiation is more effective, it may form before midnight. At Sabine Pass, the sound signals operate an average of 90 to 120 hours per month from December through March. At Port Arthur, visibilities drop to 0.25 mile or below on 6 to 8 days per month during this period.

(46)

Pilotage, Port Arthur

(47) Pilotage is compulsory for all foreign vessels and U.S. vessels under register in the foreign trade. Pilotage is optional for coastwise vessels that have on board a pilot licensed by the federal government. The Sabine Pilots have an office in Port Arthur, Texas, and a pilot station at Sabine, Texas, at the inner end of the west jetty at Sabine Pass.

(48) The five pilot boats, SABINE PILOT, SPINDLE TOP, PORT NECHES, PORT ARTHUR and SABINE BANK PILOT, 45 to 65 feet long, each have a black hull and a white house with green trim. The International Code flag "P" is flown. The boats are equipped with a radiotelephone and monitor VHF-FM channels 13, 14, 16 and 20 and use channel 14 as a working channel. The pilot office at Port Arthur monitors VHF-FM channel 20. All the pilots carry portable radiotelephones. The pilot boats meet vessels, day or night, at the sea buoy or at Sabine Bank Channel Lighted Gong Buoy 29, according to the preference of the vessel. For boarding, the pilots request that the pilot ladder is rigged 8 feet (2.4 meters) above the water. Pilots can be obtained on a minimum of 4 hours advance notice, which should include the vessel's length, beam, DWT, freshwater deep draft, berth assignment and ETA. Notice may be given by telephone 409–722–1141, 962–8580 maintained 24 hours through the Port Arthur Marine Operator, by FAX 409–962–9223, by email dispatcher@sabinepilots.com or through ships' agents.

(49) The Coast Guard Captain of the Port highly recommends all tank vessels with drafts greater than 27 feet to secure pilotage services throughout the length of Sabine Bank Channel, especially during periods of restricted visibility. It is recommended that vessels embark and disembark pilots at Sabine Bank Channel Lighted Buoy SB.

(50)

Towage

(51) Vessels usually proceed without assistance through the pass to Port Arthur. Radiotelephone-equipped tugs up to 3,900 hp are available at Port Arthur. The tug companies are equipped to perform wrecking and salvage operations.

(52)

Quarantine, customs, immigration and agricultural quarantine

(53) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(54) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) The city has three hospitals.

(55) Port Arthur is a **customs port of entry**.

(56)

Coast Guard

(57) A **marine safety unit** is in Port Arthur.

(58) **Texas Bayou**, on the west side opposite the abandoned Sabine Pass lighthouse, has facilities for small craft to dock and a launching ramp. Water, ice and some provisions are available from a nearby store. Gasoline is available at a dock about 0.5 mile south-southeast of the bayou's entrance on Sabine Pass.

(59) **Sabine** is a village on the west side of the pass, about 5 miles above the outer end of the jetties. The south of the two old slips is used as a small-boat harbor where gasoline, diesel fuel, water and ice are available. There

(72)

Facilities at Port Arthur, Texas

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Plains Marketing, Sabine Pass Wharf	29°44'21"N., 93°53'19"W.	300	27	6	Receipt and shipment of crude oil	Plains Marketing
Premcor Refining Group Port Arthur Refinery Tug Mooring Wharf	29°51'05"N., 93°58'18"W.	300	17	7	• Shipment of liquid sulphur • Occasional mooring of tug-boats	Premcor Refining Group, Inc.
Premcor Refining Group Port Arthur Refinery Berths Nos. 0 to 6	29°50'47"N., 93°58'07"W.	1,200	40	7	Receipt and shipment of crude oil, petroleum products, petrochemicals and liquid caustic soda	Premcor Refining Group, Inc.
Great Lakes Carbon Corp. Wharf	29°50'03"N., 93°57'51"W.	980	40	8	Shipment of calcined petroleum coke	Rice Carden Corp./ Great Lakes Carbon Corp.
United Marine Enterprise Port Arthur Shipyard Motiva Enterprises No. 3 Dock	29°50'23"N., 93°57'20"W.	1,400	28-30	12	• Mooring and maintenance of vessels • Mooring of offshore drilling rigs for repair	Motiva Enterprises, LLC./ United Marine Enterprise, Inc.
Motiva Enterprises Port Arthur Terminal No. 1 Dock Wharf Berths Nos. 6 and 7	29°49'59"N., 93°57'25"W.	1,500	37	10	• Receipt of methyl tertiary butyl ether and ballast water • Shipment of petro products	Motiva Enterprises, LLC
Motiva Enterprises Port Arthur Terminal No. 2 Dock Wharf, Berths Nos.1 and 2	29°49'43"N., 93°57'36"W.	700 (No. 1) 1,100 (No. 2)	37	9.2	• Receipt of ballast water • Shipment of petroleum products	Motiva Enterprises, LLC
Port of Port Arthur Public Ocean Terminal Upper Wharf, Berths Nos. 1 and 2	29°51'45"N., 93°56'12"W.	1,380	40	15	Receipt and shipment of conventional and containerized cargo	Port of Port Arthur Navigation District of Jefferson County
Port of Port Arthur Public Ocean Terminal, Lower Wharf, Berths Nos. 3 to 5	29°51'32"N., 93°56'25"W.	1,820	40	15	Receipt and shipment of conventional and containerized cargo	Port of Port Arthur Navigation District of Jefferson County
Atlantic Shippers of Texas Wharf	29°55'35"N., 93°52'44"W.	700	28	12	Receipt and shipment of ingredients for livestock feed	Atlantic Shippers of Texas, Inc.
Global Terminaling Services Wharf	29°55'49"N., 93°52'31"W.	800	40	15.7	• Shipment of petroleum coke	Kansas City Southern Industries/ Global Terminaling Services, Inc.

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

is a menhaden plant and wharf, and many shrimp boats base here. Several oil companies have bases for supplying offshore oil wells.

(60) Sabine is a **customs port of entry**.

(61) **Sabine Pass** is a village on the west side of the pass about 1.5 miles north of Sabine. Shrimp boats base here.

(62) **Sabine Lake** has an average depth of about 6 feet in its 15-mile length. At the south end, where it empties into Sabine Pass, the depth is 1 to 4 feet. A fixed highway bridge over the south end has a clearance of 65 feet. An overhead power cable close northwest of the bridge has a clearance of 75 feet. Numerous gas and oil well structures, pipes, piles, stakes and wrecks, some submerged, exist within Sabine Lake. In addition to the south entrance from Sabine Pass, the lake can be entered also from the Sabine-Neches Canal or through Sabine River. The depth through **East Pass** is about 3 feet.

(63) A 1.5-mile-long bulkhead is off the Port Arthur waterfront on the west side of Sabine Lake. A channel with a reported controlling depth of about 4 feet leads through a narrow opening in the bulkhead to a marina basin. Berths, gasoline, diesel fuel, water, ice, marine supplies and a launching ramp are available.

(64) **Johnson Bayou**, the extreme southwest part of Louisiana, empties into the southeast part of Sabine Lake, directly east of Port Arthur. The dredged channel leading to the entrance has filled to the lake bottom level. In 1987, the reported depth was 3 feet into the mouth of the bayou. The entrance is marked by private stakes and buoys. Inside the entrance, the bayou is deeper and navigable for about 4.5 miles to the settlement of **Johnson Bayou**; a highway connects the settlement with **Sulphur**. A channel, marked by a private light and buoys, leads north-northwest across Sabine Lake from Johnson Bayou to the Sabine-Neches Canal.

(65) **Port Arthur Ship Canal** extends for about 6 miles from Sabine Pass to the entrance to Taylor Bayou. A narrow strip of land separates the canal from the west shore of Sabine Lake. Lights and lighted ranges mark the channel to Taylor Bayou.

(66) **Port Arthur**, an important shipping center, is on the west shore of the Sabine Lake, 17 miles above the Sabine Pass entrance. There are several large oil refineries and chemical plants, two shipyards, a grain elevator and numerous small industrial firms at Port Arthur.

(67) The principal industrial development is on Taylor Bayou, at the southwest outskirts of the city, sometimes known as **West Port Arthur**. The port has extensive domestic and foreign trade in chemicals and crude petroleum and its refined products. There is some

commerce in grain, lumber, iron and steel products, cotton, scrap iron, glass and clay products, shell, paper products, alcohol, caustic soda, menhaden, vegetable and fish oils, lead and general merchandise.

(68)

Harbor regulations

(69) The port is under the control of the Port of Port Arthur Navigation District. A Port Commission, under a Port Director, is responsible for the development and operation of the port and establishes regulations.

(70)

Wharves

(71) Port Arthur has more than 90 wharves and piers—only the deep-draft facilities are listed in the table. The alongside depths are reported; for information on the latest depths contact the private operator. All of the facilities have direct highway and railroad connections. Water and electrical shore power connections are available at most piers and wharves. General cargo at the port is usually handled by ship's tackle; special handling equipment, if available, is mentioned in the description of the particular facility. Cranes up to 150 tons are available at Port Arthur. Floating cranes with capacities up to 125 tons are also available.

(73)

Supplies

(74) Provisions and marine supplies can be obtained in Port Arthur. Water of good quality is available alongside the wharves or can be delivered in barges. Bunker fuels can be obtained from Premcor Refining Group, Port Arthur Refinery, Berths Nos. 0 to 6, or elsewhere in the harbor by barge. Small boats can obtain gasoline, oil, water and supplies along the city waterfront of the Sabine-Neches Canal.

(75)

Repairs

(76) Port Arthur has two shipyards on the west side of the Sabine-Neches Canal. The yard about 2.5 miles above Taylor Bayou builds drilling rigs, has three floating drydocks with a maximum capacity of 4,200 tons and can handle vessels up to 350 feet. The second yard, about 7 miles above Taylor Bayou, has a 3,000-ton floating drydock and two marine railways; vessels up to 125 feet can be handled. Both yards have machine, electrical welding and carpenter shops and make general repairs. Floating cranes up to 125 tons are available in the port.

(77)

Communications

(78) The port is served by two Class II railroads, buslines and an airline. The Jefferson County Airport is northwest of the city.

(79) **Taylor Bayou**, 6 miles above Sabine Pass, is the site of many of the deep-draft facilities at Port Arthur. Federal project depth for the basins and connecting channels in the bayou is 40 feet. (See Notices to Mariners and latest editions of the charts for controlling depths.) Barriers, 1.6 miles and 2.3 miles above the entrance, obstruct through navigation on Taylor Bayou. The upper reach of Taylor Bayou, navigable for about 29 miles, is accessible through Taylor Bayou Outfall Canal, which is entered from the Intracoastal Waterway at Mile 290.3W. Taylor Bayou Outfall Canal and the upper reach of Taylor Bayou are discussed in chapter 12.

(80) The **Sabine-Neches Canal** is a continuation of the Port Arthur Ship Canal above the mouth of Taylor Bayou. It extends parallel with the shores of Sabine Lake, from which it is separated by a narrow strip of land, northeast to the mouth of Neches River, thence east through the open water of the north part of Sabine Lake to the mouth of Sabine River. The federal project depths are 40 feet to the mouth of Neches River, thence 30 feet to the mouth of Sabine River. (See Notice to Mariners and latest editions of charts for controlling depths.) Lights, lighted ranges and buoys mark the channel.

(81) A fixed highway bridge with a clearance of 136 feet crosses the Sabine-Neches Canal at Port Arthur 1.8 miles above the entrance to Taylor Bayou.

(82) During high-river stages on Neches River, usually from January to the last of April, a vessel may encounter an athwartship current crossing Neches River along the canal route, which may prove dangerous if not guarded against.

(83)

ENC - US5TX73M
Chart - 11343

(84) **Neches River** empties into Sabine Lake from the northwest and extends in a ship canal 18.5 miles to Beaumont. A federal project provides for a 40-foot channel to a 34-foot turning basin at Beaumont, thence 30 feet to the Bethlehem Shipyards. (See Notice to Mariners and latest editions of charts for controlling depths.) Lights, lighted ranges and buoys mark the river.

(85) State Route 87 highway bridge (Rainbow Bridge) over the river, about 1.5 miles above its mouth, has a fixed twin span with a clearance of 143 feet. This twin bridge and the one at Port Arthur are the only bridges crossing the channel between the Gulf and the turning basin at Beaumont. Overhead power cables with clearances of 164 feet cross the river 50 yards east of State Route 87 highway bridge and just east of McFadden Bend Cutoff. These are the least overhead cable clearances between Port Arthur and the turning basin at Beaumont.

(86) On the west side, at the turn from the Sabine-Neches Canal into the Neches River, there are several basins in which are a marine service wharf, a small-vessel fueling wharf and a boat club. The marine service wharf repairs small vessels and barges and operates a tank cleaning service.

(87) A marina is on the long canal just west of the south end of State Route 87 highway bridge. Gasoline and berths are available. In 1982, reported depths of about 5 feet could be carried to the marina.

(109)

Facilities at Beaumont, Texas

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
South side Neches River						
Fina Oil and Chemical Co. Port Arthur Terminal No.1 Dock	29°58'49"N., 93°52'40"W.	900	40	14	Receipt and shipment of crude oil, xylene, naptha and petroleum products	Fina Oil and Chemical Co., Inc., subsidiary of TotalFinaElf SA
Fina Oil and Chemical Co. Port Arthur Terminal, No.1 Dock A	29°58'50"N., 93°52'48"W.	550	35	12½	Receipt and shipment of benzene, toluene and petroleum products	Fina Oil and Chemical Co., Inc., subsidiary of TotalFinaElf SA
Fina Oil and Chemical Co. Port Arthur Terminal Dock B	29°58'50"N., 93°52'54"W.	500	30	12½	Receipt and shipment of asphaltene, xylene, benzene, toluene and petroleum products	Fina Oil and Chemical Co., Inc., subsidiary of TotalFinaElf SA
Port Neches						
Huntsman Corp. Oxides and Olefins Facility, Port Neches No.1 Dock Wharf	29°59'22"N., 93°55'46"W.	800	38	9	Receipt and shipment of petro-chemicals and liquid caustic soda	Huntsman Corp.
Motiva Enterprises Port Neches Terminal No. 3 Dock Wharf	29°59'26"N., 93°56'03"W.	600	28	8½	Receipt and shipment of crude oil, naptha, gas oil and pyrolysis gas	Motiva Enterprises, LLC and Huntsman Corp.
Motiva Enterprises Port Neches Terminal No. 2 Dock Wharf	29°59'30"N., 93°56'13"W.	950	40	8½	Receipt of crude oil, naptha, petroleum products and gas oil	Motiva Enterprises, LLC and Huntsman Corp.
Motiva Enterprises Port Neches Terminal No. 1 Dock Wharf	29°59'34"N., 93°56'23"W.	800	40	8½	Receipt and shipment of crude oil, petroleum products and methanol	Motiva Enterprises, LLC and Huntsman Corp.
Huntsman Petrochemical Corp., Port Neches No. 2 Dock Wharf	29°59'37"N., 93°56'33"W.	500	27-30	11	Receipt and shipment of butadiene, methanol, styrene and other liquified petroleum gases	Ameripol Synpol Co. and Huntsman Corp./Huntsman Petrochemical Corp.
Huntsman Petrochemical Corp., Port Neches No. 3 Dock Wharf	29°59'39"N., 93°56'38"W.	310	24	14	Receipt and shipment of crude butadiene, methanol, styrene and liquified petroleum gases	Ameripol Synpol Co. and Huntsman Corp./Huntsman Petrochemical Corp.
Union Oil Co. of CA Beaumont Terminal Main Dock Berths 1 through 5 and 7	30°00'31"N., 93°58'26"W.	1,170	40	4½ to 14½	• Receipt and shipment of crude oil, petroleum products, petrochemicals, ballast water and bunker fuel • Bunkering/loading of tankers berthed at wharf	Union Oil Co. of CA
Sun Marine Terminals Ship Dock No. 1	30°00'27"N., 93°58'58"W.	875	40	18	• Receipt and shipment of crude oil, petroleum products, petrochemicals and ballast water • Bunkering tankers	Sun Marine Terminals, Inc.
Sun Marine Terminals Ship Dock No. 2	30°00'32"N., 93°59'20"W.	1,000	40	18	• Receipt and shipment of crude oil and ballast water • Bunkering tankers berthed	Sun Marine Terminals, Inc.
Sun Marine Terminals Ship Dock No. 3	30°00'36"N., 93°59'33"W.	1,000	40	18	• Receipt and shipment of crude oil and ballast water • Bunkering tankers berthed	Sun Marine Terminals, Inc.
Sun Marine Terminals Ship Dock No. 4	30°00'39"N., 93°59'46"W.	1,000	40	18	• Receipt and shipment of crude oil and ballast water • Bunkering tankers berthed	Sun Marine Terminals, Inc.
Sun Marine Terminals Ship Dock No. 5	30°00'49"N., 94°00'19"W.	1,000	40	18	• Receipt and shipment of crude oil and ballast water • Bunkering tankers berthed	Sun Marine Terminals, Inc.
Beaumont						
Du Pont Beaumont Industrial Park, Main Wharf	30°01'10"N., 94°01'28"W.	785	36	12.8	Receipt and shipment of methanol, acrylonitrite, sulfuric acid and anhydrous ammonia	E.I. Du Pont de Nemours & Co., Inc.
Oiltanking Beaumont South Wharf	30°01'53"N., 94°02'01"W.	700	40	12	Receipt and shipment of petroleum products	Oiltanking Beaumont, LP
Oiltanking Beaumont North Wharf	30°02'00"N., 94°02'02"W.	800	40	18	Receipt and shipment of petroleum products	Oiltanking Beaumont, LP
Martin Gas Sales Stanolind Cut Terminal D Dock Pier	30°02'17"N., 94°02'46"W.	800 (SE side) 300 (NW side)	25 to 35	7	Receipt and shipment of liquid sulphur and sulphuric acid	Martin Gas Sales, Inc.
Neches Industrial Park Dock No. 1 Barge Wharf	30°03'41"N., 94°02'09"W.	750	34	10	Receipt and shipment of ammonia, ammonium biosulfate, thiosulfate fertilizers and liquid sulphur by barge	Neches Industrial Park, Inc., Martin Gas Sales, Inc., and A&A Fertilizer, Ltd.

Facilities at Beaumont, Texas

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Exxon Mobil Refining & Supply Co. Beaumont Refinery Wharf No. 5	30°04'34"N., 94°03'52"W.	850	40	13	• Receipt of crude, lubricating oils and ballast water • Shipment of petroleum products	Exxon Mobil Refining & Supply Co., Division of Exxon Mobil Corp.
Exxon Mobil Refining & Supply Co. Beaumont Refinery Wharf No. 4	30°04'37"N., 94°04'02"W.	750	40	13	• Receipt and shipment of petroleum products, lubricating oils and ballast water • Loading and bunkering tankers	Exxon Mobil Refining & Supply Co., Division of Exxon Mobil Corp.
Exxon Mobil Chemical Co. Beaumont Olefins/ Aromatics Plant Wharves Nos. 2 and 3	30°04'26"N., 94°03'31"W.	650	38	14	• Receipt and shipment of toluene, benzene, cutter stock, paraxylene and propylene • Tugboat mooring	Exxon Mobil Chemical Co., Division of Exxon Mobil Corp.
Louis Dreyfus Corp. Port of Beaumont Navigation District, Grain Wharf	30°04'31"N., 94°04'40"W.	1,100	40	16	Shipment of grain	Port of Beaumont Navigation District of Jefferson County/ Louis Dreyfus Corp.
Port of Beaumont Navigation District, Carroll Street Wharf	30°04'31"N., 94°04'48"W.	950	40	16	• Receipt and shipment of general cargo, lumber and steel products • Receipt of aggregate by self-unloading vessels	Port of Beaumont Navigation District of Jefferson County/ Trans-Global Solutions, Inc., d.b.a. Beaumont Bulk Terminal
Port of Beaumont Navigation District, Harbor Island Marine Terminal Wharf	30°04'34"N., 94°05'18"W.	1,880	40	15-16	Receipt and shipment conventional, heavy-lift, roll-on roll-off and project cargo	Port of Beaumont Navigation District of Jefferson County
Port of Beaumont Navigation District, Wharf No. 1	30°04'38"N., 94°05'28"W.	576	30	16	• Receipt and shipment of roll-on/ roll-off general cargo • Mooring of government-owned vessels	Port of Beaumont Navigation District of Jefferson County/U.S. Department of Transportation, Maritime Administration
Port of Beaumont Navigation District, Wharves Nos. 2, 3, and 4	30°04'41"N., 94°05'17"W.	1,385	38	16	Receipt and shipment of conventional, roll-on/roll-off cargo and dry bulk commodities	Port of Beaumont Navigation District of Jefferson County
Port of Beaumont Navigation District, Wharves Nos. 5, 6 and 7	30°04'49"N., 94°05'18"W.	1,450	36	16	Receipt and shipment of conventional and containerized cargo	Port of Beaumont Navigation District of Jefferson County

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

(88) **Port Neches**, on the Neches River 5 miles above the mouth, is an important oil refining and chemical center. Petroleum products, asphalt and roofing material are exported. Port Neches has several private oil handling terminals, a layup berth maintained by a ship repair firm that does above-the-waterline hull and engine repairs and a wharf and ramp at which gasoline and water are available. The private oil handling terminals are discussed later in this chapter under Wharves, Beaumont.

(89) The marsh island north of McFadden Bend Cutoff has been dredged away except for a strip 300 feet wide. The dredged area forms an anchorage for decommissioned ships under jurisdiction of the U.S. Maritime Administration and has a controlling depth of 18 feet. (See **33 CFR 162.270**, chapter 2, for **regulations restricting navigation** in the vicinity.)

(90) Above Beaumont, a depth of about 10 feet can be carried for about 12 miles upriver, but there is no commerce in this section and probably many snags obstruct the channel.

(91) **Beaumont**, on Neches River 18.5 miles above Sabine Lake and 43 miles from the Gulf, is the largest city in east Texas and the home of Lamar University. Petroleum, petrochemical and shipbuilding and repair are the principal industries. Commerce is principally in petroleum products, chemicals, molasses, wheat, flour, rice, synthetic rubber, shell, paper pulp, cement, dry and liquid sulfur, iron and steel products, scrap iron and lumber and wood products.

(92)

Anchorages

(93) There are no anchorages at Beaumont and only emergency anchorage is permitted in Neches River. Vessels may tie up to the banks of the river for a limited period provided permission is obtained from the Corps of Engineers. There is temporary anchorage in 29 feet in the bends of the old river below Port Neches and west of the cutoff about a mile above McFadden Bend Cutoff. There is little swinging room.

(94) A barge assembly basin, 2,200 feet long and 350 feet wide for the temporary mooring of barges of tows, is in the bend of the former channel close north of Deer Bayou. Moorings spaced about 175 feet apart on concrete deadmen are on the northeast side of the basin.

(95) The channel is clear, and all bends of less than 5,000-foot radius have been eliminated by cutoffs between the mouth of Neches River and Beaumont; there are a few places where a vessel may turn around.

(96) Two bridges cross the improved channel above the turning basin at Beaumont. The first, the Kansas City Southern vertical lift railroad bridge, about 0.4 mile above the turning basin, has a clearance of 7 feet down and 140 feet up. (See **33 CFR 117.1** through **117.59** and

117.971, chapter 2, for drawbridge regulations.) The second, Interstate 10/U.S. 90 highway bridge, about 1 mile above the railroad bridge, has a fixed span with a clearance of 45 feet.

(97)

Pilotage, Beaumont

(98) See Pilotage, Port Arthur (indexed as such) early this chapter.

(99)

Towage

(100) Tugs to 3,950 hp are available at Beaumont.

(101)

Quarantine, customs, immigration and agricultural quarantine

(102) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(103) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) Beaumont has several public and private hospitals and several clinics and infirmaries.

(104) Beaumont is a **customs port of entry**.

(105)

Harbor regulations

(106) The Board of Commissioners of the Port of Beaumont Navigation District, known as the Port Authority, has jurisdiction over and controls all terminals, wharves, sheds, warehouses and equipment owned and operated by it. The Port Authority establishes rules, regulations and tariffs governing the port. The Port Director is in charge of operations; the Superintendent of Docks assigns berths.

(107)

Wharves

(108) Beaumont has more than 70 wharves and piers—only the deep-draft facilities are listed in the table. The alongside depths are reported; for information on the latest depths contact the private operator. The port's waterfront facilities extend along the south bank of the Neches River for about 19 miles. Most of the facilities have direct highway and railroad connections, and most of the piers and wharves have water and electrical shore power connections. General cargo at the port is usually handled by ship's tackle; special handling equipment, if any, is mentioned in the description of the particular facility. Cranes up to 220 tons and a 500-ton floating derrick are available at Beaumont.

(110)

Supplies

(111) Water is available at most of the wharves and piers, and Bunker C and diesel oil can be obtained by barge or at the several oil terminals. General and marine supplies are available at Beaumont.

(112)

Repairs

(113) A shipyard that builds offshore oil well drilling towers and barges up to 500 feet is on the west side of the river about 0.5 mile above the railroad bridge. The shipyard has a 17,500-ton floating drydock that can handle vessels up to 645 feet, cranes up to 65 tons, a 500-ton floating crane and complete machine, welding, pipe, joiner and metal shops. In addition, the yard can make most any type of repairs to wooden and steel vessels and engines. Other repair plants can make above-the-waterline repairs to vessels anywhere in the harbor. Iron works in the port can handle any kind of foundry or machine work.

(114)

Small-craft facilities

(115) Gasoline, diesel fuel, water and ice are available at a boat club just above the Interstate 10/U.S. Route 90 highway bridge. A privately marked channel with a reported controlling depth of 5 feet in 1982, leads to the private boat club's berthing facilities.

(116)

Communications

(117) The Port Authority controls the terminal's rail trackage at the Port of Beaumont. It connects with the four Class I railroads serving the city. Over 80 steamship lines offer service to all ports of the world, and barge lines operate in coastwise service from the port. Several motor freight lines and interstate buslines serve the city. Radio Station WPA at Port Arthur provides ship-to-shore radio and radiotelephone service.

(118) **Pine Island Bayou** empties into Neches River 9 miles above Beaumont and has a navigable depth of about 8 feet for about 10 miles to the pumping plant of the Lower Neches Valley Authority. The only commerce on the bayou is the transportation of fuel oil to this plant.

(119) The Santa Fe railroad bridge, 6.5 miles above the mouth, has a 37-foot fixed span with a clearance of 20 feet. An overhead power cable on the east side of the bridge has a clearance of 47 feet. Highway and railroad bridges 6.8 miles above the mouth at Voth, TX, have a minimum channel width of 40 feet and clearance of 21 feet.

(120) **Sabine River** empties into Sabine Lake from the north. **Orange** is a city of some commercial importance on the river about 8 miles above Sabine Lake and 36 miles from the Gulf. The city is on the main coastal highway between Lake Charles and Beaumont. The principal commodities handled at the Port of Orange include rice, flour, cornmeal, treated timbers and lumber, naval stores, carbon black, steel products, chemicals, petroleum products, alcohol, container board, shell, rubber, powdered milk and general cargo. Shipbuilding and petrochemical production are the most important industries at Orange.

(121)

Channels

(122) The section of the Sabine River from the mouth to Orange, which is part of the Sabine-Neches Waterway, has been improved by dredging a deep-draft channel, which with land cuts, has eased or bypassed the sharp bends in the river. The federal project depths are 30

feet from the end of the Sabine-Neches Canal, at the mouth of the river, to the site of the old highway bridge (30°05.6'N., 93°43.4'W.) at Orange, thence 25 feet in the channel around Orange Harbor Island to Orange. (See Notice to Mariners and latest editions of charts for controlling depths.) Lights, lighted ranges, a lighted buoy and daybeacons mark the channel to Orange. In 1982, a reported depth of 12 feet, except on the sharp bends, could be carried to Echo, about 6 miles above Orange. An overhead power cable with a clearance of 172 feet crosses the river about 3 miles below Orange. Between Orange and Echo, an overhead power cable, a fixed highway bridge (I-10/U.S. 90) and a swing bridge cross the river; clearances are 146 feet, 47 feet and 6 feet, respectively. (See **33 CFR 117.1** through **117.59** and **117.981**, chapter 2, for drawbridge regulations.)

(123)

Anchorages

(124) There are no anchorage areas for commercial vessels in the port. Vessels may tie up along the bank of the river for limited periods if permission is obtained from the Corps of Engineers.

(125)

Currents

(126) Currents in the Sabine River are about 2.5 knots during high stages.

(127)

Pilotage, Orange

(128) See Pilotage, Port Arthur (indexed as such) early this chapter.

(129)

Towage

(130) Tugs of up to 3,900 hp are available at Orange.

(131)

Quarantine, customs, immigration and agricultural quarantine

(132) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(133) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(134) Orange has two hospitals.

(135) Orange is a **customs port of entry**.

(136)

Harbor regulations

(137) The local regulations are established by the Orange County Navigation and Port District of the Port of Orange. A Port Director is in charge of operations. Regulations are enforced by a harbormaster, whose office is at the Municipal Terminal.

(138) A **restricted area** for vessels of a Navy reserve center has been established at Orange. (See **33 CFR 334.790**, chapter 2, for limits and regulations.)

(139)

Wharves

(140) Deep-draft vessels at the Port of Orange berth alongside the long wharf on the southwest side of the Orange Municipal Slip (30°03.9'N., 93°43.2'W.), about 2 miles below the city. The wharf has four ship berths for a total length of 2,300 feet. In 1982, depths of 30 feet were reported alongside the wharf. Transit sheds with a total capacity of over 346,000 square feet of covered storage are available on the wharf. Depressed railroad tracks are in the rear of the transit sheds, and a paved highway leads to the wharf. Electricity and fresh water are available at all berths. A 30-ton mobile crane and floating cranes to 150 tons are available by special arrangement. General cargo is handled at the wharf. Oil-handling barge berths are on both sides of the channel opposite the south end of Orange Harbor Island.

(141) Lay berths for 36 vessels are available at Orange about 2 miles above the Municipal Slip. The reported depth alongside the berths is 18 feet. Electrical, fresh water and telephone connections are available.

(142)

Supplies

(143) Provisions and some marine supplies are available in Orange. Water can be obtained at either the Municipal Slip or along the riverfront in town. Bunker C and diesel oil are available by barge or truck from Port Arthur.

(144)

Small-craft facilities

(145) A marina is on the west side of the channel opposite the north end of Orange Harbor Island. Berths with electricity, water, ice and hotel accommodations are available. In 1982, a depth of 12 feet was reported available alongside the pier at the marina.

(146)

Repairs

(147) Orange has several shipyards that build vessels, offshore oil rigs and barges. The largest yard is at the north end of Orange Harbor Island. It has three floating drydocks, a pontoon pier and a marine railway. The largest drydock at this yard has an 11,000-ton capacity, is 600 feet long, has a clear width of 50 to 126 feet and can handle vessels to 388 feet. The yard has machine, metal, welding, paint and joiner shops and can make above- and below-the-waterline repairs of any type. Two repair yards on the west side of the channel 0.6 mile south-southeast of the south end of Orange Harbor Island have floating drydocks up to 2,500 tons and 185 feet long. A repair yard west of Orange Harbor Island has a 250-foot marine railway. Floating cranes up to 150 tons are available in the port, and a 500-ton floating crane can be obtained from Port Arthur.

(148)

Communications

(149) Three Class II railroads serve the port. Several motor freight lines offer service, and buslines pass through the city. The main coastal highway (U.S. Route 90) and

Interstate 10 pass north of the city, and State Route 87 connects with Port Arthur over the Rainbow Bridge.

(150) **Cow Bayou** flows into Sabine River about 4 miles above Sabine Lake. A dredged channel leads from the Sabine River to a turning basin at the highway bridge at **Orangefield**. Below the basin, one fixed highway bridge and two swing highway bridges cross the bayou; clearances are 8 feet for the swing bridges and 55 feet for the fixed bridge. (See **33 CFR 117.1** through **117.59** and **117.965**, chapter 2, for drawbridge regulations.) The fixed highway bridge at the upper end of the turning basin at Orangefield has a clearance of 18 feet. The minimum clearances of the overhead power and telephone cables below the Orangefield turning basin are 63 feet; overhead power cables at the turning basin and 0.5 mile above have clearances of 30 and 37 feet, respectively. A shipyard about 300 yards above the first bridge has a 1,000-ton floating drydock that can handle vessels up to 200 feet long.

(151) **Adams Bayou** empties into Sabine River 2 miles above Cow Bayou. A dredged channel leads from the Sabine River to the first fixed highway bridge. The highway bridge has a fixed span with a clearance of 11 feet. Just below the bridge is a shipyard with a 100-ton floating drydock that can handle vessels up to 70 feet for general repairs. Below the bridge is a yacht basin with covered and open berths for yachts up to 45 feet. Gasoline, a 2-ton hoist and water are available. Minor engine and hull repairs are made. A large plant of the Dupont Chemical Company is halfway between the Sabine River and the fixed bridge; its piers are not available to the public.

(152)

ENC - US5TX61M
Chart - 11331

(153) **Lake Charles Deepwater Channel**, a part of the Intracoastal Waterway, enters Sabine River 0.7 mile above Adams Bayou and extends east for 22 miles to the Calces River at a point 13 miles below Lake Charles. Lake Charles is described in chapter 9.

(154) The Intracoastal Waterway route continues along Sabine River and the Sabine-Neches Canal. (See chapter 12.)

(155)

ENC - US4TX52M
Chart - 11323

(156) **High Island**, a small settlement on the mainland about 30 miles west of Sabine Pass, is a mound about 1 mile in diameter and 40 feet high, the highest land on the coast between Sabine Pass and Galveston. It is a conspicuous landmark for vessels making or standing along the coast. Numerous oil derricks are on the mound, and about 1.5 miles north are two 132-foot towers for a transmission line crossing the Intracoastal Waterway.

(157) Gasoline, water and provisions can be obtained in the town. The ruins of a long fishing pier extend about 0.7 mile into the Gulf.

(158) **Rollover Pass**, about 6.5 miles west-southwest of High Island, is a shallow inlet from the Gulf into East Bay, which is not passable for even the smallest of outboard craft because of very strong tidal currents, reported obstructions and shifting bottom. The pass is baldheaded with steel piling. The village of **Gilchrist** is on the pass. Gasoline is available in cans from a station near the pass, and water and ice can be obtained at several nearby bait stands.

(159) **Heald Bank**, lying 34 miles east of Galveston and 27 miles offshore, is nearly 5 miles long in a northeast and southwest direction. Depths of 25 to 35 feet extend over the bank, and depths of 50 to 60 feet are found as close as 1.5 to 2 miles to the southeast. In a heavy sea Heald Bank should be avoided by all vessels, including those of moderate draft that could pass over it in smooth water.

(160)

Currents

(161) The currents at Heald Bank are due largely to winds. In calm weather or with light breezes, little current is experienced. Wind velocities of 20 to 35 knots produce currents of about 0.5 to 1 knot, setting in a direction approximately fair with the wind. In February 1919, a velocity of 2.6 knots in a southwest direction was observed; a north wind of about 45 knots was blowing at this time. From observations made during the first 6 months of 1915, the average drift was one-fourth knot, setting in a west direction.

(162)

ENC - US3GC03M
Chart - 11340

(163) **East Flower Garden Bank** and **West Flower Garden Bank**, covered 8 and 9 fathoms, respectively, and **Stetson Bank**, covered 8¾ fathoms, are coral reefs about 108 miles south of Sabine Pass. These reefs, together, make up the **Flower Garden Banks National Marine Sanctuary**. (See **15 CFR 922.1** through **922.50** and **922.120** through **922.123,** chapter 2, for limits and regulations.)

(164) Flower Garden Banks covers an area that has been designated as a **Prohibited Lightering Zone**. See **33 CFR 156.300** through **156.330**, chapter 2, for limits and regulations, and **Lightering Zones**, indexed as such, chapter 3.

(165) The International Maritime Organization (IMO) has declared the Flower Garden Banks and Stetson Bank an International No-Anchoring Zone, except for vessels under 100 feet (30.48 meters) using Sanctuary mooring buoys. (See **15 CFR Part 922**, chapter 2, for limits and regulations).

(166)

ENC - US4TX52M
Chart - 11323

(167) **Bolivar Peninsula**, southwest of High Island, extends to the Galveston Bay Entrance. The land is low with few prominent features. An abandoned lighthouse, a black conical tower 116 feet high, is on the south end of the peninsula. Numerous wrecks lie in the shoal water along the Gulf Coast off Bolivar Peninsula. It is reported that several fishing vessels have been wrecked on these obstructions.

(168)

Galveston Entrance

(169) Vessels should approach Galveston Bay through the prescribed Safety Fairways. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(170) **Traffic Separation Scheme (Galveston)** has been established in the approach to Galveston Bay. The Scheme consists of **directed traffic lanes** for inbound and outbound traffic, a **separation zone** and two **precautionary areas**. The Traffic Separation Scheme is coterminous with the existing safety fairway from the vicinity of Galveston Bay Entrance Lighted Whistle Buoy GA to the vicinity of Galveston South Jetty Light 5A.

(171) The Traffic Separation Scheme has been designed to aid in the prevention of collisions in the approach to the harbor but is not intended in any way to supersede or alter the applicable Navigation Rules. Separation zones are intended to separate inbound and outbound traffic lanes and to be free of ship traffic and should not be used except for crossing purposes. Mariners should use extreme caution when crossing traffic lanes and separation zones.

(172) Due to heavy vessel traffic, mariners are advised not to anchor or linger in the precautionary areas. See Traffic Separation Schemes, chapter 1, and **33 CFR 167**, chapter 2, for additional information.

(173)

ENCs - US4TX52M, US5TX53M, US5TX58M, US4TX58M
Charts - 11323, 11324, 11326

(174) **Galveston Bay** is a large irregularly shaped shallow body of water on the coast of Texas, about 285 miles west from Southwest Pass and 690 miles northwest from Dry Tortugas. The bay is about 30 miles long in a general north-northeast and south-southwest direction, about 17 miles wide at its widest part, and has general depths of 7 to 9 feet. About midway of its length it is nearly divided into parts by **Red Fish Bar**, a chain of small islets and shoals, through which the Houston Ship Channel has been dredged. North of Red Fish Bar the bay is known as the Upper Bay and south as the Lower Bay. The northeast end of the upper bay is Trinity Bay.

(175) Galveston Bay is the approach to East and West Bays, Houston Ship Channel and the cities of Galveston, Texas City and Houston as well as to numerous smaller towns and bayous.

(176) **Galveston Entrance**, the approach to Galveston Bay, lies between two converging stone-rubble jetties that are about 1.2 miles apart at the outer ends. From deep water in the Gulf, the north jetty extends to Bolivar Peninsula and the south jetty extends to the north end of Galveston Island. Mariners should be alert to the possibility of strong cross-currents in the Galveston Bay Entrance Channel; caution is advised.

(177) **Bolivar Roads** is the large deepwater area between the jetties extending west between Bolivar Peninsula on the north and Pelican Island and Galveston Island on the south. On the south and west it connects with the ship channels to Galveston, Texas City and Houston. The Intracoastal Waterway crosses its northwest side.

(178) **Galveston** occupies the entire width of the east end of **Galveston Island**. The wharves are built along Galveston Channel on the north side of the city, and the south side fronts upon the Gulf from which the city is protected by a concrete seawall 17 feet high. Galveston, although widely known as the major seashore resort in the southwest, is essentially and primarily a place of maritime commerce and industry.

(179) The Port of Galveston offers a short route to the sea, and together with the deep and easily navigated channel and excellent port facilities enable Galveston to handle cargo most expeditiously and economically. The principal commodities handled are grain, bulk fertilizer, bulk liquid, bananas/fruit, general cargo (Ro-Ro and containerized) and automobiles.

(180) **Port Bolivar** has been abandoned as a port. The pier slips have shoaled; the only marine activity is an auto ferry operating between Galveston and Port Bolivar and several small shrimp-packing plants.

(181) The current outside the jetties frequently has a velocity exceeding 1 knot. The set may be in any direction under the combined influence of the entrance currents and currents setting along the coast.

(182) Daily predictions for Galveston Bay Entrance are published in the Tidal Current Tables. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(183) **Pelican Island**, an artificial island, is on the north side of Galveston Channel and protects the channel from northers. A radio station, an offshore drilling service facility, Texas A&M University at Galveston (TAMUG), and a SEABEE and LASH barge marshalling area, Marine Geophysical Survey Company, and ship wharf are located on the island. Dikes enclose the central part of the island. Seawolf Park, a city park and recreation area with a public mooring wharf, occupies the former quarantine station at the east tip of the island. The submarine CAVALLA, a memorial to the submarine crews who lost their lives

during World War II, and the destroyer escort STEWART are berthed adjacent to the park.

(184)

Prominent features

(185) Approaching the entrance to Galveston Bay, among the first objects sighted on a clear day will be the two 363-foot high condominium towers at the east end of Galveston Island and the 358-foot high American National Insurance Co. Building at about 29°18.4'N., 94°47.4'W., which displays aircraft warning lights, two grain elevators on Galveston Channel in the vicinity of Pier 29, the numerous hotels and motels along the seawall. The 116-foot abandoned lighthouse on Bolivar Point and the many buildings of the medical center and the University of Texas show conspicuously on closer approach and are easily identified. Vessels approaching from east near the coast will first sight High Island, and those approaching from southwest will probably first sight the American National Insurance Co. Building.

(186) **Galveston South Jetty Light 5A** (29°19'40"N., 94°41'20"W.), 30 feet above the water, is shown from a steel pile with a square green daymark at the outer end of the south jetty.

(187) **Galveston Bay Entrance Lighted Buoy GB** (29°14'44"N., 94°32'41"W.) is 9.6 miles off Galveston South Jetty Light 5A.

(188) **Galveston Bay Entrance Lighted Buoy GA** (29°09'29"N., 94°25'54"W.) is about 17 miles southeast of Galveston South Jetty Light 5A.

(189) **Vessel Traffic Service Houston/Galveston** is an information hub, using radar, closed-circuit television and VHF-FM communications to provide the users with decision making information. VTS Houston/Galveston's mission is to facilitate safe, efficient waterborne commerce. Specifically, VTS Houston/Galveston works to prevent groundings, rammings and collisions by sharing information and implementing appropriate traffic management measures.

(190) Participation in the VTS Vessel Movement Reporting System is mandatory for vessels greater than 131 feet in length, vessels greater than 26 feet in length engaged in towing and vessels authorized to carry 50 or more passengers, which are engaged in trade. Vessels entering the Vessel Traffic Service Area should check in with "Houston Traffic" on VHF-FM Channel 5A. VHF-FM Channels 11 and 12 are also reserved for VTS Houston/Galveston communications. Detailed information on VTS Houston/Galveston's operating requirements, designated frequencies, precautionary areas and mandatory reporting points can be found in **33 CFR 161.1** through **161.35**, chapter 2.

(191)

COLREGS Demarcation Lines

(192) The lines established for Galveston Bay are described in **33 CFR 80.845**, chapter 2.

(193)

Channels

(194) The federal project provides for a 45-foot Entrance Channel and an Outer Bar Channel, from the Gulf to about 2 miles west of the outer end of the jetties, and in the Inner Bar Channel to Bolivar Roads, thence 40 to 45 feet in Galveston Channel. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A. The channels are well marked. Lighted ranges mark the Entrance, Outer Bar and Inner Bar Channels. Mariners should be alert to the possibility of strong cross-currents in the Galveston Bay Entrance Channel; caution is advised.

(195)

Anchorages

(196) Vessels may anchor off the bar in the Fairway Anchorages on either side of the inbound/outbound traffic lanes. (See **33 CFR 166.100** through **166.200**, chapter 2, for limits and regulations.) Anchorage areas for temporary use are north of the Inner Bar Channel. (See **33 CFR 110.1** and **110.197**, chapter 2, for limits and regulations.) In all instances, vessels must anchor sufficiently clear of all active channels so as not to interfere with navigation or the usefulness of any established aids to navigation.

(197) Because of heavy traffic, Galveston Channel can be used only for temporary anchorage by vessels preparing to haul into the berth at wharves or after leaving the wharves before going to sea. **Small craft anchoring in the designated areas should find the shoaler water so as to leave the deeper areas clear for larger vessels.**

(198) In Galveston Bay small craft can anchor anywhere outside of the dredged channels where the depth is sufficient. The water in the bay may be lowered as much as 3 feet by a norther, and vessels should anticipate this when selecting anchorage during the winter.

(199)

Dangers

(200) A considerable number of unmarked dangerous wrecks exist in the approaches to Galveston Bay Entrance. A spoil bank is south of Galveston Bay Entrance Channel, just outside the jetties. Heald Bank and the offshore oil well structures are the principal hazards.

(201) Vessels navigating in the Houston Ship Channel from Bolivar Roads to Morgans Point are cautioned about the heavy breakers which result from the bow wakes of tankers and other large merchant vessels in the channel.

(202)

Regulated navigation area

(203) A regulated navigation area has been established in the eastern entrance to Galveston Channel. (See **33 CFR 165.1** through **165.13** and **165.827**, chapter 2, for limits and regulations.)

(204)

Bridges

(205) A rail and highway causeway crosses Galveston Channel and connects Galveston Island with Pelican Island. The bascule span has a vertical clearance of 13 feet and a horizontal clearance of 120 feet. The single bascule leaf overhangs the channel above a clearance of 75 feet when the bridge is open, and caution is necessary. (See **33 CFR 117.1** through **117.59** and **117.966**, chapter 2, for drawbridge regulations.) Overhead power cables cross the channel at the causeway and have a least clearance of 85 feet.

(206) Galveston is connected to the mainland by two 1.75-long, parallel causeways, crossing the Intracoastal Waterway at the southwest end of Galveston Bay. The railroad bridge has a vertical lift span with a horizontal clearance of 300 feet and vertical clearance of 8 feet down and 73 feet up. An overhead power cable immediately southwest of the bridge has a clearance of 95 feet. The fixed bridge 0.1 mile southwest of the railroad bridge has a vertical clearance of 73 feet.

(207)

Currents

(208) The effect of the wind on the water level in this part of the Gulf and adjoining bays may be considerable. A level 2 to 4 feet above mean low tide may result from a strong wind blowing continuously for several days from the east and southeast. A strong wind blowing steadily from the north for several days may lower the water to a level 2 or 3 feet below mean low tide. Daily predictions for Galveston Channel are available from the Tide prediction service at *tidesandcurrents.noaa.gov*. Links to a user guide for this service can be found in chapter 1 of this book.

(209) The currents are also modified frequently by the winds. East or southeast winds may cause a continuous flood current between the jetties at the entrance for a period of a day or more, and west or northwest winds sometimes set up a continuous outgoing current for a similar period. The average velocity of the current between the jetties at strength is 1.7 knots on the flood and 2.3 knots on the ebb.

(210)

Weather

(211) The climate of the Galveston area is predominantly marine, with periods of modified continental influence during winter when cold fronts reach the coast. Cold fronts that reach the area are usually not severe. Temperatures drop to 32°F or below on just 4 days annually, on average. The average high temperature at Galveston is 74.6°F and the average low temperature is 65.2°F. Due to the lagging marine influence, August, rather than July, is the warmest month with an average temperature of 83.7°F. January is the coolest month with an average temperature of 53.9°F. The warmest temperature on record is 99°F, recorded in August 1990, and the coolest temperature on record is 14°F, recorded in December 1989. Temperatures greater than 90°F have been recorded in each month April through October and average 15 days each year. Each month November through March has reported temperatures below freezing.

(212) The cold fronts or northers are responsible for a preponderance of north winds from November through March. Windspeeds climb to 28 knots or more about 1 percent of the time during this period and reach the 17- to 27-knot range 13 to 19 percent of the time. On occasion they have been observed at 50 knots. However, northerlies, since they blow offshore, are less of a problem to vessels close to the coast, although they are often preceded by strong, gusty onshore winds that generate heavy seas. Waves of 12 feet or more are encountered 1 to 2 percent of the time during this period. The frontal activity is also responsible for precipitation on about 2 to 4 days per month, usually in the form of steady rains. Poor visibilities are sometimes a problem in winter, and fog occurs from November through April. Offshore visibilities drop below 0.5 mile about 1 to 2 percent of the time, while Galveston records heavy fog (visibilities of 0.25 mile or less) on an average of 1 day per month in December and January. The Galveston South Jetty Light 5A sound signal operates an average of about 70 to 100 hours per month from December through March.

(213) During spring and fall, weather is often variable. Thunderstorms are common from May through September. During July and August, they occur on about 4 days per month around the bay. Thunderstorms and showers provide most of the summer rainfall and occur, on average, 23 days each year. The average annual rainfall for Galveston is 41.53 inches. September is the wettest month averaging 5.34 inches and March is the driest averaging 2.35 inches. Snowfall averages less than one inch annually, and the greatest 24-hour snowfall total is 2.5 inches, which fell in January 1973.

(214) From late May through early November, there is the threat of a tropical cyclone with its strong winds, rough seas, storm tides and torrential rains. Galveston has experienced all of these. The 1900 hurricane completely destroyed the city as storm tides were driven to 20 feet above mean sea level. An 1885 storm dumped 26 inches of rain on the city. During Carla, in September 1961, winds guested to 112 mph (97 knots), and during Alicia in August 1983, the area was hit with 100-knot winds. A hurricane can be expected to affect the area about once in 5 years, on average. While September is the most likely month for a hurricane, devastating storms have occurred in all the hurricane months except November.

(215) The National Weather Service maintains an office in Dickinson. (See Appendix A for contact information.)

(216)

Pilotage, Galveston Bay

(217) Pilotage is compulsory for all foreign vessels and U.S. vessels under register. Pilotage is optional for U.S. vessels in coastwise trade under enrollment that have on board a pilot licensed by the federal government.

(234)

Facilities at Galveston, Texas

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Port of Houston Authority Container Terminal Galveston Facility Pier 10	29°19'00"N., 94°46'58"W.	1,346	42	11	Receipt and shipment of general cargo, steel and lumber	City of Galveston/Port of Houston Authority
Marine Spill Response Corporation, Pier 12	29°18'51"N., 94°47'02"W.	845	26-32	11	Mooring float equipment	City of Galveston/Marine Spill Response Corperation
Smith-Hamm Pier 14	29°18'52"N., 94°47'06"W.	W side 689	30-31	10	Mooring vessels and barges	City of Galveston/Smith-Hamm, Inc. and CHS Launch Services
		E side 663	22-24			
Del Monte Fresh Produce Piers 16-18	29°18'46"N., 94°47'17"W.	1,203	32	11½	Receipt of fruit	City of Galveston/Del Monte Fresh Produce North America, Inc.
Port of Galveston Pier 19 Boat Basin	29°18'30"N., 94°47'55"W.	400	30-32	8	Receipt and shipment of conventional general cargo	City of Galveston/Port of Galveston
Port of Galveston Cruise Terminal Number 1 Piers 23-25	29°18'31"N., 94°47'51"W.	964	26-32	12½	Boarding passengers and mooring vessels	City of Galveston/Port of Galveston
Port of Galveston Pier 26	29°18'30"N., 94°47'55"W.	400	30-32	8	Receipt and shipment of conventional general cargo	City of Galveston/Port of Galveston
Port of Galveston Cruise Terminal Number 2 Piers 27-28	29°18'30"N., 94°48'04"W.	1,050	36	12½	Boarding passengers and mooring vessels	City of Galveston/Port of Galveston
ADM Grain Company Galveston Elevator Piers 30-33	29°18'29"N., 94°48'17"W.	1,100	41-42	11½	Shipment of grain Occasional receipt and shipment of conventional cargo	City of Galveston/ADM Grain Company
Port of Galveston Piers 33-34	29°18'29"N., 94°48'28"W.	632	38	8½	Receipt and shipment of general/project cargo, heavy machinery and steel	City of Galveston/Port of Galveston
Agriliance Galveston Piers 35-36	29°18'30"N., 94°48'33"W.	650	38-40	11	Receipt of fertilizer	City of Galveston/ Agriliance, LLC
Port of Galveston Piers 37-38	29°18'30"N., 94°48'41"W.	W side 1,180	20	11	Receipt and shipment of Ro-Ro and project cargo	City of Galveston/Port of Galveston
		E side 1,163	30			
Port of Galveston Piers 39-40	29°18'32"N., 94°48'51"W.	W side 1,163	32	10½	Occasional receipt and shipment of conventional general cargo	City of Galveston/Port of Galveston
		E side 785	33			
Port of Galveston Pier 41	29°18'32"N., 94°48'58"W.	1,195	33	11	Receipt of cement	City of Galveston/Port of Galveston

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

(218)

Pilots for Galveston and Texas City	
Galveston/Texas City Pilots 1301 Pennzoil Road Pelican Island Galveston, TX 77554	409–941–1300 (phone 24 hours) 409–943–4893 (FAX) *info@galvestonpilots.com* (email) *www.galvestonpilots.com*
NW Gulf Federal Pilots P.O. Box 20695 Beaumont, TX 77720	409–781–8140 *www.nwgulffedpilot.com*
Pilots for Houston and all ports above Texas City	
Houston Pilots 203 Deerwood Glen Drive Deer Park, TX 77536	281–476–8201 (phone 24 hours) 281–478–4324 (FAX) *disp@houston-pilots.com* (email) *www.houston-pilots.com*

(219) The pilot boats come out when vessels are expected. Pilots board at Galveston Bay Entrance Channel Approach Lighted Buoy GA for large oil tankers drawing 40 feet or more and immediately north of Galveston Bay Entrance Channel Lighted Buoy 2A for vessels drawing less than 40 feet.

(220) The Galveston/Texas City Pilots operate three boats, TEXAS and GALVESTON (both 79 feet) and GALVESTON BAY (38 feet). The larger boats have a black hull and white superstructure with the word PILOT in red letters on each side of the superstructure. The GALVESTON BAY has a gray hull with white superstructure with the word PILOT in large red letters on each side of the superstructure. The boats fly the international code flag "P" by day and display the standard pilot lights at night. The pilot boats monitor VHF-FM channels 14 and 16 and work on channel 73—pilot dispatch call sign is KOK-780. The calls signs for pilot boats TEXAS, GALVESTON and GALVESTON BAY are WX-8357, WDF-4916 and WDD-9819, respectively. The pilots carry portable radiotelephones. The sound and visual signals are four short blasts on the whistle or flashes on the signal light.

(221) The Houston pilots have five boats: M/V HOUSTON (62 feet), call sign WBQ 8986; M/V LONESTAR (50 feet), call sign WCY 9015; BAYOU CITY (75 feet); HOUSTON PILOT No. 1 (54 feet), call sign WYR 8541; and the HOUSTON PILOT No. 3 (91 feet), call sign WZR 9849. The boats have gray hulls and white superstructures. The pilot boats display the International

Code flag P by day and the standard pilot light by night. The pilot boats monitor VHF-FM channels 14, 16 and 74, continuously; the pilot office monitors channel 74. The pilot boats call signs are WYR-8541 and WZR-9849. The sound and visual signals are two long and three short blasts on the whistle or flashes on the signal light.

(222) Vessels should follow directions for course and speed from the pilot boat on approach in order to provide a safe lee for pilot boarding. The pilot ladder should be rigged in accordance with IMO standards, firmly made off to a fixed structure and as per the direction from the pilot boat or pilot dispatch via radiotelephone. For all vessels, the lower end of the pilot ladder must terminate 3 meters above the waterline, and for higher freeboard vessels, the pilot ladder shall be used in conjunction with a combination ladder ending at 6 meters above the waterline. The pilots will advise vessels on the radiotelephone if special procedures are necessary. All pilots carry portable radiotelephones.

(223) A Galveston/Texas City Pilot can be obtained by telephone 409–941–1300, email *dispatch@galvestonpilots.com* for operational matters, or by radiotelephone on VHF-FM channel 14 with a 4-hour advanced notice. Houston Pilots request an 8-hour advance notice.

(224)

Towage

(225) Tugs up to 4,200 hp are available.

(226)

Quarantine, customs, immigration and agricultural quarantine

(227) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(228) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(229) The medical school and hospital of the University of Texas and other hospitals are in the city.

(230)

Harbor regulations

(231) The **Galveston Wharves**, which comprise piers, warehouses, wharves, export grain elevator, cotton compresses, terminal switching railroad and special modern handling equipment, is a municipally owned Port Authority, administered by the Board of Trustees appointed by the City Council. The operation of the wharves is under direction of a Port Director. The Board establishes tariff rates and regulations governing the wharves. The individual piers and terminals are administered by the firms operating them.

(232)

Wharves

(233) Galveston has more than 60 wharves and piers—only the deep-draft facilities are listed in the table. The alongside depths are reported; for information on the latest depths contact port authorities. Almost all the facilities are on the south side of Galveston Channel and are owned and operated by the Board of Trustees of the Galveston Wharves, a city-owned corporation. All the deep-draft facilities have water, shore power, railroad and highway connections. General cargo at the port is usually handled by ship's tackle; special handling equipment, if available, is mentioned in the table under mechanical handling. Cranes up to 300-ton capacity are available in Galveston. A 200-ton floating crane is available at the port, and a 500-ton floating derrick is available from Houston.

(235)

Supplies

(236) Provisions and marine supplies are available. Water for boiler use or drinking may be obtained at all piers. Bunker C and diesel oil are available by truck or barge; maximum loading rate is about 3,000 barrels per hour.

(237)

Repairs

(238) The port of Galveston has numerous marine repair shops and foundries capable of making repairs to the hull or machinery of steel or wooden vessels. A company has facilities to repair refrigerator equipment. In the slip east of the Container Terminal (Pier 10) are two boatyards with marine ways, the largest of which can handle vessels up to 250 tons or 130 feet for general repairs. A machine and carpenter shop operates in connection with the yard. A marine repair plant, 1.7 miles west of the bridge between Galveston Island and Pelican Island, has a 1,000-ton vertical lift and related shops for the construction and repair of steel barges, tugs and various types of small vessels.

(239)

Salvage

(240) Tugs, lighters, pumps, derricks, diving equipment and other facilities are available for wrecking and salvage operations.

(241)

Small-craft facilities

(242) A marina, yacht club and yacht yard are in a basin about 400 yards east of the Container Terminal (Pier 10). The marina is protected by a concrete breakwater and has five piers with covered and open berths for more than 400 craft; each berth has electrical and water connections. In 2002, the reported approach depth was 20 feet with 10 feet alongside the slips. The yacht yard at the inner end of the basin has a lift that can handle craft up to 70 feet for hull, engine and electronic repairs or dry open or covered storage. Gasoline, diesel fuel, water, ice, marine supplies, pump-out station and berths with electricity are available in the yacht basin. A launching ramp is available, and a mooring area is north of the marina.

(243)

Communications

(244) There are no commercial flights servicing Galveston. The closest public-use airports are located near Houston. A small airport in Galveston offers helicopter charter

(264)

Facilities at Texas City, Texas

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Sterling Chemicals, Dock No. 1	29°22'40"N., 94°53'34"W.	750	40	5 and 15	Receipt and shipment of chemicals by tanker and barge	Sterling Chamicals, Inc.
Texas City Terminal Railway Co., Dock No. 15	29°22'32"N., 94°53'26"W.	400	36	15	Receipt and shipment crude oil, petroleum products and chemicals	Texas City Terminal Railway Co., operated by Valero, LP
Texas City Terminal Railway Co., Dock No. 16	29°22'27"N.,94°53'22"W.	625	40	16	Receipt and shipment of crude oil, petroleum products, petrochemicals and chemicals	Texas City Terminal Railway Co./Marathon Ashland Petroleum, LLC and Valero Energy Corp
Texas City Terminal Railway Co., Dock No. 18	29°22'22"N., 94°53'25"W.	760	36	14	Receipt and shipment of crude oil, petroleum products and petrochemicals	Texas City Terminal Railway Co./Marathon Ashland Petroleum, LLC
Texas City Terminal Railway Co., Dock No. 19	29°22'22"N., 94°53'33"W.	500	36	12	Receipt and shipment of crude oil, petroleum products and chemicals	Texas City Terminal Railway Co./Valero, LP
Texas City Terminal Railway Co., Oil Dock No. 20	29°22'20"N., 94°53'33"W.	760	36	14	Receipt and shipment of petroleum products	Texas City Terminal Railway Co./Valero, LP
BP North America, Dock No. 32	29°22'14"N., 94°53'22"W.	850	40	18½	Receipt and shipment of crude oil and petroleum products by tanker	BP North America, Inc.
Texas City Terminal Railway Co., Tanker Dock, Berths Nos. 40 and 41	29°21'58"N., 94°53'30"W.	1,090	40	16	Receipt of crude oil by tanker	Texas City Terminal Railway Co. / BP North America, Inc., Marathon Ashland Petroleum, LLC and Valero Energy Corp.
BP Chemicals Americas, Dock No. 50	29°21'49"N., 94°54'16"W.	420	36-40	11	Receipt and shipment of chemicals by tanker and barge	Texas City Terminal Railway Co. / BP Chemicals America, Inc.
Oiltanking Texas City, Tanker Dock No. 66	29°21'39"N., 94°55'00"W.	700	36	12	Receipt and shipment of chemicals by tanker	Oiltanking Texas City, LP
Oiltanking Texas City, Tanker Dock No. 67	29°21'35"N., 94°54'54"W.	700	36	6	Receipt and shipment of chemicals by tanker and barge	Oiltanking Texas City, LP

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

service associated with the offshore oil industry. There are close to 100 shipping lines that provide service to all ports of the world. In addition, several barge lines operate along the Intracoastal Waterway to other Gulf ports and to the Mississippi and other river systems. The terminal railroad connects with two Class I railroads serving the port. They are the Union Pacific and the Burlington Northern and Santa Fe. Interstate and local buslines provide service, and motor freight lines serve the port. A radio station provides ship-to-shore radio and radiotelephone service, and weather reports are broadcast.

(245) **Texas City**, on the west side of Galveston Bay about 7 miles northwest from Galveston, is a privately owned port of considerable commercial importance. It has extensive foreign and coastwise trade in petroleum, chemicals, fertilizer and tin ore. Commodities handled through the port include shell, rice, wheat, flour, molasses, hides, synthetic rubber, naval stores, textiles, lumber, wood pulp paper products, petroleum products, steel products, salt, aluminum, zinc, copper, and tin ores, machinery, coal tar products, sulfuric acid, industrial chemicals, scrap iron and fertilizer. A 23-foot storm levee has been constructed around the city.

(246)

Prominent features

(247) The Texas City Dike that extends about 4.5 miles into Galveston Bay, the three elevated tanks in the port area and the numerous cracking towers of the oil refineries and chemical plants are conspicuous.

(248)

Channels

(249) Texas City Channel extends west-northwest from deep water in Bolivar Roads through the lower end of Galveston Bay to a turning basin off the wharves at Texas City. A federal project provides for a depth of 45 feet in the channel and basin. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A. The channel is marked by lighted ranges, lights and lighted and unlighted buoys.

(250) Texas City Channel is protected by Texas City Dike on the north. The dike is earth filled and protected by stone revetment and is about 4.5 miles long. It is 900 feet north of the channel at the east end and about 2,300 feet north at the west end. The wharves are protected by

a large spoil bank known as **Shoal Point**, extending along the east side of the turning basin.

(251) **Industrial Canal**, a private industrial canal, extends from the south end of the turning basin off the Texas City wharves south and west for about 2 miles to another turning basin. The channel is marked by a private light and a **090°** lighted range.

(252)

Security Zones

(253) The Captain of the Port (COTP) Houston-Galveston has established a Security Zone in Texas City including the Port of Texas City Channel, Turning Basin and Industrial Canal. (See **33 CFR 165.30** through **165.33** and **165.814**, chapter 2, for limits and regulations.)

(254)

Pilotage, Texas City

(255) See Pilotage, Galveston Bay (indexed as such) this chapter.

(256)

Towage

(257) Vessels usually proceed without assistance from the bar to Bolivar Roads. Tugs up to 3,400 hp are available at Texas City for docking, undocking and shifting.

(258)

Quarantine, customs, immigration and agricultural quarantine

(259) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(260) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(261) Texas City has a county and a private hospital.

(262)

Wharves

(263) Texas City has over 40 wharves and piers. Only the deep-draft facilities are listed in the table. The alongside depths are reported; for information on the latest depth contact the private operator. The port's waterfront facilities are on the turning basin and along the Industrial Canal. Almost all facilities have highway, railroad, water and electrical shore power connections. The Texas City Terminal Railway Co. owns most of the waterfront facilities in Texas City. General cargo at the port is usually handled by ship's tackle; special handling equipment, if available, is mentioned in the table. A 50-ton floating crane is available at Galveston, and a 500-ton floating derrick is available from Houston.

(265)

Communications

(266) The Texas City Terminal Railroad connects with two Class I railroads serving the port. Bus lines and a motor freight line serve the city.

(267)

ENCs - US5TX58M, US4TX58M
Chart - 11326

(268) **East Bay** is a large and shallow bay extending east about 16 miles from the south end of Galveston Bay and lying north of Bolivar Peninsula. The depths in the bay range from 2 to 7 feet. **Hanna Reef** is a chain of low islands and shoals composed of broken shell. Only a heavy anchor will penetrate more than a few inches. The islands support no life. Breaker action is reported to be severe along the south side. The chain lies east of the Houston Ship Channel and partially separates Galveston Bay from East Bay. Small craft of about 3-foot draft can pilot their way between bays through two passes or around either end of the reef.

(269) **Trinity Bay** is a large body of water northeast of the upper part of Galveston Bay. Depths in the bay proper range from 5 to 9 feet. Extensive oil-drilling operations are in progress in the Red Fish Bar, Cedar Point and Trinity Bay areas. Numerous oil well structures and derricks are visible to the east of the Houston Ship Channel. The derricks are moved as soon as wells are brought in or abandoned. Numerous pipes, piles and abandoned oil wells that constitute a menace to navigation are in the north and west part of the bay between Trinity River and Umbrella Point.

(270)

Caution

(271) There are a number of fishing locations in Trinity Bay in the vicinity of which caution should be exercised as piles or other structures may exist. They are marked by quick flashing red lights.

(272) Although a federal project authorizes a channel 9 feet deep from Houston Ship Channel to and in Trinity River, **Trinity River Channel** does not lead into the river; it leads northeast from Houston Ship Channel to **Smith Point**, thence follows the east shore north between a protective spoil bank and the mainland to a dead end where the spoil bank crosses the channel and joins the mainland at Anahuac. The channel is not maintained.

(273) **Double Bayou**, 8 miles northeast of Smith Point, flows into Trinity Bay and is used mainly by oil and fishing interests. A dredged entrance channel marked by lights and daybeacons leads to the mouth of the bayou and thence upstream for about 1.7 miles.

(274) At a point 0.5 mile above its mouth, the bayou divides into East and West Forks and is navigable for respective distances of about 4 and 12 miles. **Double Bayou** and **Eagle** are settlements along the West Fork between the mouth and the highway bridge 3 miles from Trinity Bay. The bridge has a fixed channel span with a width of 10 feet and clearance of 14 feet. A marina at Double Bayou has covered berths and a marine railway capable of handling boats up to 55 feet for hull and engine repairs. A shipyard just above the marina builds barges

and other commercial vessels. A marine railway at the yard can handle vessels up to 120 feet for general repairs. Diesel fuel, ice and a launching ramp are available at seafood wharf on the West Fork near its junction with East Fork. A bridge crosses East Fork, 5 miles from the junction of the bayou.

(275) **Anahuac Channel**, a dredged channel, leads from the upper part of Trinity Bay to Anahuac and **Browns Pass** and is the entrance channel to Trinity River. The channel is marked by lights and daybeacons. Mariners should be on the lookout for floating logs.

(276) **Anahuac** is a town at the northeast end of Trinity Bay, opposite the mouth of Trinity River. There was a reported depth of 5 feet in 1992 at a small landing used for handling barge shipments of shell. Small shrimp boats tie up just above the shell wharf. Gasoline is available at service stations in the town. The **Chamber-Liberty Counties Navigation Canal** is used for irrigation purposes only. A highway connects Anahuac with Goose Creek and Houston.

(277) **Trinity River** is one of the largest rivers in Texas and empties into the northeast end of Trinity Bay. Entrance to the river is through Anahuac Channel and Browns Pass and not through Trinity River Channel. Sulfur is moved by barge from **Moss Bluff**, about 10 miles above the river mouth, to Galveston Bay. A highway bridge with a fixed channel span having a clearance of 73 feet crosses the river about 6 miles above Anahuac. An overhead power cable with a clearance of 78 feet crosses the river about 3 miles below the highway bridge.

(278) In the open waters of Trinity Bay about 2 miles west of Anahuac Channel, a 0.5-mile-long overhead power cable with a clearance of 29 feet is strung in a northwest-southeast direction on poles about 200 feet apart.

(279) Off **Houston Point (Cedar Point)**, a small dredged channel with a reported depth of 6 feet in 1982 leads to an oil company dock in a basin.

(280) Berths for tenders and crew boats are at the bulkhead at the head of the basin, and dolphins for mooring barges are on the west side of the basin. A walkway extends about 0.3 mile seaward from the basin.

(281)

Cedar Bayou

(282) **Cedar Bayou** is a crooked stream flowing in a south direction into the northwest corner of Galveston Bay, 2.5 miles east of Morgans Point and 25 miles north of Galveston. The principal commerce is in crude oil and shells, handled mostly in barges.

(283) A dredged channel leads from the Houston Ship Channel, between **Atkinson Island** and **Hog Island**, across Galveston Bay and into Cedar Bayou for about 1.6 miles above the mouth. The channel is marked by lights, buoys and daybeacons. Two submerged jetties marking the former mouth of the bayou are on the north side of the entrance channel; the northernmost jetty is marked by a light.

(284) State Highway 99 fixed bridge, about 7.3 miles above the entrance, has a vertical clearance of 52 feet. Overhead power cables crossing the bayou between the mouth and the fixed bridge have a least vertical clearance of 85 feet.

(285) A highway bridge crossing a cutoff between **Boaz Island** and the mainland has a 13-foot fixed span with a vertical clearance of 6 feet. An overhead power cable just southwest of the bridge has a vertical clearance of 40 feet. Only very small craft use the cutoff.

(286) Shallow **Tabbs Bay** is at the northwest end of Galveston Bay and contains numerous oil well structures and overhead power cables. There are no defined channels; the average depth is reported to be less than 3 feet.

(287) **Goose Creek** empties into the north side of Tabbs Bay. A channel marked by private daybeacons leads northward from the Houston Ship Channel into Goose Creek to a pair of fixed bridges, under construction (2020), at **Baytown**. The channel is navigable for craft drawing up to 5 feet. Goose Creek contains numerous oil wells, pipelines, pilings and other hazards; local knowledge is advised. The creek is used by oil well supply and commercial fishing vessels.

(288)

Structures across Goose Creek

Name and Description	Location	Clearances (feet) Horizontal	Clearances (feet) Vertical (MHW)
Overhead power cable	29°42'24"N., 94°59'35"W.		44
State Highway 146 (two fixed spans)	29°42'49"N., 94°59'29"W.	55	6
Overhead power cable	29°42'50"N., 94°59'29"W.		50
Overhead power cable	29°43'19"N., 94°59'16"W.		38
West Main Street Bridge (fixed)	29°43'20"N., 94°59'17"W.	56	14
Overhead power cable	29°43'37"N., 94°59'25"W.		36
Railroad Bridge (fixed)	29°43'39"N., 94°59'27"W.	56	14
Overhead power cable	29°43'39"N., 94°59'24"W.		40
Overhead cable	29°43'49"N., 94°59'23"W.		N/A
Railroad Bridge (fixed)	29°43'50"N., 94°59'23"W.	32	14
Market Street Bridge (fixed)	29°43'55"N., 94°59'19"W.	48	9

(289) **Barbours Terminal Channel**, opposite Hog Island, is a dredged channel leading to a turning basin, extending west about 1.2 miles from Houston Ship Channel. The turning basin provides excellent shelter for vessels up to 150 feet long.

(290) The Captain of the Port (COTP) Houston-Galveston has established a Security Zone at Morgans Point including Barbours Terminal Channel and Turning Basin. (See **33 CFR 165.1** through **165.33** and **165.814**, chapter 2, for limits and regulations.) Unauthorized vessels/persons are

(292)

Facilities at Barbours Cut Terminal

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Barbours Cut Terminal, LASH/SEABEE Vessel Wharf	29°40'59"N., 94°59'07"W.	790	42	16	Mooring vessels	Port of Houston Authority
Barbours Cut Terminal Roll-on/Roll-off Wharf	29°40'58"N., 94°59'21"W.	63	42	7	• Receipt and shipment of roll-on/roll-off cargo • Mooring for tugs, towboats and barges	Port of Houston Authority
Barbours Cut Terminal Berth No. 1 Wharf	29°40'56"N., 94°59'28"W.	1,000	42	18	Receipt and shipment of containerized and roll-on/roll-off cargo	Port of Houston Authority
Barbours Cut Terminal Berth No. 2 Wharf	29°40'55"N., 94°59'39"W.	1,000	42	18	Receipt and shipment of containerized general cargo	Port of Houston Authority/ Sealand Service, Inc.
Barbours Cut Terminal Berth No. 3 Wharf	29°40'53"N., 94°59'50"W.	1,000	42	18	Receipt and shipment of containerized general cargo	Port of Houston Authority/ Sealand Service, Inc.
Barbours Cut Terminal Berth No. 4 Wharf	29°40'51"N., 95°00'02"W.	1,000	42	18	Receipt and shipment of containerized general cargo	Port of Houston Authority/ Sealand Service, Inc.

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

excluded from these areas without express permission of the COTP.

(291) The **Port of Houston**, **Barbours Cut Terminal** is on the south side of Barbours Cut and is owned by the Port of Houston Authority. The alongside depths given for these facilities are reported depths. All berths have railway and highway connections, except the LASH Vessel Wharf without rail connections. Water is available at all but the roll-on/roll-off wharf. Electrical shore-power connections are not available.

(293)

ENCs - US5TX58M, US4TX58M, US4TX52M
Charts - 11326, 11323

(294) Morgans Point is on the northwest end of Galveston Bay on the west side of Houston Ship Channel. **La Porte**, a town 2 miles southwest of Morgans Point, has rail and highway connections with other parts of the state.

(295) From Morgans Point south to **Red Bluff**, (29°36.2'N., 94°59.0'W.) are summer homes with numerous boat landings along the shore. The Houston Yacht Club is in a basin formed by breakwaters about 1.3 miles northwest of Red Bluff. The channel leading to the basin had a reported controlling depth of 8 feet in 2002. Gasoline, diesel fuel, water, ice, open and covered berths with electricity, a launching ramp, pump-out station and an electronic hoist to 3 tons are available.

(296) **Bayport** is a deepwater port and industrial complex operated by the Port of Houston Authority. A dredged channel leads from Houston Ship Channel close south of Atkinson Island to the shore about 0.9 mile northwest of Red Bluff, thence west in a landcut to a turning basin. The channel is marked lights, lighted ranges and a directional sector light.

(297) The Captain of the Port (COTP) Houston-Galveston has established a Security Zone in Bayport including Port of Bayport Ship Channel and Turning Basin. (See **33 CFR 165.30** through **165.33** and **165.814**, chapter 2, for limits and regulations.) Unauthorized vessels/persons are excluded from these areas without express permission of the COTP.

(298) Baytank (Houston) Bayport Ship Terminal Wharves Nos. 1 and 2: southwest side of basin; 587-foot wharves; 40 feet reported alongside; deck heights, 14 feet; storage tanks for 957,000 barrels of petrochemicals; receipt and shipment of petrochemicals; owned and operated by Baytank (Houston), Inc.

(299) LBC Houston Bayport Terminal Ship Dock: west side of basin; 100-foot wharf, 240 feet of berthing space with dolphins; 38 feet alongside; deck height, 16 feet; storage tanks with 1,753,000-barrel capacity; receipt and shipment of petroleum products and petrochemicals; owned and operated by LBC Houston.

(300) **Clear Creek** empties into the west side of Galveston Bay 20 miles northwest of Galveston; 2 miles above its mouth the creek broadens into shallow **Clear Lake**, 2.5 miles long. A dredged channel leads from Galveston Bay through Clear Creek and across Clear Lake, thence a natural channel leads for another 3.3 miles through Clear Creek to the railroad bridge at **League City**. The Clear Creek entrance channel and the creek and lake channels are well marked with lights, buoys and daybeacons. The channel from Galveston Bay to Clear Lake is reported to be highly congested with light commercial and pleasure-craft traffic, especially on weekends; a **speed limit** of 5 miles per hour is posted. Submerged obstructions were reported at the bridge under construction about 0.3 mile inside the entrance; caution is advised.

(301)

Structures across Clear Creek			
		Clearances (feet)	
Name and Description	Location	Horizontal	Vertical (MHW)
Overhead power cable	29°32'54"N., 95°01'07"W.		99
State Highway 146 (fixed) (Under construction)	29°32'58"N., 95°01'23"W.	113 (main) 62 (aux)	73
Overhead power cables	29°32'57"N., 95°01'26"W.		100
Overhead power cable	29°32'02"N., 95°05'31"W.		51
Clear Creek Bridge (fixed/highway)	29°32'06"N., 95°05'46"W.	90	25
Overhead power cable	29°32'20"N., 95°05'47"W.		55
Overhead power cables	29°41'32"N., 95°05'43"W.		45

(302) **Seabrook**, a town on the north side at the entrance to Clear Creek, is headquarters for fishing and pleasure craft. **Kemah**is a town on the south side of the entrance to Clear Creek.

(303) There are several large yacht basins at the west end of Clear Lake, and numerous marinas and boatyards are on the lake, on both sides of Clear Creek and on the Seabrook channel.

(304) Most of the shrimp and fishing wharves and seafood packing plants are along the waterfront east of the bridges.

(305) **Dickinson Bayou** empties into **Dickinson Bay**, a small indentation in the west side of lower Galveston Bay, between **April Fool Point** and **Miller Point**, about 13 miles north of Galveston. A dredged channel leads from Galveston Bay through Dickinson Bay and Dickinson Bayou to the highway bridge about 1.2 miles above the mouth of the bayou. The entrance channel is marked by lights, buoys and daybeacons.

(306) Marinas and boatyards are at April Fool Point and at a basin about 1 mile northwest of the point. Gasoline, diesel fuel, water, ice, marine supplies, launching ramps, cranes to 5 tons, open and covered berths with electricity, pump-out station and storage facilities are available; engine repairs can be made.

(307) About 1.2 miles above the mouth of Dickinson Bayou, State Route 146 fixed highway bridge has a clearance of 45 feet. Overhead power and telephone cables at the bridges have minimum clearances of 56 feet.

(308) A marina, on the north side of the Dickinson Bayou just above the bridges, has berths for pleasure and fishing craft, gasoline, diesel fuel and ice. The largest marine railway at the marina can handle craft up to 48 feet for hull and engine repairs and storage. An overhead power cable about 2.2 miles above the bridges has a clearance of 85 feet.

(309) At Dickinson two bridges cross the bayou. The Missouri Pacific railroad bridge has a 23-foot fixed channel span with a vertical clearance of 15 feet. The State Highway 3 fixed bridge, 0.3 mile above the railroad bridge, has a 66-foot fixed span with a vertical clearance of 12 feet. The overhead power cable at the railroad bridge has a clearance of 42 feet.

(310) **Moses Lake**, a shallow lagoon south of Dickinson Bay, is used as a harbor of refuge by many small craft during hurricane warnings. The entrance to the lake is through a vertical lift tide gate that has a width of 56 feet and an open clearance of 51 feet; the twin supporting towers of the gate are visible from the Houston Ship Channel. A private unmarked channel leads from Dickinson Channel through Moses Lake to Moses Bayou. In 1996, the channel had a controlling depth of 6 feet to the tide gate, thence a controlling depth of 7½ feet was reported in 1982 to Moses Bayou. Commercial traffic consists of chemical barges enroute to a plant on Moses Bayou. There are several marinas, small-craft launching ramps and fish camps on a slip on the south side of the entrance to **Dollar Bay**. Gasoline, diesel fuel, berths, electricity, water, ice, a launching ramp, wet and dry storage and provisions are available. A branch channel privately marked by poles with a reported depth of 3 feet in 1982 leads from the main channel to the slip.

(311)

ENCs - US4TX52M, US5TX53M, US5TX57M, US5TX58M, US4TX58M
Charts - 11323, 11324, 11325, 11326

(312) **Houston Ship Channel** extends from Galveston Harbor across Galveston Bay and through parts of San Jacinto River and Buffalo Bayou to the city of Houston, a distance of 44 miles. The entrance to the channel is at the northwest end of Bolivar Roads, between Port Bolivar and Texas City channels. The entrance is marked by a **319.1°** lighted range and by a lighted buoy on the northeast side of the channel. The channel through Galveston Bay is marked by lighted bouys near the entrance and lights and lighted ranges to Morgans Point.

(313) The Coast Guard advises vessels exercise particular caution where the channel intersects the Intracoastal Waterway, about 6.6 miles above the entrance jetties and just below Lighted Buoys 25 and 26. Situations resulting in collisions, groundings and close quarters passing have been reported by both shallow and deep-draft vessels. The Coast Guard has requested vessels make a **SECURITE** call on VHF-FM channel 13 prior to crossing the Intracoastal Waterway, particularly during periods of restricted visibility.

(314) The federal project provides for a 45-foot channel from Bolivar Roads for about 36 miles to Carpenter Bayou, thence 40 feet for about 11.5 miles to Clinton Island, thence 36 feet for about 4 miles to and in Houston Turning Basin. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.

(333)

Facilities at Jacintoport, Texas

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Port of Houston Jacintoport Terminal Wharf	29°44'55"N., 95°06'34"W.	2,000	38	14	Receipt and shipment of conventional, container-ized cargo, roll-on/ roll-off and misc. dry bulk and bagged commodities	Port of Houston Authority/ Jacintoport Corp. and Harborside Refrigerated Services
Houston Fuel Oil Terminal Co., Ship Dock No. 1	29°44'59"N., 95°06'02"W.	900	40	15	Receipt and shipment of crude oil and fuel oil	Houston Fuel Oil Terminal Co., Inc.
Intercontinental Terminals, Co., Houston Ship Docks No. 1 Wharf and Nos. 2 and 3 Pier	29°44'43"N., 95°05'59"W.	1,800	42	20	• Receipt and shipment of bulk liquids, liquefied petroleum gas and petrochemicals • Receipt of ballast water	Intercontinental Terminals, Co.
VOPAK, Deer Park Terminal Ship Dock No. 1 Barge Dock No. 1 Wharf, and Ship Dock No. 2	29°44'45"N., 95°05'40"W.	900	42	15	Receipt and shipment of petroleum products and petrochemicals	Paktank Corp.
Cargill, Houston Grain Elevator Dock	29°44'27"N., 95°06'49"W.	780	44-46	15	Shipment of grain	Cargill, Inc.
Cargill, Houston Grain Elevator Wharf	29°44'29"N., 95°06'52"W.	600	34	14	Receipt and shipment of fertilizer	Cargill, Inc., Fertilizer Division

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

(315) North of Bolivar Peninsula, spoil banks run along the southwest side of the channel and extend north to **Red Fish Bar**. About 1.5 miles below Red Fish Bar, a narrow channel marked at the entrance by a daybeacon exits Houston Ship Channel to the west, leading to Dickinson Bayou. Along the northeast side of Houston Ship Channel north of Red Fish Bar, there are dredged openings through the spoil bank, permitting passage into the northeast part of **Upper Galveston Bay**.

(316) Part of the spoil material from the dredging of Houston Ship Channel shows above water and forms a dike protection for the channel; for several miles south of Morgans Point this dike is relatively high and is known as **Atkinson Island**.

(317) From Morgans Point to Lynchburg, a distance of 8 miles, the ship channel is marked by numerous lighted ranges and other aids. Above Lynchburg, only a few lights mark bends in the channel to the area near **Galena Park**.

(318) A ferry operates across the Houston Ship Channel at Lynchburg. A high-level fixed highway bridge with a clearance of 175 feet is about 4.2 miles above the ferry crossing. A high-level fixed highway bridge with a clearance of 135 feet crosses the ship channel at Manchester. Overhead power cables near **Mitchell Bay**, **Carpenter Bayou** and Galena Park have clearances of 162 feet or higher.

(319)

Morgans Point to Baytown

(320) **Morgans Point**, 23 miles northwest of Bolivar Roads, marks the beginning of an extensive industrial area of oil refineries and other industrial plants lining the ship channel to Houston.

(321) A fixed highway bridge in the vicinity of Baytown Tunnel, about 2.5 miles above Morgans Point, has a clearance of 175 feet.

(322) **Baytown** is 4 miles above Morgans Point on the northeast side of the channel. It is the site of the ExxonMobil Baytown Complex which is one of the largest integrated and most technologically advanced refining and petrochemical complexes in the world. There is a deepwater wharf and two deep-draft piers with railroad and highway connections. The refinery here has the capability to process up to 584,00 barrels of crude oil per day. Petroleum products and petrochemicals are received and shipped and vessel are bunkered at these facilities.

(323) Pier 1 (29°43'28"N., 95°01'12"W.) is an 820-foot wharf with 1,350 feet of berthing space with dolphins; 40 feet alongside; deck height, 9 feet.

(324) Pier 2 (29°43'38"N., 95°01'18"W.) is 432 feet long with 810 feet of berthing space with dolphins on the east and west sides; 40 feet alongside; deck height, 9 feet.

(325) Pier 3 (29°43'41"N., 95°01'23"W.) is 402 feet long with 820 feet of berthing space with dolphins on the west side; 402-feet long with 810 feet of berthing space with dolphins on the east side; 40 feet alongside; deck height, 14 feet.

(326) An overhead power cable crosses the channel about 0.3 mile above the Baytown facilities and has a minimum clearance of 162 feet. The transmission towers are prominent.

(327)

ENC - US5TX57M
Chart - 11325

(328) **San Jacinto River** branches north from the ship channel at **Lynchburg Landing**, 8 miles above Morgans

(339)

Facilities at Greens Bayou, Texas

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Econ Rail Corporation Port of Houston Bulk Material Handling Plant Wharf	29°44'58"N., 95°09'56"W.	650	40	20	Shipment of dry bulk commodities: potash, petroleum coke, fertilizer, barite and ammonium sulfate	Port of Houston Authority/ Econo-Rail Corporation
Chevron Chemical Co. Houston Chemical Complex Terminal Berth Nos. 4, 5, 6, 8 and 9	29°44'35"N., 95°10'29"W.	3,020	22 - 35	8 to 13	Receipt of styrene and olefins; shipment of olefins	Chevron Chemical Co.
Phillips Chemical Co. Houston Chemical Complex Terminal Berth Nos. 8 and 9 Wharf	29°44'45"N., 95°10'38"W.	1,060	22 - 25	8 to 13	Mooring of vessels and barges for repair	Phillips Petroleum Co.
Armco, Houston Ship Wharf	29°44'46"N., 95°11'20"W.	1,080	40	12	Receipt and shipment of conventional cargo, roll-on/roll-off, and misc. dry bulk including iron ore and vermiculite	Armco Inc.; operated by Armco, Inc., d.b.a. Greens Port Industrial Park
Williams Energy Corp., Houston Terminal, Ship Dock No. 2	29°44'32"N., 95°11'59"W.	1,000	40	10	Receipt and shipment of petroleum products, acids, caustic soda, and other chemicals; bunkering vessels and loading barges at berth	Williams Energy Corp.
Williams Energy Corp., Houston Terminal, Ship Dock No. 1	29°44'32"N., 95°12'04"W.	800	42	17	• Receipt and shipment of petroleum products, acids, caustic soda, and other chemicals • Bunkering vessels at berth	Williams Energy Corp.

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

Point. It has a navigable depth of about 12 feet for about 5 miles, thence 5 to 6 feet to the Interstate Route 90 bridge on the Beaumont-Houston highway about 13.8 miles above the mouth. The overhead power cable near the river entrance at Lynchburg Landing has a clearance of 85 feet. Twin fixed highway bridges 1.8 miles above the mouth have clearances of 22 feet. The Missouri-Pacific Railroad bridge, 4.2 miles above the mouth has a fixed span with clearance of 22 feet.

(329) **Old River**, 8.4 miles above Morgans Point, leads northwest from the ship channel. The navigable depth in the channel is about 7 feet for 0.6 mile. CEMEX USA receives cement at a pier on the west side of the mouth of Old River. Depths of 42 feet are reported alongside. The facility has silo storage for 50,000 tons of cement and a ship unloader with a capacity of 850 tons per hour.

(330) **San Jacinto State Park**, on the south side of the channel 9 miles above Morgans Point. Landings are provided for small craft, and vessels should slow down to prevent wave wash and damage to boats. A monument 605 feet high is the most prominent object in the area. On its top is an occulting red light visible on clear nights from Galveston entrance. The U.S.S. TEXAS, historic battleship veteran of two World Wars, is moored permanently in a slip in the park area, just off the ship channel. A submerged breakwater extends across the entrance to the slip.

(331) An overhead power cable crossing the channel about 500 yards above the TEXAS has a clearance of 165 feet.

(332) Jacintoport Terminal Slip, about 0.7 mile above the U.S.S. TEXAS, is on the north side of the channel and extends west about 0.6 mile. A large deepwater basin is on the south side of the channel opposite the Jacintoport Terminal Slip entrance. Four deep-draft wharves are in the basin. There are chemical and liquid cargo handling wharves on the south side of the channel at the mouth of **Tucker Bayou** and at the mouth of **Patrick Bayou**.

(334) **Boggy Bayou Basin**, on the south side of the channel about 2 miles above Jacintoport Terminal slip, is the site of the Shell Deer Park Complex. On the south side of the basin are four 600-foot tanker berths with depths of 33 to 40 feet reported alongside. An 850-foot berth with depths of 41 feet alongside is just east of the mouth of the basin. All the berths have railway and highway connections, and fresh water is available. Crude oil petroleum products, petrochemicals and chemicals are received and shipped, and vessels can receive bunker fuels.

(335) A high-level fixed highway bridge with a clearance of 175 feet is about 0.9 mile above Boggy Bayou Basin.

(336) A deepwater basin on the north side of the river opposite Boggy Bayou Basin is the site of the Stolthaven Houston Terminal. The terminal operates both as a domestic bulk facility and as an international distribution hub. Products stored include chemicals, petroleum products and vegetable oils. The pier that extends from the head of the basin has 900 feet of berthing space on the east and west sides. The pier on the west side of the basin has 900 feet of berthing space. All the berths have depths of 42 feet alongside.

(337) On the south side of the channel, about 1 mile west of Boggy Bayou, is the Trecora Chemical facility wharf. The wharf has 850 feet of berthing space with platforms and a reported depth of 32 feet alongside. The INEOS Phenol Cumene Plant wharf, 0.3 mile west of the chemical facility wharf, has 750 feet of berthing space with dolphins and a reported depth of 42 feet alongside. Benzene is received and acetone, phenol, cumene and cumene heavies are shipped.

(338) **Greens Bayou** enters the main ship channel from north at a point 2.1 miles above Boggy Bayou. A dredged channel enters the bayou and leads upstream for about 1 mile. Above this point, the bayou is navigable for drafts of 8 to 10 feet for about 4 miles, thence drafts of 4 to 5 feet for another 5 miles. Two overhead power cables, with a least clearance of 70 feet cross the dredged channel near the head of the project. Above the dredged channel, the bayou is crossed by several bridges and overhead pipelines. There are shipyards, chemical plants and barge terminals on the bayou.

(340) **Hunting Bayou**, on the north side of the channel 1.9 miles west of Greens Bayou, is the site of liquid petroleum gas (Targa Resources) and crude oil (Magellan Midstream Partners) operations. There is no water and bunkering is not permitted at the Magellan Terminals.

(341) **Cotton Patch Bayou** is on the south side of the channel about 0.2 mile above Hunting Bayou. A marine repair plant has wharves with 12 to 30 feet alongside; floating drydocks to 2,678 tons and cranes to 110 tons are available.

(342) Close west of Cotton Patch Bayou is the site of the Kinder Morgan terminal wharf. The wharf has a 120-foot face, 750 feet of berthing space with dolphins, a deck height of 12 feet and a reported alongside depth of 38 feet. Petroleum products, petrochemicals and other bulk liquid commodities are handled on the wharf.

(343) **Washburn Tunnel** crosses under the ship channel from Galena Park to Pasadena about 0.9 mile above Hunting Bayou. Both Galena Park and Pasadena have large petrochemical industries.

(344) The Chevron petroleum complex, with wharves on the south side of the ship channel close east of the tunnel, ships and receives crude oil and refined products. The wharves are in line, providing 950 feet of berthing space with dolphins and reported depths of 39 feet alongside. The complex includes a refinery and tank farm with a storage capacity of 5.1 million barrels of crude oil.

(345) About 1.5 miles above Hunting Bayou, on the north side of the ship channel, is the Kinder Morgan terminal and wharves. Wharf No. 1 has a 120-foot face, 600 feet of berthing space with dolphins, a deck height of 14 feet and 36 feet reported alongside. Wharf No. 2, 0.4 mile west of Wharf No. 1, has a 140-foot face, 700 feet of berthing space with dolphins, a deck height of 19 feet and 39 feet reported alongside. One barge wharf is between wharves No. 1 and No. 2. Storage tanks with 1-million-barrel capacity are at the plant. Petroleum products, chemicals, petrochemicals, vegetable oils and other bulk liquids are handled, and vessels are bunkered.

(346) Overhead power cables crossing the ship channel just east and west of Wharf No. 1 at the Kinder Morgan terminal have clearances of 165 feet and 185 feet, respectively.

(347) The LyondellBasell, Houston Refinery and wharves are on the south side of the ship channel about 0.5 mile above the Kinder Morgan terminal wharves. Dock B has berthing space with dolphins for 800-foot vessels, 40 feet reported alongside, and a deck height of 16 feet. Dock C has 750 feet of berthing space with dolphins, 38 feet reported alongside, and a deck height of 14 feet. Storage tanks at the facility have a capacity of 7.3 million barrels. Petroleum products and petrochemicals are received and shipped, and crude oil is received.

(348) Kinder Morgan, Galena Park Terminal Wharf is on the north side of the ship channel opposite the LyondellBasell Refinery. The wharf has a 76-foot face, 700 feet of berthing space with dolphins; 34 to 36 feet alongside; deck height, 17 feet; receipt and shipment of bulk liquids. Just west of the Kinder Morgan, Galena Park Terminal is the Ardent Mills, Galena Park Mill berth with a 6.3 million-bushel grain elevator. The elevator is one of the most prominent landmarks on the Houston Ship Channel. The berth provides 900 feet of berthing space with dolphins and 39 feet reported alongside. Three spouts can load vessels at 120,000 bushels per hour.

(349) **Sims Bayou Turning Basin** is off the south side of the ship channel close east of Sims Bayou. (See Notice to Mariners and latest edition of the chart for controlling depth.) Texas Petrochemicals Corps., Docks A and B are on the west side of Sims Bayou Turning Basin. Dock A has 500 feet of berthing space with dolphins and 32 feet reported alongside. Dock B has 700 feet of berthing space with dolphins and 38 feet reported alongside. Deck heights are 14 feet. Pipelines extend from docks to storage tanks with a total capacity of 23.8 million gallons; receipt and shipment of petrochemicals.

(350) **Sims Bayou** enters Houston Ship Channel about 2.7 miles above Hunting Bayou. The Harris County Houston Ship Channel Terminal railroad bridge crossing the bayou about 0.8 mile above the mouth has a 26-foot fixed span with a clearance of 18 feet. An overhead power cable crossing at the bridge has a clearance of 46 feet. A shell-handling wharf is on the north side just below the bridge. Between the bridge and the shell-handling wharf, several sunken shell barges are reported to block the bayou and prevent navigation above this point.

(351) United States Gypsum Company plant and wharf are on the north side of the ship channel opposite the entrance to Sims Bayou. The wharf has 600 feet of berthing space with dolphins and 28 feet reported alongside. Gypsum rock is received from self-unloading vessels.

(352) Manchester Terminal Corp. Wharf, on the south side of the ship channel, is close west of the mouth of Sims Bayou. The terminal is one of the largest privately operated general cargo terminals on the Houston Ship Channel. The terminal wharf is 1,520 feet long with depths of 34 feet reported alongside. The terminal has four storage warehouse buildings and 49 acres open storage, cranes up to 185 tons and railway and highway connections. Conventional and containerized general cargo in foreign and domestic trade are handled.

(353) Close west of the Manchester Terminal Corp. Wharf is the Valero refining complex. The wharf here has a 152-foot face with 600 feet of berthing space with dolphins and 34 feet alongside. Several barge wharves are adjacent

to the ship wharf. Crude oil, petroleum products and methanol are handled.

(354) Arrow Terminals, Galena Park Dock, on the north side of the ship channel opposite the Manchester Terminal Corp. Wharf, has 1,200 feet of berthing space; 12 feet alongside; receipt and shipment of dry bulk materials, including crushed stone and ferroalloys, by barge.

(355) A **Coast Guard Port Safety Station** is on the north side of the ship channel in about 29°43'41"N., 95°15'26"W. The area on the north side of the channel in the vicinity of the Coast Guard wharf is foul.

(356) Port of Houston, Manchester Terminal is on the south side of the ship channel about 1.3 miles above Sims Bayou. There are two deep water docks totaling 3,200 feet of berthing space with reported depths of 32 feet alongside. There is one 2-ton hydraulic crane and one electric traveling gantry shiploader with a belt conveyor and spout with a loading rate of 24,500 bushels per hour. The wharf has a grain elevator with 52 storage silos and 49 bins with a total capacity of 2.6 million bushels; storage for 6.4 million gallons of petrochemicals and natural latex, 19 million gallons of molasses, 2.7 million gallons of chemicals and 3.1 million gallons of caustic soda.

(357) A high-level fixed highway bridge with a clearance of 135 feet crosses the ship channel at Manchester, about 1.4 miles above Sims Bayou.

(358) **Harrisburg**, about 2 miles below the Houston Turning Basin, comprises the industrial section of the city of Houston. **Harrisburg Bend**, a dredged channel around **Brady Island**, has unloading rigs for sand and shell, boat repair yards and other facilities. Cypress Street Bridge to Brady Island over the bend, 0.2 mile south of Brays Bayou, has a fixed span with a clearance of 7 feet. Overhead power cables with clearances of 50 and 67 feet cross the bend immediately south and 150 yards south, respectively, of the bridge.

(359) Shipyards on Brady Island and on Harrisburg Bend have marine ways that can handle vessels up to 300 feet long, 600 feet wide and 22-foot drafts. General repairs are made on all types of vessels, but the yards specialize in work on towboats, barges and other small commercial craft. Machine shops are nearby.

(360) **Brays Bayou** branches off the west entrance to Harrisburg Bend. A highway bridge just above the bayou mouth has a fixed span with a clearance of 23 feet. Three highway and two railroad bridges crossing the bayou above the first bridge have fixed spans with minimum channel widths of 31 feet and clearances of 12 feet. Overhead power cables crossing the bayou have a minimum clearance of 23 feet.

(361) **Buffalo Bayou**, above the Houston Turning Basin, is frequently used by barge traffic. The principal commodities handled on the bayou are shell, petroleum, clay, steel products, cotton, sand and gravel. The channel through the bayou is crossed by several bridges, all of which are fixed with the exception of two swing bridges. The minimum clearance for the swing bridges is 25 feet. The minimum clearances for the fixed bridges are 27 feet to the Main Street bridge and 9 feet to the Franklin Avenue bridge. (See **33 CFR 117.1** through **117.59** and **117.955**, chapter 2, for drawbridge regulations.) Several overhead pipeline and telephone/power cables cross the bayou with a minimum clearance of 46 feet.

(362) **Houston**, the largest city in Texas, is at the head of Houston Ship Channel 22 miles above Galveston Bay and 44 miles from Galveston Entrance to the Gulf. The city is the principal distribution point for Texas and one of the main distribution points for the west and southwest United States. It also has a large medical center with 16 participating institutions and medical organizations.

(363) **Port of Houston** lies within Harris County and is one of the largest ports in the United States in total tonnage handled. The port extends along Houston Ship Channel from the turning basin at the head of the channel to Morgans Point and takes in Harrisburg, Manchester, Clinton Park, Galena Park, Pasadena, Lynchburg and Baytown. The port also includes Buffalo Bayou, Sims Bayou, Hunting Bayou, Greens Bayou, Boggy Bayou, Goose Creek, Cedar Bayou, Barbours Cut and the new industrial development and port facilities at Bayport on Galveston Bay near Red Bluff.

(364) Principal cargoes imported include petroleum and petroleum products, iron and steel, crude fertilizers and minerals, organic chemicals, wood and articles of wood. Principal cargoes exported include petroleum and petroleum products, organic chemicals, cereals and cereal products, plastics, animal or vegetable fats and oils.

(365) There are one public and four privately owned grain elevators in the port with capacities of up to 8½ million bushels. In addition, the port has numerous petroleum, petrochemical and fertilizer plants, shipyards and steel mills.

(366)

Anchorages

(367) Vessels are prohibited from anchoring in the Houston Ship Channel or turning basin except in case of emergency, in which circumstances they shall anchor as near as possible to the channel edge or turning basin so as not to interfere with free navigation or obstruct the approach to any pier.

(368)

Security Zones

(369) The Captain of the Port (COTP) Houston-Galveston has established a Security Zone in Houston including Houston Ship Channel and all associated turning basins. (See **33 CFR 165.30** through **165.33** and **165.814**, chapter 2, for limits and regulations.) Unauthorized vessels/persons are excluded from the areas without express permission of the COTP.

(370)

Weather

(371) The climate of Houston is predominantly marine. The terrain includes numerous small streams and bayous,

(396)

Facilities at Houston, Texas

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
North Side Houston Ship Channel						
Public Wharf No. 32	29°43'35"N., 95°15'53"W.	806	38	16	Receipt and shipment of general cargo, steel, roll-on/roll-off & dry bulk	Port of Houston Authority
Public Wharves Nos. 30 and 31	29°43'32"N., 95°16'06"W.	1,176	38	15	Receipt and shipment of general cargo, automobiles, steel, and project cargo	Port of Houston Authority
Public Wharf No. 29	29°43'35"N., 95°16'17"W.	600	38	15	Receipt and shipment of general and containerized cargo, automobiles	Port of Houston Authority
Public Wharves Nos. 27 and 28	29°43'39"N., 95°16'24"W.	1,200	38	15	Receipt and shipment of general and containerized cargo, automobiles	Port of Houston Authority
Public Wharf No. 26	29°43'48"N., 95°16'31"W.	600	38	15	Receipt and shipment of conventional and containerized cargo, roll-on/ roll-off, and automobiles	Port of Houston Authority
Public Wharves Nos. 24 and 25	29°43'56"N., 95°16'32"W.	1,200	38	14½	Receipt and shipment of conventional, containerized cargo, misc.dry bulk	Port of Houston Authority
Public Wharf No. 23	29°44'05"N., 95°16'36"W.	600	38	14½	Receipt and shipment of conventional, containerized cargo, misc.dry bulk	Port of Houston Authority
Public Wharves Nos. 21 and 22	29°44'12"N., 95°16'38"W.	1,200	38	14½	Receipt and shipment of conventional, containerized cargo, misc.dry bulk	Port of Houston Authority
Public Wharf No. 20	29°44'21"N., 95°16'45"W.	593	38	14½	Receipt and shipment of conventional, containerized cargo, misc.dry bulk	Port of Houston Authority
Public Wharves Nos. 18 and 19	29°44'27"N., 95°16'49"W.	1,177	38	14½	Receipt and shipment of conventional, containerized cargo	Port of Houston Authority
Public Wharf No. 17	29°44'34"N., 95°16'35"W.	600	38	14½	Receipt and shipment of conventional, containerized cargo	Port of Houston Authority
Public Wharf No. 16	29°44'39"N., 95°17'00"W.	554	38	14	Receipt and shipment of conventional, containerized cargo	Port of Houston Authority
Public Wharf No. 15	29°44'44"N., 95°17'04"W.	526	34	14	Mooring vessels	Port of Houston Authority
Public Wharf No. 14	29°44'49"N., 95°17'07"W.	480	34	15½	Mooring vessels	Port of Houston Authority
East Side of Turning Basin						
Public Wharves Nos. 12 and 13	29°45'04"N., 95°17'24"W.	990	33	14½	Mooring vessels	Port of Houston Authority
Public Wharf No. 11	29°45'00"N., 95°17'13"W.	530	33	14½	Receipt and shipment of general cargo and cotton	Port of Houston Authority
Public Wharf No. 10	29°45'00"N., 95°17'13"W.	700	33	14	Receipt and shipment of general cargo	Port of Houston Authority
West Side of Turning Basin						
Public Wharf No. 9	29°45'05"N., 95°17'26"W.	555	34	18	Receipt and shipment of conventional, containerized cargo	Port of Houston Authority
Public Wharf No. 8	29°44'59"N., 95°17'27"W.	624	38	18	Receipt and shipment of conventional, containerized cargo	Port of Houston Authority
South Side of Turning Basin						
Public Wharf No. 4	29°44'53"N., 95°17'27"W.	779	27	8	Mooring of vessels for repair; transient mooring for tugs and towboats	Port of Houston Authority
Public Wharf No. 3	29°44'54"N., 95°17'18"W.	800	33	8	Transient mooring for tugs, towboats and vessels	Port of Houston Authority
South Side Houston Ship Channel						
Public Wharf No. 2	29°44'50"N., 95°17'12"W.	519	33	11½	Receipt and shipment of tallow	Port of Houston Authority/Jacob Stern & Sons, Inc.
Public Wharf No. 1-W	29°44'46"N., 95°17'09"W.	601	34	13	Receipt and shipment of tallow	Port of Houston Authority/Jacob Stern & Sons, Inc.

Facilities at Houston, Texas

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Public Wharf No. 1-E	29°44'42"N., 95°17'08"W.	750	34	13	Receipt of molasses and liquid fertilizer; shipment of tallow and vegetable oils	Port of Houston Authority/PM Ag Products/Jacob Stern & Sons
PM Ag Products, Houston Wharf	29°44'35"N., 95°17'02"W.	600	28	15½	Receipt of liquid fertilizer, caustic soda and molasses; shipment of vegetable oils	PM Ag Products, Inc.
Public Wharves Nos. 41 through 48	29°44'30"N., 95°16'58"W.	3,426	31	13	Mooring vessels	Port of Houston Authority and U.S. Maritime Administration
Texas Stevedores New Terminal Wharf Berth Nos. 1 and 2	29°43'56"N., 95°16'40"W.	830	32	18	Shipment of conventional and containerized general cargo, and misc. dry bulk	Dekaizer, Inc./Texas Stevedores, Inc.

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

which together with the nearness to Galveston Bay favor the development of both ground and advective fogs. Prevailing winds are from the southeast and south, except in January, when frequent passages of high-pressure areas bring invasions of polar air on prevailing north winds.

(372) Temperatures are moderated by the influence of winds from the Gulf, which results in mild winters and, on the whole, relatively cool summer nights. Another effect of the nearness of the Gulf is abundant rainfall, except for rare extended dry periods. Polar air penetrates the area frequently enough to provide stimulating variability in the weather.

(373) The annual average temperature at Houston is 68.9°F with an average maximum of 79.2°F and an average minimum of 58.2°F. The temperature can be expected to surpass 90°F an average of 97 days each year and fall below freezing only 19 days each year. The warmest temperature on record at Houston is 107°F, recorded in August 1980, and the coolest temperature on record is 7°F, recorded in December 1989. Each month June through September has recorded temperatures in excess of 100°F while each month October through April has recorded temperatures below freezing.

(374) Monthly rainfall is evenly distributed throughout the year. In past years about 75 percent of the total precipitation has been between 30 and 60 inches and the annual average is 47.89 inches. May is the wettest month averaging 5.58 inches and February is the driest averaging 2.92 inches. Since thundershowers are the main source of rainfall, precipitation may vary substantially in different sections of the city on a day-to-day basis. Thunderstorms may occur in any month however; the peak months are June through August. An average of 65 thunderstorms occur each year.

(375) Records of sky cover for daylight hours indicate about one-fourth of the days per year as clear with maximum of clear days in October. Cloudy days are relatively frequent from November to May, and partly cloudy days are more frequent from June through September.

(376) Snow rarely occurs; however, on February 14–15, 1895, 20 inches of unmelted snow was measured.

(377) Heavy fog occurs on an average of 16 days a year, and light fog occurs about 62 days a year in the city, but the frequency of heavy fog is considerably higher at William P. Hobby Airport.

(378) Destructive windstorms are fairly infrequent, but both thundersqualls and tropical storms occasionally pass through the area. Since 1950, 15 tropical systems have approached Houston; none were severe.

(379) The National Weather Service maintains an office at the Houston International Airport; **barometers** may be compared there or by telephone. (See Appendix A for address.)

(380)

Pilotage, Houston

(381) See Pilotage, Galveston Bay (indexed as such) this chapter.

(382)

Towage

(383) Tugs up to 4,200 hp are available at Houston.

(384)

Quarantine, customs, immigration and agricultural quarantine

(385) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(386) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) Houston has many private hospitals.

(387) Houston is a **customs port of entry.**

(388)

Coast Guard

(389) A **Sector Office** is in Houston—see Appendix A for address. **Houston Coast Guard Air Station** is at Ellington Field Joint Reserve Base.

(390)

Harbor regulations

(391) The Port of Houston is managed, governed and controlled by the **Port of Houston Authority.** The regulations are enforced by the **Director of the Port**

whose offices are at 111 East Loop North—telephone 713–670–2400. See **33 CFR 162.75 (b)(4)**, chapter 2, for **speed limit** in the harbor. Smoking is prohibited on any wharf except in designated smoking areas and is also prohibited on the open decks or in the hatches of any vessel in the harbor. These regulations are strictly enforced.

(392)

Wharves

(393) Houston has over 200 piers and wharves. Only the deep-draft facilities at Houston are listed in the facilities table. The alongside depths for the facilities listed are reported; for information on the latest depths contact the operator. Unless otherwise mentioned, all the facilities are owned and operated by the Port of Houston Authority. Most of the piers and wharves have water and electrical shore power connections and highway and railroad connections.

(394) General cargo at the port is usually handled by ship's tackle; special handling equipment, if available, is mentioned in the description of the particular facility.

(395) About 200 acres of open storage area, over 9 million square feet of covered storage, and 2½ million cubic feet of cooler and freezer space are available in the port. Mobile cranes up to 300 tons and a floating derrick with a capacity of 800 tons are available at the port. The Port of Houston Authority operates two 40-ton traveling container cranes and four 300-ton mobile cranes available for use at Public Wharves Nos. 23 through 31.

(397)

Supplies

(398) All types of marine supplies and services are available at Houston. Fresh water is available at all the wharves and piers. Vessels can receive bunker fuels at many of the oil companies wharves or by oil barges.

(399) Small-craft supplies and services are available at Houston.

(400)

Repairs

(401) A shipyard adjacent to Greens Bayou has a floating drydock with a lifting capacity of 9,000 tons. The drydock is 488 feet long on the keel blocks and 101 feet wide and has a depth of 10 feet over the keel blocks. Houston has machine shops, foundries and other repair facilities that can handle most above- and below-waterline repairs.

(402)

Communications

(403) The Houston Belt & Terminal Railway Co. and the Port Terminal Railroad Association serve the majority of the waterfront facilities and connect with the six trunk line railroads serving the port and city. Over 100 steamship lines offer cargo service from Houston to world ports, and some 90 tanker operators serve the port.

(404) Millions of tons of cargo are moved annually in the coastwise service through the Port of Houston via the Intracoastal Waterway by common carrier barge lines, 20 specialized cargo and many private barge operators. There are over 30 major motor freight carriers and numerous specialized truck lines. Bus lines operate from two terminals, and there is local bus service.

(405) Several airlines provide passenger, freight and mail service, and one carrier handles only air cargo from George Bush Intercontinental Airport.

(406)

ENCs - US4TX52M, US3GC02M
Charts - 11323, 11330

(407) From Galveston Entrance to San Luis Pass, a distance of 27 miles, the Gulf coast trends in a general southwest by west direction. The southwest end of Galveston Island is low and sandy, with no conspicuous natural marks. Except in the vicinity of the Galveston Entrance, the coast has fairly uniform depth with few outlying dangers and can be approached to within about 3 miles by deep-draft vessels.

(408)

ENCs - US5TX53M, US5TX51M, US4TX52M
Charts - 11324, 11322, 11323

(409) **West Bay** is a shallow body of water that extends 16 miles southwest from the southwest part of Galveston Bay, between Galveston Island and the mainland. The bay proper is of no commercial importance.

(410) The Intracoastal Waterway crosses the east end of West Bay between **North Deer Island** and **Tiki Island**. Tiki Island is a developed resort with several channels and lagoons on the north and south sides of the island. In 1998, a least depth of 4½ feet was reported in the channel around the island. A bridge connecting Tiki Island with the mainland, crossing the channel at the east end of the island, has a clearance of 14 feet. An overhead power cable crosses the channel just north of the bridge and has a clearance of 37 feet.

(411) **Offatts Bayou** extends from off the south side of West Bay to the southwest limits of Galveston. The entrance channel leaves the Intracoastal Waterway about 0.3 mile west of the causeway and leads close around **Teichman Point**. Off the point the channel divides, one channel leading to the Galveston Airport and the other into the bayou. The channels are marked by daybeacons. The bayou is frequented by small pleasure and fishing boats and some commercial traffic out of Galveston. A yacht club is on the south side of the bayou. Several commercial bait camps are around the bayou, and a city park is on the south shore.

(412) A boatyard at Teichman Point has a 1,000-ton marine railway that can handle 125-foot vessels for hull, engine and electronic repairs. A marina in Offats Bayou has moorings for transients, electricity, water, ice and a launching ramp. Hull repairs can be made. A fill for 61st Street, Galveston, crosses the bayou near its head. An opening in the fill provides a passage for small boats to a small lagoon east of 61st Street. A fixed bridge with a

horizontal clearance of 38 feet and a vertical clearance of 9 feet crosses the opening. An overhead power cable with a clearance of 43 feet is on the west side of the bridge.

(413) **Chocolate Bay** extends about 2.5 miles northwest from the west end of West Bay to the mouth of **Chocolate Bayou**. The Intracoastal Waterway crosses the mouth of Chocolate Bay. A barge assembly basin with mooring buoys is on the south side of the Intracoastal Waterway on the north side of Alligator Point, the east entrance point to Chocolate Bay; depths of about 16 feet are reported in the basin. The basin is intended only for temporary mooring of barges.

(414) A dredged channel, entered through two connecting channels and marked by buoys, daybeacons, lights and lighted ranges, leads north from the Intracoastal Waterway to the Monsanto Chemical Co. plant basin on Chocolate Bayou, 7.3 miles above the Intracoastal Waterway. It was reported that shell barges and pleasure craft navigate the natural channel in the bayou above the Monsanto basin to a highway bridge near the town of **Liverpool**, 13 miles above the Intracoastal Waterway. There are shell-handling wharves at and just below **Snug Harbor**, about 1.6 miles below the highway bridge.

(415)

Structures across Chocolate Bayou

Name and Description	Location	Clearances (feet) Horizontal	Vertical (MHW)
Overhead power cable	29°12'43"N., 95°12'24"W.		81
Texas County Highway 2004 Bridge (fixed)	29°12'44"N., 95°12'27"W.	181	50
Overhead power cable	29°15'10"N., 95°14'00"W.		N/A
Overhead power cables	29°15'50"N., 95°13'50"W.		50
Overhead power cable	29°16'34"N., 95°14'55"W.		50
Texas County Highway 171 Bridge (fixed)	29°18'10"N., 95°15'59"W.	60	20

(416) Chocolate Bayou is used mostly by small pleasure craft. Most of the land on both sides has been developed into resort homes. The water is brackish to fresh in the upper reaches and is pumped from the bayou into nearby rice fields. Depths in the bayou are reported to average 8 feet or more but are greatly affected by winds and are considerably less with north winds, which prevail during the winter months. During hurricanes, the bayou is reported to afford protection from waves and wind, but some danger still exists from heavy rain runoff. There are marinas and yacht basins on the bayou above the chemical plant.

(417) The principal commodities carried by barge on the bayou are shell, petroleum products and industrial chemicals.

(418) **Scholes Field**, the airport for Galveston, is on the south side of the entrance to Offatts Bayou. The red and white checkered water tank is prominent.

(419) **Bermuda Beach** and **Palm Beach** are summer resorts on the Gulf shore about 5 and 6.5 miles southwest of Scholes Field. The homes along the Gulf shore on the west half of Galveston Island are all raised on piles and are very distinctive.

(420) **Pirates Cove** and **Jamaica Beach** are resorts about 5.7 and 8 miles, respectively, southwest of Scholes Field on the bay side. Numerous canals have been dredged to private waterfront homes. Privately dredged and marked channels lead to these resorts from West Bay. The reported controlling depth in the Pirates Cove channel was 4 feet in 1999. A marina at Pirates Cove can provide limited berths, gasoline, water, ice, a launching ramp and winter dry storage. The channel to Jamaica Beach had a reported controlling depth of 3 feet in 1982. Jamaica Beach is the site of the Karankawa Indian burial ground.

(421) **Sea Isle** is a resort about 5.5 miles east of San Luis Pass. A privately dredged entrance channel, with a reported controlling depth of 3 feet in 1999, leads south from the bay to three boat slips or lagoons. The entrance channel is marked by a private lighted entrance range and other aids. The ruins of a 3,000-foot pier are east of the entrance channel.

(422) **Bay Harbor** is a resort about 4 miles east of San Luis Pass. A privately dredged channel, with a reported controlling depth of 3 feet in 1982, leads south to a boat basin on the north shore of the island. A privately lighted entrance range and daybeacons mark the entrance channel.

(423) **San Luis Pass**, an unmarked channel 0.2 mile wide, leads northwest from the Gulf and passes between the shoals south from Galveston Island and east from **San Luis Island**. In 1981, the pass had a reported controlling depth of ½ foot. It is not recommended for strangers. Fishermen acquainted with the pass may sometimes be hired to pilot vessels, but the shoal waters of West Bay and **Christmas Bay** limit passage to lightdraft craft.

(424) A fixed highway bridge and causeway across San Luis Pass connects Galveston Island with San Luis Island; clearance is 29 feet.

(425) Off the northeast side of San Luis Island are depths up to 22 feet; this deeper area offers protected anchorage for small craft, but the bottom is hard sand. The best anchorage is in **Cold Pass** on the west side of San Luis Island. A campground is on San Luis Island about 0.4 mile northwest of the highway bridge.

(426) A depth of 5 feet can be carried from San Luis Pass to the west side of San Luis Island, thence south in Cold Pass to **Moodys Island** and west and northwest into Christmas Bay; a draft of 4 feet can then be taken to and through **Bastrop Bay**. Privately maintained aids mark the channel from the west end of Cold Pass to **Christmas Point**, and a privately marked channel crosses Bastrop Bay and joins the Intracoastal Waterway.

(427) A channel has been dredged in **Bastrop Bayou** by private interests from the Intracoastal Waterway, Mile 382.2W, to the fixed highway bridge at Mims, TX, Landcuts eliminate the bends in the bayou and bypass

Cox Lake. In 2006, the reported controlling depth was about 2 feet. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.Total length of the channel from the Intracoastal Waterway to the fixed highway bridge is about 4.7 miles; the bridge has a clearance of 45 feet. Small-craft facilities are available at various fishing camps along the Bastrop Bayou Channel.

(428) A channel between Bastrop Bay and **Mud Island** connects Christmas Bay and West Bay; formerly a section of the Intracoastal Waterway, this channel has been abandoned and is no longer maintained. A shallow dredged channel from the south end of Christmas Bay leads into and through **Drum Bay** and thence southwest to a connection with the Intracoastal Waterway. This channel is used by small fishing craft with drafts of 1 to 2 feet.

Chart Coverage in Coast Pilot 5—Chapter 11
NOAA's Online Interactive Chart Catalog has complete chart coverage
http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml
96°W
95°30'W
95°W
29°30'N
97°30'W
97°W
96°30'W
T E X A S
29°N
SAN LUIS PASS
Freeport
Matagorda
Port Lavaca
MATAGORDA BAY
28°30' N
MATAGORDA SHIP CHANNEL
SAN ANTONIO BAY
28°N
11311
ARANSAS PASS
Corpus Christi
Port Aransas
11309
27°30'N
11308
BAFFIN BAY
G U L F O F M E X I C O
27°N
LAGUNA MADRE
Port Mansfield
26°30'N
11303
Port Isabel
BRAZOS SANTIAGO PASS
11302
26°N
Brownsville
11301
M E X I C O

San Luis Pass to the Rio Grande

(1) This chapter describes the Texas Gulf Coast from San Luis Pass to the Rio Grande, a distance of about 238 miles, and Matagorda, Tres Palacios, Lavaca, Aransas and Corpus Christi Bays and their tributaries. Also discussed are the deepwater ports of Freeport, Point Comfort, Corpus Christi and Brownsville and many of the smaller barge ports.

(2)

COLREGS Demarcation Lines

(3) The lines established for this part of the coast are described in **33 CFR 80.845** and **80.850**, chapter 2.

(4)

ENCs - US3GC01M, US3GC02M
Charts - 11300, 11330

(5) From San Luis Pass to the entrance to Matagorda Bay at Pass Cavallo, the coast trends for 80 miles in a general southwest by west direction. From Pass Cavallo it curves gently southwest for 100 miles to latitude 27°N., where the trend is south; thence it curves gently a little east of south for 58 miles to the mouth of the Rio Grande. Throughout its whole distance the coast encloses a chain of shallow bays or lagoons, some of considerable size. These are separated from the Gulf by long, narrow islands and peninsulas that are generally low and sandy, with few natural distinguishing marks. Some of the bays and lagoons may be entered from the Gulf through dredged passes protected by jetties and others through small passes partly obscured by bars with little depth on them.

(6)

Shipping safety fairways and fairway anchorages

(7) A system of shipping safety fairways has been established along the Gulf Coast to provide safe lanes for shipping that are free of oil-well structures. Vessels approaching the passes and entrances to ports or bound along the Gulf Coast between San Luis Pass and Brazos Santiago Pass should proceed in the charted shipping safety fairways. Caution should be exercised when approaching or navigating in these fairways as they are unmarked.

(8) **Fairway Anchorages** have been established off some of the entrances to the ports, which will be generally free of oil-well structures. (See **33 CFR 166.100** through **166.200**, chapter 2, for regulations governing the **fairways** and **anchorages**.)

(9)

Dangers

(10) The coast has fairly uniform depths with few outlying dangers except in the vicinity of the passes and off the mouths of the San Bernard and Brazos River where shoaling to 10 feet is reported as far as 3/4 mile offshore; otherwise, vessels of a 40-foot draft can approach to within 6 miles of the shore. Other reported dangers are about 20 miles southwest of the entrance to the Brazos River and consist of occasional ridges of soft mud having as little as 4 fathoms over them, with general surrounding depths of 5 to 5½ fathoms. Oil wells may be encountered offshore, especially in the vicinity of Freeport Harbor. Mariners are cautioned to give them a wide berth especially when drilling operations are in progress.

(11)

Caution

(12) Hurricanes have caused considerable damage in the Gulf Coast area. Mariners are advised to exercise extreme caution as depths may vary from those charted and mentioned in the Coast Pilot. In addition, several hurricanes have created many new cuts or passes through the beachbarrier islands. Many of these cuts were reported in the stretch of beach extending north from about 6 miles north of Port Mansfield Channel for a distance of 20 miles. These openings in the beach should not be used for navigation.

(13)

Currents

(14) Along the west side of the Gulf of Mexico between Tampico and Corpus Christi is a north flow which in the vicinity of the 100-fathom curve off the mouth of the Rio Grande has an average velocity of nearly 0.5 knot.

(15) Strong currents caused by winds would be expected to set somewhat to the right of the wind direction or, near the coast, in a direction parallel to the shoreline, current velocities of 0.5 to 1 knot being produced by wind velocities of 20 to 40 miles per hour.

(16) However, it has been reported that at times strong currents set west toward the coast and the possibility of being carried inshore by such currents should be guarded against. The grounding of a vessel at a location 9 miles southwest of Aransas Pass was reported caused by strong west currents that accompanied winds from the north and northeast.

(17)

Weather

(18) The climate of the coast from San Luis Pass to the Rio Grande is the product of the combined effects of the

(23)

METEOROLOGICAL TABLE – COASTAL AREA OFF CORPUS CHRISTI, TEXAS
Between 26°N to 29°N and 95°W to 98°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	1.6	2.0	0.8	0.4	0.3	0.1	0.0	0.1	0.6	0.8	1.5	1.5	0.7
Wave Height > 9 feet [1]	3.8	4.2	2.7	1.8	1.0	0.7	0.4	0.1	1.1	1.8	3.8	4.2	1.9
Visibility < 2 nautical miles [1]	4.3	2.4	3.5	3.3	1.1	0.6	0.3	0.2	0.5	0.3	0.8	1.9	1.5
Precipitation [1]	6.1	4.4	2.8	2.3	2.3	2.6	1.5	3.0	3.9	2.4	3.2	5.7	3.3
Temperature > 69° F	20.0	22.0	30.0	69.8	95.9	99.9	100.0	100.0	99.4	91.1	64.6	34.7	72.5
Mean Temperature (°F)	62.4	64.7	67.3	72.1	77.1	82.2	83.6	83.7	82.3	77.2	71.1	65.7	74.9
Temperature < 33° F [1]	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean RH (%)	80	78	81	83	84	81	79	79	77	75	78	78	79
Overcast or Obscured [1]	42.5	32.3	35.4	27.6	17.5	8.3	6.2	8.5	11.8	12.3	24.8	35.7	20.6
Mean Cloud Cover (8^{ths})	5.5	4.8	5.1	4.8	4.3	3.6	3.5	3.9	4.0	3.7	4.5	5.2	4.3
Mean SLP (mbs)	1020	1018	1016	1014	1013	1014	1016	1015	1014	1017	1018	1019	1016
Ext. Max. SLP (mbs)	1040	1041	1036	1034	1031	1027	1025	1029	1027	1033	1041	1040	1041
Ext. Min. SLP (mbs)	999	1000	990	991	990	1001	1001	1001	992	997	994	998	990
Prevailing Wind Direction	N	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	N	SE
Thunder and Lightning [1]	0.8	0.6	0.8	1.1	2.3	2.1	1.2	2.4	2.8	1.1	1.6	1.0	1.5

[1] Percentage Frequency

humid subtropical region to northeast, the semi-arid area to west and southwest and the warm, moist, moderating influences of the Gulf of Mexico. The maritime flow predominates, modifying the humidity and temperatures and decreasing the range of extremes. As a result, the few continental cold fronts reaching this coast are seldom severe. Winters are usually mild, and temperatures rarely drop below freezing in coastal waters. Inland, freezes occur on about 4 to 8 days annually. Spring is characterized by mild, brisk days with frequent showers. There is little change in the day-to-day weather of summer, except for an occasional rain shower or possibly a thunderstorm. Tropical cyclones are a threat from late May into early November. The early fall is an extension of summer, while November is a transition to winter with its greater temperature ranges, stronger winds and first occurrences of "northers."

(19) While the frequency of north winds increases in winter because of the southerly latitude, southeasterlies remain predominant. However, northerlies and northeasterlies are responsible for most of the windspeeds over 20 knots. At times during the winter, an atmospheric wave will develop along a stationary front off the coast. This is usually associated with the remnants of a polar high. These waves may intensify and head northeast. They can develop into strong extratropical storms, known as "Texas Lows." Offshore, gales blow 1 to 2 percent of the time, and seas of 8 feet or more occur 10 to 15 percent of the time from November through March. Seas of 20 feet or more, while not frequent, do occur occasionally during winter.

(20) Another winter navigational hazard is fog, which is reported 2 to 7 percent of the time in open waters from December through April. Visibilities fall below 0.5 mile about 1 to 3 percent of the time. Fog is most likely with winds out of the east through south.

(21) During the warmer months, the Bermuda High increases in strength and generates a persistent southeasterly flow, which produces an almost monotonous summer period interrupted only occasionally by a rain shower or tropical cyclone. Windspeeds drop, on average, during the summer, although annual extremes are likely to occur if there is hurricane activity. On average, an 85-knot wind is likely once in 10 years, while a 105-knot wind blows once every 50 years.

(22) While the hurricane season lasts from late May into early November, tropical cyclones are most likely during August and September along this coast. Since 1900, some 45 tropical cyclones have affected this area; 35 of these have generated hurricane-force winds. A hurricane can be expected about every 3 years, on average. Many of the hurricanes that strike this area are devastating. Between 1875 and 1900, three hurricanes generated tides that nearly destroyed Indianola and Brownsville. Since 1900, twenty severe hurricanes have hit this area. From Freeport to Brownsville, they have generated tides of 10 to 17 feet and wind gusts to 175 mph. During the September 1919 hurricane, some 300 to 600 people lost their lives in Corpus Christi as tides rose to 16 feet. In August 1945, the Matagorda Bay area was devastated as 135-mph winds were reported at Port Lavaca, while 153-mph gusts were measured on the anemometer of the Bauer Dredging Co. before the instrument failed. Beulah generated 18-foot tides on Padre Island in September 1967, while Celia in August 1970 delivered 130-mph sustained winds at Aransas Pass, as did Harvey in 2017.

(24)

ENCs - US5TX51M, US3GC02M
Charts - 11322, 11330

(25) **Freeport Harbor**, lying 40 miles southwest of Galveston entrance, is the harbor for the town of

Freeport. The area is known locally as Brazosport. The principal industryies are based on the petrochemical and mineral resource industries as well as their related support industries. The largest employer is the Dow Chemical Corporation, which operates four large plants. Other industries are oil, sulfur and shrimp. Oil, chemical products, LPG, LNG, breakbulk, automobiles, heavy equipment, and fruit are the principal exports. The Intracoastal Waterway crosses Old Brazos River about 1 mile above the jettied entrance. At this point, the Dow Barge Canal leads north and the river channel west. Old Brazos River has been dammed about 6 miles above the jettied entrance. Below the dam, the old river channel is now a tidal estuary and the harbor is protected against flood conditions in the river.

(26)

Prominent features

(27) The buildings, stacks, and tanks of the chemical plants, in addition to the cargo cranes and docked tankers, are the most prominent features. From seaward, by day, the State Route 332 fixed highway bridge crossing the Intracoastal Waterway is also prominent. By night, the numerous lights and flared gas at the chemical plants can be seen, and the obstruction lights on the radio towers at Freeport are conspicuous. **Freeport Coast Guard Station** is on the north side of the entrance channel.

(28) **Vessels should approach Freeport Harbor through the prescribed Safety Fairways.** (See **33 CFR 166.100** through **166.200**, chapter 2.)

(29)

COLREGS Demarcation Lines

(30) The lines established for Freeport Harbor are described in **33 CFR 80.845**, chapter 2.

(31)

Channels

(32) The ship channel has been improved by construction of jetties on either side of the entrance. Federal project depths are 48 feet from deep water in the Gulf to the jetty channel, thence 46 feet to the upper turning basin, in the channel to Brazosport turning basin and in the turning basin, in the channel to the upper turning basin and in the upper turning basin, thence 36 feet in the Brazos Harbor approach channel and turning basin. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.

(33) A vertical lift tide gate with a horizontal clearance of 75 feet, a reported vertical clearance of 69 feet, and a depth over the sill of 16 feet crosses the channel just above Stauffer turning basin. The tide gate is closed during hurricane conditions or when tides are 2.5 feet or more above normal.

(34) Above Stauffer turning basin, a depth of 10 to 12 feet can be carried to the wharves at Freeport.

(35)

Anchorages

(36) Anchorages are on either side of the Safety Fairway leading to the entrance channel. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(37)

Dangers

(38) About 6 miles southwest of the entrance to Freeport Harbor, Brazos River has generated a shoal extending about ¾ mile into the Gulf off the mouth of the river. This area is foul and should be given a wide berth. It is reported that several vessels have stranded in this vicinity and that the depths are considerably less than charted. The bottom is soft mud, indicating that silting from the river has occurred.

(39) Oil drilling structures may be erected in the Gulf near the approach to Freeport Harbor. Mariners should be on the lookout for these structures and give them a wide berth.

(40)

Security zones

(41) The Captain of the Port (COTP) Houston-Galveston has established **security zones** in Freeport Harbor. (See **33 CFR 165.1** through **165.33** and **165.814**, chapter 2, for limits and regulations.)

(42)

Bridges

(43) No bridges cross the channel from the entrance to the upper turning basin. An overhead power cable with a clearance of 63 feet crosses the harbor just above the Stauffer turning basin. A fixed highway bridge with a clearance of 60 feet crosses the harbor about 0.4 mile above the turning basin. The Union Pacific railroad bridge, with a vertical lift span having a clearance of 10 feet in the closed position and 69 feet in the open position, crosses the harbor about 1 mile above the turning basin. (See **33 CFR 117.1** through **117.59** and **117.975**, chapter 2, for bridge regulations.) A highway bridge that has a clearance of 20 feet is about 0.3 mile above the railroad bridge. An overhead power cable at the bridge has a clearance of 58 feet.

(44)

Currents

(45) The current off the entrance of Freeport Harbor generally sets to the west, with a countercurrent near the beach, largely influenced by the direction of the wind. The bar is rough with an east breeze.

(46) Strong crosswinds and currents at the jetty entrance make navigation difficult for larger vessels. Difficulty in navigation is experienced with larger vessels at the junction with the Intracoastal Waterway when strong currents are flowing from the canal. Large vessels are difficult to turn in the smaller upper turning basin.

(65)

Facilities at Freeport, Texas

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Dow Chemical U.S.A. Texas Operations A-14 Dock	28°56'49"N., 95°18'21"W.	820	42	25	Receipt of chemicals and petrochemicals	Dow Chemical Company
Dow Chemical U.S.A. Texas Operations A-13 Dock	28°56'49"N., 95°18'25"W.	600	16 - 24	16		Dow Chemical Company
Dow Chemical U.S.A. Texas Operations A-8 Dock	28°56'41"N., 95°18'25"W.	650	42	16	Receipt of chemicals and petrochemicals	Dow Chemical Company
Dow Chemical U.S.A. Texas Operations A-22 Dock	28°56'36"N., 95°18'59"W.	685	42		Chemicals and petrochemicals	Dow Chemical Company
Port Freeport Docks Brazos Harbor Dock 1	28°56'22"N., 95°20'23"W.	625	36	16	General Cargo	Brazos River Harbor Navigation District
Seaway Docks 1, 2 and 3	28°56'21"N., 95°19'21"W.	820	42	15	Crude oil	Brazos River Harbor Navigation District
Phillips 66 Docks 2 and 3	28°56'02"N., 95°19'49"W.	1040	41	16	Crude oil, VGO, LPG	Phillips 66 Company
Phillips 66 Dock 4	28°56'14"N., 95°20'08"W.		40	16	Barge dock, clean oi, chemicals	Phillips 66 Company
Seaway Dock 1	28°56'11"N., 95°19'15"W.				Fuel barge berth	Brazos River Harbor Navigation District
Seaway Docks 2 and 3	28°56'21"N., 95°19'21"W.	820	42	15	Crude oil	Brazos River Harbor Navigation District
Freeport LNG 1 and 2	28°56'21"N., 95°18'30"W.	1050	42		LNG	Freeport LNG

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

(47)

Weather

(48) Weather in this area is only an occasional navigational problem. Winds blow at 28 knots or more about 3 to 4 percent of the time in November and from January through April. Average speeds are 12 to 14 knots during this period. Fog is also a winter problem, and visibilities drop below 0.25 mile on about 3 to 6 days each month from November through April. Thunderstorms are most frequent from April through September, during the afternoon and evening. These thunderstorms are usually air mass types as opposed to the less frequent but more severe thunderstorms that occur with fronts and squall lines from fall through spring. Tropical cyclones, particularly severe hurricanes, are most likely in August and September.

(49)

Pilotage, Freeport

(50) Pilotage is compulsory for all foreign vessels and U.S. vessels under register in foreign trade. Pilotage is optional for coastwise vessels that have on board a pilot licensed by the federal government.

(51) Freeport and all ports in Brazoria County are served by Brazos Pilots Association, P.O. Box 2246, Freeport, TX 77542; telephone 979–233–1120 (Answered 24 hours); FAX 979–233–7071; Email: office@brazospilots.com. Brazos Pilots Association station address is: P.O. Box 1076, 2502 Deep Sea Drive, Freeport, TX 77542.

(52) Vessels are taken in day or night. Pilots board vessels about 1 mile off of Freeport Entrance Lighted Buoy FP (28°52'30"N., 95°14'02"W.). Two pilot boats are utilized, the 65- foot BRAZOS PILOT and the 55-foot FREEPORT PILOT 1. Both pilot boats have a black hull and white superstructure, stenciled with the word PILOT on both sides of the hull and the superstructure. Standard day and night pilot signals are shown. The pilot station monitors VHF-FM channels 14 and 16 twenty-four hours a day. The pilot boat monitors VHF-FM channel 16 and uses channel 14 as a working frequency.

(53) Pilot boarding speed should be 8 to 10 knots. The height of the ladder should be 3 meters above water level. Vessels over 750 feet LOA or vessels having a beam in excess of 107 feet and vessels of 700 feet LOA and over with drafts in excess of 36½ feet shall enter the harbor only during daylight hours. Other restrictions apply to specific docks and some movements will be on a per job basis; check with Pilot Station.

(54) Pilots can be obtained from the Brazos Pilots Association by the above telephone or FAX number or by prior arrangement through ships' agents; a minimum of 2-hour notice of time of arrival is requested.

(55)

Towage

(56) Tugs up to 6,000 hp are available at Freeport.

(57)

Quarantine, customs, immigration and agricultural quarantine

(58) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(59) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) The closest hospital to Freeport is at Lake Jackson.

(60) Freeport is a **customs port of entry**.

(61)

Harbor regulations

(62) The Navigation and Canal Commissioners of the Brazos River Harbor Navigation District have jurisdiction and control of the navigable waters of the district. The district includes that portion of Brazoria County west of the west bank of Chocolate Bayou. A **speed limit** of 8 mph for all vessels proceeding in the channels and 5 mph while passing the wharf, dock or moored craft is enforced. The general manager acts as Port Director. The Terminal Superintendent assigns berths on application for the facilities operated by the Brazos River Harbor Navigation District.

(63)

Wharves

(64) Freeport has more than 75 wharves and piers—only the deep-draft facilities are listed in the facilities table. The alongside depths are reported; for information on the latest depths contact the operator. Almost all the piers and wharves have highway, railway, water and shore power connections. General cargo at the port is at times handled by ship's tackle; special handling equipment, if available, is listed under Mechanical Handling and Storage in the table. Two Post Panamax Gantry cranes in addition to a 110 ton crane are available.

(66)

Supplies

(67) Gasoline, diesel fuel, marine bunkers, water, ice and most marine supplies are available at Freeport.

(68)

Repairs

(69) The Port of Freeport has no facilities for making major repairs or for drydocking deep draft vessels; the nearest such facilities are at Galveston. A ship yard on the west side of the harbor 0.1 mile below Stauffer turning basin has a travel lift. Some of the yards may have gasfreeing and barge cleaning facilities.

(70)

Small-craft facilities

(71) Small craft can find excellent protection in the harbor at Freeport. Numerous small piers and wharves are along the waterfront. There are a few small-craft facilities along the Intracoastal Waterway between the Freeport Harbor Channel and the entrance to Oyster Creek.

(72)

Communications

(73) The Union Pacific Railroad serves the Freeport area. Numerous trucklines operate from the port. Good paved roads and highways radiate to all points.

(74)

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Chart - 11322

(75) **Brazos River** enters the Gulf about 6 miles southwest of Freeport Harbor entrance. The mouth of the river is not used as an entrance due to logs, shoaling and general foul ground. The Intracoastal Waterway crosses the river 1.6 miles above the mouth, with flood gates at both the East and West entrances to the Intracoastal Waterway from the Brazos River. A depth of 8 feet at ordinary river stage is available to **Bolivar Landing**, 36 miles upriver from the Intracoastal Waterway. Most of the traffic on the river consists of offshore oil supply vessels en route to or from their base on the east side of the river, about 0.1 mile below the State Route 36 highway bridge, and chemical barges enroute to and from the wharf of a chemical company, about 2.7 miles above this highway bridge.

(76) Overhead power cables having a minimum clearance of 42 feet cross Brazos River between the Intracoastal Waterway and Brazoria. State Route 36 fixed highway bridge, 3.1 miles above the waterway, has a clearance of 50 feet. The FM Highway 2004 fixed bridge, 14.7 miles above the waterway, has a clearance of 37 feet. Three bridges at **Brazoria**, about 20 miles above the waterway, have a minimum clearance of 33 feet at low-river stages and 5½ feet at high-river stages. An overhead power cable crosses the river about 0.8 mile above Brazoria; clearance is not known.

(77) **San Bernard River** flows into the Gulf 3.5 miles southwest from the mouth of Brazos River. San Bernard River is obstructed at the mouth by a shifting sandbar over which the channel depths vary from 3 to 5 feet. From the Intracoastal Waterway, 0.8 mile above the mouth, the channel has been dredged to a point near the West Columbia highway bridge 22 miles above the Intracoastal Waterway.

(78) Some critical reaches in the river are caused by narrow widths or sharp bends. Complaints have been made that tows navigating the river have damaged wharves and the vessels moored to them; operators are advised to reduce speed to avoid wave-action damage. When towing barges in tandem, particular care must be taken to prevent any part of the tow striking the banks, boats or structures along the banks.

(79) There is a launch ramp and restaurant about 3.5 miles above the junction of the San Bernard River, thence, there is a launch ramp about 8 miles above the junction near Churchill.

(80) Between the waterway and the upstream limits of the improvement, San Bernard River is crossed by three fixed highway bridges with least clearance of 36 feet horizontal and 13 feet vertical and by a railroad swing bridge with a clearance of 19 feet. The swing bridge is equipped with radiotelephone at 409–548–3268. The bridgetender monitors VHF-FM channel 10; call sign KI-2524. (See **33 CFR 117.1** through **117.59** and **117.984**, chapter 2, for drawbridge regulations.) Least clearance of overhead cables is 38 feet.

(81) Cedar Lakes, East Matagorda Bay, Caney Creek, Live Oak Bayou, Old Gulf, Colorado River, and Matagorda are described in chapter 12.

(82)

Matagorda Bay

(83) **Matagorda Bay** is a large body of water separated from the Gulf by **Matagorda Peninsula**. Depths in the bay range from 5 to 13 feet, averaging 10 to 12 feet over the greater part. Considerable oil development and fishing are carried on in the bay and its main tributaries Tres Palacios and Lavaca Bays.

(84) **Vessels should approach Matagorda Bay through the prescribed Safety Fairways.** (See **33 CFR 166.100** through **166.200**, chapter 2.)

(85)

COLREGS Demarcation Lines

(86) The lines established for Matagorda Bay are described in **33 CFR 80.850**, chapter 2.

(87) **Matagorda Ship Channel** is a 22-mile-long deepwater channel from the Gulf to and through a land cut in Matagorda Peninsula thence through Matagorda and Lavaca Bays to a public terminal at Point Comfort. The entrance to the land cut is protected by jetties. The channel is marked with lighted buoys in the Gulf of Mexico and lights in through Matagorda Bay. The federal project provides for a depth of 40 feet through the Sea Bar Channel and Jetty Channel, thence 38 feet through the land cut and Matagorda and Lavaca Bays to a turning basin of the same depth at Point Comfort. Caution should be used when transiting near the channel limits due to abandoned structures immediately outside the channel limits that may or may not be visible above the waterline. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.

(88) <Deleted Paragraph>

(89) **Matagorda Ship Channel Entrance Lighted Buoy MB**, 3 miles southeast of the jetties, marks the channel approach.

(90) **Matagorda Ship Channel Entrance Light** (28°25'18"N., 96°19'06"W.), 64 feet above the water, is shown from a skeleton tower on a concrete block on the north jetty at the entrance to Matagorda Bay.

(91) A lighted **316.7°** range and lighted buoys mark the entrance channel through the jetties and land cut, and lighted ranges, lights and buoys mark the bay channel.

(92)

Anchorages

(93) Anchorages are on either side of the safety fairway. (See **33 CFR 166.100** through **166.200**, chapter 2.) With north winds or smooth sea, fair anchorage is available in 45 to 75 feet. There is a wreck covered 46 feet in the anchorage on the north side of the fairway. There is a submerged wreck and two obstructions with a least depth of 45 feet in the anchorage on the south side of the fairway.

(94) Good anchorage for small craft may be found on the west side of Pass Cavallo in **Saluria Bayou** in 7 to 10 feet.

(95) The usual storm anchorages for small boats in Matagorda Bay area are: the Harbor of Refuge south of Port Lavaca, in depths of 13 feet; **Chocolate Bay**, with depths of 1 to 2 feet; Lavaca Bay, on the east side to the north of the causeway, with depths of 4 to 5 feet; **Lavaca River** with depths of about 5 feet across the bar; Carancahua Bay with depths of 3 feet across the bar; and Tres Palacios Bay, off Palacios, with depths of 4 to 5 feet. Small craft should not anchor in Matagorda Bay in the vicinity of the land cut through Matagorda Peninsula as strong currents and turbulent water are reported in this area.

(96) **Pass Cavallo**, 108 miles southwest of Galveston Entrance, an entrance to Matagorda Bay from the Gulf, is about 0.35 mile wide between **Matagorda Island** and Matagorda Peninsula. The pass is obstructed by a bar that is subject to frequent changes in location and depths. The depths vary from 3 to 8 feet. With a sea or swell running outside, there is virtually a continuous line of breakers across the bar. The pass is subject to swift currents and is not considered navigable. It is used only by a few local vessels that draw less than 5 feet and have thorough local knowledge.

(97)

Currents

(98) The tidal current in Pass Cavallo is believed to attain a velocity of 2 knots with currents of 5 knots reported. It is reported to be very strong in the land cut through Matagorda Peninsula, especially on the runoff of the ebb after strong south winds. The current in Matagorda Ship Channel attains a reported velocity of about 3 knots and up to 7 knots under severe conditions. Daily predictions of the tidal current are available from the Tidal Current prediction service at *tidesandcurrents.noaa.gov*. Links to a user guide for this service can be found in chapter 1 of this book.

(99)

Pilotage, Matagorda Bay

(100) Pilots are available for Matagorda Bay day or night. Ships having a beam greater than 102 feet or are more than 725 feet in length will only be piloted during daylight

hours. The pilots board vessels approximately 2 miles seaward of Matagorda Ship Channel Entrance Lighted Buoy MB (28°23'01"N., 96°17'01"W.) from one of two pilot boats with the word PILOT on each side of the superstructure, The pilot boat is equipped with VHF-FM channels 16 and 10 and monitors channel 16 two hours prior to a vessel's ETA. Pilots can be obtained 24 hours a day by telephone (361–552–9988) or through the ships' agents or the Port Lavaca/Point Comfort Control Station on VHF-FM channel 16 or 7A; 24-hour and 4-hour notices of time of arrival are requested—*www.mbpilots.com*.

(101) **Halfmoon Reef** extends about 3 miles off **Palacios Point**, the southwest point of the tongue of land extending between the east and north portions of Matagorda Bay. The reef is composed of shells and is 100 to 500 yards wide. A light is off the southeast end of the reef. A fish haven, marked by private lighted buoys, is on the reef and has a reported least depth of 1 foot.

(102) **Tres Palacios Bay**, about 6 miles north of Palacios Point, is a shallow bay on the northeast side of Matagorda Bay. A federal project provides for a channel 14 feet deep leading from the Intracoastal Waterway through Matagorda Bay and Tres Palacios Bay to two basins at the head of the harbor of Palacios. (See Notice to Mariners and latest editions of charts for controlling depths.) The channel is marked by lights and daybeacons, and the channel entrance is protected by two breakwaters marked by lights at the outer ends.

(103) **Palacios**, a fishing and farming community, is on the west side of Tres Palacios Bay. Two elevated water tanks in the town show prominently from the bay.

(104) Commercial facilities in Palacios are involved with seafood processing for the most part. The town has a hospital, and a busline and a motor freight line serve the town. State Route 35, the main coastal highway, passes through the town.

(105) The three turning basins at the head of the harbor at Palacios are operated by the Board of Directors of Navigation District No. 1 of Matagorda County through a **harbormaster** (www.portofpalacios.com). Berthing facilities are available. The larger of two shipyards at the head of turning basin number one has two marine lifts that can handle vessels up to 100 feet and 150 tons for general repairs.

(106) A boat basin and marina are on the east side of town and provide transient berths, diesel fuel, gasoline, water, ice, electricity and pumpout. An alongside depth of 6 feet is available; VHF-FM channel 16 is monitored.

(107) Southwest of **Turtle Bay**, between **Well Point** and **Schicke Point**, is a fish haven known as Gadwall Reef. The minimum depth of the fish haven is 5 feet, but it has been reported to bare at low water.

(108) **Carancahua Bay**, 6 miles west of Tres Palacios Bay, is a shallow, unimportant body of water frequented only by small pleasure boats and oil-drilling equipment. In 1982, it was reported that there were depths of 3 to 6 feet inside the bay. It was further reported that numerous wellheads, oyster shell reefs, platforms and other obstructions, some marked by private lights, occupied the bay making navigation hazardous. Numerous beach houses are on both sides of the bay. State Route 35 highway bridge crossing the bay 7 miles above the entrance has a fixed channel span with a width of 18 feet and a clearance of 13 feet.

(109) **Keller Bay**, an arm on the east shore of Lavaca Bay, is the site of oil exploration and development. Shell is barged through a privately maintained channel to **Olivia**, a small farming community on the east side of the bay. Barges drawing 6 feet are brought in to Olivia.

(110) **Lavaca Bay**, an arm of Matagorda Bay at its northwest corner, has general depths of 4 to 5 feet with several shoals and reefs throughout the upper part of the bay.

(111) A federal project in Port Lavaca Bay provides for a 14-foot channel leading northwest through Lavaca Bay from Matagorda Ship Channel off **Gallinipper Point** for about 3.5 miles to a turning basin at the mouth of **Lynn Bayou** at Port Lavaca; the channel is well-marked by lights, buoys and daybeacons. From the south side of Port Lavaca Channel, a channel leads southwest for about 1.4 miles to the **Harbor of Refuge** south of Port Lavaca; the channel is marked by daybeacons and a light. From the north side of Port Lavaca Channel, a channel leads generally northward through Lavaca Bay to the entrance of **Lavaca River**, and through the river to a fixed bridge just south of the confluence with the **Navidad River**, a distance of about 15 miles. The channel is marked by daybeacons through the bay and just inside the mouth. (See Notice to Mariners and latest editions of charts for controlling depths.)

(112) State Route 35 highway causeway, crossing Lavaca Bay from **Noble Point** to Point Comfort, has a fixed span over the navigation channel with a clearance of 43 feet. About 0.5 mile of the former highway bridge adjacent to the southwest end of the causeway has been retained as a fishing pier. An overhead power cable crossing Lavaca Bay about 500 yards northwest of the causeway has a clearance of 69 feet over the channel. State Route 616 highway bridge has a fixed span with a clearance of 15 feet, and the Missouri-Pacific railroad bridge has a swing span with a clearance of 12 feet, which crosses Lavaca River near its junction with the Navidad River in the vicinity of the towns of **Vanderbilt** and **Lolita**. (See **33 CFR 117.1** through **117.59** and **117.969**, chapter 2, for drawbridge regulations.) Overhead power/telephone cables crossing Lavaca River between its mouth and the bridges near its junction with the Navidad River have a least clearance of 59 feet.

(113) **Point Comfort**, on the east side of Lavaca Bay, is the site of the ship and barge wharves of a large aluminum company, the Calhoun County Navigation District's general cargo facilities, and an electric power plant. (see www.calhounport.com).

(114) About 0.5 mile southwest of Point Comfort, a privately marked and dredged channel leads north from

Matagorda Ship Channel to the private facilities on the west side of the point. In 1996, the reported controlling depth was 38 feet for about 0.8 mile above the intersection with Matagorda Ship Channel, thence in 1992, the controlling depth was 26 feet for about another 0.2 mile to a basin, thence 8 feet to the head of the channel; thence in 2001, 12 feet was reported in the basin at the head of the channel.

(115)

Quarantine, customs, immigration and agricultural quarantine

(116) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(117) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(118) Port Lavaca-Point Comfort is a **customs port of entry**.

(119)

Towage

(120) A 2,000 hp tug and two 3,000 hp tugs are available.

(121)

Wharves

(122) Port of Port Lavaca/Point Comfort, Liquid Cargo Ship Terminal Berths (28°38'37"N., 96°33'05"W.): 165-foot south and north face; 1,100 feet of berthing space with dolphins; 36 feet alongside south face; deck height, 20 feet; receipt of ammonia and naphtha; shipment of adiponitrile, caustic soda, methyl-ethyl glycol and ethylene dichloride; owned by Calhoun County Navigation District and operated by Formosa Plastics Corp. USA and BP Chemicals Corp.

(123) Alcoa, Point Comfort Operations, Bauxite Pier (28°38'43"N., 96°33'48"W.): 60 to 80-foot face; 875-foot sides, 875-foot sides, 875 feet of berthing space, 36 feet alongside; deck height, 20 feet; 50 acres open storage; two traveling gantry canes served by belt-conveyor system with 2,000-ton per hour unloading rate; receipt of bauxite, fluorspar and occasionally limestone; owned and operated by Alcoa, Inc.

(124) Alcoa, Point Comfort Operations, Bulk Loading Dock (28°39'07"N., 96°33'47"W.): 50-foot platform; 500 feet of berthing space; 36 feet alongside; deck height, 18 feet; loading tower and spout served by belt-conveyor system with 400-ton per hour loading rate; shipment of alumina; owned and operated by Alcoa, Inc.

(125)

Supplies

(126) Some marine supplies and provisions are available at Port Lavaca. Bunker C fuel oil can be obtained by barge from Corpus Christi or Houston on 2 days advance notice. Light diesel oil is available by tank truck.

(127) **Port Lavaca** is a city on the west shore of Lavaca Bay in a fishing, farming and industrial area. The municipal harbor (28°37.3'N., 96°37.5'W.) is under the jurisdiction of the Port Lavaca Port Commission. The local regulations are administered by the city manager. There are several boat basins along the waterfront south of the municipal harbor; depths of 6 to 14 feet are reported in the basins. These facilities are maintained by the port commission and local fishing, dredging and oil companies. Diesel fuel, water, marine supplies, provisions and ice are available. Engine and above-the-waterline repairs can be made. A hospital is in the city.

(128) The Harbor of Refuge is south of Port Lavaca. The marginal barge wharves of a chemical company and a fertilizer company are along the north side of the harbor.

(129) **Garcitas Creek**, empties into the head of Lavaca Bay. Shell barges drawing 6 feet are brought in to the town of **La Salle**. The creek is used frequently by fishermen and recreational boaters.

(130) **Port O'Connor** is a small settlement at the southwest end of Matagorda Bay north of Pass Cavallo. The town is approached via the Intracoastal Waterway route between two jetties that extend into the bay and are marked by lights at their outer ends. The channel through the jetties favors the south jetty. Mariners are cautioned to keep in the channel as the entire width between the jetties is not dredged and shoal areas with rocky bottom lie outside the channel. Vessels should make their entrance approach well east of the jetties and through the buoyed Intracoastal Waterway. Numerous docks and slips for shrimp boats and pleasure craft are along the north side of the waterway at Port O'Connor. Gasoline, diesel fuel, water, ice and provisions are available. **Port O'Connor Coast Guard Station** is on the north bank of the waterway about 1 mile west of the town.

(131)

Espiritu Santo to Cedar Bayou

(132) **Espiritu Santo** and San Antonio, Mesquite and Aransas Bays are a series of shallow bodies of water extending southwest along the coast for a distance of 50 miles from Pass Cavallo to Aransas Pass, separated from the Gulf by Matagorda Island and **San Jose Island**. The bays are filled with islands, reefs and shoals and are of little commercial importance except as a link in the Intracoastal Waterway.

(133) **Espiritu Santo Bay** is entered from Matagorda Bay through the Intracoastal Waterway and Ferry Channel. The bay has general depths of 5 to 8 feet. In the east part of the bay, **Ferry Channel** extends from the waterway south to a fish and wildlife reserve at the former Matagorda Air Force Range on Matagorda Island; the channel is marked by daybeacons. In 1984, the reported controlling depth was 8 feet.

(134) **San Antonio Bay** has depths up to 5 and 6 feet. It is separated from Espiritu Santo Bay by the **First Chain of Islands**, through which are South Pass and Steamboat Pass. **South Pass**, an old unmarked dredged cut, has a depth of about 4 feet. The channel extends between two islands and close to the privately maintained markers on the north side of the south island. **Steamboat Pass**, 1.5 miles to the north, has less than 3 feet of water.

(135) The Intracoastal Waterway crosses San Antonio Bay from the vicinity of **Grass Island** to **False Live Oak Point**. The spoil banks on both sides of the channel have several openings. Small islets are in the spoil bank area.

(136) Numerous reefs, some of which bare at low water, are in and about the bay, particularly in the upper end. They make navigation difficult, and local information is essential.

(137) North of **Swan Point** and **McDowell Point** the delta of Guadalupe River divides the head of San Antonio Bay into **Guadalupe Bay** and **Mission Lake** on the east and **Hynes Bay** on the west. **Goff Bayou** and **Schwing Bayou** flow into Mission Lake.

(138) **Guadalupe River** empties into the north end of San Antonio Bay. A depth of about 2 feet can be carried from the bay into the north fork of the river. Snags and driftwood make navigation almost impossible, but there are navigable depths as far as the San Antonio River, about 10 miles above the mouth.

(139) **Victoria Barge Canal** is a dredged channel that leads from the Intracoastal Waterway northwest along the east side of San Antonio Bay, thence through landcuts along the east side of Guadalupe Bay, Mission Lake and Green Lake, thence in a dredged cut to **Pickering Basin (Port of Victoria)** about 30 miles above the Intracoastal Waterway and about 7 miles below the city of **Victoria**. A 330-foot public dock with 9 feet alongside is in the basin; water and electricity are available.

(140) State Route 35 fixed highway bridge with a clearance of 50 feet, the Victoria Barge Canal railroad lift bridge with a clearance of 22 feet down and 50 feet up, and a fixed highway bridge with a clearance of 49 feet, cross the channel 15 miles, 25 miles and 27.6 miles, respectively, above the Intracoastal Waterway. (See **33 CFR 117.1** through **117.59** and **117.991**, chapter 2, for drawbridge regulations.) Least clearance of overhead power and telephone cables crossing the channel is 53 feet.

(141) About 5.3 miles above the Intracoastal Waterway, a dredged channel leads east from Victoria Barge Canal to a turning basin at the town of **Seadrift.**

(142) The facilities in the basin are under the control of the Westside Calhoun County Navigation District. Mooring dolphins are along the north side of the basin, and a wharf is on the south side of the basin. The facilities are used to unload shell from barges, to load and unload barge shipments of general cargo, and for the fueling of vessels. In addition, there are service wharves and seafood processing plants in the basin. Gasoline, diesel fuel, water, ice and some provisions are available.

(143) Seadrift, a small fishing and farming community, has highway connections.

(144) A private channel about 0.3 mile south of the channel to Seadrift, privately marked by stakes, leads to a resort housing development at Swan Point. In 1999, a depth of 3.8 feet was reported in the channel with 3.0 feet in the harbor.

(145) About 12 miles above the Intracoastal Waterway, a privately dredged channel, with a reported controlling depth of 10 feet in 1982, leads to a basin at a large chemical plant at Long Mott.

(146) **Long Mott** is a small town on Mission Lake that has railroad and highway connections.

(147) **Mesquite Bay** lies between **Ayres Reef** and **Third Chain of Islands** and is of no commercial importance except for fish and oysters. The buildings of a ranch are on Matagorda Island opposite the southeast corner of the bay. A small water tank about 35 feet high shows prominently from the Gulf.

(148) A marked channel leads from the Intracoastal Waterway at the east end of Aransas Bay across Carlos Bay into Mesquite Bay.

(149) **Cedar Bayou**, separating Matagorda Island from San Jose Island, leads in a south direction from the southeast corner of Mesquite Bay toward the Gulf. A bar has closed the outlet to the Gulf.

(150)

Aransas Bay to Lydia Ann Channel

(151) **Aransas Bay**, 15 miles long and 3 to 4 miles wide, is used extensively as a shrimping ground. The Intracoastal Waterway crosses the bay and opposite Rockport turns west to and through Redfish Bay; at the turn, the channel of the Intracoastal Waterway Alternate Route continues to Lydia Ann Channel. **San Jose Island Dock Channel**, a privately maintained channel near Blind Pass at the southeast end of the bay, is marked by private daybeacons and a light. The periodic tide throughout the bay has a diurnal range less than 0.5 foot the variation in water level depends principally on the wind. Many piles along the south side of the Intracoastal Waterway do not show at high water; they are very dangerous, and caution should be used near this edge of the waterway.

(152) **St. Charles Bay**, an arm of Aransas Bay extending north, is the site of considerable hunting and sport fishing, but commercial fishing is prohibited. There are numerous homes in the vicinity of Hail Point on the west side of the bay near the entrance. A depth of 2 to 3 feet is found through the entrance with somewhat greater depths and numerous reefs inside. The bay is used by small craft as a refuge during tropical storms.

(153) A privately maintained channel, with a reported controlling depth of 2 feet, leads from the west end of Goose Island to **Neptune Harbor** and **Goose Island State Park**. A launching ramp is at the state park. A fixed highway bridge between the mainland and Goose Island, is reported to have a 15-foot span and a clearance of 2 feet.

(154) There is a yacht basin near the end of the causeway at **Lamar**. A privately maintained channel leads to the basin. In 1990, numerous shoals were reported to exist outside the basin entrance. Water, ice and a launching ramp are available in the basin.

(155) **Copano Bay**, a northwest extension of Aransas Bay, is used principally as a center for hunting and sport fishing. No commercial fishing, except oystering, is permitted.

Extreme caution is required to navigate the bay because of the numerous unmarked reefs. Depths up to 8 feet are found in the bay with 6 to 7 feet in the narrow sloughs or channels between the reefs. Numerous oil wells and pipelines fill the bay.

(156) Good anchorage for small craft is available in the bight south of **Redfish Point**, inside the bay on the south side at the entrance. Storm anchorages for drafts up to 3 or 4 feet may be had in the south end of the bay in the small bight at the northeast corner of **Port Bay**. Slightly greater draft can find good protection in the extreme northeast corner of Copano Bay in the bight off Redfish Point. Soft mud bottoms are at these anchorages.

(157) State Route 35 highway bridge crosses the entrance to Copano Bay and has a fixed span with a vertical clearance of 75 feet. Sections of a former bridge, along the west side of the causeway, remain as fishing piers. A launching ramp is at the southwest end of the causeway.

(158) **Mission Bay**, on the north shore of Copano Bay, is of no importance; only small skiffs can enter.

(159) **Bayside** is a small resort town on the northwest shore of Copano Bay. A large hotel shows prominently from the bay. Highway and telephone communications are available.

(160) **Aransas River**, emptying into the northwest end of Copano Bay, is shallow and navigable only for small craft of 1 foot or less. The State Route 136 highway bridge across the mouth has a 41-foot fixed span with a clearance of 15 feet. There is a small marina on the west side at the south end of the bridge. The channel leading to the facility had a reported controlling depth of 4 feet in 1982 and was privately marked by stakes. Water, ice, open and covered berths with electricity, marine supplies and a launching ramp are available. The marina is closed during the winter season. Overhead power and telephone cables at the bridge have clearances of 17 feet.

(161) The ruins of a bridge cross Port Bay about 1.5 miles above the entrance. In 1990, it was reported the cable had been removed. State Route 188 highway bridge crossing Port Bay about 4 miles above the entrance has a 41-foot fixed span with a clearance of 5½ feet; an overhead power cable crosses at the bridge.

(162) There are fish camps along Live Oak Peninsula between Port Bay and Redfish Point where provisions, berths and lodging are available.

(163) **Fulton**, an incorporated city on the west shore of Aransas Bay, is the site of a commercial fish harbor and yacht basin protected by a dike and breakwater. The harbor is entered from Aransas Bay through a dredged channel marked by lights and daybeacons. It was reported that when making the harbor, local residents bear on a prominent, isolated old mansion that fronts on the beach close west of the harbor; a large water tower about 1 mile west of the mansion should not be used. Berth assignments and ship movements in the harbor are under the direction of a **harbormaster** who maintains an office in Rockport. A no-wake **speed limit** is enforced in the harbor.

(164) The harbor at Fulton is used as a base by numerous shrimp boats and trawlers. Berths with electricity, water, ice and wet storage are available. A marina about 1.0 mile north of the harbor has berths, electricity, water, ice, a launching ramp and wet storage available.

(165) **Key Allegro**, a resort center built on filled-in marshland, is about a mile south of Fulton. **Little Bay** between the key and **Live Oak Peninsula** is shoal. Two private channels have been dredged into Little Bay to the lagoons and a marina on the west side of the key. The north channel had a reported depth of 1 foot in 2002. A hump-backed highway bridge crossing the channel from the key to the mainland has a 25-foot fixed span with a minimum clearance of 8 feet. The south entrance channel had a reported depth of 5.8 feet in 2001. Privately maintained lights mark the south channel. The marina has berths, gasoline, diesel fuel, pumpout, electricity, water and ice available. In 2008, 7 feet was reported in the approach and 9 feet alongside.

(166) A side channel branching off from the south Key Allegro Channel leads west to a boat basin on the long sandspit that extends east from Rockport Harbor. The reported depth in the channel was 5 feet in 1982. The channel is privately marked by stakes. A launching ramp is available.

(167) **Rockport** is a commercial fishing and resort city on the west shore of Aransas Bay, just southwest of Key Allegro. The approach to city from the Intracoastal Waterway can be made through a number of openings in spoil banks lining the north side of the waterway. Natural depths of 10 to 13 feet lead to the light marking the approach to the harbor. A dredged channel leads from Aransas Bay to a basin in the harbor. The basin is about 0.3 mile long and protected by a concrete breakwater. To enter, pass about 50 yards east of the approach light and head directly toward the light on the seawall at the basin entrance. The channel is marked by lights and daybeacons.

(168) There are excellent facilities in the basin for yachts and other craft. The marine laboratory of the Texas Parks and Wildlife Department is at the north end of the basin. Water, ice, wet storage, marine supplies and berthing space for more than 100 yachts and commercial vessels are available in the basin. Berth assignments and ship movements are under the direction of a **harbormaster**, who maintains an office at the northeast end of the basin. A no-wake **speed limit** is enforced in the harbor.

(169) Rockport has highway connection with Port Lavaca and Corpus Christi and railroad connections to the interior.

(170) **Cove Harbor** and **Palm Harbor**, 2.5 and 4 miles, respectively, south of Rockport, are discussed in chapter 12.

(171) **Lydia Ann Channel** extends south from the south end of Aransas Bay and connects with Aransas Pass. The entrance from Aransas Bay is by a dredged channel, and an alternate route of the Intracoastal Waterway. For detailed channel information and minimum depths as

reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A. The wreck of the S. S. JOHN WORTHINGTON, lies submerged on the east side of the channel in about 27°51'47"N., 97°02'59"W.—the wreck is marked by danger buoys. Caution is advised if approaching this wreck as the buoys may not accurately mark the outer ends.

(172)

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Chart - 11309

(173) **Aransas Pass**, 154 miles southwest of Galveston Entrance and 113 miles north of the mouth of the Rio Grande, is the principal approach from the Gulf to Aransas and Corpus Christi Bays and their tributaries. The pass lies between San Jose Island on the north and Mustang Island on the south. **Harbor Island**, directly opposite the inner end of the pass, separates Aransas Bay from Corpus Christi Bay.

(174) Two jetties extend into the Gulf from San Jose and Mustang Island. Several submerged wrecks lie to the south of the channel inside the jetties.

(175) The approach to Aransas Pass is marked by a lighted buoy, 5.5 miles offshore. The entrance channel is marked by lighted buoys and a **301.2°** lighted range.

(176)

Prominent features

(177) The water tank at Port Aransas is the first object sighted in approaching Aransas Pass in the daytime. The microwave tower is the first object sighted at night. Also prominent are a condominium apartment and other buildings at Port Aransas. The privately maintained lighthouse, a 65-foot high red and brown brick tower on Harbor Island, and the buildings at Port Aransas will be sighted as the pass is approached.

(178) The flashing white and green rotating aerolight at the naval air station on Encinal Peninsula on the south side of Corpus Christi Bay is reported visible from the Gulf and from Corpus Christi Channel in the bay.

(179) **Port Aransas Coast Guard Station** (27°50.3'N., 97°03.5'W.) is on the northeast end of Mustang Island.

(180) Vessels should approach Aransas Pass through the prescribed Safety Fairways. (See **33 CFR 166.100** through **166.200**, chapter 2.) **Note:** The Aransas Pass Safety Fairway, the southeast approach to Aransas Pass, consists of partially divided parallel shipping fairways instead of a single fairway. These parallel fairways are not a traffic separation scheme. However, in the interest of vessel traffic safety, the use of the northeast lane for inbound **(298°)** traffic and the southwest lane for outbound **(118°)** traffic is recommended.

(181)

COLREGS Demarcation Lines

(182) The lines established for Aransas Pass are described in **33 CFR 80.850**, chapter 2.

(183) A **safety zone** has been established around loaded liquified petroleum gas (LPG) vessels transiting Corpus Christi Channel between the outer end of Aransas Pass jetties and Port of Corpus Christi Oil Dock No. 10, including La Quinta Channel. (See **33 CFR 165.1** through **165.8**, **165.20**, **165.23**, and **165.808**, chapter 2, for limits and regulations.)

(184)

Channels

(185) A dredged approach channel leads northwest from the safety fairway between two jetties to an inner basin between Port Aransas and Harbor Island. The federal project depth is 49 feet in the entrance channel and 47 feet in the basin. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.

(186) The Coast Guard advises vessels to exercise particular caution where the channel intersects the alternate route of the Intracoastal Waterway at Lydia Ann Channel, about 1.6 miles above the entrance jetties, and where Corpus Christi Channel intersects the Intracoastal Waterway main route, about 7.1 miles above Lydia Ann Channel. Situations resulting in collisions, groundings and close quarters passing have been reported by both shallow and deep-draft vessels. The Coast Guard has requested vessels make a **SECURITE** call on VHF-FM channels 12 and 13 prior to crossing the Intracoastal Waterway, particularly during periods of restricted visibility.

(187) **Corpus Christi Channel** leads west-southwest from the inner basin at Port Aransas into Corpus Christi Bay. The channel turns west just south of Ingleside Cove and continues across the bay to the entrance of Corpus Christi harbor, thence through the harbor to a turning basin at Viola, 23.5 miles from the outer bar. The federal project depth is 47 feet in the channel from Port Aransas to Viola. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.

(188) **La Quinta Channel** branches north from Corpus Christi Channel near Port Ingleside and follows the northeast side of Corpus Christi Bay to a turning basin 5.5 miles above the entrance. The federal project depth is 47 feet in the channel and basin. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A. A

detached breakwater is on the east side of the channel entrance, south of Port Ingelside.

(189) **Jewell Fulton Canal** branches off La Quinta Channel about 2 miles northwest of its junction with Corpus Christi Channel. The canal extends about 0.8 mile northeast to a turning basin in **Kinney Bayou**. The entrance channel is marked by daybeacons, and the basin is marked by private daybeacons and an unlighted range. A boatyard in the bayou has a 50-metric ton mobile hoist and can handle boats to 60 feet for hull and engine repairs.

(190)

Anchorages

(191) Vessels should anchor off Aransas Pass in the Aransas Pass Fairway Anchorages. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(192) Inside Aransas Pass, there is no suitable anchorage for deep-draft vessels. Light-draft vessels up to about a 10-foot draft can anchor in Lydia Ann Channel north of Inner Basin. Also, lighter draft vessels can anchor in Corpus Christi Bay in depths up to 13 feet.

(193)

Currents

(194) The currents at times have velocities exceeding 2.5 knots in Aransas Pass; they are greatly influenced by winds. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(195) It is reported that the currents outside Aransas Pass are variable. Southbound currents when reinforced by northerly winds have produced a drift that has been reported as high as four knots across the mouth of the jetties.

(196) Winds from any east direction make a rough bar and raise the water inside as much as 2 feet above normal. Winds from any west direction have an opposite tendency. A sudden shift of the wind from south to north makes an especially rough bar for a short time. During summer months, south winds prevail, becoming moderate to fresh in the afternoon.

(197)

Weather

(198) Although located on the Gulf, Corpus Christi has an intermediate climate between that of the humid subtropical region to the northeast and those of the semiarid region to the west and southwest.

(199) The normal rainfall for Corpus Christi is about 30 inches a year. Peak rainfall months are June and September, and March is the driest. The season of tropical storms is from June to November and affects the rainfall during this period; otherwise these months are usually dry. Several months during the years of record have had no rainfall or only a trace, while nearly eight inches fell in one 24-hour period in October 1995. Since records began in 1887, snow has fallen on an average of about 1 day every 2 years. The average annual snowfall is less than one inch, and the greatest 24-hour snowfall was one inch, occurring in January 1967 and again in February 1973.

(200) There is little change in the day-to-day weather in the summer, except for an occasional rain shower or a tropical storm in the area. Maximum temperatures range in the high eighties to low nineties, except for brief periods in the high nineties, occasioned by a shift in the wind direction from the prevailing southeast to south and southwest. The sea breeze during the afternoon and evening moderates the heat of the summer day. The average annual temperature at Corpus Christi is 72.1°F with an average high of 81.2°F and an average low of 62.5°F. August is the warmest month with an average high of 84.6°F, and January is the coolest with an average high of 56.4°F. Minimum temperatures are usually in the low seventies. The record maximum temperature in Corpus Christi was 109°F, recorded in September 2000. The maximum temperatures usually occur about noon, with afternoons more pleasant than mornings in that they are usually cloudless and windy. In the summer season, the region receives nearly 80 percent of possible sunshine. The coolest reading on record at Corpus Christi is 11°F, recorded in 1899. Extreme maximums in excess of 100°F have occurred in each month March through September, and extreme minimums below freezing have occurred in each month October through March.

(201) The fall months of September and October are essentially an extension of the summer months. November is a transition to the conditions of the coming winter months, with greater temperature extremes, stronger winds and the first occurrences of "northers." From late November through February, fog is likely to occur in the vicinity of Aransas Pass and Port Aransas.

(202) Relative humidity, because of the nearness of the Gulf of Mexico, is high throughout the year. However, during the afternoons the humidity usually drops to 50 and 60 percent.

(203) Severe tropical storms average about one every 10 years. Lesser strength storms average about one every 5 years. The city of Corpus Christi has a feature not found in most other coastal cities. A bluff rises 30 to 40 feet above the level of the lowlands areas near the bay. This serves as a natural protection from high water. Protection for the main city is now furnished by seawalls. The chief hurricane months are August and September, although tropical storms have occurred as early as June and as late as October. Since 1950, nine tropical systems have come within 50 miles of Corpus Christi; most notable was hurricane Celia, which raked the area with 160 mph gusts (140 knots) in early August 1970. However, most of the storms pass either to the south or east of the city. Tornadoes are of infrequent occurrence in the area. Hail occurs about once a year.

(204) The National Weather Service maintains an office in Corpus Christi where **barometers** may be compared, or they may be compared by telephone. (See Appendix A for address.)

(205)

Pilotage, Corpus Christi Bay

(206) Pilotage is compulsory for all foreign vessels and U.S. vessels under register in foreign trade. Pilotage is optional for coastwise vessels that have on board a pilot licensed by the federal government.

(207) Aransas Corpus Christi Pilots serve Aransas Pass Outer Bar and Jetty Channel, Corpus Christi Ship Channel to Viola Basin, and LaQuinta Channel. The pilots' office address is P.O. Box 2767, Corpus Christi, TX 78403; telephone 361–888–6230 or 361–884–5899; FAX 361–749–6933; email: dispatch@accpilots.com; and website: accpilots.com.

(208) The pilots board vessels between the sea buoy, Aransas Pass Entrance Lighted Buoy AP, and Lighted Buoy 3. The Aransas Corpus Christi Pilots maintain a pilot station on the south jetty; (telephone 361–749–5444). Three pilot vessels are maintained on station. Two 52-foot vessels and one 70-foot vessel. Each pilot vessel has an orange hull and white super structure.

(209) Pilot services are available 24 hours a day, and arrangements for pilot services are made by telephone or VHF-FM channel 12 by hailing Aransas Corpus Christi Pilots. A 3-hour advance notice of time of arrival at the Aransas Pass Entrance Lighted Buoy AP is required. A 3-hour notice is required for sailings and shifting. Update of a vessel's estimated time of arrival at the AP buoy can also be emailed to dispatch@accpilots.com.

(210)

Towage

(211) Tugs up to 6,800 hp and up to 80 metric tons of bollard pull are available in the Port of Corpus Christi. They serve all the channels in the Corpus Christi Bay area and offshore. Harbor tugs are powerful and maneuverable vessels which can travel in any direction. When assisting vessels, tugs may or may not be made up to the vessel with a line. Passing vessels should provide a wide berth for the operation. Harbor tugs produce a very powerful propeller wash which may affect vessels passing in close proximity. Harbor tugs have much deeper drafts than towboats and will usually be restricted to the deeper areas of the channel. While assisting vessels, the actions of the tugs are at the direction of the Pilot or the vessel's Master. It is common practice for the Pilot to make a broadcast on VHF-FM channels 12 or 16 before shifting to a working channel to direct the operation of the harbor tugs. Divers, salvage equipment and spill response are available and some tugs are equipped for firefighting. Specific tug requirements are listed in the Rules and Regulations Governing Pilots and Pilotage on the Corpus Christi Ship Channel which can be found at https://corpuschristipilotboard.com/.

(212)

Quarantine, customs, immigration and agricultural quarantine

(213) **Quarantine, customs, immigration** and **agricultural quarantine** officials are stationed in Corpus Christi. Vessels subject to such inspections generally make arrangements through ships' agents; officials usually board vessels at their berths.

(214) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(215) Public hospitals are available in Corpus Christi.

(216) Corpus Christi is a **customs port of entry**.

(217)

Coast Guard

(218) The U.S. Coast Guard **Sector Office** Corpus Christi and Corpus Christi Coast Guard Air Station is located at the Corpus Christi International Airport. (See Appendix A for address.)

(219) **Port of Corpus Christi** is on the west side of Corpus Christi Bay about 20 miles from the outer end of the jetties at Aransas Pass. The port limits include all of Nueces County and San Patricio County, TX. Corpus Christi Main Harbor includes all of the waterfront facilities along the Industrial Canal, Tule Lake Channel and Viola Channel, including the turning basins from Corpus Christi Turning Basin to Viola Turning Basin. Harbor Island, Port Aransas, Port Ingleside and La Quinta are included in the port area.

(220) The principal exports include crude oil, gasoline, diesel fuel, petroleum coke, hot briquet iron, liquid natural gas (LNG) and sorghum.

(221)

Harbor regulations

(222) Port of Corpus Christi Authority, headed by the Port Executive Director, has jurisdiction and control over the Port of Corpus Christi. The **harbormaster** assigns berths and enforces port regulations. VHF-FM channels 12 and 16 (call sign, KKQ-769) are monitored continuously from the harbormaster's office on the third floor at 1305 North Shoreline Boulevard. Vessels entering the Inner Harbor may not exceed a safe maneuvering and steerage speed and will not create any unusual wake. Vessels violating the speed restriction described herein are liable for damage to any terminal facility caused by unusual wake. Furthermore, any traffic entering the La Quinta Channel must check in with the Harbormaster on VHF-FM channel 12, the check in points are as follows: Aransas-Corpus Christi Bay Cutoff Channel Daybeacon 37; Baffin Bay Daybeacon 7; Aransas Pass Lighted Buoy 7 and Aransas Pass Lighted Buoy 8 and Aransas Bay Alternate Route Light 51.

(223)

Wharves

(224) Corpus Christi has more than 100 piers and wharves. Only the deep-draft facilities are listed in the facilities table for Corpus Christi. Water and electrical shore power connections are available at most piers and wharves upon request. Almost all the facilities have highway and railroad connections.

(225) General cargo at the port is usually handled by ship's tackle. Over 162 acres of open storage space (65½ hectares) and 1,497,508 square feet of covered storage

(226)

Facilities at Corpus Christi, Texas

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Harbor Island						
Kellogg Brown & Root Harbor Island Offshore Facility Wharf	27°50'34"N., 97°04'57"W.	800	20	8	• Offshore mooring • Oil-well service vessels • Fueling and providing water to small vessels	Kellogg Brown & Root, Inc.
Port Ingleside						
Koch Pipeline Co. Ingleside Terminal Wharf	27°49'08"N., 97°11'59"W.	1,000	40	18	• Receipt and shipment of crude oil • Bunkering vessels	Koch Pipeline Co., LP
La Quinta Channel						
Occidental Chemical Corp. Ingleside Plant, Ship Wharf	27°52'08"N., 97°14'43"W.	920	40	15	Shipment of caustic soda, vinyl chloride monomer and ethylene dichloride	Occidental Chemical Corp.
Sherwin Alumina Sherwin Plant, Alumina Dock	27°52'44"N., 97°15'38"W.	960	37-39	9	N/A	Sherwin Alumina, LP
Sherwin Alumina Sherwin Plant, Bauxite Dock	27°52'44"N., 97°16'04"W.	• 705 west • 630 east	45-47	10	N/A	Sherwin Alumina, LP
North side Corpus Christi Turning Basin						
Port of Corpus Christi Authority, Northside General Cargo Terminal Cargo Dock No. 9	27°48'52"N., 97°23'47"W.	750	33	15	Receipt and shipment of conventional general cargo	Port of Corpus Christi Authority
Port of Corpus Christi Roll On/Roll Off Ramp	27°48'52"N., 97°23'47"W.	60	35	6½	Reciept of Ro/Ro cargo	Port of Corpus Christi Authority
Port of Corpus Christi Authority, Cargo Dock No. 10	27°48'54"N., 97°23'53"W.	700	35	15	Receipt and shipment of refrigerated and frozen general cargo	Port of Corpus Christi Authority
Port of Corpus Christi Authority, Oil Dock No. 1	27°48'53"N., 97°24'05"W.	1,000	40	16	• Receipt and shipment of crude oil, petroleum products, and petrochemicals • Loading/bunkering barges	Port of Corpus Christi Authority
Port of Corpus Christi Authority, Oil Dock No. 2	27°48'53"N., 97°24'12"W.	142	15-16	9½	• Receipt and shipment of crude oil, petroleum products, and petro-chemicals • Loading/bunkering barges	Port of Corpus Christi Authority
South side Corpus Christi Turning Basin						
Port of Corpus Christi Authority, Cargo Dock 8	27°48'43"N., 97°24'13"W.	1,060	42	15	Receipt and shipment of containerized general cargo	Port of Corpus Christi Authority
Port of Corpus Christi Authority, Cargo Dock Nos. 14 and 15	27°48'43"N., 97°24'22"W.	938	32-33	15	Receipt and shipment of containerized general cargo	Port of Corpus Christi Authority
Citgo Refining & Chemicals, Port Avenue Terminal Wharf	27°48’43”N., 97°24’38”W.	178	40	12	Shipment of petroleum products	Citgo Refining & Chemicals, Inc.
Flint Hills Resources Tanker Dock No. 3	27°48'46"N., 97°24'52"W.	900	45	14	• Receipt of crude oil, petroleum products, and petrochemicals • Bunkering of berthed tankers	Flint Hills Resources, LP, a subsidiary of Koch Industries, Inc.
North side Industrial Canal						
ADM/Growmark Elevator Wharf	27°49’04”N., 97°25’24”W.	327	42	13	Shipment of grain	ADM/Growmark, subsidiary of Archer Daniels Midland Co.
South side Industrial Canal						
Flint Hills Resources Dock No. 2	27°48’50”N., 97°25’03”W.	800	38-40	10	• Receipt and shipment of crude oil, petroleum products and petrochemicals • Bunkering of berthed tankers	Flint Hills Resources, LP, a subsidiary of Koch Industries Inc.
Citgo Refining & Chemicals, Corpus Christi Refinery, Ship Dock No. 1	27°48’58”N., 97°25’22”W.	800	40	14	• Receipt and shipment of petroleum products and petrochecmicals • Loading bunkering barges	Citgo Refining & Chemicals, Inc.
South side Avery Point Turning Basin						
Citgo Refining & Chemicals Corpus Christi Refinery Barge Dock No. 7	27°49’07”N., 97°25’47”W.	100	22	15	Shipment of petroleum products	Citgo Refining & Chemicals, Inc.

Facilities at Corpus Christi, Texas

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
Port of Corpus Christi Authority, Oil Dock No. 3	27°49'13"N., 97°25'55"W.	142	14-17	9½	• Receipt and shipment of crude oil, petroleum products and petrochemicals • Loading bunkering barges • Mooring of tugs and barges	Port of Corpus Christi Authority
South side Tule Lake Channel						
Citgo Refining & Chemicals, Corpus Christi Refinery, Ship Dock No. 3	27°49'30"N., 97°29'31"W.	1,000	48	22	Receipt of crude oil and asphalt by tanker and barge	Citgo Refining & Chemicals, Inc.
Port of Corpus Christi Authority, Oil Dock No. 4	27°49'17"N., 97°29'59"W.	850	44-45	16	• Receipt and shipment of crude oil, petroleum products and petrochemicals • Bunkering and loading barges	Port of Corpus Christi Authority
Port of Corpus Christi Authority, Oil Dock No. 7	27°49'20"N., 97°26'08"W.	850	44-45	16	• Receipt and shipment of crude oil, petroleum products and petrochemicals • Bunkering and loading barges	Port of Corpus Christi Authority
Port of Corpus Christi Authority, Oil Dock No. 11	27°49'22"N., 97°26'18"W.	850	43-45	16	• Receipt and shipment of crude oil, petroleum products and petrochemicals • Bunkering and loading barges	Port of Corpus Christi Authority
Interstate Grain Port Terminal Co., Corpus Christi Elevator Wharf	27°49'01"N., 97°28'12"W.	920	37	10	Shipment of grain	Interstate Grain Port Terminal Co.
Valero Refining Co., Ship Dock No. 2	27°49'10"N., 97°28'47"W.	1,000	45	18	• Receipt and shipment of crude oil and petroleum products • Fueling vessels • Loading bunkering barges	Valero Refining Co.
Valero Refining Co., Ship Dock No. 3	27°49'15"N., 97°28'57"W.	1,000	45	18	• Receipt and shipment of LP-gas, crude oil and petroleum products • Fueling vessels • Loading bunkering barges	Valero Refining Co.
North side Tule Lake Channel						
Port of Corpus Christi Authority, Bulk Terminal, Dock No. 1	27°49'05"N., 97°27'39"W.	835	34	12	Receipt and shipment of misc. bulk ores, and dry bulk by vessel and barge	Port of Corpus Christi Authority
Port of Corpus Christi Authority, Bulk Terminal, Dock No. 2	27°49'05"N., 97°27'44"W.	1,270	44-45	13	Shipment of coke, coal and misc. dry bulk commodities by vessel and barge	Port of Corpus Christi Authority
South side Viola Turning Basin						
Port of Corpus Christi Authority, Oil Dock No. 8	27°50'31"N., 97°31'16"W.	1,000	45	16	• Receipt and shipment of crude oil, petroleum products and petrochemicals by tanker • Fueling small-craft • Bunkering vessels	Flint Hills Resources, LP, a subsidiary of Koch Industries
Port of Corpus Christi Authority, Oil Dock No. 9	27°50'34"N., 97°31'23"W.	320	25	9½	• Receipt and shipment of crude oil, petroleum products and petrochemicals by tanker • Fueling small-craft	Port of Corpus Christi Authority/Flint Hills Resources, LP, a subsidiary of Koch Industries
Port of Corpus Christi Authority, Oil Dock No. 10	27°50'35"N., 97°31'29"W.	400	N/A	9½	N/A	Port of Corpus Christi Authority/Flint Hills Resources, LP, a subsidiary of Koch Industries

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

(139,100 square meters) are available, and over 900,000 cubic feet (25,490 cubic meters) of cold storage space are available in the port.

(227)

Supplies

(228) Water is available at several of the Port's Public Docks upon request including Cargo Docks 1, 2, 8, 9, 14, 15, as well as Bulk Terminals 1 and 2, and Oil Docks 1, 2, 4, 7, 11 and 15, and bunker fuels are available at the oil wharves and by barge at other berths. General and marine supplies are available; unusual items can be obtained from Galveston or Houston.

(229)

Repairs

(230) Corpus Christi has no facilities for making major repairs or for drydocking deep-draft vessels; the nearest such facilities are at Galveston. Several well-equipped firms are available for making above-the-waterline repairs to vessels. Shafts up to 25 feet in length can be produced by a local firm.

(231) Repair facilities are available for medium-draft vessels. The largest floating drydock has a lifting capacity of 3,570 tons, length of 240 feet, width of 82 feet and 23 feet over the keel blocks. The largest vertical boatlift has a capacity of 150 tons and can handle 125-foot vessels. A marine railway can handle keeled vessels up to 650 tons and flat bottom craft up to 1,000 tons; length of cradle, 140 feet, clear width of cradle at top of keel blocks, 52 feet.

(232) Regulations have been established by the Port of Corpus Christi, Port Commission, governing the repairing of ships, particularly "hot work." Copies of these regulations can be obtained from the port officials.

(233)

Communications

(234) Port Corpus Christi is served by three Class I railroads, Burlington Northern Santa Fe (BNSF), Kansas City Southern (KCS), and Union Pacific (UP), along with a short-line operated by Genessee & Wyoming and the Port's own rail line, Corpus Christi Rail Terminal. Numerous motor freight lines operate from the port, and buslines serve the city. Airlines provide transportation from Corpus Christi International Airport northwest of the city. Over 100 shipping companies provide water transportation to ports on the Gulf, Atlantic and Pacific Coasts and all world ports. Taxi and local bus service is available.

(235) **Port Aransas** is a small commercial fishing and resort town on the north end of **Mustang Island** at the inner end of Aransas Pass. A marked dredged channel leads south to a harbor basin from inside the pass. There are boatyards and a municipal marina in the basin. Berths with electricity, gasoline, diesel fuel, water, ice, marine supplies, provisions, pumpout and launching ramps are available. A 1,200-foot fishing pier extends into the Gulf about 0.5 mile south of Aransas Pass. An automobile ferry operates between Port Aransas and Harbor Island. Port Aransas Coast Guard Station is in the harbor basin.

(236) **Harbor Island** is at the head of Aransas Pass. Large oil-handling plants with berths are on the southeast end of the island (see Wharves, Corpus Christi.). A dredged turning basin is east of the berths along the north side of the ship channel. State Route 361 causeway begins at the ferry landing and crosses Morris and Cummings Cut and Redfish Bay and leads to the town of Aransas Pass on the mainland. A facility on the southeast end of Harbor Island, operated by Martin Energy, allows for temporary dockage to vessels with fuel accounts.

(237) Pilings, some submerged, of a former mooring slip were reported north of Harbor Island on the west side of Lydia Ann Channel.

(238) From the Inner Basin off Harbor Island, a dredged channel leads northwest for about 5.2 miles and intersects with the Intracoastal Waterway and turning basin just off the town of **Aransas Pass**, with a connecting channel leading into **Conn Brown Harbor**. Detailed channel information is available through NOAA Electronic Navigational Charts. The most recent surveys of the area are posted by the U.S. Army Corps of Engineers (See Appendix A for contact information.)

(239) The Intracoastal Waterway crosses the west end of Aransas Channel and extends along the east side of the town, sheltered from Redfish Bay by spoil banks. South of the causeway the canal offers good protection to small boats. The channel and harbor to the north of the causeway have several seafood processing plants. A large shrimp boat fleet operates out of the town.

(240) There are boatyards and marinas in the harbor. The largest marine railway can handle craft up to 120 feet for general repairs or storage. Gasoline, diesel fuel, water, ice, marine supplies, open and covered berths with electricity and launching ramps are available.

(241) A 5-mph **speed limit** is enforced in the channel and harbor from Harbor Island to the town of Aransas Pass. The **harbormaster** has an office at the Port of Corpus Christi Authority at 1305 N Shoreline Blvd., Corpus Christi, TX 78401. The town has both highway and railroad connections to all parts of the state.

(242) **Corpus Christi Bayou**, at the south end of Aransas Bay, provides small craft a shortcut from Aransas Bay via **Morris and Cummings Cut** to Corpus Christi Bay. The bayou had a reported controlling depth of about 2 feet in 1982. The channel is crooked and difficult to follow, as only a few piles mark the channel.

(243) The controlling depth through Morris and Cummings Cut is about 4 feet. About midway, this cut is crossed by the dredged Aransas Channel. A fixed bridge crosses the cut just south of the dredged channel and has a width of 24 feet. Southeast of this bridge is another fixed bridge with a width of 28 feet and a clearance of 8 feet. Overhead power cables crossing at the bridges have a clearance of 31 feet.

(244) A privately maintained and marked channel leads from the south end of Morris and Cummings Cut to a basin at the south end of the town of Aransas Pass; the reported controlling depth in 1990 was about 5 feet.

(245) **Redfish Bay** is shallow; it extends north along the mainland from Corpus Christi Bay to Aransas Bay. The dredged channel of the Intracoastal Waterway is adjacent to the mainland shore, traversing the bay north to south and joining Corpus Christi deep-draft channel at Port Ingleside.

(246) **Corpus Christi Bay** is a large body of water, roughly elliptical in shape, lying to the west of Mustang Island and connected with Aransas Pass by the Corpus Christi Channel. The bay is about 15 miles long in an east and west direction and 11 miles wide at its widest part. About the east end of the bay the depths are 8 to 11 feet, and most of the rest of the bay has depths of 12 to 13 feet.

(247) A **seaplane restricted area** is in Corpus Christi Bay. (See **33 CFR 334.800**, chapter 2, for limits and regulations.)

(248) **Shamrock Cove**, on the southeast side of Corpus Christi Bay, affords good anchorage for small boats in depths of 7 to 8 feet, soft mud bottom. Shoals extend

about 0.2 mile west and 0.3 mile south of **Shamrock Point**.

(249) In **Port Ingleside**, on the north shore of Corpus Christi Bay about 7.5 miles west of Aransas Pass, is a privately owned oil terminal. There are piers in a basin and a deep-draft wharf north of the Corpus Christi Channel.

(250) Just west of the oil terminal is a **restricted area** (See **33 CFR 334.802,** chapter 2, for limits and regulations.) The naval base was reported closed in 2010 and the restricted area no longer active.

(251) **Ingleside on the Bay**, a fishing community on the east shore of Ingleside Cove, has a marina at the south end of the cove that can accommodate boats up to 50 feet. Berths, electricity, water, ice, launching ramp and wet storage are available. The unmarked channel leading to the facility had a reported controlling depth of about 6 feet in 2002.

(252) **Nueces Bay** is a tributary of Corpus Christi Bay partially separated from it by sandspits and has depths of only 1 to 2 feet. **Indian Point** and **Rincon Point**, the northeast and southeast points forming the entrance, are connected by U.S. Route 181 highway causeway. **Rincon Canal**, marked by daybeacons and an unlighted **320°** range, leads northwest from Corpus Christi Bay to the Rincon Industrial Park complex at the southeast end of Nueces Bay inside Rincon Point. The Industrial Park, in various stages of construction, will serve as a shallow-draft commerce terminal. A fixed highway bridge crosses the main channel and has a clearance of 50 feet. The poles of a former power cable extend across the entrance to Nueces Bay below the causeway, and the piling of a former railroad bridge remains, except for removed sections at both ends.

(253) **Nueces River** emptying into the west part of Nueces Bay is navigable for shallow-draft boats for a distance of 9 miles to a dam. The river is of no commercial importance.

(254)

ENC - US5TX23M
Chart - 11311

(255) **Corpus Christi Harbor**, on the north side of Corpus Christi, consists of inland basins connected by an industrial canal. The basins and connecting canal are landlocked and well protected.

(256) **Corpus Christi**, on the west side of Corpus Christi Bay and 18 miles from Aransas Pass, is the most important city commercially on the Texas coast southwest of Galveston. The principal industries are in seafood processing, agriculture, livestock, meat packing and freezing, petroleum products, petrochemical and industrial chemicals, natural gas, manufacture of plastics, steel products, aluminum, zinc, machinery, oil field equipment, paper products, agricultural fertilizers, cement, gypsum products, textiles and the shipment of wheat, cotton, corn, barley, sorghum, dry bulk materials and general cargo.

(257) The city has several hospitals, a large municipal auditorium, a large boat harbor and a Coast Guard air station.

(258)

Bridges

(259) U.S. Route 181 fixed highway bridge over the entrance to Corpus Christi Turning Basin is under construction (2018). An overhead power cable crosses the canal midpoint between the first turning basin and Avery Point Turning Basin with a clearance of 165 feet. Another overhead cable crosses Viola Channel between Tule Lake Turning Basin and Viola Turning Basin with a clearance of 195 feet at mean low tide.

(260)

Small-craft facilities

(261) The bay waterfront at Corpus Christi is protected by a breakwater nearly 2 miles long. Depths in most of the area behind the breakwater range from 6 to 10 feet, not including the ship channel crossing the north end. The main entrance is through the ship channel. Depths of 6 to 10 feet can be carried south inside the breakwater to three large wharves of the municipal marina, about 0.7 mile south of the ship channel; boats should pass inshore of the center of this protected waterway. There are four openings in the breakwater south of the ship channel. The northernmost two are very shallow and are not used, with depths of 1 foot to bare. The southernmost opening, which provides a direct entrance to the marina from the bay, has depths of about 7 feet and is marked on its north and south sides by lights.

(262) There is a marina supervisor, with an office on the center wharf, who assigns berths and can be contacted at 361–826–3980. A municipal patrol and rescue boat operates from the marina. The patrol boat can be contacted through the Corpus Christi police and marine radio. The boat monitors VHF-FM channel 16 when underway and is also equipped with VHF-FM channels 6, 12 and 26.

(263) The marina is opposite the center of the city and has excellent accommodations for yachts and small vessels. Protected berths for more than 500 craft are available with reported depths of 8 to 11 feet. Gasoline, diesel fuel, electricity, water, ice, pumpout, winter storage and launching ramps are available. A repair yard has a 15-ton mobile lift and can handle boats up to 40 feet; hull, engine and electronic repairs can be made.

(264) A repair yard on the north side of the Tule Lake Channel portion of the harbor channel has an 89-ton vertical lift and a 140-foot marine railway.

(265) The Corpus Christi Yacht Club is at the marina.

(266)

Anchorages

(267) A **special anchorage** area is in the area south of the municipal marina. (See **33 CFR 110.1** and **110.75**, chapter 2, for limits and regulations.)

(268)

ENC - US3GC01M
Chart - 11300

(269) **Laguna Madre** is a shallow body of water extending south from Corpus Christi Bay for a distance of 100 miles. Depths range from zero to 9 feet with reefs and mudflats throughout. The Intracoastal Waterway traverses Laguna Madre from Corpus Christi Bay to Port Isabel, TX (See chapter 12.) **Padre Island**, a low, barren storm-swept strip of sand beach, separates Laguna Madre from the Gulf. Most of the Island is part of the **Padre Island National Seashore** and subject to the rules and regulations of the U.S. Department of Interior's National Park Service.

(270) A natural fishing reef is 1.5 miles offshore about 15.6 miles north of Port Mansfield jetties. Another natural fishing reef is 4.5 miles offshore about 11.2 miles north of the jetties.

(271)

Port Mansfield

(272) **Port Mansfield**, 70 miles south of Corpus Christi Bay, is a commercial fishing and popular sport fishing and recreational center and a base for oil exploration in Laguna Madre. A water tank at the town is prominent.

(273) **Vessels should approach Port Mansfield through the Port Mansfield Safety Fairway.** (See **33 CFR 166.100** through **166.200**, chapter 2.)

(274)

COLREGS Demarcation Lines

(275) The lines established for Port Mansfield are described in **33 CFR 80.850**, chapter 2.

(276) An 8.6-mile dredged channel leads from the Gulf, from a point 78 miles south of Aransas Pass and 31 miles north of Brazos Santiago Pass, through a jettied entrance and a land cut across Padre Island, and thence across Laguna Madre to a turning basin at Port Mansfield. A shrimp-boat basin and a small-craft basin extend south from the southwest and southeast corners of the turning basin, respectively. (See Notice to Mariners and latest edition of charts for controlling depths.) The entrance to the dredged channel is marked by a light off the ends of the north and south jetties in ruins. The channel is marked by lights and daybeacons.

(277)

Anchorages

(278) Vessels may anchor off the entrance to Port Mansfield on either side of the safety fairway.

(279) Port Mansfield, under the jurisdiction of the Willacy County Navigation District, has a port director; a **harbormaster** assigns berths. There are berthing facilities, open storage space and a transit shed with covered storage space. The basins have been bulkheaded, and vessels up to 128 feet can be berthed at finger piers in the shrimp-boat basin. There are about 200 berths in the small-craft basin.

(280) There are four marinas in the shrimp-boat basin that provide gasoline, diesel fuel, ice, water and limited marine supplies.

(281) A **speed limit** of 4 knots is enforced in the harbor. An improved highway connects with the nearest railroad shipping point at **San Perlita**, 14 miles distant, and with **Raymondville**, the nearest town of any size, 28 miles distant. Raymondville has a hospital, telegraph communications and rail and highway connections.

(282)

ENCs - US4TX11M, US5TX13M
Charts - 11301, 11303

(283) **Arroyo Colorado** enters Laguna Madre through **Arroyo Colorado Cutoff**. A dredged channel, 90 miles south of Corpus Christi, leads from the Intracoastal Waterway through Arroyo Colorado Cutoff and Arroyo Colorado to a turning basin at Port Harlingen, 22 miles from the mouth. See Notice to Mariners and the latest edition of the chart for controlling depths.

(284) A barge assembly basin, with attendant mooring dolphins and depths of about 14 feet, is on the north side of Arroyo Colorado Cutoff about 1.7 miles west of the Intracoastal Waterway. This basin is intended for the temporary mooring of barges.

(285) **Rio Hondo** is a small town on the Arroyo Colorado, about 20 miles above its mouth. There are privately operated wharves for the unloading of petroleum products and chemicals and limited berthing facilities for pleasure craft. Water is available at a small pier. Ice by truck and provisions are available. There are railroad and highway connections to the north part of the state.

(286) State Route 106 highway bridge at Rio Hondo has a vertical lift span with a clearance of 27 feet down and 73 feet up. (See **33 CFR 117.1** through **117.59** and **117.951**, chapter 2, for drawbridge regulations.) Overhead power and telephone cables close south of the bridge have clearances of 63 feet. An overhead power cable with a clearance of 73 feet is about 0.8 mile below Rio Hondo.

(287) **Port Harlingen**, under the jurisdiction of the Arroyo Colorado Navigation District known as the Port Commission, is east of Harlingen and about 2 miles above Rio Hondo. A Port Director is in charge of operations and enforces the regulations established by the Port Commission. A **speed limit** of 8 knots in the channel and 4 knots in the turning basin is enforced. The Port Director assigns berths. There are two reinforced concrete wharves 650 feet and 100 feet long, three oil unloading piers and aggregates and fertilizer wharf. A transit shed on the largest wharf has 12,000 square feet of covered storage, with a rail siding at a loading platform in the rear of the shed. All the wharves had a reported depth of 12 feet alongside in 1982. Forklifts, crawler cranes, a grain elevator and a compressed gas and oil storage facility are available. Water is available at the large wharf. Gasoline and diesel fuel are available by truck. The principal imports are petroleum products,

steel products and chemicals. The principal exports are grain, chemicals and crude petroleum. There are railroad and highway connections to **Harlingen** and the interior. At Harlingen and **San Benito** there are hospitals, a grain elevator, railroad and bus transportation and communication facilities.

(288)

ENCs - US4TX11M, US5TX12M
Charts - 11301, 11302

(289) **Brazos Santiago Pass (Brazos Santiago)**, the approach to Port Isabel and Port Brownsville, is a narrow pass from the Gulf to the lower end of Laguna Madre, between the south end of Padre Island and the north end of **Brazos Island**. It lies 236 miles south-southwest from Galveston entrance, 106 miles south from Aransas Pass and 6 miles north from the mouth of the Rio Grande.

(290)

Prominent features

(291) In approaching Brazos Santiago Pass on a clear day, the radio antenna at **South Padre Island Coast Guard Station** and the water tank and Port Isabel Light are the first objects sighted. Soon thereafter the mariner will pickup Brazos Santiago Light and the Coast Guard station inside the entrance on the north side. The light on top of the radio antenna of the Coast Guard station is prominent at night. On clear nights it is reported to be visible 20 or more miles offshore. The large hotels and condominiums on Padre Island north of the entrance are prominent.

(292) **Port Isabel Light** (26°04'36"N., 97°12'24'W.), 91 feet above the water, is shown from the white conical brick tower; the light is maintained by the State.

(293) Vessels should approach Brazos Santiago Pass through the **Brazos Santiago Pass Safety Fairway** or the **Coastwise Safety Fairway**. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(294)

COLREGS Demarcation Lines

(295) The lines established for Brazos Santiago are described in **33 CFR 80.850**, chapter 2.

(296)

Channels

(297) The pass has been improved by the construction of two rubble mound jetties extending nearly 1 mile into the Gulf and by dredging a channel between them from deep water in the Gulf. Federal project depths are 44 feet in the Brazos Santiago Pass entrance channel, thence 42 feet through the jetty channel and across Laguna Madre to the junction of the channels leading to Port Brownsville and Port Isabel, 36 feet to Port Isabel turning basin, and 42 feet from the junction to the **Brownsville Turning Basin**. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.

(298) The entrance is marked by a lighted buoy about 2 miles east of the jetties, a lighted **269.4°** entrance range, and lighted buoys off ends of the jetties. The channels are well marked by lights, lighted buoys, daybeacons and lighted ranges.

(299) In the 16-mile channel to Brownsville Turning Basin. **Boca Chica Passing Basin** is 7 miles and **Goose Island Passing Basin** 11.3 miles above the outer end of the entrance jetties.

(300) Private interests have dredged a ship basin at the south end of Padre Island just inside Brazos Santiago Pass entrance. The basin had a reported approach and alongside depth of 6 feet in 2013. There is a large marina in the basin where gasoline, diesel fuel, water, ice, open berths, storage and surface launching ramps are available.

(301)

Anchorages

(302) Vessels should anchor in the Brazos Santiago Pass Fairway Anchorages on either side of the safety fairway. (See **33 CFR 166.100** through **166.200**, chapter 2.)

(303) Directly off the entrance to Brazos Santiago Pass, the bottom is soft and affords fair anchorage with good holding ground; farther north and south the bottom is harder. After entering the pass, ships must proceed to the wharves. Once inside Brazos Santiago Pass, there is no satisfactory anchorage for deep-draft vessels.

(304)

Currents

(305) Tidal currents of 6 knots were reported in the vicinity of Brazos Santiago Pass and Port Isabel that may cause strong cross currents on the Intracoastal Waterway at about Mile 665.1W, especially with a flood tide and strong southeast winds. Caution is advised for large vessels transiting between Port Isabel and Long Island. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(306)

Dangers

(307) An unmarked dangerous wreck is 4.5 miles north of Brazos Santiago Pass Entrance Lighted Whistle Buoy BS, and a fish haven is 1.3 miles north of the buoy.

(308)

Weather

(309) The climate of Brownsville is partly manmade. The prevailing winds of the area are from the Gulf of Mexico but do not produce a truly marine climate. The region could be classified as semiarid because of the lack of rainfall, the result of the low elevation of the area, which fails to give the air from the Gulf sufficient lift to cause condensation and of the considerable subsidence of the winds aloft due to the presence of mountains starting about 100 miles to the west. The manmade, and most

important, climatic factor of this region is the irrigation that has changed the entire lower Rio Grande Valley into a semitropical area.

(310) The normal annual rainfall of about 26 inches is poorly distributed, with maxima in June, September and October. Most of the precipitation comes in the form of thunderstorm activity, and often a single thunderstorm will account for the entire month's rainfall. Some extreme rainfalls have occurred when hurricanes were in the vicinity. However, the frequency of hurricanes in this area is very small, and the general path is a north and south one just off the coast in the Gulf. Since 1950 only eight tropical systems have approached Brownsville. Perhaps the most noteworthy were Beulah in September 1967 and Allen in August 1980. Beulah made a direct hit at Brownsville with an estimated wind of 109 knots observed at the airport. Allen provided a 68-knot gust at the airport. The greatest 24-hour rainfall at Brownsville occurred during Beulah. Over 12 inches was documented on September 20, 1967.

(311) Temperatures in summer and fall are not extremely high but are fairly constant in the lower nineties during the daytime and in the middle seventies at night. The average annual temperature at Brownsville is 74.1°F with an average high of 82.8°F and an average low of 65.0°F. August is the warmest month with an average temperature of 84.7°F, and January is the coolest with an average temperature of 60.5°F. The prevailing onshore winds from the Gulf moderate the temperatures. The highest temperature recorded at Brownsville was 106°F recorded in March 1984. Each month March through August has recorded temperatures in excess of 100°F while each month November through March has recorded temperatures at or below freezing. The lowest temperature on record at Brownsville is 16°F, recorded in December 1989.

(312) Winter temperatures are mild, with the normal daily minimum for January, the coldest month, being 51.0°F. Frequently an entire winter will pass without a temperature as low as the freezing point occurring.

(313) Snow seldom occurs in Brownsville; however, local newspaper records reveal that 6 inches of snow blanketed the area in 1895.

(314) Glaze is rare in Brownsville, but, during a cold wave in 1951, ice accretion was 1 to 1½ inches for the most severe glaze of record.

(315) The National Weather Service maintains an office in Brownsville where **barometers** may be compared, or they may be compared by telephone. (See Appendix A for address.)

(316)

Pilotage, Brownsville

(317) Pilotage is compulsory for all foreign vessels and U.S. vessels under register in foreign trade. Pilotage is optional for coastwise vessels that have on board a pilot licensed by the federal government.

(318) The Brazos Santiago Pilots Association serves the Port of Brownsville and Port Isabel, Texas. The pilots mailing address is P.O. Box 414, Port Isabel, TX 78578; telephone/fax 956–943–3680.

(319) The pilots board vessels 1 mile east of the sea buoy. The Brazos Santiago Pilots maintain a station on South Padre Island at a marina near the Port Isabel Coast Guard Station. The pilot boat "PILOT VII" is 51 feet long with an orange hull and white deckhouse with the word PILOT on the house. The pilot boat "VI" is 27 feet long with a red hull and a white deckhouse. The pilot boats monitor VHF-FM channels 16 and 12 and work on channel 12.

(320) When boarding, pilots will make contact over VHF approximately 30 minutes before planned boarding time. The pilot will give pilot ladder rigging instructions at that time. Pilots request a boarding speed of 7 knots.

(321) Pilot services are available 24 hours a day, weather permitting. Arrangements for pilot service can be made through the Brownsville Harbormasters office by telephone 969–831–8256 and through the ships' agents. A minimum 4-hour notice of time of arrival is required.

(322)

Quarantine, customs, immigration and agricultural quarantine

(323) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(324) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(325) There are two hospitals in Brownsville.

(326) Brownsville is a **customs port of entry**.

(327)

Towage

(328) Two tugs of 1,600 and 1,800 hp are available at Brownsville for docking and undocking vessels, coastwise towing or salvage work.

(329)

Harbor regulations

(330) The Port Commission of the Brownsville Navigation District has jurisdiction and control over the Brownsville Ship Channel and turning basin and all wharves and transit sheds owned or operated by it. The Port Commission establishes rules and regulations governing the port. The Port Director is in charge of operations, and the **harbormaster** assigns berths and enforces the regulations. A **speed limit** of 8 knots in Brownsville Ship Channel and 4 knots in the turning basin is enforced.

(331) **Port Brownsville**, about 14.5 miles from the inner end of Brazos Santiago Pass, is the port for the city of Brownsville. Exports include cotton, cotton products, lead, agricultural implements, zinc, sulfate, ores, chemicals, petroleum products, and citrus fruit. Imports are fruit, steel products, ores, and general cargo. Offshore oil rigs are constructed and repaired in Port Brownsville.

(332) **Brownsville**, about 5 miles west-southwest of Port Brownsville, is a fast growing metropolis and the largest city in the rich agricultural section on the north side of

(336)

Facilities at Brownsville, Texas

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Purpose	Owned/ Operated by:
North side of Brownsville Ship Channel						
Brownsville Navigation District, Oil Dock No. 3	25°57'35"N., 97°22'45"W.	325	35	14.8	Receipt and shipment of petroleum products	Brownsville Navigation District
Brownsville Navigation District, Oil Dock No. 2	25°57'22"N., 97°23'24"W.	350	32	14.8	Receipt and shipment of petroleum products, solvents, liquid wax, latex and vegetable oils	Brownsville Navigation District/Transmontaigne Terminaling Co.
Brownsville Navigation District, Oil Dock No. 1	25°57'19"N., 97°23'31"W.	325	32	14.8	Receipt and shipment of petroleum products, hexane and other solvents	Brownsville Navigation District/Transmontaigne Terminaling Co.
North side of Turning Basin						
Brownsville Navigation District, Docks Nos. 7 and 8	25°57'14"N., 97°23'49"W.	1,000	29	12	Receipt and shipment of steel and general cargo	Brownsville Navigation District
Brownsville Navigation District, Docks Nos. 1, 2 and 4	25°57'07"N., 97°24'08"W.	1,250	32	12	Receipt and shipment of general cargo, ores and bulk materials	Brownsville Navigation District
West end of Turning Basin						
Brownsville Navigation District, Dock No. 3	25°57'59"N., 97°24'04"W.	450	32	12	Receipt and shipment of steel products and ores	Brownsville Navigation District
South side of Turning Basin						
Brownsville Navigation District, Docks Nos. 10 & 11	25°57'03"N., 97°23'53"W.	• 650 west • 600 north	• 21 • 28	12	• Receipt and shipment of dry bulk commodities, ores, metals and heavy machinery • Steel by barge	Brownsville Navigation District
Brownsville Navigation District, Docks Nos. 12 & 13	25°57'08"N., 97°23'40"W.	1,250	28-29	12	Receipt and shipment of steel, misc. ores and general cargo	Brownsville Navigation District
South side of Brownsville Ship Channel						
Port of Brownsville, B.C. Dock	25°57'19"N., 97°23'10"W.	400	39-42	12	Shipment of grian and stone	Brownsville Navigation District/Port Elevator-Brownsville, LC and Global Stone, LC
Brownsville Navigation District, Liquid Cargo Dock	25°57'20"N., 97°22'24"W.	450	34	14	Receipt and shipment of petroleum products and liquid wax	Brownsville Navigation District/Citgo Petroleum Corp. and Transmontaigne Terminaling Co.

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

the lower Rio Grande Valley that extends 100 miles west from the river mouth. Noted as a resort city, it is also a gateway to Matamoros, Mexico, on the opposite side of the Rio Grande.

(333)

Wharves

(334) The port of Brownsville has more than 40 piers and wharves. Only the deep-draft facilities are listed in the facilities table for Brownsville. All the facilities described are owned and operated by the Brownsville Navigation District of Cameron County unless otherwise stated. All the facilities have highway, railroad and water connections. Almost all have electrical shore power connections.

(335) General cargo at the port is usually handled by ship's tackle; special handling equipment, if available, is mentioned in the description of the particular facility. Two 150-ton floating cranes are available. About 52 acres of open storage space, over 1 million square feet of covered storage and over 2 million cubic feet of cold storage space are available in the port.

(337)

Supplies

(338) All manner of marine supplies and provisions are available at the port. Fresh water is available at most of the wharves. Gasoline, diesel fuel and kerosene are available at the oil wharves. Bunker fuels can be delivered by barge from Corpus Christi by special arrangements.

(339)

Repairs

(340) Port of Brownsville has no facilities for making major repairs or for drydocking deep-draft vessels; the nearest such facilities are at Galveston. Several firms are available for making above-the-waterline repairs to vessels. Shafts up to 30 feet long can be produced by a local firm. The largest marine railway can handle vessels up to 200 tons.

(341)

Small-craft facilities

(342) **Brownsville Fishing Harbor** is on the north side of the channel 3.6 miles below the head of the turning basin at Port Brownsville. Berthing facilities are usually

leased to fishing companies, and facilities for private yachts are very limited. There are seafood processing plants, marine supply outlets and marine engine repair facilities in the fishing harbor. Two shipyards have marine ways, the larger capable of handling vessels up to 100 feet for general repairs. Gasoline, diesel fuel, water, ice, launching ramps, open and covered berths and marine supplies are available. There is bus and taxi service from the basin to Brownsville. Most of the public facilities for yachts are at Port Isabel.

(343)

Communications

(344) Brownsville is connected with points in both the United States and Mexico by three Class I railroads; the Union Pacific, the Southern Pacific and the National Railways of Mexico. Switching service within the port is done by the Brownsville and Rio Grande International Railroad. Several barge lines offer service at the port. Numerous motor freight lines operate out of the port and Brownsville. Steamship agencies represent numerous lines that offer service to all ports of the world. Airlines operate from the Brownsville-South Padre Island International Airport about 4 miles east of the city, with daily scheduled flights to all parts of the United States. There is local taxi and bus service and interstate bus service to all points.

(345) **Port Isabel**, about 2.5 miles west from Brazos Santiago Pass, is an important point for the shipping of petroleum products by barge and the receipt of barge shipments of sand and gravel. It has a large shrimp boat fleet, and the town is widely patronized as a resort for sport fishing and recreation.

(346)

Channels

(347) North of Port Isabel, a dredged channel branches off the Intracoastal Waterway in a southwest direction towards the Port Isabel small-boat basin. The channel turns south before entering the basin and, once inside, turns southeast to a turning basin.

(348) Another dredged channel branches off the Intracoastal Waterway between Port Isabel proper and Long Island in about 26°04'03"N., 97°12'25"W. The channel leads west from the waterway and curves around Port Isabel in a northerly direction.

(349) The deep-draft Port Isabel Channel departs the Laguna Madre Channel about 2.8 miles above the jetties and leads north for 1.2 miles to the turning basin at Port Isabel. A federal project provides 42 feet through Laguna Madre Channel and 36 feet through Port Isabel Channel and turning basin. (See Notice to Mariners and latest editions of charts for controlling depths.) The Intracoastal Waterway is described in chapter 12.

(350) A causeway crossing the Intracoastal Waterway between Port Isabel and Padre Island has a fixed span with a clearance of 73 feet. The fixed span of the former causeway crossing the south end of Laguna Madre between Long Island and Padre Island has been removed; a 38-foot navigation opening remains.

(351)

Wharves

(352) There are over 25 piers and wharves at Port Isabel. Most are of shallow draft and are used mainly by the seafood industry and for marine services and repairs. Only the deep-draft facilities are described. The deep-draft facilities on the turning basin are owned by the Port Isabel-San Benito Navigation District and are managed by a **port director**, who assigns berths and controls the movement of vessels. A **speed limit** of 4 knots in the harbor and 8 knots in the ship channel is enforced.

(353) The Port Isabel Turning Basin General Cargo Wharf, on the west side of the turning basin, has a 550-foot face with 30 feet reported alongside. About 50,000 square feet of covered storage, 72,000 square feet of open storage space and storage tanks with 192,000-barrel capacity are available. The wharf is used for the receipt and shipment of general cargo, the receipt of sand and gravel and the shipment of crude oil. The wharf has highway, fresh water, shore power and pipeline connections.

(354) The port has lay berth facilities for vessels to 200 feet long and 24-foot draft. An additional 600-foot cargo dock with 24 feet alongside is available and is currently used by the offshore drilling industry.

(355)

Supplies

(356) Port Isabel has no waterfront facilities for bunkering deep-draft vessels; fuel can be supplied to vessels berthed in the turning basin by tank barges from Corpus Christi. Gasoline, diesel fuel and marine lubricants are available to fishing boats and other small vessels.

(357)

Repairs

(358) Port Isabel has no facilities for making major repairs or for drydocking deep-draft vessels; the nearest such facilities are at Galveston. Several firms are available for making above- and below-the-waterline repairs to smaller vessels. The largest marine railway can handle vessels up to 140 feet and 800 tons for general repairs.

(359)

Small-craft facilities

(360) There are several marinas at Port Isabel.

(361)

Communications

(362) Port Isabel has highway connections, and the Cameron County Municipal Airport is about 10 miles northwest of the city.

(363) **Del Mar Beach**, on Brazos Island, is a swimming and fishing resort.

(364) The **Rio Grande** empties into the Gulf of Mexico 6 miles south of Brazos Santiago Pass. The International Boundary and Water Commission states (December 28, 1953) that the river forms the International boundary between the United States and Mexico for 1,241 statute

miles; further, that the total length of the boundary is 1,935 statute miles from the Gulf of Mexico to the Pacific Ocean. No survey of the river has been made recently, but access to the river over the entrance bar is limited to skiffs and small boats; inside, the channel is changeable. The International Boundary Commission has several dams on the Rio Grande to prevent freshwater from wasting into the Gulf.

(365) The east coast of Mexico is described in Pub. No. 144, Sailing Directions (Enroute), Caribbean Sea, published by the National Geospatial-Intelligence Agency.

Chart Coverage in Coast Pilot 5—Chapter 12
NOAA's Online Interactive Chart Catalog has complete chart coverage
http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml
32°N
30°N
28°N
26°N
24°N
80°W
82°W
84°W
86°W
88°W
90°W
92°W
94°W
96°W
98°W
TEXAS
LOUISIANA
MISS.
ALABAMA
GEORGIA
FLORIDA
CUBA
MEXICO
GULF OF MEXICO
Houston
Galveston
New Orleans
Mobile
Tampa
Key West
11331
11322
11354
11350
11355
11372
11367
11374
11378
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11427
11308
11303
11302

Intracoastal Waterway

(18)

Structures across the Gulf Intracoastal Waterway
Caloosahatchee River to Anclote River (Statute Mile 0 to 150)

Name•Description•Type	Mile	Waterway	Clearance (feet) Horizontal	Clearance (feet) Vertical*	Information
Overhead power cable	8.0	Pine Island Sound		95	
Boca Grande Causeway Bridge (swing)	34.3	Gasparilla Sound	81	9	**Note 2** — Bridge under construction
State Route 776 (bascule)	43.5	Lemon Bay	86	26	**Note 1** — Englewood to Manasota Key
Manasota Beach Highway Bridge (bascule)	49.9	Lemon Bay	90	26	**Note 1** — Manasota to Manasota Key
Overhead power cable	49.9	Lemon Bay		88	Manasota to Manasota Key
State Route 45 Bridge (bascule)	54.9	IWW landcut	90	25	**Note 1**
Venice Avenue Bridge (bascule)	56.6	Hatchett Creek	90	30	**Note 2**
Hatchett Creek (US-41) Bridge (bascule)	56.9	Hatchett Creek	100	30	**Note 2**
Albee Road (SR-789) Bridge (bascule)	59.3	Blackburn Bay	90	14	**Note 1**
Blackburn Point Road Bridge (swing)	63.0	Little Sarasota Bay	51	9	**Note 1**
Stickney Point (SR-72) Bridge (bascule)	68.6	Little Sarasota Bay	90	18	**Note 2**
Siesta Drive Bridge (bascule)	71.6	Roberts Bay	90	25	**Note 2**
Ringling Causeway Bridge (fixed)	73.6	Sarasota Bay	100	65	
Cortez (SR-684) Bridge (bascule)	87.2	Anna Maria Sound	90	22	**Note 2**
Anna Maria Island Bridge (bascule)	89.2	Anna Maria Sound	90	24	**Note 2**
Sunshine Skyway Bridge (fixed)	99.0	Tampa Bay	500	180	Main ship channel span
Sunshine Skyway Bridge (fixed)	110.5	Tampa Bay	91	65	Northern-most span near Maximo Point
Pinellas Bayway (bascule)	113.0	Main Channel	89	25 (center)	**Note 2** — Structure E, Bridge under construction
Pinellas Bayway (fixed)	114.0	Boca Ciega Bay	100	65	Structure C
Corey Causeway Bridge (bascule)	117.7	Boca Ciega Bay	90	23	**Note 2**
Treasure Island Causeway Bridge (bascule)	119.0	Boca Ciega Bay	100	21	**Note 2** — Bridgetender monitors VHF-FM channel 9; call sign WQZ-67 or KZU-970. Middle span of the causeway.
Welch Causeway Bridge (bascule)	122.8	Boca Ciega Bay	89	25	**Note 2**
78th Avenue (SR-694) Bridge (bascule)	126.0	The Narrows	90	20	**Note 1** — Bridgetender monitors VHF-FM channel 9; call sign WHV-751
State Route 688 Bridge (bascule) dual span	128.2	The Narrows	90	21	**Note 1**
Belleair Causeway (SR-686) Bridge (fixed)	131.8	Clearwater Harbor	100	75	
Clearwater Memorial Causeway Bridge (fixed)	135.9	Clearwater Harbor	315	74	
Dunedin Causeway Bridge (bascule)	141.9	St. Joseph's Sound	91	24	**Note 1** — Bridgetender monitors VHF-FM channel 9; call sign WHV-750

* Vertical clearance measured at Mean High Water
Note 1 – See **33 CFR 117.1** to **117.49**, chapter 2, for drawbridge regulations.
Note 2 – See **33 CFR 117.1** to **117.59** and **117.287**, chapter 2, for drawbridge regulations.

(1) This chapter describes the **Intracoastal Waterway**, a toll-free canal, from Caloosahatchee River, Florida, to Brownsville, Texas. The waterway is a protected route inside the west coast of Florida and behind the Gulf Coast. A 140-mile stretch between Anclote River and Carrabelle, Florida, is not protected and is described in chapter 5. The waterway is discussed in two sections—Caloosahatchee River to Anclote River, a distance of 150 statute miles and Carrabelle to Brownsville, a distance of 1,059 statute miles.

(2) Also discussed in this chapter are the alternate routes of the Intracoastal Waterway: Algiers Alternate Route, Landside Route, Morgan City-Port Allen Alternate Route, and Atchafalaya River Route.

(3) Supervision of the Intracoastal Waterway's construction, maintenance and operation is divided among four U.S. Army Engineer Districts: Jacksonville, Mobile, New Orleans and Galveston. (See Appendix A for addresses.)

(4)

Mileage

(5) The first section of the waterway is zeroed in at 26°30.6'N., 82°01.1'W., near the mouth of the Caloosahatchee River at its junction with Okeechobee Waterway.

(6) Distances along the Intracoastal Waterway are in statute miles to facilitate reference to the small-craft charts; all other distances are in nautical miles. A conversion table, to aid in converting nautical miles to statute miles or vice versa, can be found at the end of chapter 1.

(7)

Channels

(8) The federal project for the Intracoastal Waterway, Caloosahatchee River to Anclote River, provides for a channel 9 feet deep and 100 feet wide. Although effort is made to maintain the project depth, the channels may shoal several feet in places between maintenance dredgings—consult the U.S. Army Corps of Engineers for controlling depths. (See Appendix A for contact information.)

(9) The Coast Guard advises vessels exercise particular caution in areas where the waterway intersects major shipping channels. Situations resulting in collisions, groundings and close quarters passing have been reported in the intersections by both shallow and deep-draft vessels. The Coast Guard has requested vessels make a **SECURITE** call on VHF-FM channel 13 prior to crossing deep-draft shipping channels, particularly during periods of restricted visibility.

(10)

Bridges and overhead cables

(11) Structures (bridges, overhead cables and pipelines) crossing only the Intracoastal Waterway are shown in tables within the chapter. These tables list structures within the following mileages: **Mile 0** to **150**, **Mile 376E** to **125E**, **Mile 35E** to **95W**, **Mile 95W** to **680W**, **Algiers Alternate Route**, **Atchafalaya River Route** and **MP Alternate Route**. Clearances of structures are given at mean high water. Drawbridge regulations, if applicable, are given in the tables and referenced back to chapter 2.

(12)

Cable ferries

(13) Cable ferries still cross the Intracoastal Waterway at several places.

(14) **Note:** Generally, the cables are suspended during crossings and dropped to the bottom when the ferries dock. However, since operating procedures may differ in some cases, mariners are advised to exercise extreme caution and seek local knowledge. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(15)

Aids to navigation

(16) Intracoastal Waterway aids have characteristic yellow markings that distinguish them from aids to navigation marking other waters. (See U.S. Coast Guard Light Lists or Chart 1, Nautical Chart Symbols and Abbreviations, for illustrations of special markings.)

(17)

ENC - US5FL42M
Chart - 11427

(19) From near the mouth of the Caloosahatchee River, the waterway crosses San Carlos Bay and enters Pine Island Sound, between Pine Island and Sanibel Island.

(20) Strong crosscurrents are encountered in San Carlos Bay especially during ebb of spring tides between Pine Island Sound Daybeacon 2A and Daybeacon 8.

(21) **J. N. "Ding" Darling National Wildlife Refuge**is on Sanibel Island.

(22) **Pine Island Sound**, between Pine Island and the outer islands, is the main thoroughfare between San Carlos Bay and Charlotte Harbor. Numerous small islands, keys, for the most part uninhabited, and shoals abound in the sound. Some of the islands are part of the **Pine Island National Wildlife Refuge**. The waterway through the sound is marked by lights and daybeacons.

(23) **Pine Island**, between Pine Island Sound and Matlacha Pass, is about 13 miles long and about 2.5 miles wide at the north end. There are a number of seasonal and year-round settlements on the island.

(24) **St. James City** is a small fishing and residential community on the south end of Pine Island, opposite **Mile 4.0.** A 5-ton hoist and a marine railway that can handle craft to 30 feet for hull and engine repairs are available.

(25) There are several marinas and fish camps on **Monroe Canal** and **Henley Canal**at St. James City where berths with electricity, gasoline, diesel fuel, water, ice and some marine supplies can be obtained. The entrance channel to **Long Cutoff** leads to the canals. In 1982, the reported midchannel controlling depth was 6 feet. In 1987, a reported centerline controlling depth of 3 feet was in Monroe Canal. A road leads from St. James City to the north end of Pine Island and connects with a road across Little Pine Island and Matlacha Pass to Fort Myers and Cape Coral.

(26) Opposite **Mile 10.0, Blind Pass**, which separates Sanibel Island from Captiva Island, enters Wulfert Channel and Pine Island Sound. Wulfert Channel is marked by private daybeacons. Blind Pass is described in chapter 4.

(27) **Captiva** is a village on **Captiva Island**, west of **Mile 12.1** about 3 miles north of Blind Pass. Gasoline, water, ice, diesel fuel, pump-out and some marine supplies are available in Captiva. The approach channel, marked by a light and daybeacons, had a reported depth of 6.0 feet in 2012.

(28) At **Mile 13.7**, a privately dredged and marked channel, leads west from the waterway to a marina near the north end of Captiva Island. In 2015, 5 feet was reported available in the channel. The marina has berths with electricity, gasoline, diesel fuel, water, ice, a pump-out station and marine supplies.

(29) **Redfish Pass**, west of **Mile 14.5**, separating Captiva Island, and North Captiva Island is described in chapter 4. A marked channel on the east side of Captiva Island provides access to a marina. Gasoline, diesel fuel, pump-out, electricity, water, ice and marine supplies are available. In 2007, 6 feet was reported in the approach and alongside.

(30) **Captiva Pass**, west of **Mile 18.0**, separating North Captiva Island and Cayo Costa, is described in chapter 4. Fair anchorage is available for small boats in **Safety Harbor**, which is 0.5 mile south of Captiva Pass on the inner side of North Captiva Island. The depth inside the harbor is about 5 feet, but only small craft drawing less than 3 feet can enter. The channel into the harbor is marked by private daybeacons, but local knowledge is advised. The holding ground is good, and the anchorage is well protected from all directions.

(31) At **Mile 21.5**, a privately marked channel leads to piers and a restaurant at Cabbage Key. The piers can accommodate boats to 75 feet.

(32) **Useppa Island**, near the north end of Pine Island Sound east of **Mile 21.5**, has a natural small-boat basin on its northwest side. A privately marked channel leads to the basin; local knowledge is advised. The island is a private resort development with docking facilities for members only.

(33) **Cayo Costa** is an island on the south side of the entrance to Charlotte Harbor. A state park is on the island. **Pelican Bay**, on the northeast side of the island, affords well protected anchorage in depths of 4 to 7 feet. The entrance to Pelican Bay is through **Pelican Pass**, about 1 mile south-southeast from the north end of the island; the controlling depth is about 5 feet. A small circular basin at the north end of the bay affords excellent protection to small craft, but the entrance is reported almost filled in and is difficult to navigate.

(34) At **Mile 22.6**, a channel marked by daybeacons and a light leads east from the waterway, north of Useppa Island, and thence northeast to Charlotte Harbor in the vicinity of **Bokeelia Island**.

(35)

ENC - US5FL42M
Chart - 11427

(36) **Bokeelia** is a small settlement on **Bokeelia Island**, at the north end of Pine Island on the south side of Charlotte Harbor. Drafts up to about 5 feet can be taken to the wharf at Bokeelia. Several small marinas at Bokeelia, in **Back Bay**, can provide berths, gasoline, water and ice. Launching ramps are available. A forklift can haul out craft to 30 feet for hull and engine repairs or storage. On the west side of Bokeelia Island, a privately marked channel leads from Charlotte Harbor through **Jug Creek** to Back Bay. In 1982, the reported controlling depth through Jug Creek was 3 feet. A fixed highway bridge with a horizontal clearance of 28 feet and a vertical clearance of 10 feet connects Bokeelia Island with Pine Island east of Back Bay.

(37) At **Mile 25.6**, the waterway enters Charlotte Harbor.

(38) **Boca Grande**, the entrance from the Gulf of Mexico to Charlotte Harbor, Port Boca Grande, and Charlotte Harbor and its tributaries, Peace and Myakka Rivers, are discussed in chapter 4.

(39)

ENC - US5FL19M
Chart - 11425

(40)

Anchorages

(41) Small vessels can anchor almost anywhere in Charlotte Harbor. Good depths for small craft can be found close inshore between Port Boca Grande and Boca Grande. Small craft also can use the lagoon at Boca Grande.

(42) At **Mile 26.60**, the waterway passes Port Boca Grande.

(43) **Boca Grande**, west of **Mile 28.6**, has marinas, boatyards and a yacht basin. Berths with electricity, gasoline, diesel fuel, water, ice, marine supplies, pump-out station, launching ramps and engine repairs are available.

(44) **Boca Grande Bayou**, a landlocked lagoon that provides shelter for small craft, can be entered from the waterway opposite **Mile 28.3**. The channel is marked by daybeacons, lights and a private lighted range. In 1982, the channel had a reported controlling depth of 6 feet. Boca Grande Bayou can also be entered at **Mile 29.4** by a privately dredged channel and a landcut. In 1986, 4 feet was reported available in the channel. In 1999, the channel was reported no longer being maintained. The bayou is crossed by two fixed highway bridges with a least channel width of 28 feet and a least clearance of 13 feet. Entry to the bayou from north is possible through a partially privately marked channel.

(45) Harbor Drive Waterway leads west from Boca Grande Bayou near its south entrance.

(46) At about **Mile 30.0,** the waterway enters **Gasparilla Sound**, which extends north from Charlotte Harbor for about 5 miles between **Gasparilla Island** and the mainland. **Island Bay National Wildlife Refuge**is about 2.2 miles east of the waterway.

(47) At **Mile 34.0,** a privately dredged channel leads northeast from the waterway to a small-boat basin and the mouth of **Coral Creek**. The channel is marked by private daybeacons. In 2005, the reported approach and alongside depth was 7 feet. State Route 771 highway bridge crosses the creek about 0.1 mile above the mouth and has a 12-foot fixed span with a clearance of 8½ feet. A fixed, abandoned railroad bridge trestle has a clearance for small skiffs only. **Placida** is a small village at the south end of the highway bridge.

(48) The small-boat basin contains a marina and a seafood shipping plant. Berthing, electricity, gasoline, diesel fuel,

water, ice, marine supplies, a launching ramp and open and covered storage are available. A 70-ton lift for hull, engine and electronic repairs is available.

(49) At **Mile 34.1**, the trestle of an abandoned railroad bridge crosses Gasparilla Sound from Placida to the north end of Gasparilla Island. The opening at the north end of the trestle has a horizontal clearance of 90 feet, and the opening in the middle has a horizontal clearance of 40 feet. The opening at the south end has a horizontal clearance of 10 feet and vertical clearance of 5 feet. Boca Grande Causeway is just northwest and parallel to the abandoned railroad bridge. A swing bridge with a vertical clearance of 22 feet is at the north end. Fixed spans are at the middle, with a reported clearance of 26 feet at the center, and at the south end, with reported clearances of 40 feet (horizontal) and 16 feet (vertical). The bridgetender monitors VHF-FM channel 9. (See **33 CFR 117.1** through **117.59** and **117.287(a-1)**, chapter 2, for drawbridge regulations.) An overhead power cable on the northwest side of the causeway has a clearance of 35 feet at the middle span and 27 feet at the span near the south end.

(50) A marina, between the bridges, has a surfaced launching ramp, gasoline, diesel fuel, pump-out station, electricity, water, ice and marine supplies. In 2005, the marked channel to the marina had a reported approach depth of 6 feet.

(51) **Gasparilla Pass** between Gasparilla Island and Little Gasparilla Island is discussed in chapter 4.

(52) At **Mile 34.3**, the waterway enters **Placida Harbor**. Good small-boat anchorage is available inside the north point of Gasparilla Pass between Little Gasparilla Island and **Bird Key.**

(53) At **Mile 37.4**, the waterway enters **The Cutoff**, a narrow shallow pass joining Placida Harbor with Lemon Bay. Small-craft facilities east of the waterway at **Miles 38.7** and **38.4** have berths, electricity, gasoline, diesel fuel, water, ice, wet and dry storage, pump-out station and marine supplies. A 50-ton lift is available for making hull, engine and electronic repairs. In 2002, depths of 6 feet were reported in the approach channels and basins at the facilities.

(54) **Lemon Bay** is a shallow lagoon that extends 15 miles northwest behind the barrier beach from the head of Placida Harbor to Alligator Creek. There are numerous marinas and service facilities along both sides of Lemon Bay between The Cutoff and Alligator Creek.

(55) **Stump Pass**, near the south end of Lemon Bay southwest of **Mile 41.0**, is discussed in chapter 4.

(56) **Rock (Ainger) Creek** is about 2 miles north of Stump Pass on the east side of Lemon Bay northeast of **Mile 42.8**. A highway bridge with a 27-foot fixed span and a clearance of 9 feet crosses the creek about 0.4 mile above the mouth. Marinas on either side of the creek just below the bridge have berths, electricity, water, gasoline, launching ramps and a 15-ton forklift. A privately marked channel with a reported depth of 3 feet in 2005 leads to the facilities. Craft to 22 feet can be handled on trailers for engine repairs.

(57) **Englewood Beach** is on the west side of the bay just south of the bridge.

(58) **Redfish Cove** is on the east side of the bay at the north end of State Route 776 highway bridge.

(59) **Englewood** is on the east side of the bay about 1.5 miles north of State Route 776 highway bridge. A boat basin and marina are here. In 2005, the reported approach depth to the marina was 4.0 feet. Gasoline, diesel fuel, electricity, water, ice, storage, marine supplies and hull, engine and electronic repairs are available; lift to 50 tons.

(60) At **Mile 52.0,** about 300 yards southeast of the entrance to Alligator Creek, a small passenger ferry crosses Lemon Bay. The ferry monitors VHF-FM channel 16.

(61) At **Mile 52.6**, the waterway enters a 5.1-mile landcut that leads into Roberts Bay at Venice.

(62) A marina, on the west side of the landcut just north of the highway bridge, at **Mile 55.1**, has berths, electricity, gasoline, diesel fuel, ice, water, pump-out station and marine supplies. Hull, engine and electronic repairs can be made. In 2015, 8 feet was reported in the approach and alongside.

(63) **Venice Inlet**, about 26 miles northwest from Port Boca Grande, is described in chapter 4.

(64) The city of **Venice** and the towns of **Nokomis** and **Laurel** are on the shores of the three small bays, **Roberts Bay, Dona Bay** and **Lyons Bay**, inside and to the east of Venice Inlet. A water tank and several large apartment buildings are prominent approaching the U.S. Route 41 bridge over Hatchett Creek. The channel in Lyons Bay, Dona Bay and Roberts Bay are marked by private daybeacons. Reported drafts of about 2 to 5 feet could be taken to the landings at these towns.

(65)

Manatees

(66) A caution zone for the protection of manatees is in Venice Inlet and Roberts, Dona and Lyons Bays. (See Manatees, chapter 3.)

(67) Several marinas are at Venice Inlet and on Roberts, Dona and Lyons Bays.

(68) The waterway continues north from Venice Inlet through **Blackburn Bay, Dryman Bay, Little Sarasota Bay, Roberts Bay, Sarasota Bay** and **Anna Maria Sound** to the lower part of Tampa Bay. These connecting bodies of water are separated from the Gulf by a line of narrow keys.

(69)

Currents

(70) In Venice Inlet the average velocity is about 1 knot. At the bridge at the south end of Blackburn Bay, the current floods to the north and ebbs to the south with an average velocity of about 0.8 knot. At Blackburn Point Bridge at the south end of Little Sarasota Bay, the current floods south-southeast with an average velocity of 1.4 knots and ebbs north with an average velocity of 0.7

knot. One day's observation off the bridge at the north end of Little Sarasota Bay showed very weak currents. In Sarasota Bay at the entrance to Roberts Bay, the currents average only 0.3 knot. At the bridge off Golden Gate Point the average velocity at strength is about 0.4 knot. In Anna Maria Sound off Cortez, the flood currents set to the north-northwest and average about 0.6 knot; the ebb current is weak. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(71) A marina, at **Mile 59.3**, on the east side of the waterway has gasoline, diesel fuel, dry storage, water, ice, marine supplies and a 20-ton lift. Hull, engine and electronic repairs can be made.

(72) At **Mile 63.0** are several small-craft facilities. Berths with electricity, gasoline, water, ice and storage are available. One boatyard has a 12-ton marine lift for boats up to 36 feet, where hull, engine and electronic repairs can be made.

(73) **Osprey** is a small settlement on the east side of Little Sarasota Bay. A marina is near the south end of Siesta Key just north of Midnight Pass. Gasoline, diesel fuel, water, ice, wet and dry storage and a 10-ton lift are available. Hull, engine and electronic repairs can be made. In 2001, the reported controlling depth to the marina was 5 feet.

(74) A marina is at the head of a long slip on the east side of Little Sarasota Bay at **Mile 67.2**. The channel to the slip is marked by private daybeacons and, in 2002, was reported to have an approach depth of 4 feet. Gasoline is available. A lift can handle craft to 23 feet for storage and engine repairs.

(75) Two marinas, west of the bridge at **Mile 68.6**, can provide gasoline, water, ice, dry storage and marine supplies. Two fork lifts are available for hull, engine and electronic repairs.

(76) **Big Sarasota Pass**, an inlet from the Gulf of Mexico to the south end of Sarasota Bay between Siesta Key and Lido Key, is described in chapter 4.

(77) There is a marina at **City Island** at the northeast end of Lido Key, alongside the New Pass Channel, east of New Pass bridge, where berths, gasoline, water, ice and marine supplies are available. There are two forklifts and a traveling lift that can haul out craft to 56 feet for hull and engine repairs. The entrance to this marina is narrow and caution should be observed due to strong currents in the channel.

(78) **Sarasota**, on the east shore of Sarasota Bay at the south end, is a year-round community and winter resort. The Sarasota-Bradenton Airport is north of the city; rail, bus and highways connect with points in Florida and other states. The town has several hospitals. A number of tall buildings, water tanks and radio towers show prominently from offshore.

(79) Sarasota has several marinas, boatyards and yacht basins. A large marina is in the bight just east of **Golden Gate Point**. At **Mile 73.3**, a dredged channel leads northeast from the waterway to a turning basin at the marina. In 2013, 12 feet was reported in the approach and 10 feet alongside in the turning basin.

(80)

Small-craft facilities

(81) The small-craft facilities in Sarasota can provide berths with electricity, gasoline, diesel fuel, water, ice, storage, pump-out station and launching ramps.

(82) **Hudson Bayou**, about 0.6 mile southeast of Golden Gate Point, provides excellent shelter for small craft. The channel into the bayou had a reported controlling depth of 5 feet in 1982. The highway bridge over Hudson Bayou, 0.2 mile above the mouth, has a 28-foot fixed span with a clearance of 9½ feet. The overhead power cable at the bridge has a clearance of 65 feet. A highway bridge, 0.4 mile above the mouth, has a 39-foot fixed span with a clearance of 8 feet.

(83) **New Pass**, an inlet from the Gulf of Mexico into Sarasota Bay, between Lido Key and Longboat Key is described in chapter 4.

(84) At **Mile 74.4**, a dredged channel leads east from the waterway across Sarasota Bay to a turning basin at Payne Terminal and is described in chapter 4. The basin at Payne Terminal has a Coast Guard Auxiliary berth.

(85) **Whitaker Bayou**, about 0.5 mile north of Payne Terminal, provides excellent shelter for small craft. In 2001, the entrance to the bayou had a reported controlling depth of about 4 feet; thence in 2001, 3 feet was reported in the bayou. A highway bridge over the bayou has a 32-foot fixed span with a clearance of 7 feet. A boatyard near the head of Whitaker Bayou has water and a marine railway that can handle craft to 70 tons or 60 feet; hull, engine and electronic repairs can be made.

(86) At **Mile 78.1**, a marina basin is about 0.3 mile south of **Bishops Point**. Berths with gasoline, diesel fuel, pump-out, electricity, water, ice, marine supplies and wet storage are available; engine and electronic repairs can be made. In 2014, 7 feet was reported in the approach.

(87) **Bowlees Creek** empties into Sarasota Bay northeast of **Mile 79.0.** A privately marked channel with a reported approach depth of 5 feet in 2014 leads to a few marinas. Berths with electricity, gasoline, water, ice, pump-out station, wet and dry storage and marine supplies are available. U.S. Route 41 fixed highway bridge and a fixed pipeline bridge cross Bowlees Creek about 0.5 mile above its mouth. Each has a horizontal clearance of 27 feet and a vertical clearance of 10 feet. An overhead power cable close west of the highway bridge has a clearance of 27 feet.

(88) About 0.4 mile northwest of the entrance to Bowlees Creek, a privately dredged channel marked by private daybeacons and a lighted range leads to a basin of a yacht club and boatyard. In 2004, the reported approach and alongside depth was 5 feet. Gasoline, water, ice, dry storage and marine supplies are available. Hull, engine

and electronic repairs can be made; lift to 20 tons. A fish haven is about 0.5 mile west of the channel entrance.

(89) **Buttonwood Harbor**, on Longboat Key in Sarasota Bay, is southwest of **Mile 79.9**. A natural channel marked by private daybeacons and a light leads to the harbor. The channel separates into a north and south channel about 0.5 mile into the main channel. The channel leading south is privately marked and leads to a small marina with dockage only. In 2014, a reported depth of 5 feet could be carried to Buttonwood Harbor with shoaling reported immediately south of the entrance continuing 0.3 mile along the southern edge of the channel; caution is advised.

(90) The town of **Longboat Key** is composed of the entire island of Longboat Key.

(91) **Longbeach**, the north part of the town of Longboat Key on the south side of Longboat Pass, is a fishing and resort town. About 1.5 miles southeast of the pass, southwest of **Mile 83.7**, a privately marked channel with a reported depth of 4 feet in 2014 leads to a boat basin where gasoline, pump-out, water, ice and marine supplies are available. Hull, engine and electronic repairs can be made.

(92) **Longboat Pass**, west of **Mile 85.4** between Longboat Key and **Anna Maria Island**, is described in chapter 4.

(93) A marina at **Mile 87.2**, at the west end of the bridge, can provide transient berths, electricity, gasoline, diesel fuel, pump-out station, dry storage, water, ice and marine supplies. Hull, engine and electronic repairs can be made with lifts to 77 tons. In 2015, the reported approach and alongside depth was 6 feet. **Cortez Coast Guard Station** is near the east end of the bridge. There are several fish wharves at the east end of the bridge at which party fishing boats moor. Several small-craft facilities are at Cortez.

(94) A marina on **Perico Island**, close north of the highway bridge over Anna Maria Sound, has berths, water, ice, wet and dry storage, marine supplies and a 7-ton forklift. Hull, engine and electronic repairs can be made.

(95) **Anna Maria** is a small village at the north end of Anna Maria Island. Several marinas and boatyards are on Anna Maria Island north of the State Route 64 highway bridge.

(96)

ENCs - US5FL19M, US5FL11M, US5FL12M, US-4FL12M, US5FL09M, US5FL17M
Charts - 11425, 11415, 11416, 11411

(97) The waterway continues north through Anna Maria Sound and enters Tampa Bay at **Mile 92.0**. Anna Maria Sound is marked at its north end by **Anna Maria Sound Light 1** (27°32'03"N., 82°42'48"W.), 16 feet above the water and shown from a dolphin with a square green daymark.

(98)

ENCs - US5FL11M, US5FL12M, US4FL12M, US-5FL09M, US5FL17M
Charts - 11415, 11416, 11411

(99) The waterway continues across lower Tampa Bay to the main ship channel at **Mile 97.8,** thence northeast to **Mile 102.8,** thence north in the St. Petersburg Channel to **Mile 106.0,** thence west in the dredged channel, close south of Pinellas Peninsula and into Boca Ciega Bay at **Mile 110.8**.

(100) Small craft can also use the dredged **Sunshine Skyway Channel** that extends parallel with and about 600 yards west of the Sunshine Skyway bridge between **Mile 97.8** and **Mile 110.8**. The channel is marked by lights and daybeacons.

(101) **Boca Ciega Bay** extends 13 miles northwest from the lower part of Tampa Bay. New channels have been dredged at several places in the bay. Several of the small keys have been filled in to form large islands, and bridges link many of the keys.

(102) **Sunshine Skyway Park** is a state recreational area along the skyway east of the channel.

(103) Tidal currents in Boca Ciega Bay seldom exceed 0.5 knot. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(104) **Maximo Point**, opposite **Mile 110.5**, the southwest extremity of Pinellas Peninsula, is at the north end of the Sunshine Skyway Causeway. A small-boat basin has gasoline, a launching ramp and marine supplies; hull, engine and electronic repairs can be made. In 2006, the reported approach depth was 3 feet.

(105) On Maximo Point, east of the skyway, there is a large prominent apartment hotel and motel that has a boat basin where berths with electricity, wet and dry storage, water and ice are available. In 2006, the reported alongside depth was 4 feet.

(106) **Cats Point Channel** extends north from the waterway at **Mile 110.8**, thence northwest along the landfill west of Cats Point, and thence across the upper part of Boca Ciega Bay, and rejoins the waterway at **Mile 115.7**. The channel is marked by lights and daybeacons.

(107) **Frenchman Creek** is on the east side of Boca Ciega Bay about 0.3 mile north of Maximo Point. The twin fixed spans of the Sunshine Skyway with horizontal clearances of 26 feet and vertical clearances of 20 feet cross the creek.

(108) **Cats Point** is on the east side of Boca Ciega Bay, 1.1 miles north of Maximo Point. A highway bridge of the Pinellas Bayway crossing Cats Point Channel at Cats Point has a 40-foot fixed span with a clearance of 18 feet. A large marina is in the lagoons close north of Cats Point. Gasoline, diesel fuel, water, ice, marine supplies, wet and dry storage, pump-out station and berths with electricity

are available. A 55-ton lift is available for hull and engine repairs.

(109) **Pinellas Bayway**, a complex system of highways and causeways (State Routes 679 and 682) crossing Boca Ciega Bay, links Pinellas Peninsula at Cats Point to St. Petersburg Beach and Tierra Verde, Cabbage Key and other keys south of it, including Mullet Key. Clearances of the various bridges of the bayway are given with the description of the various channels which they cross.

(110) State Route 682 highway bridge (Structure B) of the bayway crossing the channel between two sections of landfill west of Cats Point has a 47-foot fixed span with a clearance of 11 feet.

(111) A marina on the southwest side of the bridge at **Mile 113.0** can provide gasoline, diesel fuel, pump-out, water, marine supplies, launching ramp and wet and dry storage. In 2011, 8 feet was reported alongside.

(112) Bunces Pass, Pass-a-Grille Channel, Tierra Verde, Vina del Mar and St. Petersburg Beach are discussed in chapter 5.

(113) **Gulfport** is a city on the north shore of Boca Ciega Bay, opposite **Mile 116.0**.

(114) **Clam Bayou** is on the east side of the city. A privately marked **035°** lighted range and daybeacons mark a dredged cut leading into the bayou and the Gulfport City Marina in the basin close west of the bayou. In 2006, depths were reported to be 6 feet in the channel and 5 feet in the basin. A **harbormaster** who assigns berths is at the marina and can be reached by telephone (727–893–1071). A no wake **speed limit** is enforced in the basin. Gasoline, diesel fuel, water, ice, electricity, pump-out, marine supplies, a launching ramp and transient berths are available.

(115) **Blind Pass**, a shallow pass from the Gulf to Boca Ciega Bay, is discussed in chapter 5.

(116) The waterway continues north passing South Causeway Isles, Paradise Island, Isle of Palms and Capri Isle which are land filled residential areas with numerous lagoons and private berths at waterfront homesites.

(117)

ENC - US5FL17M
Chart - 11411

(118) At **Mile 121.5**, the channel from **Johns Pass**, discussed in chapter 5, junctions with the waterway.

(119) **Long Bayou**, an arm of Boca Ciega Bay opposite Johns Pass, extends in a north direction for about 3 miles to a dam that forms **Lake Seminole**. Private daybeacons mark the bayou. Twin fixed highway bridges with clearances of 20 feet cross the bayou about 1 mile above the mouth. An overhead power cable at the bridge has a clearance of 34 feet. Close north of the highway bridge is a pedestrian fixed bridge with a horizontal clearance of 32 feet and a vertical clearance of 12 feet. A marina south of the bridge and on the east side of the bayou has electricity and water available. A marina north of the bridge on the west side of the bayou has gasoline, pump-out, electricity, water and ice available.

(120) **Cross Bayou**, with a shoal area across its mouth, enters Long Bayou just above the railroad bridge. An overhead power cable with a clearance of 31 feet crosses the mouth of Cross Bayou and continues across Long Bayou. **Cross Bayou Canal**, principally a drainage ditch, connects Old Tampa Bay with Cross Bayou.

(121) The waterway continues through the north part of Boca Ciega Bay between Sand Key and the mainland.

(122) At **Mile 122.8**, the shallow cove just east of the mainland end of the Welch Causeway Bridge has been dredged to form a small boat basin adjacent to the Veterans Hospital. A depth of about 4 feet can be taken into the basin. Just south of the causeway, a channel with a reported controlling depth of 8 feet in 2006 leads to the municipal marina at Madeira Beach. Gasoline, diesel fuel, a pump-out station, water, ice, marine supplies, a launching ramp and berths with electricity are available. Another basin at the northeast end of the causeway on the mainland, with a reported depth of 4 feet, has a marina for the private use of residents of a nearby condominium apartment complex.

(123) **The Narrows**, entered at **Mile 125.5,** connecting the northwest end of Boca Ciega Bay with the south end of Clearwater Harbor, is about 4.5 miles long. On the west side of The Narrows near the south end are rocks that are covered at high water; to avoid them mariners should favor the east bank.

(124) Berths, electricity, gasoline, diesel fuel, water, ice, wet and dry storage, pump-out station, lifts to 30 tons and hull, engine and radio repairs are available at several marinas along The Narrows opposite **Indian Rocks Beach** at **Mile 128.8.**

(125) At **Mile 130.0**, the waterway enters Clearwater Harbor.

(126) **Clearwater Harbor** extends about 7 miles north from the Narrows to St. Joseph Sound and has an average width of about a mile. The harbor is mostly shoal, except for the waterway and the natural channels varying in depth from 5 to 14 feet. The several channels in the harbor should be followed closely as some sections are quite crooked.

(127) **Belleair**, **Mile 132.8**, has a large hotel with a private yacht basin into which a draft of about 4 feet can be taken. The stack at the hotel is conspicuous.

(128) In 1972, pilings of a former pier, exposed at near low water, were reported in the vicinity of **Mile 134.2** between the east edge of the waterway and Belleview Island; mariners are advised to exercise caution in this area.

(129) At **Mile 135.5**, the dredged channel through Clearwater Pass, discussed in chapter 5, junctions with the waterway.

(130) **Clearwater**, the county seat of Pinellas County on the east shore of Clearwater Harbor opposite Clearwater Pass, is principally a winter resort but has considerable industry in electric and electronic manufacturing. There

are many prominent features including a large white apartment hotel near the north end of Clearwater Beach Island, a tall water tank near the middle of the island, a large hotel on the island on the north side of the Clearwater Memorial Causeway, a prominent hotel in Clearwater, several tall radio towers, and several prominent buildings. The city has three hospitals. The city is served by bus and truck lines. The St. Petersburg-Clearwater International Airport is about 7 miles southeast of the city. A Coast Guard air station is at the airport.

(131)

Currents

(132) The tidal current at Clearwater in the vicinity of the Clearwater Memorial Causeway is about 0.4 knots. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(133) At **Mile 135.9**, Causeway Channel, marked by daybeacons, leads west from the waterway to a junction with a dredged channel thence to a turning basin at the west end of Clearwater Memorial Causeway. The dredged channel with which it junctions is the branch channel leading north from the dredged channel through Clearwater Pass and is described in chapter 5.

(134) The city of Clearwater operates the City Pier and Municipal Marina at the turning basin. The marina can provide berths, electricity, gasoline, diesel fuel, water, ice, pump-out station, wet storage and marine supplies. The **harbormaster** has his office at the marina and assigns the berths. He can be reached by telephone (813–462–6954) or VHF-FM channel 16 (156.80 MHz) for marine information or berthing instructions. The Clearwater Police Boat is based at the Municipal Marina. The Clearwater Coast Guard Station is on the east side of Sand Key about 1 mile south of Clearwater Pass.

(135) **Mandalay Channel** leads north from the Clearwater Municipal Marina turning basin. Daybeacons mark the critical spots in the channel. The fixed bridge crossing the channel at the west end of Clearwater Memorial Causeway just north of the Clearwater Municipal Marina turning basin has a clearance of 14 feet at its center.

(136)

Small-craft facilities

(137) Other small-craft facilities in the Clearwater area are located at the part of Clearwater Beach Island, along the south side of the island north of Clearwater Memorial Causeway, and at Clearwater proper. Berths, electricity, gasoline, diesel fuel, water, ice, pump-out station, launching ramp, wet and dry storage and marine supplies are available; hull, engine and electronic repairs can be made. At Clearwater just east of **Mile 136.6**, a 60-ton mobile hoist can handle craft up to 70 feet.

(138) At **Mile 136.4**, a channel marked by daybeacons leads northwest to a junction with Mandalay Channel.

(139) The waterway through the harbor passes close alongshore off Clearwater and continues north into St. Joseph Sound.

(140) **Dunedin**, east of **Mile 139.0**, is a resort town on the east shore of St. Joseph Sound, about 3 miles north of Clearwater. Several large apartment buildings and two tanks are conspicuous. The town has a hospital and railway connections.

(141) The Dunedin Municipal Marina, east of **Mile 139.3**, is in a basin protected by two moles. It has a commercial fish pier and berths with electricity for about 180 boats. A surfaced launching ramp, pump-out station and water are available. A motel is on the north mole, and a boat club is on the south mole. In 2006, the reported approach depth was 5 feet with 4 feet alongside. The entrance to the basin is marked by private daybeacons. A **harbormaster** is in attendance and assigns berths (813–738–1909).

(142) A privately dredged channel leads into **Seven Mouth Creek**, to a basin on the northeast side of Caladesi Island west of **Mile 141.1.** In 2006, the channel had a reported depth of 4 feet. It is marked by a private light and daybeacons. The basin and island are part of the **Caladesi Island State Park**. A ferry operates daily between the island and **Honeymoon Island Recreation Area.**

(143) At **Mile 141.8**, a marked channel leads eastward from the waterway to a marina. Gasoline, diesel fuel, pump-out, water, ice, wet and dry storage, electricity, marine supplies and a lift to 10 tons are available. Hull, engine and electronic repairs can be made. In 2006, the reported approach depth was 6 feet.

(144) **Hurricane Pass**, between **Caladesi Island** and **Honeymoon Island**, is discussed in chapter 5.

(145) **Minnow Creek** is on the east shore of St. Joseph Sound east of **Mile 142.3**. A privately dredged channel leads from the waterway to basins in **Smith Bayou** at the mouth of the creek. The channel is marked by private daybeacons. There are several marinas in the basins, which in 2004 had a reported depth of 3 feet. There are forklifts and a marine railway; hull, engine and electronic repairs can be made. Gasoline, water, ice, marine supplies, pump-out station, wet and dry storage, launching ramps and covered berths with electricity are available.

(146) At **Mile 143.4,** a dredged channel leads east from the waterway to the pier of a small marina at **Ozona.** In 1985, the centerline controlling depth was 2½ feet in the channel with 5 feet reported alongside the pier. The channel is marked by a light and daybeacons. Hull, engine and electronic repairs can be made; lift to 4 tons is available.

(147) A **boiling spring** is close to shore just southeast of **Crystal Beach**, east of **Mile 144.4.** The boiling water is visible above the surrounding waters in calm weather.

(148) A launching ramp is near the end of a municipally owned causeway on the east side of St. Joseph Sound east of **Mile 148.8**. Another causeway about 0.6 mile to the north is part of the Fred H. Howard County Park.

(149) At **Mile 150.0**, the dredged channel of this first section of the Intracoastal Waterway ends.

(156)

Structures across the Intracoastal Waterway
Carrabelle, Florida to Mobile Bay (Statute Mile 376.2E to 125E)

Name•Description•Type	Mile	Waterway	Clearance (feet) Horizontal	Clearance (feet) Vertical*	Information
Overhead power cable	363.0E	St. George Sound		46	85 feet over the ICW channel
Bryant Patton Bridge (SR-300) Bridge (fixed)	361.4E	Apalachicola Bay	150	65	
John Gorrie Memorial Bridge (fixed)	351.4E	Apalachicola River	150	65	
Overhead power cable	351.4E	Apalachicola River		84	
Apalachicola and Northern Railroad Bridge (swing)	347.0E	Apalachicola River	119	11	**Note 1**
Overhead power cable	331.7E	Searcy Creek		95	
White City (SR-71) Bridge (fixed)	329.3E	Searcy Creek	200	65	
Overhead power cable	319.0E	Wetappo Creek		85	
State Route 386 Bridge (fixed)	315.4E	Wetappo Creek	150	65	
Dupont (SR-30/US-98) Bridge (fixed)	295.5E	East Bay	150	50	
Overhead power cable	293.7E	East Bay		85	
Hathaway (SR-30/US-98) Bridge (fixed)	284.8E	West Bay	287	65	
Overhead power cables	284.6E	West Bay		85	45-foot clearance outside the two lighted towers
Overhead power cables	272.9E	West Bay Creek		70	
State Route 79 Bridge (fixed)	271.8E	West Bay Creek	150	65	Dual span
Overhead power cable	269.2E	West Bay Creek		100	
Overhead power cable	254.8E	West Bay Creek		70	
Clyde B. Wells (US-331/SR-83) Bridge (fixed)	250.3E	Choctawhatchee Bay	150	66	
Mid-Bay (SR-293) Bridge (fixed)	234.2E	Choctawhatchee Bay	180	64	White Point to Moreno Point
Brooks Bridge (fixed)	223.0E	The Narrows	125	50	
Navarre Causeway Bridge (fixed)	207.0E	Santa Rosa Sound	125	50	
Pensacola Beach Bridge (fixed)	189.1E	Santa Rosa Sound	150	65	Dual spans
State Route 292 Bridge (fixed)	171.9E	Big Lagoon	150	73	
Foley Beach Express Highway Bridge (fixed)	158.7E	Portage Creek	250	73	
Overhead power cable	158.2E	Portage Creek		93	
State Route 59 Highway Bridge (fixed)	155.0E	Portage Creek	125	73	Dual spans
Overhead power cables	154.6E	Portage Creek		93	
Dauphin Island Bridge (fixed)	127.8E	Mississippi Sound	350	83	Vertical clearance is 93 feet for a mid-channel width of 125 feet
Overhead power cable	127.8E	Mississippi Sound		93	

* Vertical clearance measured at Mean High Water
Note 1 – See **33 CFR 117.1** to **117.59** and **117.258**, chapter 2, for drawbridge regulations.

(150) From Anclote River north there is no inside route until the east terminus of the second section of the waterway is reached at Carrabelle, FL, about 140 miles to the north-northwest. Boats sailing outside may find refuge during bad weather by entering the Withlacoochee River, about 75 miles north of Clearwater, Cedar Keys Harbor, about 95 miles north of Clearwater, the Steinhatchee River, the Crystal River, the Homosassa River or Horseshoe Cove; all of which are described in chapter 5.

(151)

Mileage

(152) The second section of the waterway is zeroed at **Harvey Lock**, New Orleans, and measured **eastward (E)** or **westward (W)** along the waterway. Alternate Routes of the Intracoastal Waterway are zeroed to take off from the basic route and are given letter designations such as **A.A.** (Algiers Alternate Route), **L.R.** (Landside Route), **M.P.** (Morgan City-Port Allen Alternate Route) and **A.R.** (Atchafalaya River Route).

(153) Distances along the Intracoastal Waterway are in statute miles to facilitate reference to the small-craft charts; all other distances are in nautical miles. A mileage conversion table is in Appendix B.

(154)

Channels

(155) The federal project for the Intracoastal Waterway Carrabelle, FL, to Brownsville, TX, provides for a channel 12 feet deep with a minimum width of 125 feet. Although effort is made to maintain the project depth, the channel may shoal several feet in places between maintenance dredging. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition

reports are available through a USACE hydrographic survey website listed in Appendix A.

(157)

Locks

(158) Minimum lock lengths are 415 feet at lock **Mile 0.0** (Harvey); 640 feet (626 feet usable) at lock **Mile 6.5E** (Inner Harbor Navigation); and 797 feet (760 feet usable) at lock **A.A. Mile 0.0** (Algiers). Minimum lock widths along the main route of the waterway are 75 feet, and along the alternate routes 56 feet at Bayou Sorrel Lock at **M.P. Mile 36.4**, Morgan City-Port Allen Alternate Route. Minimum depth over the sill is 12 feet at **Mile 0.0** (Harvey) and 11 feet at the Old River Navigation Canal Lock, **A.R. Mile 0.0**, Atchafalaya River Route. The 415-foot Harvey Lock can be avoided by detouring through the 760-foot Algiers Lock in the Alternate Route. (See **33 CFR 162.75**, **207.180**, and **207.187**, chapter 2, for regulations governing use, administration, and navigation of locks and floodgates.)

(159)

Cable ferries

(160) Cable ferries still cross the Intracoastal Waterway at several places.

(161) **Note:** Generally, the cables are suspended during crossings and dropped to the bottom when the ferries dock; however, since operating procedures may differ in some cases, mariners are advised to exercise extreme caution and seek local knowledge. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(162)

Aids to navigation

(163) Intracoastal Waterway aids have characteristic yellow markings that distinguish them from aids to navigation marking other waters. (See U.S. Coast Guard Light Lists or Chart 1, Nautical Chart Symbols and Abbreviations, for illustrations of special markings.)

(164) The improved part of the waterway begins at 29°47.5'N., 84°40.4'W., in Carrabelle Ship Channel at **Mile 376.2E.** Waterway depths are available to Carrabelle, 3.7 miles to the north and to the open waters of the Gulf, 3.3 miles to the south. (See chapter 6.)

(165) From Carrabelle channel, the well-marked waterway route is southwest for 20.6 miles through **St. George Sound** to 29°39.9'N., 84°58.1'W., in **Apalachicola Bay**, thence north by west for 4.2 miles to Apalachicola.

(166)

Mile 351.4E to Mile 340.7E

(167) **Apalachicola**, Mile 351.4E, is on the west side of the entrance to **Apalachicola River**. The town has several small-craft facilities. (See chapter 6 for additional information about Apalachicola.)

(168) Two marinas are at the head of small bayous 0.8 and 0.6 mile southeast of the Apalachicola and Northern Railroad Bridge. The southeasternmost facility is accessible through two channels with reported controlling depths of 3½ feet in 1982, while the other is accessible through a channel with a reported controlling depth of 5 feet. Gasoline, water, ice, limited marine supplies, berths, outboard motor repairs and a launching ramp are available at each facility.

(169) The waterway leaves Apalachicola River at **Mile 345.6E** and proceeds through Jackson River to **Lake Wimico**, which is entered at **Mile 340.7E**.

(170)

Mile 335.3E to Mile 312.1E

(171) The waterway leaves Lake Wimico at **Mile 335.3E** through **Searcy Creek** and a long landcut. A submerged freshwater siphon is at **Mile 329.5E.**

(172) At **White City** (Mile 329.3E), transient berths, gasoline, electricity, water, limited supplies and a launching ramp are available on the north side of the White City Bridge.

(173) At **Mile 327.7E, Gulf County Canal** extends southwest for about 5 miles to Port St. Joe, where fuel and supplies can be obtained. (See chapter 6 for more complete information.) The canal has a federal project depth of 12 feet. (For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.) Two overhead power cables, which cross the canal about 3.5 miles southwest of the junction with the waterway, have clearances of 85 feet. A fixed highway bridge with a clearance of 75 feet crosses the canal at the entrance of St. Joseph Bay. An overhead power cable at the bridge has a clearance of 85 feet.

(174) At **Overstreet** (**Mile 315.4E**), gasoline in cans, water and groceries are available at a store near the west end of the State Route 386 Bridge; a launching ramp is just south of the bridge.

(175) North of Overstreet, the waterway follows a cut in **Wetappo Creek** for a short distance then enters **East Bay** of St. Andrew Bay at **Mile 312.1E**. The channel through the bay is well marked with lights and buoys.

(176)

ENC - US5FL61M
Chart - 11390

(177) **Panama City**, at **Mile 292.3E**, is on the north side of St. Andrew Bay.

(178) Several marinas are along the east and west side of Watson Bayou, and a municipal yacht basin is on the northwest side of the entrance to Massalina Bayou at **Mile 290.4E**. (See chapter 6 for additional information about Panama City.)

(179) Opposite **Mile 285.3E**, a dredged channel leads from the waterway in **Alligator Bayou**. In 1983, the reported controlling depth was 20 feet to Light 4; thence in 1991, the controlling depth was 9½ feet to the end of the bayou. The channel is marked by a lighted range

and lights. **Panama City Coast Guard Station** is on the southeast side of the basin. The bayou is within a **restricted area**. (See **33 CFR 334.760**, chapter 2, for limits and regulations.)

(180) The waterway continues through St. Andrew Bay and its northwest arm, **West Bay**. On either end of the Hathaway Bridge are marinas that can provide gasoline and diesel fuel. A 60-ton mobile hoist and berths are available at the marinas on the east side of the bridge.

(181) **North Bay** extends in a northeast direction from **Mile 282.4E.** The controlling depths are 12 feet to the bridge at **Lynn Haven**, 5 miles above the waterway, and thence 4½ feet to a dam, 2 miles above the bridge; oyster bars in the middle of the bay with 5 to 6 feet of water over them should be avoided. State Route 77 highway bridge over the bay at Lynn Haven has a fixed span with a clearance of 18 feet. An overhead power cable with a clearance of 34 feet crosses the bay about 200 yards south of the dam. Several bayous along North Bay afford anchorage for small craft.

(182) A channel with a reported depth of about 13 feet leads from the bay into Alligator Bayou to the basin at the Gulf Electric Power Plant. Overhead power cables crossing North Bay about 0.5 mile east of Alligator Bayou have a clearance of 45 feet. The transmission towers in the bay are reported to be unlighted and present a hazard to small craft at night.

(183) **Fannin Bayou** is on the north side of North Bay opposite Lynn Haven. Channels marked by buoys and daybeacons lead through the bayou and its west, north and east arms. The town of **Southport** is at the head of the north arm.

(184) A marina in the dredged basin on the west side of **Mill Point** at the north end of the bridge has water, ice, limited berths and marine supplies and a launching ramp.

(185) A state park is east of the south end of the bridge. Launching ramps are available in the park. Gasoline in cans and limited marine supplies are available in Lynn Haven.

(186) From West Bay the waterway enters **West Bay Creek**, at **Mile 273.0E**. A gasoline station is on the highway near the State Route 79 Bridge, and there are limited transient berths with water and electricity available at a fish pier on the southeast side of the bridge. A boat ramp is on the southeast side of the pier.

(187)

Mile 253.5E to Mile 222.2E

(188) From West Bay Creek, the waterway follows a long landcut and enters **Choctawhatchee Bay** at **Mile 253.5E**.

(189) The channel through the shallow east end of Choctawhatchee Bay is marked with lights and buoys, but the route through the remainder of the bay is in open water with depths greater than 12 feet and only occasional lights marking the shoal areas on the south side.

(190) A marina is on the southeast side of the Mid-Bay Bridge, with a reported approach depth of 6 feet through a marked channel.

(191) The entrance to Choctawhatchee Bay from the Gulf is at **Mile 228.0E**. The bay and its tributaries are described in chapter 6.

(192) The waterway leaves Choctawhatchee Bay at **Mile 223.4E** and proceeds west for 33 miles through **The Narrows** and **Santa Rosa Sound** to Pensacola Bay. The east part of the route is through a well-marked dredged channel; the west part is through open water with depths greater than 12 feet and marked by occasional lights and buoys. **Restricted areas** in The Narrows and Santa Rosa Sound extend from **Mile 218.9E** to **Mile 204.4E**. (See **33 CFR 334.710** and **334.730**, chapter 2, for limits and regulations.)

(193) There are several small-craft facilities along The Narrows in the vicinity of and west of the Brooks Bridge. **Fort Walton Beach** on the north side of The Narrows at **Mile 222.2E** has complete repair facilities; fuel and marine supplies are available. A mobile hoist is available at Shalimar. (See chapter 6 for more complete information on the facility at Shalimar.)

(194)

ENCs - US4AL12M, US5AL12M
Chart - 11378

(195) Marinas on **Little Sabine Bay** at Pensacola Beach can provide gasoline, diesel fuel, pump-out, water, ice, marine supplies and transient berths. In 1999, 5 feet was reported in the channel leading from the waterway; the channel is marked by private daybeacons. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A. A yacht club close east of the north end of the Pensacola Beach Bridge has berths, electricity, gasoline, diesel fuel, water, ice, pump-out station, wet and dry storage and a 15-ton forklift available.

(196) Mariners are **prohibited** from anchoring or mooring vessels in Little Sabine Bay after Santa Rosa Island has been placed under a hurricane watch condition or a more serious hurricane alert. Vessels in the bay must be moved within 24 hours of any hurricane watch or warning.

(197) At **Mile 182.9E**, a 4.1-mile route leads about north-northeast through deep water in **Pensacola Bay** to **Pensacola**. The city has complete supply and repair facilities. (See chapter 6 for more complete information.)

(198) From Pensacola Bay, the waterway passes through a landcut at **Mile 179.0E** into **Big Lagoon**. At the west end of the land cut, a channel marked by private daybeacons leads north to a marina inside Sherman Cove. A marina is on the north shore west of **Trout Point**, **Mile 177.0E**. Gasoline, diesel fuel, water, ice, launching ramps, marine supplies, pump-out station, wet and dry storage and

berths with water and electricity are available. A mobile hoist can haul out craft to 25 tons for hull repairs.

(199) **Pensacola Coast Guard Station** is about 1 mile east of Pensacola Light.

(200) **Perdido Key** is a summer resort south of the State Route 292 Bridge. A marina is on the south bank of the waterway about 0.7 mile west of the bridge. Gasoline, diesel fuel, water, ice, a pump-out station, launching ramp, wet and dry storage and berths with electricity are available. A forklift to 17 tons is available for engine repairs. In 2012, 6 feet was reported alongside the berths.

(201) From **Mile 166.8E**, the well-marked waterway extends through the lower part of **Perdido Bay**, thence through **Arnica Bay**,**Bay La Launch**, and **Wolf Bay**.The Florida-Alabama boundary follows the waterway between **Miles 167.4E** and **169.9E**. (Perdido Bay and its tributaries are described in chapter 6.)

(202) A submerged wreck is at **Mile 165.9E** in about 30°19'03"N., 87°31'00"W.

(203) A marina is at a small-boat basin on the south side of the waterway in Arnica Bay at **Mile 165.1E**. Berths with water and electricity, gasoline, diesel fuel, ice, pump-out and marine supplies are available. In 2012, 8 feet was reported alongside. **Roberts Bayou**, locally known as Pirates Cove, empties into the north side of Arnica Bay.

(204) At **Mile 162.8**, on the north side of waterway, a privately marked channel leads to a marina. Gasoline, diesel fuel, pump-out, berths, dry and wet storage, lifts to 99 tons and marine supplies are available. In 2012, 10 feet was available in the approach and alongside.

(205) From the west end of Wolf Bay at **Mile 160.0E**, the waterway extends through a long landcut to and through **Oyster Bay** and enters **Bon Secour Bay** at **Mile 151.0E**.

(206) Just east of the Foley Beach Express Highway Bridge, on the south side of the waterway, is a marina with berths, gasoline, diesel fuel, electricity, water, ice, wet storage and pump-out. In 2012, 9 feet was reported in the approach and alongside.

(207) Near the State Route 59 Highway Bridge at **Mile 155.0E**, a marina can provide gasoline, diesel fuel, pump-out and water.

(208) The village of **Gulf Shores** is 0.7 mile south of the bridge. The Dixie Graves Highway extends west from Gulf Shores to Fort Morgan on Mobile Point.

(209) The 22.5-mile route of the waterway across the lower part of Bon Secour Bay and **Mobile Bay** is through a well-marked dredged channel, except inside the entrance to Mobile Bay from the Gulf where general depths are greater than 12 feet.

(210) **Mobile Bay Channel** crosses the waterway at **Mile 133.6E**; **Mobile** is 25.2 miles north. The Coast Guard has requested vessels transiting the waterway make a **SECURITE** call on VHF-FM channel 13 prior to crossing Mobile Bay Channel, particularly during periods of restricted visibility. chapter 7 describes Mobile Bay and its tributaries.

(211) From Mobile Bay, the waterway goes through **Pass aux Herons** to the open water of Mississippi Sound. The current velocity is 1.3 knots through Pass aux Herons. It has been reported, however, that greater velocities may be experienced when the wind is southeast to east on an ebb tide, or when the wind is southwest to northwest on a flood tide. With these conditions, Pass aux Herons Buoys 14, 15 and 17 may be towed under. Berthing and repair facilities, supplies and fuel are available at the town of Dauphin Island.

(212)

ENCs - US5MS21M, US5MS11M, US4MS12M
Charts - 11374, 11372, 11373

(213) The waterway leaves Pass aux Herons Channel at **Mile 119.1E** and enters the open water of Mississippi Sound, which has general depths greater than 12 feet until up to Marianne Channel, **Mile 58.1E** at the west end of the sound.

(214) If bound for **Bayou La Batre**, depart the waterway at the light marking the west end of Pass aux Herons Channel, **Mile 119.1E**, and proceed on a north-northwest course for about 4.3 miles to Bayou La Batre Light 1, marking the entrance to the dredged channel, thence through the marked channel for about 6 miles to the town. Supply and repair facilities are available. (See chapter 7 for more complete information.)

(215) The entrance to Mississippi Sound from the Gulf through **Petit Bois Pass** is 2 miles south of **Mile 115.4E**. A wreck and two obstructions have been reported between the Intracoastal Waterway and the north entrance to the pass. The Alabama-Mississippi boundary crosses the waterway at **Mile 112.0E.**

(216) At **Mile 104.2E**, the waterway crosses the deep ship channel in Mississippi Sound between Horn Island Pass and **Pascagoula.** The Coast Guard has requested vessels transiting the waterway make a **SECURITE** call on VHF-FM channel 13 prior to crossing the shipping channel, particularly during periods of restricted visibility. The channel to Pascagoula extends north for 1.9 miles, thence northwest for 5.8 miles to the turning basin. Berthing and repair facilities, supplies, gasoline and diesel fuel are available. (See chapter 7 for more complete information.)

(217) Lights at **Miles 98.1E** and **95.9E** mark turning points in the waterway route. At **Mile 89.3E,** a light, 3.4 miles south of low and rounded **Bellefontaine Point**, marks the waterway route.

(218) At **Mile 87.5E**, a dredged channel leads north and northwest for 9.4 miles to **Biloxi.** (See chapter 7.)

(219)

ENC - US5MS11M
Chart - 11372

(220) At **Mile 81.0E,** a light, 2.6 miles north of Ship Island, marks the waterway through Mississippi Sound. From the light a north by west course in depths of 15 to 10 feet for 4.7 miles leads to a marked channel that continues north and east for 3.2 miles to Biloxi. A northwest course

(225)

Structures across the Intracoastal Waterway
Rigolets-New Orleans Cut to Morgan City (Statute Mile 35E to 95W)

Name•Description•Type	Mile	Waterway Location	Clearance (feet) Horizontal	Clearance (feet) Vertical*	Information
Overhead power cable	13.5E	Mississippi River Gulf Outlet		170	
Paris Road (SR-47) Bridge (fixed)	13.0E	Mississippi River Gulf Outlet	500	137	See chapter 8, **Bridges**, for more information
Overhead power cable	8.2E	Mississippi River Gulf Outlet		170	
Overhead power cable	7.5E	Inner Harbor Navigation Canal		166	
Florida Avenue Bridge (vertical lift)	7.5E	Inner Harbor Navigation Canal	300	0 (down) 156 (up)	**Note 2** — Bridgetender monitors VHF-FM channel 16 and works channels 12 and 13; call sign WUG-409.
Judge Seeber (SR-39) Bridge (vertical lift)	6.7E	Inner Harbor Navigation Canal	302	40 (down) 156 (up)	**Note 2**
St. Claude Avenue (SR-46) Bridge (bascule)	6.2E	Inner Harbor Navigation Canal	70	0	**Note 2** — Bridgetender monitors VHF-FM channel 16 and works channel 13; call sign WG-401.
Crescent City Connection (I-90) Bridges (fixed)	2.7E	Mississippi River	750	150	Green lights mark the channel centerline and red lights mark the edges of the channel.
Highway and Railroad Bridges (bascule)	0.1W	Harvey Canal	75 65 (open)	7	**Note 1**
Overhead power cable	0.1W	Harvey Canal		90	
West Bank Expressway Bridges (fixed)	0.8W	Harvey Canal	300	95	
Overhead power cable	1.8W	Harvey Canal		135	
Lapalco Boulevard Bridge (bascule)	2.8W	Harvey Canal	150	45	**Note 3** — Bridgetender monitors VHF-FM channel 16 and works channel 13; call sign DTR-859.
Overhead power cable	4.1W	Harvey Canal		124	
Overhead power cable	10.1W	Bayou Barataria		99	
State Route 45 Bridge (fixed)	11.9W	Bayou Barataria	150	73	
Overhead power cable	23.0W	Intracoastal Waterway		191	
Overhead power cable	34.6W	Harvey Canal No. 2		110	
Overhead power cable	34.8W	Harvey Canal No. 2		90	
State Route 308 Bridge (fixed)	35.2W	Harvey Canal No. 2	150	73	
State Route 1 Bridge (vertical lift)	35.6W	Larose-Bourg Cutoff	125	35 (down) 73 (up)	**Note 1** — Bridgetender monitors VHF-FM channel 13; call sign KJA-544.
Overhead power cable	35.6W	Larose-Bourg Cutoff		90	
Overhead power cable	40.4W	Larose-Bourg Cutoff		100	
State Route 316 Bridge (pontoon)	49.8W	Larose-Bourg Cutoff	125		**Note 1** — Bridgetender monitors VHF-FM channel 13; call sign KTD-550.
Overhead power cable	49.9W	Larose-Bourg Cutoff		90	
Overhead power cable	53.9W	Intracoastal Waterway		90	
Prospect Street Bridge (fixed)	54.4W	Intracoastal Waterway	125	73	
Overhead power cable	54.7W	Intracoastal Waterway		90	
Overhead power cable	55.6W	Intracoastal Waterway		120	
Overhead power and telephone cables	55.7W	Intracoastal Waterway		88	
East Park Avenue Bridge (fixed)	57.6W	Intracoastal Waterway	125	73	
East Main Street (SR-24) Bridge (fixed)	57.7W	Intracoastal Waterway	125	73	
Overhead power cables	57.7W	Intracoastal Waterway		93	
Houma Railroad Bridge (vertical lift)	58.9W	Intracoastal Waterway	212	4 (down) 70 (up)	Bridge is being removed
Overhead power cable	58.9W	Intracoastal Waterway		90	
State Route 315 Bridge (bascule)	59.9W	Intracoastal Waterway	125	40	**Note 3** — Bridgetender monitors VHF-FM channel 13; call sign KTD-548.
Overhead power cable	90.8W	Bayou Boeuf		138	

* Vertical clearance measured at Mean High Water
Note 1 – See **33 CFR 117.1** to **117.49**, chapter 2, for drawbridge regulations.
Note 2 – See **33 CFR 117.1** to **117.59** and **117.458**, chapter 2, for drawbridge regulations.
Note 3 – See **33 CFR 117.1** to **117.59** and **117.451**, chapter 2, for drawbridge regulations.

from the light for 6.4 miles leads to a large yacht basin at **Beauvoir**.

(221) At **Mile 72.8E**, the waterway crosses the deep **Gulfport Channel** between Ship Island Pass and Gulfport. The channel to Gulfport extends northwest for 6.0 miles to the ship basin. Small-boat basins are on both sides of the ship basin. Berthing and repair facilities, marine supplies, gasoline and diesel fuel are available. (See chapter 7 for more complete information.)

(222) At **Mile 65.3E,** the waterway rounds a lighted buoy in Mississippi Sound and turns sharply to the southwest. If bound for **Pass Christian Harbor**, depart the lighted buoy on a west-northwest course and proceed 5.4 miles through depths of 13 to 7 feet to the entrance to the municipal boat basin at the town of **Pass Christian**.(See chapter 7 for more complete information.)

(223) From **Mile 65.3E,** the southwest reach proceeds through natural depths and through dredged **Marianne Channel** to **Mile 53.9E;** thence the route is west through dredged **Grand Island Channel**,to natural depths exceeding 12 feet at **Mile 47.9E** in the east approach to Grand Island Pass.

(224)

ENCs - US6LA36M, US5LA36M
Chart - 11367

(226) The **Mississippi-Louisiana boundary**follows thewaterway west through **St. Joe (Grand Island) Pass** to **Mile 40.6E**, then turns sharply from the waterway and follows the channel to **Pearl River**.

(227) From **Mile 40.6E**, the waterway continues west through dredged cuts and crosses the **Lake Borgne** end of The Rigolets at **Mile 35.0E**. **The Rigolets**(see chapter 7) is a comparatively deep passage that connects Lake Borgne with **Lake Pontchartrain**, several miles to the west.

(228) From The Rigolets, the waterway route is southwest through nearly 23 miles of **Rigolets-New Orleans Cut**. Pilots should be on the alert for cross-currents at waterway crossings of passes and bayous. **Chef Menteur Pass** (see chapter 7), which is crossed at **Mile 22.9E**, is specially noted for such currents; the pass is another deep link between Lake Borgne and Lake Pontchartrain.

(229) At **Mile 15.0E, Michoud Canal** extends north from the waterway for 1.5 miles to the town of **Michoud**, which has rail connections. A federal project provides for a depth of 36 feet in the canal and in that part of the Intracoastal Waterway connecting the canal with the Mississippi River-Gulf Outlet Canal at **Mile 14.0E.** (See Local Notice to Mariners and latest editions of the charts for controlling depths.)

(230) **Michoud Slip**, the basin at the National Aeronautics and Space Administration George C. Marshall Space Flight Center is on the north side of the waterway at **Mile 13.5E**. This is the approximate turning point from the east-west reach to southeast reach of the deep **Mississippi River-Gulf Outlet Canal**(see chapter 8.)

(231) The Intracoastal Waterway, from **Mile 13.5E** at the junction with the Mississippi River-Gulf Outlet Canal west to **Mile 0.2E** at the junction with Harvey Canal No. 1, is within the area of the New Orleans Vessel Traffic Service (VTS). (See chapter 8 for details of the New Orleans VTS.)

(232) The Port of New Orleans Bulk Materials Handling Plant is on the north bank of the waterway at **Mile 9.7E**.

(233) The waterway enters the deep **Inner Harbor Navigation Canal (Industrial Canal)** of New Orleans at **Mile 7.5E** and proceeds south through the canal to Mississippi River. (See chapter 8 for more complete information.)

(234) Repair yards on the east side of the canal at **Mile 7.0E** have a 110-foot marine railway, a 150-ton vertical boat lift and several floating drydocks with capacities to 2,160 tons. The largest is 180 feet long and 58 feet wide and has 16 feet over the blocks. Cranes to 50 tons are available.

(235) **Inner Harbor Navigation Canal Lock (Industrial Lock)**, at **Mile 6.5E**, is 640 feet long (626 feet usable), 75 feet wide (74 feet usable), with 31½ feet over the sills and handles lifts up to 17 feet. The lockmaster can be contacted on VHF-FM channels 14 or 16 or by telephone (504–945–2157). Red and green traffic lights are at each end of the lock. Vessels should enter the lock only on the green light.

(236) The Intracoastal Waterway leaves Inner Harbor Navigation Canal and enters **Mississippi River** at **Mile 5.8E**. The basic route follows the **New Orleans** waterfront upriver to **Harvey**, on the south side of the river. (See chapter 8 for description of New Orleans.) Most of the city's small-craft facilities are behind canal locks or at West End Park on Lake Pontchartrain. (See chapter 7 for more complete information on these facilities.)

(237) The waterway continues up Mississippi River and passes under two high fixed bridges at **Mile 2.7E**, where fixed green lights mark the channel centerline and the vertical clearance is 150 feet. At **Harvey**, the route leaves the river and proceeds south through **Harvey Canal No. 1**.

(238) **Harvey Lock**, at **Mile 0.0**, is 415 feet long and 75 feet wide and has 12 feet over the sills; the lockmaster continuously monitors VHF-FM channel 14. Two bascule bridges over the canal, just south of the lock, have a least vertical clearance of 7 feet. An overhead power cable at the bridges has a clearance of 90 feet. At **Mile 0.8W**, the West Bank Expressway has two fixed spans with clearances of 95 feet.

(239) Supplies and services at Harvey include berthage, gasoline, diesel fuel, water, ice and marine supplies. Harvey shipyards can handle vessels up to 420 feet, and the machine shops can repair gasoline and diesel engines.

(240) The waterway continues south and enters Bayou Barataria at **Mile 6.5W**.

(241) The **Algiers Alternate Route (A.A.)** is zeroed at **Algiers Lock (A.A. Mile 0.0)**where the basic Intracoastal Waterway route enters the Mississippi. The alternate

(242)

Structures across Algiers Alternate Route
Mississippi River to Bayou Barataria (Statute Mile 0.0 to 8.9)

Name•Description•Type	Mile	Waterway Location	Clearance (feet) Horizontal	Clearance (feet) Vertical*	Information
Overhead power cable	AA 0.5	Algiers Alternate Route		126	
Overhead power cable	AA 1.0	Algiers Alternate Route		112	
State Route 407 Bridge (fixed)	AA 1.0	Algiers Alternate Route	250	100	
Overhead power cable	AA 3.5	Algiers Alternate Route		126	
Overhead power cables	AA 3.7	Algiers Alternate Route		120	
Missouri Pacific Railroad Bridge (vertical lift)	AA 3.7	Algiers Alternate Route	125	2 (down) 100 (up)	**Note 1**
State Route 23 Bridge (vertical lift)	AA 3.8	Algiers Alternate Route	125	40 (down) 100 (up)	**Note 2** — Bridgetender monitors VHF-FM channel 13; call sign WDT-572.
Overhead power cable	AA 8.4	Algiers Alternate Route		117	

* Vertical clearance measured at Mean High Water
Note 1 – See **33 CFR 117.1** to **117.49**, chapter 2, for drawbridge regulations.
Note 2 – See **33 CFR 117.1** to **117.59** and **117.451**, chapter 2, for drawbridge regulations.

route swings downriver, departs the river about 6 miles below Canal Street and continues southwest through a landcut with the same project dimensions as the basic route.

(243) Algiers Lock, at **Mile 0.0**,is 797 feet long (760 feet usable), 75 feet wide, 13 feet over the sills, and handles lifts up to 18 feet.

(244) The alternate route enters Bayou Barataria and rejoins the basic route at **A.A. Mile 8.9**, which coincides with **Mile 6.5W**.

(245) From **Mile 6.5W**, the waterway continues south and west for several miles through **Bayou Barataria**. At **Mile 10.6W** is the town of **Crown Point**.

(246) The waterway departs Bayou Barataria at **Mile 14.6W** and crosses **Bayou Villars** at **Mile 15.1W**. From the crossing, Bayou Villars extends 1.0 mile west to **Lake Salvador**, which has depths of 5 to 7 feet, and 0.4 mile east to a junction with Bayou Barataria at the town of Lafitte. In 1997, the controlling depth in Bayou Villars was 3½ feet. An overhead power cable crossing Bayou Villars close west of the waterway has a clearance of 185 feet. A 20-mile chain of bayous and canals winds southeast from Lafitte to **Barataria Bay**. (See chapter 9 for bridges, overhead cables, and controlling depth.) **Lafitte** has several shipyards that can handle vessels up to 80 feet; gasoline, diesel fuel, water, ice and marine supplies are available.

(247) At **Mile 20.0W**, the waterway crosses **Bayou Perot**, which is another passage from the lakes on the southeast to Lake Salvador on the west. An overhead power cable crossing the mouth of the bayou has a clearance of 60 feet.

(248)

Mile 29.3W to Mile 87.2W

(249) The waterway enters **Harvey Canal No. 2** at **Mile 29.3W,** which is 1.2 miles from the canal's Lake Salvador terminus and proceeds southwest in the canal to Larose.

(250) At **Mile 35.4W**, the waterway crosses **Bayou Lafourche**, which is described in chapter 9. On the northeast side of the crossing is **Larose**. Boatyards in the vicinity have a 1,500-ton floating drydock and other facilities for handling craft to 60 feet; gasoline, diesel fuel, water, ice and marine supplies are available. Pontoon drawbridges cross Bayou Lafourche east and west of the waterway at Larose. (See chapter 9 for operating details.)

(251) The waterway west from Larose is through the **Larose-Bourg Cutoff**.

(252) At **Mile 48.8W**, the cutoff crosses **Company Canal**which connects **Bourg** on Bayou Terrebonne, with Lockport on Bayou Lafourche. (See chapter 9.) A repair yard is on the south side of the waterway at Company Canal. A 3,000-ton floating drydock can handle vessels to 240 feet long, 86 feet wide and 12-foot draft; complete hull and engine repairs can be made to steel vessels. Cranes to 150 tons are available. At **Mile 49.8W,** State Route 316 pontoon highway bridge crosses the waterway. The bridge is operated by cables that are suspended just above the water when the bridge is being opened or closed. The cables are dropped to the bottom when the bridge is in the fully open position but remain suspended while the bridge is fully closed. Warning signs are posted on the upstream and downstream ends of the bridge fender system. Extreme caution is advised in the area of the bridge. **Do not attempt to pass through the bridge until it is fully opened and the cables are dropped to the bottom.** See Structures across the Intracoastal Waterway (Statute Mile 35E to 95W) for more information.

(253) The route swings sharply south and crosses an east-west reach of **Bayou Terrebonne** at **Mile 57.5W**; the bayou is described in chapter 9.

(254) In the southwest angle of the Terrebonne-Intracoastal Waterway crossing is the town of **Houma** (Mile 57.6W),which is the seat of Terrebonne Parish. Houma is an industrial and agricultural town that is also a petroleum center and a base for commercial fishing. The town has good rail freight and highway connections, a sugar mill, seafood processing and cold-storage facilities. The Houma shipyard can handle craft up to 225 feet and

boatyards can handle craft up to 60 feet, and there are facilities for engine repairs.

(255) **Houma Canal** branches west from the waterway immediately south of the Houma Railroad Bridge (Mile 58.9W) and extends for 0.4 mile to the confluence of Bayou Black and Little Bayou Black. U.S. Route 90 highway bridge across the canal has a 40-foot swing span with a clearance of 4 feet. (See **33 CFR 117.1** through **117.59** and **117.453**, chapter 2, for drawbridge regulations.)

(256) **Bayou Black** extends west from Houma Canal for about 24 miles to a junction with the Intracoastal Waterway at Mile 83.7W. Dams block the bayou close west and 4.0 miles west of Houma Canal. This section of the bayou has been declared nonnavigable waters. In 1985, the bayou had reported depths of 2 to 4 feet from the west dam to **Gibson**, thence 4 feet to the turning basin about 2.6 miles southwest of Gibson; thence in 2010, the midchannel controlling depth was 10 feet from the turning basin to the west junction of the bayou with the Intracoastal Waterway. The minimum channel width of the swing bridges crossing the bayou is about 36 feet and the minimum clearance about 1 foot. U.S. Route 90 highway bridge crossing the bayou at Gibson does not open for the passage of vessels; clearance of 2 feet. (See **33 CFR 117.1** through **117.59** and **117.425**, chapter 2, for drawbridge regulations.) The numerous overhead power cables crossing the bayou have a minimum clearance of 30 feet. An overhead television cable crossing the bayou at Gibson has a clearance of 22 feet. Bayou Black has very little traffic, and navigation can be difficult at times because of the many vessels that are moored in the bayou.

(257) U.S. Route 90 runs along the east bank of the bayou and crosses over to the west bank at **Gibson**, then continues on to Morgan City. A large shipyard on a basin off the bayou about 3 miles south of Gibson builds barges, crew boats and offshore oil well structures.

(258) The waterway continues west through landcuts to **Mile 73.7W,** where it crosses the southeast part of **Lake Hackberry**; the remains of hyacinth booms are on both sides of the lake crossing.

(259) The waterway enters narrow **Lake Cocodrie** at **Mile 76.9W** and departs the lake at **Mile 80.4W**; the channel through the lake is well marked. The next link is **Bayou Cocodrie**; winding Bayou Black, previously described, comes down from the north to join Bayou Cocodrie at **Mile 83.7W**.

(260) Bayou Cocodrie joins the north loop of **Bayou Chene**, which in turn joins **Bayou Boeuf** at Mile 87.2W; this is also **L.R. Mile 0.0** of the **Landside Route**, a lesser channel that winds north through Bayou Boeuf and other waterways for 43 miles to a junction with the latter-described Morgan City-Port Allen Alternate Route.

(261) The Landside Route is no longer maintained. (See Local Notice to Mariners for controlling depths.) U.S. Route 90 highway bridge over Bayou Boeuf at **L.R. Mile 1.3** has a fixed span with a clearance of 73 feet. The Southern Pacific Railroad bridge over the bayou at **L.R. Mile 1.9** has a swing span with a clearance of 6 feet. A fixed bridge at **L.R. Mile 2.0** has a clearance of 73 feet. The overhead power cable 0.35 mile north of the fixed bridge has a clearance of 120 feet. Bayou Boeuf has several oil company marine terminals and shipyards that build supply vessels, barges and offshore oil-well structures. A boat ramp is on the west side of Bayou at the highway bridge.

(262)

ENCs - US4LA20M, US4LA22M
Chart - 11354

(263) The Landside Route proceeds north through landcuts and through **Bayou Milhomme**. Continuing north, the route is through **Bayou Long** and **Belle River** to **L.R. Mile 23.8** where State Route 70 pontoon bridge crosses the waterway. (See **33 CFR 117.1** through **117.59**, and **117.424**, chapter 2, for drawbridge regulations.)

(264) The next passages are **Big Goddel Bayou**, **Little Goddel Bayou**, **Bay Natchez**and **Chopin Chute**. State Route 997 pontoon bridge crosses Chopin Chute at **L.R. Mile 41.3.** (See **33 CFR 117.1** through **117.59** and **117.478**, chapter 2, for drawbridge regulations.) The Landside Route then follows a section of **Lower Grand River** and merges with the basic Morgan City-Port Allen Alternate Route at **L.R. Mile 49.2 (M.P. Mile 36.9)**.

(265)

Pontoon bridges

(266) The pontoon bridges that cross the Landside Route are operated by cables that are suspended just above the water when the bridges are being opened or closed. The cables are dropped to the bottom when the bridges are in the fully open position but remain suspended while the bridges are fully closed. Extreme caution is advised in the area of the bridges. **Do not attempt to pass through the bridges until they are fully opened and the cables are dropped to the bottom.**

(267)

ENCs - US5LA27M, US5LA23M
Chart - 11355

(268) Returning to the main Intracoastal Waterway, the route west and northwest from **Mile 87.2W** is through the west reach of Bayou Boeuf.

(269) **That part of Intracoastal Waterway from Mile 93.0W to Mile 102.0W is within the area of the Berwick Bay Vessel Traffic Service (VTS). See Vessel Traffic Service, Berwick Bay (indexed as such) chapter 9, for a discussion of the VTS and other additional information.**

(270) **Bayou Boeuf Lock**, at **Mile 93.0W**, is 1,156 feet long (1,148 feet usable), 75 feet wide and 13 feet over the sills and handles lifts up to 11 feet. Daybeacons and red and green traffic lights are at each end of the lock. VHF-FM channels 13 and 16 are monitored continuously at the lock.

(276)

Structures across the Intracoastal Waterway
Morgan City to Port Allen Alternate Route (Statute Mile 0.0MP to 64.2MP)

Name•Description•Type	Mile	Waterway Location	Clearance (feet)		Information
			Horizontal	Vertical*	
Southern Pacific Railroad Bridge (vertical lift)	0.3	Berwick Bay	320	4 (down) 73 (up)	**Note 1** — Bridgetender monitors VHF-FM channel 13; call sign KW-4440.
Interstate 90 Bridge (south)	0.5	Berwick Bay	525	73	**Note 2**
Interstate 90 Bridge (north)	0.6	Berwick Bay	583	50	**Note 2**
State Route 75 Bridge (pontoon)	38.4	Lower Grand River	125		**Notes 3 and 4** — Bridgetender monitors VHF-FM channel 13.
Overhead power cable	44.8	Port Allen Canal		99	
State Route 77 Route (swing)	47.1	Port Allen Canal	125	2	**Note 4**
Overhead power cable	48.3	Port Allen Canal		117	
Missouri Pacific Railroad Bridge (vertical lift)	56.0	Port Allen Canal	125	7 (down) 73 (up)	Bridgetender monitors VHF-FM channel 13; call sign KVY-656.
Overhead power cable	57.5	Port Allen Canal		92	
Overhead power cable	63.0	Port Allen Canal		90	
Missouri Pacific Railroad Bridge (vertical lift)	64.0	Port Allen Canal	84	14 (down) 73 (up)	Bridgetender monitors VHF-FM channel 13; call sign KVY-657.
State Route 1 Bridge (fixed)	64.1	Port Allen Canal	84	65	

Note 1 – The bridgetender of the railroad bridge is available on VHF-FM channels 13 and 16 for information regarding the lift span and marine traffic in the bridges vicinity.
Note 2 – Lights forming a lighted approach danger range are on the west abutment of the both Interstate 90 Bridges and are visible only to downbound vessels. The range marks the west boundary of the suggested downbound course for approaching the bridges. The range is not to be steered on; mariners should not rely solely on it to safely navigate through the bridge.
Note 3 – Pontoon bridges are operated by cables that are suspended just above the water when the bridges are being opened or closed. The cables are dropped to the bottom when the bridges are in the fully open position, but remain suspended while the bridges are fully closed. Warning signs mark the approaches to both bridges. Do not attempt to pass through the bridges until they are fully opened and the cables are dropped to the bottom.
Note 4 – See **33 CFR 117.1** through **117.59** and **117.478**, chapter 2, for drawbridge regulations.

(271)

Cable ferry

(272) A cable ferry crosses Bayou Boeuf at **Mile 94.3W.** Flashing white lights on each bank mark the ferry crossing. The ferry is equipped with navigational lights and a flashing red warning light and operates between the hours of 0530 and 2230 daily. When the ferry is underway, the unmarked cables extend about 2 feet above the water's surface and are dropped to the bottom when not underway. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(273) Deep **Bayou Shaffer** branches south from **Mile 94.5W**. (See chapter 9 for more complete information.)

(274) At **Mile 95.5W** the westernmost reach of Bayou Boeuf joins **Lower Atchafalaya River**, which is an important outlet to the Gulf. (See chapter 9.) Narrow **Berwick Bay**, a link in the Atchafalaya River System, extends north from the junction for about 2 miles. On the northeast side of the junction is the port of **Morgan City**, **(Mile 95.5W)**. See Morgan City (indexed as such), chapter 9 for port facilities, service, supplies and repairs.

(275)

ENCs - US4LA20M, US4LA22M
Chart - 11354

(277) **Mile 95.7W** is **M.P. Mile 0.0** of the **Morgan City-Port Allen Alternate Route** and **A.R. Mile 113.3** of the **Atchafalaya River Route,** both of which wind north to outlets on the Mississippi River near and above Baton Rouge. Both of the alternate routes have the same project dimensions as the basic Intracoastal Waterway. (See Local Notice to Mariners for controlling depths.)

(278) **That part of the Morgan City-Port Allen Alternate Route from M.P. Mile 0.0 to M.P. Mile 5.0 is within the area of the Berwick Bay Vessel Traffic Service (VTS). (See chapter 9 for a discussion of the Berwick Bay Vessel Traffic Service and other additional information.)**

(279) A lighted approach danger range is shown from the west abutment of the fixed bridges. The range is visible only to downbound vessels and is designed to mark the west boundary of the suggested downbound course for approaching the bridges. **The range is not designed to be steered on. Mariners are cautioned not to rely solely on the range to safely navigate through the bridges.**

(280) At **M.P. Mile 1.9**, the Lower Atchafalaya River branches west and joins **Bayou Teche** 8 miles from Berwick Bay. (See chapter 9 for depths, locks, bridges, overhead cables and facilities.)

(281) At **M.P. Mile 2.4 (A.R. Mile 115.7)**, the two alternate routes separate. The Morgan City-Port Allen Alternate Route turns sharply to the east then follows winding courses north through landcuts and bayous.

(282) **Bayou Sorrel Lock**, at **M.P. Mile 36.4**, is 800 feet long (790 feet usable) and 56 feet wide, has 14 feet over the sills and handles lifts to 21 feet. Red and green traffic lights and daybeacons are at each end of the lock. The lockmaster monitors VHF-FM channels 12 and 14.

(283) The Landside Route, described previously, comes in from the southeast and merges with the Morgan City-Port

(289)

Structures across the Gulf Intracoastal Waterway
Atchafalaya River Route (Statute Mile 0.0 AR to 115.7 AR)

Name•Description•Type	Mile	Waterway Location	Clearance (feet)		Information
			Horizontal	Vertical*	
Highway Bridge (vertical lift)	0.0 AR	Old River Navigation Canal	75	53 (up) 0 (down)	
Kansas City Southern Railroad Bridge (swing)	4.9 AR	Atchafalaya River	131	5	**Note 2**
Overhead power cable	4.9 AR	Atchafalaya River		58	
Highway fixed bridge	5.3 AR	Atchafalaya River	504	50	
Overhead pipelines (gas)	28.2 AR	Atchafalaya River		52	
Missouri Pacific Railroad Bridge (vertical lift)	29.5 AR	Atchafalaya River	160	53 (up) 3 (down)	**Note 1** — Bridgetender monitors VHF-FM channel 13; call sign KUF-701.
Overhead pipeline	39.9 AR	Atchafalaya River		60	Clearance is at the center
U.S. Route 190 Bridges (fixed)	40.5 AR	Atchafalaya River	475	58	
Missouri Pacific Railroad Bridge (swing)	41.5 AR	Atchafalaya River	129	6 (closed)	**Note 1** — Bridgetender monitors VHF-FM channel 13; call sign KUF-702.
Overhead power cable	42.0 AR	Atchafalaya River		81	
Overhead power cable	48.0 AR	Atchafalaya River		93	
Overhead power cable	58.0 AR	Atchafalaya Basin Main Channel		70	
Interstate 10 Highway Bridge (fixed)	58.1 AR	Atchafalaya Basin Main Channel	250	52	Atchafalaya Basin Bridge
Overhead pipeline	58.8 AR	Atchafalaya Basin Main Channel		58	
Overhead power cable	104.5 AR	Six Mile Lake		75	

* Vertical clearance measured at Mean High Water
Note 1 – See **33 CFR 117.1** to **117.49**, chapter 2, for drawbridge regulations.
Note 2 – See **33 CFR 117.1** to **117.59** and **117.423**, chapter 2, for drawbridge regulations.

Allen Route at **M.P. Mile 36.9 (L.R. Mile 49.2)** in Lower Grand River.

(284) The M.P. route continues north through landcuts and bayous. **Jack Miller Store** is on the east side of the waterway at **M.P. Mile 43.6**, and **Indian Village** is on the same side at **M.P. Mile 46.0**. A shipyard is on the east side of the waterway just below Jack Miller Store. A marine railway at the yard can haul out craft to 60 feet long for complete hull and engine repairs; cranes to 100 tons are available.

(285) **Bayou Plaquemine** branches east from **M.P. Mile 46.5** and leads for 6.6 miles to **Plaquemine**, which is on the west bank of the Mississippi River 98 miles above Canal Street, New Orleans. In 2000, the bayou had a controlling depth of 1 foot. **Plaquemine Lock**, formerlythe north terminus of the Morgan City-Port Allen Alternate Route, is permanently closed. State Route 3066 (spur) swing bridge at Indian Village with a clearance of 2 feet crosses the bayou about 0.6 mile east of its junction with Morgan City-Port Allen Alternate Route. (See **33 CFR 117.1** through **117.59** and **117.488**, chapter 2, for drawbridge regulations.) Three fixed bridges 0.2 mile west of the lock have a least clearance of 13 feet, thence about 1.6 miles west of the fixed bridges is a fixed bridge with a least clearance of 7 feet; the overhead power cables over the bayou have a least clearance of 61 feet. It is advised that prior to navigating the bayou information concerning depths and local conditions be obtained from local authorities.

(286) From **M.P. Mile 46.5**, the Morgan City-Port Allen Alternate Route continues north through parts of Bayou Grosse Tete and through the landcuts of the **Port Allen Canal**. A shipyard on the east side of the canal just below the railroad bridge at **M.P. Mile 56.0**, has a 2,500-ton floating drydock capable of handling vessels for general repairs. Port Allen Canal turns northeast at **M.P. Mile 56.9**. The canal turns again at **M.P. Mile 62.5** and heads southeast to Port Allen Lock.

(287) **Port Allen Lock**, at **M.P. Mile 64.2**, is 1,198 feet long (1,188 feet usable) and 84 feet wide, has 13 feet over the sills and handles lifts to 47 feet. The lockmaster can be contacted on VHF-FM channel 14. Red and green traffic lights and daybeacons are at each end of the lock. Vessels entering the lock should wait for the green signal. The lock is the Mississippi gateway of the Morgan City-Port Allen Alternate Route and is on the west side of the river 115 miles above Canal Street, New Orleans.

(288)

ENCs - US4LA20M, US4LA22M, US3LA02M
Charts - 11354, 11352

(290) Getting back to Berwick Bay, the **Atchafalaya River Route** turns sharply to the northwest at **A.R. Mile 115.7 (M.P. Mile 2.4)** and follows improved channels through **Stouts Pass** and **Sixmile Lake**, then winds north to **A.R. Mile 0.0**, which is at **Barbre Landing,** 0.5 mile east of the confluence of **Atchafalaya River**, **Red River** and Old River.

(291) From **A.R. Mile 0.0,** the route leads for 5.2 miles east in Old River Canal and Old River Lock to a junction with Mississippi River that is 181 miles up the Mississippi from Canal Street, New Orleans, and 64 miles above Baton Rouge.

(305)

Structures across the Intracoastal Waterway
Morgan City, LA to Port Brownsville, TX (Statute Mile 95.0W to 680.0W)

Name•Description•Type	Mile	Waterway Location	Clearance (feet)		Information
			Horizontal	Vertical*	
Overhead power cable	96.5W	Lower Atchafalaya River		130	
Overhead power cable	113.0W	Intracoastal Waterway		94	
State Route 317 Bridge (fixed)	113.0W	Intracoastal Waterway	125	73	
Overhead power cable	134.0W	Intracoastal Waterway		90	
Louisa (SR-319) Bridge (bascule)	134.0W	Intracoastal Waterway	200	73	**Note 1** — The bridgetender monitors VHF-FM channel 13; call sign KDT-551.
State Route 82 Bridge (fixed)	170.3W	Isle Marrone Cutoff	250	73	
Overhead power cable	170.6W	Isle Marrone Cutoff		97	
Overhead power cable	184.4W	Intracoastal Waterway		93	
Overhead power cable	219.8W	Intracoastal Waterway		82	
State Route 27 Bridge (fixed)	219.8W	Intracoastal Waterway	250	73	
Overhead power cable	221.9W	Intracoastal Waterway		219	
Overhead power cable	231.5W	Intracoastal Waterway		90	
State Route 384 Bridge (pontoon)	231.5W	Intracoastal Waterway	125		**Note 3** — The bridgetender monitors VHF-FM channel 13; call sign KJA-560.
State Route 384 Bridge (pontoon)	238.0W	Intracoastal Waterway	125		**Note 3** — The bridgetender monitors VHF-FM channel 13; call sign WXY-918.
State Route 27 Bridge (vertical lift)	243.8W	Intracoastal Waterway	233	50 (down) 135 (up)	**Note 1** — The bridgetender monitors VHF-FM channel 13; call sign KTD-558.
Overhead power cable	243.9W	Intracoastal Waterway		139	
Overhead power cable	245.3W	Intracoastal Waterway		140	
Overhead power cable	254.2W	Intracoastal Waterway		93	
Overhead power cable	260.1W	Intracoastal Waterway		151	
Overhead power cable	267.8W	Sabine River		172	
Gulfgate (State Highway 82) Bridge (fixed)	286.3W	Sabine-Neches Canal	400	136	
West Port Arthur Bridge (fixed)	288.8W	Salt Bayou	210	73	
Overhead power cables	288.8W	Salt Bayou		125	
Overhead power cable	319.3W	Horseshoe Bend		83	
State Route 124 Bridge (fixed)	319.3W	Horseshoe Bend	175	73	
Overhead power cable	319.4W	Horseshoe Bend		110	
Overhead power cable	322.3W	Horseshoe Bend		93	
Galveston Railroad Bridge (vertical lift)	357.2W	Galveston Bay	300	8 (down) 73 (up)	The bridgetender monitors VHF-FM channel 16 and works 13; call sign KUF-652.
Overhead power cable	357.2W	Galveston Bay		99	
Interstate 45 Bridge (fixed)	357.3W	Galveston Bay	310	73	
State Route 332 Bridge (fixed)	393.8W	Intracoastal Waterway	125	73	
Overhead power cable	393.9W	Intracoastal Waterway		97	
Overhead telephone cable	394.8W	Intracoastal Waterway		74	
Texas Farm Road 1495 Bridge (fixed)	397.6W	Intracoastal Waterway	125	73	
Overhead power cable	397.6W	Intracoastal Waterway		100	
Overhead power cable	417.9W	Intracoastal Waterway		73	
Texas Farm Road 457 Bridge (pontoon)	418.0W	Intracoastal Waterway	140		**Notes 3 and 4** — The bridgetender monitors VHF-FM channel 16 and works 13; call sign KQU-644.
Overhead power cable	418.0W	Intracoastal Waterway		94	
Overhead power cables	440.7W	Intracoastal Waterway		71	
Texas Farm Road 2031 Bridge (fixed)	440.7W	Intracoastal Waterway	125	73	
Texas State Highway 361 Bridge (fixed)	533.1W	Redfish Bay	125	48	
Overhead power and telephone cables	533.1W	Redfish Bay		61	
Overhead power cable	550.9W	Laguna Madre		93	
Overhead power cable	552.7W	Laguna Madre		91	
John F. Kennedy Causeway Bridge (fixed)	552.7W	Laguna Madre	150	73	
Queen Isabella Causeway Bridge (fixed)	665.2W	Laguna Madre	275	73	

Structures across the Intracoastal Waterway
Morgan City, LA to Port Brownsville, TX (Statute Mile 95.0W to 680.0W)

Name•Description•Type	Mile	Waterway Location	Clearance (feet) Horizontal	Clearance (feet) Vertical*	Information
South Garcia Street Bridge (pontoon)	666.0W	Laguna Madre	149		**Notes 2 and 3** — The bridgetender monitors VHF-FM channel 12.
Overhead power cable	666.0W	Laguna Madre		94	

* Vertical clearance measured at Mean High Water
Note 1 – See **33 CFR 117.1** through **117.59** and **117.451**, chapter 2, for drawbridge regulations.
Note 2 – See **33 CFR 117.1** through **117.59** and **117.968**, chapter 2, for drawbridge regulations.
Note 3 – Pontoon bridges are operated by cables that are suspended just above the water when the bridges are being opened or closed. The cables are dropped to the bottom when the bridges are in the fully open position, but remain suspended while the bridges are fully closed. Warning signs mark the approaches to both bridges. Do not attempt to pass through the bridges until they are fully opened and the cables are dropped to the bottom.
Note 4 – A hinged apron at the south end of the bridge can be opened to provide a 13-foot-wide small-boat channel.

(292) **Old River** is a 6-mile-long stream that formerly connected the Mississippi River with the Red and Atchafalaya Rivers. A dam about 1.0 mile from its east entrance prevents the Mississippi from flowing uncontrolled into the Atchafalaya Basin. An outflow channel with a control structure on the west bank of the Mississippi about 9.5 miles upriver regulates and controls the flow into the Red River.

(293) **Caution:** The outflow channel is not a navigation channel. A flashing amber light on the south point of the channel indicates that the control structure is in operation. Very dangerous currents exist in the area, especially during the high-water season. When in the vicinity of the structure, mariners are advised to steer as close to the east bank as safety permits to avoid dangerous crosscurrents and from being drawn into the structure.

(294) The Old River control structure is within a **safety zone**. (See **33 CFR 165.1** through **165.7**, **165.20** through **165.25**, and **165.802**, chapter 2, for limits and regulations.)

(295) **Old River Navigation Canal and Lock**was built to bypass the dam and permit navigation between the Mississippi, Red and Atchafalaya Rivers. The federal project provides for a dredged channel 12 feet deep and about 2 miles long from the Mississippi to Old River about 1.4 miles west of the dam, thence 12 feet to the junction at **Barbre Landing** with the Red and Atchafalaya Rivers at **A.R. Mile 0.0**. The lock is 1,200 feet long (1,190 feet usable) and 75 feet wide, with 11 feet over the sill.

(296) **Atchafalaya River Route**flows south into the Gulf of Mexico from its confluence with Red and Old Rivers at **A.R. Mile 0.5**. The 101.5-mile section, the confluence to Morgan City, has a federal project depth of 12 feet. The controlling depths are published periodically in Navigation Bulletins issued by the New Orleans District Corps of Engineers, New Orleans, LA.

(297) **That part of the Atchafalaya River Route from A.R. Mile 113.0 to A.R. Mile 122.0 is within the area of the Berwick Bay Vessel Traffic Service (VTS). See Vessel Traffic Service, Berwick Bay (indexed as such), chapter 9, for a discussion of the VTS and other additional information.** Commerce on the river is in shell, logs, petroleum products, liquid sulfur, alcohol, industrial chemicals, fertilizer, sugar and molasses.

(298) In 1982, hazardous currents were reported in the vicinity and just north of the Missouri Pacific Railroad Bridge (**A.R. Mile 29.5**).

(299) A vehicular ferry, operating from 0500 to 2300, crosses the river just south of Melville at **A.R. Mile 29.7**.

(300) A shipyard just south of the Missouri Pacific Railroad Bridge (**A.R. Mile 41.5**) has a marine railway that can haul out craft to 65 feet for complete repairs.

(301) At Morgan City, U.S. Route 90 highway bridge at **A.R. Mile 117.4 (M.P. Mile 0.6)** has two fixed spans with clearances of 50 and 73 feet. The Southern Pacific Railroad bridge 1.3 mile south of the highway bridge has a vertical lift with a clearance of 4 feet down and 73 feet up.

(302)

ENCs - US5LA27M, US5LA23M
Chart - 11355

(303) Returning to Morgan City and the basic route, the Intracoastal Waterway continues southwest in Lower Atchafalaya River. The waterway departs Lower Atchafalaya River at **Mile 98.2W** and proceeds west in **Little Wax Bayou**. The river entrance to the bayou is marked by a light. The route leaves Little Wax Bayou at **Mile 102.0W** and continues west through a landcut that crosses several other bayous. The bayou sides of most crossings may have remains of hyacinth booms.

(304)

ENCs - US4LA13M, US5LA13M
Chart - 11350

(306) At **Mile 107.7W**, the waterway crosses **Wax Lake**, which is a deep drainage ditch. The alternate **North Channel** and **South Channel** at the crossing are no longer maintained. Strong currents from Wax Lake Outlet are reported to set vessels in the waterway to the south.

(307) The settlement of **North Bend** is at **Mile 113.0W** on the north side of the waterway.

(308) The waterway continues in a cut to **Bayou Bartholomew**, where a cutoff at **Mile 120.8W** leads north through Franklin Canal to Bayou Teche. (See chapter 9 for more complete information.)

(309) At **Miles 121.4W** and **122.6W,** the remains of hyacinth booms block the entrances to **Mud Lake.**

(310) At **Mile 122.9W,** the waterway is crossed by a cut that leads southwest through The Jaws to West Cote Blanche Bay (see chapter 9) and northeast for 5.5 miles through Charenton Canal to Bayou Teche, 0.5 mile below **Baldwin.**

(311) **Charenton Drainage and Navigation Canal** is crossed at the upper end by a railroad bridge with a swing span clearance of 5 feet and a highway bridge with a fixed span clearance of 50 feet; cables over the canal have clearances greater than 50 feet. Dual fixed highway bridges with a clearance of 50 feet cross the canal about 1.1 miles south of the junction with Bayou Teche.

(312)

Cable ferry

(313) At **Mile 129.7W,** the waterway is crossed by a cable ferry to Cote Blanche Island. Unlighted signs, labeled "Cable Ferry 1,000 Feet," mark the east and west approaches to the ferry crossing. The privately owned ferry, with a 23-passenger capacity, operates 24 hours, daily. The ferry is equipped with navigational lights and monitors VHF-FM channel 16. When the ferry is underway, the unmarked cables are at or just below the water's surface and are dropped to the bottom when not underway. Towboat operators are cautioned not to pass too soon after the ferry crosses so as to avoid damaging the cables. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(314) The **Port of West Saint Mary**, on the north side of the waterway at about **Mile 132.3W**, is a T-shaped channel with a reported controlling depth of 13 feet in 1998. The channel and port are under the supervision of the Board of Directors of the West Saint Mary Port, Harbor and Terminal District.

(315) **Weeks**, on the east side of the waterway at **Mile 137.2W,** is the site of the largest salt mine in Louisiana. Just north of the village, at **Mile 138.6W, Vermilion Bay** is entered through Weeks Bayou; the route north to Port of New Iberia is at **Mile 140.4W** through a cut to **Bayou Jack Canal**. (See chapter 9 for more complete information.)

(316) At **Mile 145.8W,** the waterway is crossed by **Bayou Petite Anse** leading north through connecting canals to Avery Island and Delcambre; Avery Canal connects with the bayou south of the waterway to provide a passage to Vermilion Bay. (See chapter 9 for more complete information.)

(317) Between **Miles 159.0W** and **160.2W,** the waterway passes through a cut in Vermilion River. At **Mile 159.0W,** Vermilion River Cutoff leads southeast to Vermilion Bay. Tows using the waterway should use extreme caution because of strong currents in Vermilion River. During flood stages, loaded westbound tows should not attempt to cross the river without assistance. Eastbound tows should hold close to the north bank well before entering the river until past the junction.

(318) Repair facilities are available at **Perry** and **Abbeville**, 19 to 21 miles north of the waterway on Vermilion River. Gasoline is available at Abbeville. (See chapter 9 for more complete information.)

(319) **Intracoastal City**, on the north side of the waterway at **Mile 160.0W,** is a base for oil-field exploration and development with boatyards and marinas with several boat slips having depths of 7 feet. Available supplies include gasoline, diesel fuel, water, ice and some marine supplies. (See chapter 9 for more complete information.) State Route 333 highway leads to the settlement.

(320) At Mile **161.0W, Freshwater Bayou Canal** leads southwest from the waterway to the Gulf or to White Lake through connecting canals. (See chapter 9 for more complete information.)

(321) **Leland Bowman Lock**, **Mile 163.0W**, replacing Vermilion Lock, has a usable length of 1,140 feet, width of 110 feet and a depth of 15 feet over the sills. The lockmaster can be contacted on VHF-FM channel 14 for locking instructions or information. Red and green traffic lights and a revolving red and green disk are at each end of the lock. Vessels should enter the lock only on a green signal.

(322)

Mile 170.3W to Mile 241.2W

(323) An oil company slip and wharves are about 0.3 mile east of the State Route 82 Bridge (**Mile 170.3**).

(324) A cable ferry crosses the Intracoastal Waterway at **Mile 178.4W.** The ferry carries passengers and vehicles and operates during daylight hours. White signs with red lettering, labeled "Warning, Cable Ferry Crossing," are 2,000, 1,000 and 200 feet on each side of the ferry crossing. The ferry shows no special lights or signals while underway. The unmarked ferry guide cables extend above the water surface when the ferry is underway and are dropped to the bottom when the ferry is docked at its landings. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(325) A marine fuel and supply facility, at **Mile 193.2W,** monitors VHF-FM channel 16 continuously. Gasoline, diesel fuel and groceries are available at the facility's pier, which had a reported depth of 12 feet alongside in 1982. Welding equipment is available for above-the-waterline repairs. Diesel fuel by barge in midstream and a 250-hp tug are also available.

(326) The waterway crosses **Mermentau River** between **Miles 201.6W** and **202.5W** and continues west in a landcut. The Mermentau River is navigable for more than 32 miles north of the crossing. South of the waterway, the river leads through Grand Lake to the Gulf. (See chapter 9 for more complete information.)

(327) **Bayou Lacassine** crosses the waterway at **Mile 205.1W.** North of the crossing, the bayou had a reported centerline controlling depth of 6 feet in 1982, for about 15 miles to Hayes. Many of the bends have been cut through to provide a shorter route. A highway bridge over Bayou Lacassine, about 3 miles south of Hayes, has a swing span with a clearance of 5 feet. (See **33 CFR 117.1**

through **117.59** and **117.461**, chapter 2, for drawbridge regulations.) South of the waterway, Bayou Lacassine flows through **Mud Lake** into Grand Lake.

(328) At **Miles 211.5W** and **212.7W**, a canal on the south side of the waterway leads to **Little Lake Misere**, thence east through **The Narrows** to **Lake Misere** and **Bayou Misere** to Mud Lake. The waterway arcs to the north in this section. **Bell City Drainage Canal** crosses the waterway at **Mile 212.3W**.

(329) The loading docks and tanks of an oil company are on the north side of the waterway at **Mile 223.3W**; a cut here leads to **Sweet Lake.**

(330) **Calcasieu Lock**, **Mile 238.2W**, is 1,206 feet long (1,194 feet usable), 75 feet wide and 13 feet over the sills and handles lifts to 4 feet. Red and green lights and daybeacons are at either end of the lock. Vessels should wait for the green signal before entering the lock. The lockmaster can be contacted on VHF-FM channel 14. The lock prevents saltwater from entering rice fields to the east.

(331) The waterway enters **Calcasieu River** at **Mile 239.2W** and continues north around a bend in the river across deep Calcasieu Channel to Choupique Cutoff. Vessels and tows are advised to use caution at the junctions. A fuel dock, at which diesel fuel is available by barge, and a shipyard with two 2,000-ton floating drydocks are at Calcasieu Landing on the west side of the Calcasieu Landing on the west side of the Calcasieu River just north of its junction with Choupique Cutoff. The fuel dock monitors VHF-FM channel 16 continuously. (See chapter 9 for more complete information on Calcasieu River.)

(332) **The Intracoastal Waterway, from Mile 239.0W in Calcasieu River to Mile 241.4W, is the entrance to Choupique Information Service (VTIS). See Vessel Traffic Information Service, Lake Charles (indexed as such) chapter 9.**

(333) **Lake Charles**, 9.8 miles up Calcasieu River from the waterway junction at **Mile 241.2W**, has numerous boat landings along the shore of Lake Charles. Good anchorage in depths of 8 to 10 feet is available in the lake. Berthing and repair facilities, marine supplies, gasoline and diesel fuel are available. (See chapter 9 for more complete information.)

(334)

ENC - US5TX61M
Chart - 11331

(335) From **Mile 241.2W,** the waterway passes through Choupique Cutoff and the long landcut **Lake Charles Deepwater Channel** for 24 miles to the Sabine River at Orange.

(336) **Bayou Choupique** is part of the waterway between **Miles 241.8W** and **242.4W.** The 12-foot deep exit leads to Calcasieu Channel while the west exit passes through marshland for many miles. The controlling depth in the west branch is about 8 feet to the highway bridge 2.5 miles above the junction; the bridge has a 45-foot fixed span with a clearance of 15 feet. An overhead power cable just east of the bridge has a clearance of 62 feet.

(337) At **Mile 243.3W, Old Canal** leads east to the Calcasieu Channel. In 1982, the reported controlling depth was 9 feet.

(338) A **cable ferry** crosses the waterway at **Mile 254.1**. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(339) **Vinton Canal** crosses the Intracoastal Waterway at **Mile 258.4W.** In 1995, the canal had a controlling depth of 4½ feet to a point about 4.0 miles north of waterway, thence 5½ feet about 0.5 mile below the bridge, about 7.3 miles north of the junction with the waterway. An overhead power cable with a clearance of 58 feet crosses the canal just north of the junction. The canal connects with **Black Bayou** south of the waterway.

(340) At **Mile 264.8W,** the waterway enters **Sabine River** and continues around the south bend of the river to the deep ship channel. The Coast Guard has requested vessels transiting the waterway make a **SECURITE** call on VHF-FM channel 13 prior to entering Sabine River, particularly during periods of restricted visibility.

(341) **Orange**, 0.9 mile up the Sabine River Ship Channel from the waterway junction at **Mile 266.0W**, has repair facilities, marine supplies and gasoline. (See chapter 10 for more complete information.)

(342) From **Mile 266.0W,** the waterway continues for 22 miles down the Sabine River Ship Channel and the Sabine-Neches Canal to a junction with Port Arthur Canal at Port Arthur. The Coast Guard has requested vessels transiting the waterway make a **SECURITE** call on VHF-FM channel 13 prior to entering Neches River, particularly during periods of restricted visibility.

(343) **Adams Bayou**, at **Mile 266.8W,** and **Cow Bayou**, at **Mile 269.5W,** both on the north side of the waterway, are described in chapter 10.

(344) At **Mile 276.5W,** a 15.9-mile channel, leads up the **Neches River** to the port facilities at **Beaumont**. (See chapter 10 for more complete information.)

(345) **Port Arthur**, between **Miles 279.8W** and **288.5W** (junction with Port Arthur Canal), has complete repair facilities, marine supplies, gasoline and diesel fuel at places along the Sabine-Neches Canal. (See chapter 10 for more complete information.)

(346) **Taylor Bayou** extends 1.6 miles north from **Mile 288.5W** to a point where it is obstructed by a barrier. This portion of the bayou is the site of many of the deep-draft facilities at Port Arthur and is described in chapter 10.

(347) The upper reaches of Taylor Bayou can be reached through **Taylor Bayou Outfall Canal** at **Mile 290.3W,** which leads north from the waterway to a junction with Taylor Bayou about 2.6 miles above the waterway. Taylor Bayou has depths of about 4 feet for about 29 miles above its junction with the outfall canal. Overhead power cables with a least clearance of 100 feet cross the outfall canal about 1.8 miles above the junction with the Intracoastal Waterway. A swing bridge with a clearance

of 11 feet crosses the outfall canal about 2.5 miles above the junction with the Intracoastal Waterway.

(348) A navigation lock, 200 feet long, 30 feet wide and with a depth of 10 feet over the sills is on Taylor Bayou about 0.9 mile above the junction with the outfall canal. (See **33 CFR 207.185**, chapter 2, for regulations.) Above the lock the bayou is crossed by fixed bridges with a least channel width of 13 feet and clearances of 32 feet and by overhead power cables with a least clearance of 20 feet.

(349) The waterway leaves the Sabine-Neches Canal at **Mile 288.6W** and continues for about 61 miles through a landcut to Galveston Bay.

(350) A small-boat basin on the south side of the waterway at **Mile 288.9W** has berthing facilities for craft drawing up to 5 feet. Berths, electricity, water and a 15-ton portable lift are available; hull repairs can be made.

(351) A spillway at **Mile 292.4W** contains **Shell Lake** and other lakes south of the waterway. Floodgates on the south side of the waterway at **Mile 305.4W** contain **Star Lake.**

(352) At **Mile 314.1W,** dirt ramps of a cattle crossing are on either side of the waterway.

(353) An oil loading terminal is in a slip on the north side of the waterway just east of the State Route 124 Bridge (**Mile 319.3W**). **High Island**, on the highway 1.5 miles south of the waterway, is an oil-producing center with numerous oil wells but has no facilities for passing craft. A landing for shallow-draft boats is at **Mile 321.3W.**

(354) The waterway passes through two marked cuts in the southeast part of shallow **East Bay** between **Miles 325.7W** and **329.7W.** Berthing facilities for shallow-draft boats are in slips on each side of the waterway. The waterway through Rollover Bay is narrow and experiences strong currents and wind effects. Mariners should take into consideration the available horsepower, size and configuration of tow and make every attempt to verify existing and forecasted conditions at the bay well prior to transiting this area.

(355) An oil-loading terminal is at **Mile 333.2W** on the southeast side of the waterway. The waterway continues southwest to Port Bolivar and Galveston Bay. Basins along this part of the waterway have several marinas where the berths with electricity, gasoline, diesel fuel, water, ice, wet and dry storage, launching ramps and marine supplies can be obtained. A marina at **Mile 342.9W**, on the southeast side of the waterway, can accommodate craft drawing up to 5 feet and has facilities for handling craft up to 55 feet for hull and engine repairs. A channel leading from Galveston Bay through **Sievers Cove** to the waterway, about **Mile 343.2W**, is marked on both sides by piles. In 1982, 4 feet was reported available in the channel. The waterway through Seivers Cove is narrow and experiences strong currents and wind effects from north winds. Mariners should take into consideration the available horsepower, size and configuration of tow and make every attempt to verify existing and forecasted conditions at the bay well prior to transiting this area.

(356)

ENCs - US5TX58M, US4TX58M, US5TX53M, US5TX61M, US5TX51M
Charts - 11326, 11324, 11331, 11322

(357) **Port Bolivar** is at **Mile 348.3W** on the southeast side of the waterway and is near the southwest end of **Bolivar Peninsula**. Gasoline, diesel fuel, water and ice are available at some of the town landings.

(358) The waterway leaves the Bolivar cut and enters **Galveston Bay** at **Mile 349.3W.** The direct route bypasses Galveston and proceeds southwest through the lower part of the bay. **Houston Ship Channel** is crossed at **Mile 350.2W.** The Coast Guard has requested vessels transiting the waterway make a **SECURITE** call on VHF-FM channel 13 prior to crossing Houston Ship Channel, particularly during periods of restricted visibility. Vessel Traffic Service Houston-Galveston recommends westbound tows avoid meeting eastbound tows between Bolivar Peninsula Buoy 15 and Buoy 20 due to strong currents and shoaling at the entrance to Bolivar.

(359) The port of **Houston** is 43 miles to the northwest. (See chapter 10.) An alternate route for vessels transiting between the Intracoastal Waterway and the Houston Ship Channel is marked from Bolivar Peninsula Buoy 20 to Houston Ship Channel Light 28. The direction of traffic movement is not regulated. However, in order to reduce congestion, Houston Traffic requests that this route be used for northbound-only traffic. Southbound traffic is requested to proceed south to Houston Ship Channel Lighted Buoy 26 and then turn east to Bolivar Point.

(360) Ebb currents near Houston Ship Channel Lighted Buoy 26 and eastward toward the Bolivar area make the turn difficult, especially during winter months with north winds present; caution is advised. Mariners should verify current and wind conditions prior to transiting this area. Vessels attempting to transit this area during these conditions should consider available horsepower and utilization of assist vessels to prevent grounding on the south side of the channel in the vicinity of Bolivar Peninsula Light 19A.

(361) Houston Traffic also requests that all vessels proceeding northbound in the alternate route conduct a securite broadcast of their intentions prior to entering in the Houston Ship Channel. Mariners should verify the status of the alternate route aids to navigation at the Intracoastal Waterway/Bolivar Peninsula intersection prior to transiting this area; caution is advised. The channel to Texas City is crossed at **Mile 350.8W**; the port is 5 miles to the west-northwest. (See chapter 10 for more complete information.)

(362) There is a dry storage marina on the end of the Texas City Dike, about 0.6 mile northwest of the junction with Texas City Channel. Gasoline, diesel fuel, water, ice and marine supplies are available. A depth of 6 feet was

reported alongside the fuel dock and in the approach channel in 1982.

(363) The basic route of the waterway continues southwest through dredged cuts to the bridges that separate Galveston Bay from West Bay. The waterway cuts through the northwest tip of Pelican Island at **Mile 351.5**. This area known as Pelican Cut is relatively narrow. The cut has several moorings buoys reported north of the channel to foster navigation safety; waiting weather prior to crossing or entering Houston Ship Channel or transiting Galveston bridges. Tows using these mooring buoys may further reduce the available navigable water. Mariners should use caution and make every attempt to determine the available sea room at the cut prior to transiting.

(364) An alternate route of the waterway at **Mile 349.3W** swings south in **Bolivar Roads** then southwest in Galveston Channel. The port of Galveston at **Mile 353.5W** is on the south side of **Galveston Channel**. (See chapter 10 for port facilities, services, supplies and repairs.) The **Pelican Island** railroad-highway bridge over Galveston Channel at **Mile 356.0W** has a bascule span with a clearance of 13 feet. **Caution:** The open bascule span overhangs the channel above a vertical clearance of 75 feet. The bridgetender monitors VHF-FM channel 16 and works and channel 13; call sign KYH-532. (See **33 CFR 117.1** through **117.59** and **117.66**, chapter 2, for drawbridge regulations.) The bridgetender monitors VHF-FM channel 13. An overhead power cable close east of the bridge has a clearance of 85 feet. The alternate route leaves the port's deep water at the bridge and proceeds west in dredged cuts to rejoin the waterway at **Mile 356.4W.**

(365) West of the bridges, a marked channel leads southeast from **Mile 357.7W** to **Offatts Bayou**, which is one of the principal bases for Galveston pleasure and fishing craft. (See chapter 10 for channel depths, services, supplies and repairs.)

(366)

ENC - US5TX51M
Chart - 11322

(367) The waterway continues west through dredged cuts between **North Deer Island** and **Tiki Island** in the northeast part of West Bay. At **Mile 362.8W,** the waterway enters a 12-mile cut that is never more than 0.2 mile behind the northwest shore of West Bay.

(368) At **Mile 374.7W,** the waterway leaves the landcut and crosses the mouth of Chocolate Bay at the northwest end of West Bay through a buoyed channel with range lights at each end. Marked channels to **Chocolate Bay** lead north from the waterway at **Miles 375.7W** and **376.3W**.

(369) San Luis Pass and tributaries to the west part of West Bay are described in chapter 10.

(370) From **Mile 377.9W,** the waterway enters a landcut that passes through and across shallow bays, bayous and rivers for 33 miles to **Mile 411.3W** at the northwest end of Cedar Lakes.

(371) **Oyster Creek**, emptying into the waterway at **Mile 392.2W,** about 2.5 miles northeast of Brazosport, is a stream of no importance used as a storm refuge by small craft. An overhead power cable with a minimum clearance of 78 feet crosses the creek about 2.3 miles above the mouth. In 1999, a reported depth of 8 feet could be carried to State Route 523 highway bridge about 3.5 miles about the mouth.

(372) There are numerous marinas and boatyards along the waterway between the entrance to Oyster Creek and the Freeport Entrance Channel.

(373) At **Mile 394.8W,** the private canal on the north side of the waterway is closed to the public by a gate across the entrance.

(374) The town of **Freeport** is 2 miles up Old Brazos River from the waterway junction at **Mile 395.1W**. (See chapter 11 for more complete information.)

(375) The waterway crosses the **Brazos River** at **Mile 400.8W.** The 75-foot-wide floodgates on both sides of the river control waterway traffic when crossing conditions are hazardous because of strong current velocities. (See **33 CFR 162.75**,**207.180**, and **207.187**, chapter 2, for regulations governing the use, administration and navigation of the floodgates; local information is issued by the Galveston District Engineer, Corps of Engineers.)

(376) The lockmasters monitor VHF-FM channel 13 continuously and may be reached by telephone (East Gate, 409–233–1251; West Gate, 409–233–5161). Mooring piles are on both sides of the waterway on the canal sides of the floodgates for the mooring of vessels when the floodgates are closed or when tows are limited. Red and green traffic lights and daymarks are at both ends of the floodgates. Heavy rains cause strong outgoing currents and eddies in the waterway between the east and west floodgates. Mariners should use caution and consider available horsepower, size and configuration of tow and vessel traffic and the availability of sea room in order to obtain proper alignment into the floodgates prior to transiting the area. (Brazos River is described in chapter 11.)

(377) The waterway crosses **San Bernard River** at **Mile 405.0W.** Operators of small craft are advised to be on the lookout for logs and floating debris in the waterway between Brazos River and San Bernard River. (San Bernard River is described in chapter 11.)

(378)

Mile 420.5W to Mile 470.9W

(379) The waterway continues in a landcut from the north side of Cedar Lakes to **Mile 420.5W** where it follows a cut along the north shores of shallow East Matagorda Bay and Matagorda Bay for 35 miles, thence across the open waters of Matagorda Bay to Port O'Connor. Prolonged east winds will create a difference in water level between

East Matagorda Bay and Matagorda Bay, thus causing strong west currents in the waterway.

(380) Ice and limited berths are available at a small marina just west of the pontoon bridge (**Mile 418.0W**). Depths of about 2 feet were reported alongside the facility in 1982.

(381) The entrance to **Caney Creek** at **Mile 419.9W** was reported closed in 1982. The creek can be entered through **Caney Creek Cutoff**. The cutoff crosses the waterway through a 0.5-mile canal leading to **East Matagorda Bay** at Mile **420.4W.** In 1982, shoaling was reported at the junction of Caney Creek and Caney Creek Cutoff. Above the junction, a depth of about 2 feet can be taken up the creek to a bridge 25 miles above the waterway. The fixed highway bridge 9 miles above the waterway and 2 miles below **Sargent** has a 28-foot fixed span with a clearance of 10 feet. Several fish camps along the creek have gasoline and launching ramps.

(382) **Live Oak Bayou** crosses the waterway at **Mile 427.8W** and empties into East Matagorda Bay. There is a fish camp on the bayou about 1.0 mile above the crossing at which gasoline, water, ice and a launching ramp are available. It is accessible by small outboards only.

(383) There is an abandoned boat basin and bulkhead at **Gulf** on the north side of the waterway at **Mile 435.7W.** A channel opposite Gulf leads south from the waterway into East Matagorda Bay. This channel had a reported controlling depth of about 7 feet in 1982, with shoaler depths in the bay.

(384) An oil-loading terminal is on the north side of the waterway at **Mile 438.6W.** A harbor on the north side of the waterway at **Mile 440.0W** has berths, electricity, gasoline, diesel fuel, launching ramps, pump-out station, wet storage, water, ice and marine supplies.

(385) **Matagorda**, a small fishing and oystering fleet base, is on the north side of the waterway at **Mile 440.7W**. Gasoline, water, ice, a launching ramp and limited marine supplies are available. A depth of 5 feet is reported alongside.

(386) The **Colorado River By-Pass Channel**, at **Mile 440.8** leads southwest for 0.5 mile and joins the Colorado River.

(387) **Colorado River Locks**, at **Miles 441.1W** and **441.8W,** are 1,200 feet long and 75 feet wide, with 15 feet over the sills. The locks control the waterway traffic when crossing conditions are hazardous because of strong current velocities. (See **33 CFR 162.75**, **207.180**, and **207.187**, chapter 2, for regulations governing use, administration and navigation of floodgates and locks; local information is issued by the Galveston District Engineer, Corps of Engineers.)

(388) The lockmaster may be contacted by telephone (409–863–7842) or radiotelephone. The lockmaster monitors VHF-FM channels 13 and 16 continuously. Red and green traffic lights and daymarks are at each end of the lock. Mooring piles are on both sides of the waterway on the canal sides of the locks for mooring vessels when the locks are closed or when tows are limited. Strong outgoing currents and eddies can develop in the waterway between the east and west locks. Mariners should use caution and consider available horsepower, size and configuration of tow, vessel traffic and the availability of sea room in order to obtain proper alignment into the locks prior to transiting the area.

(389) **Colorado River** crosses the waterway at **Mile 441.5W** and enters the Gulf through a 5.8-mile flood discharge channel in the isthmus separating East Matagorda Bay and Matagorda Bay. The Gulf entrance to the flood discharge channel is marked by lights at the outer ends of the jetties. The entrance is subject to frequent change; caution and local knowledge are advised. The east side of the river has fish camps where gasoline, diesel fuel, water, ice, launching ramps, marine supplies and berths with electricity are available.

(390) A dredged channel leads north from the Intracoastal Waterway for 13.5 miles to a turning basin at the Port of Bay City Barge Terminal. The head of navigation in the river is just above the turning basin. The channel is marked by daybeacons as far as the turning basin.

(391) Overhead power cables crossing the Colorado River just above its junction with the waterway and 5.1 miles above the junction have a least clearance of 66 feet.

(392) Another overhead power cable with a clearance of 74 feet crosses the river about 6 miles above the junction. An overhead cable car immediately north of the overhead cable has a clearance of 75 feet. A private ferry crosses the river just north of the cable car. The ferry carries vehicles.

(393) On the east side of the river, a small-craft facility, just north of the ferry, has gasoline, diesel fuel by truck, water, berths with electricity and a launching ramp. Pilings from a former bridge are reported about 1 mile north of the ferry landing. A fixed highway bridge about 8 miles above the waterway has a least clearance of 53 feet. Overhead power cables just above and about 0.9 mile above the bascule bridge have clearances of 76 feet and 75 feet, respectively. Boat operators should be on the lookout for logs and floating debris in the river and discharge channel.

(394) **Port of Bay City Barge Terminal Wharf**, in a basin on the east side of the river 13.5 miles above the mouth, is 200 feet long with a concrete apron and a transit shed with 32,000 square feet of storage space. The wharf has a barge loading ramp and oil handling pipe connection on a lower level below the main wharf apron. A private petroleum wharf is also in the basin. In 1982, depths of 9 feet were reported alongside the facilities. The Port of Bay City Authority of Matagorda County Navigation District No. 2 is in charge of operations.

(395) **Bay City,** the county seat of Matagorda County, is about 7 miles north of the terminal. It is a center for cattle, cotton, rice, petroleum, natural gas, sulfur and petrochemicals. Four Class I railroads and an interstate bus line serve the city. Two main state highways pass through the city. Bay City has an inflatable dam in the river that is inflated during the growing season to impound water for irrigation purposes.

(396) At **Mile 455.6W**, the waterway enters the open waters of **Matagorda Bay** through a well-marked channel and continues across the bay for 19 miles to Port O'Connor. A marked channel leads northward to Tres Palacios Bay at Mile **465.1W**. (See chapter 11 for more complete information.) Mariners should use extreme caution when crossing the area near Matagorda Ship Channel (**Mile 470.9W**) due to strong currents.

(397) Emergency moorings have been established on the south side of the landcut south of Oyster Lake to enable vessels and tows to tie up when it becomes unsafe to proceed through the open waters of Matagorda Bay. These facilities are for temporary use only, and at all other times the fairway must be kept open.

(398) At **Mile 470.9W,** the waterway crosses the Matagorda Ship Channel. Small craft should not anchor in the area between the waterway and the entrance to the landcut through Matagorda Peninsula due to the turbulence reported in the waters in the area.

(399)

Mile 478.5W to Mile 485.2W

(400) The entrance channel to Port O'Connor is between jetties with lights off their outer ends at the southwest end of Matagorda Bay. Berthing facilities, gasoline, diesel fuel and marine supplies are available. (See chapter 11.)

(401) From Port O'Connor, the waterway passes through a cut along the north shore of Espiritu Santo Bay for about 18 miles to San Antonio Bay.

(402) At **Mile 478.5W, Ferry Channel**, a marked channel across Espiritu Santo Bay, leads to a fish and wildlife reserve at a former military base on Matagorda Island. (See chapter 11 for more complete information.)

(403) Gasoline and a launching ramp are available at a small-boat basin on the north side of the waterway at **Mile 485.2W.** In 1982, a depth of 2 feet was reported alongside the fuel dock.

(404)

Mile 491.8W to Mile 500.0W

(405) At **Mile 491.8W,** the waterway enters the open waters of shallow **San Antonio Bay** through a well-marked channel. Marked channels lead north from **Miles 491.8W** and **492.5W** to **Seadrift** and other places in the bay. (See chapter 11 for more complete information.)

(406) At **Mile 500.0W,** the waterway leaves San Antonio Bay and passes through landcuts and channels in shallow bays for about 11 miles to Aransas Bay. The channel is marked by lights and buoys. The **Aransas National Wildlife Refuge** is on the north side of the waterway at the east end of the landcut. With a prevailing south wind, vessels may be set into the shallow depths of the bays through this section of the waterway. Mariners are advised to keep in the channel and favor the aids on the south side.

(407)

Mile 511.1W to Mile 535.3W

(408) At **Mile 511.1W,** the waterway enters the open waters of **Aransas Bay** and continues across the bay in a well-marked channel. Marked openings in the spoil banks on the northwest side of the waterway provide passage in depths of 3 to 12 feet to Rockport and other places in Aransas Bay. (See chapter 11 for more complete information.)

(409) At **Mile 522.7W,** an alternate route of the waterway continues southwest and south through Lydia Ann Channel to Aransas Pass. The main route of the waterway swings west and follows a cut along the northwest shore of Redfish Bay to Corpus Christi Bay.

(410) **Rockport**, 1.5 miles northwest of **Mile 524.0W,** has berthing and facilities and marine supplies. (See chapter 11 for more complete information.)

(411) Boat operators are advised to stay in the waterway channel throughout the cut in Redfish Bay to avoid rock formations that may project from the channel slopes.

(412) **Cove Harbor**, **Mile 525.6W**, is a commercial basin off the waterway about 2.5 miles south of Rockport Harbor. The basin is used by craft engaged in the oil and fishing industries. There are two slips in the basin and berths along the bulkhead of the basin and in the slip. In 2001, 8.0 feet was reported in the entrance; thence in 2000, 7 to 13 feet was in the basin. Launching ramps are available.

(413) **Palm Harbor**, **Mile 527.5W**, is a yacht basin in a dredged slip 0.3 mile long off the waterway about 1.5 miles south-southwest of Cove Harbor. A depth of 6 feet was reported in the basin and entrance channel in 2002. Gasoline, berths, electricity, water, ice, launching ramp, dry storage and marine supplies are available at the basin.

(414) At **Mile 532.9W**, the waterway crosses Aransas Channel, which leads west to the town of **Aransas Pass** and east to the Gulf through Aransas Pass.

(415)

Small-craft facilities

(416) Several small-craft facilities are at the town. (See chapter 11 for additional information about the town of Aransas Pass.)

(417) At **Mile 534.0W,** the waterway is crossed by a dredged channel; northwest of the waterway, the channel leads to a small-boat basin at the town of Aransas Pass. The channel south leads through Redfish Bay to Corpus Christi Bay.

(418) At **Mile 535.3W**, a boatyard on the northwest side of the waterway has a 170-ton vertical lift and can make hull and engine repairs.

(419)

ENC - US5TX24M
Chart - 11308

(420) At **Mile 539.5W,** the waterway crosses Corpus Christi Channel. The Coast Guard has requested vessels transiting the waterway make a **SECURITE** call on VHF-FM channel 13 prior to crossing Corpus Christi Channel, particularly during periods of restricted visibility.

(421) **Corpus Christi**, 11 miles west of **Mile 539.5W**, has complete berthing and repair facilities, gasoline, diesel fuel and marine supplies. Corpus Christi and other places in Corpus Christi Bay are described in chapter 11.

(422) From the junction with Corpus Christi Channel **(Mile 539.5W),** the waterway continues south through a landcut and dredged channel to **Mile 545.4W** in Corpus Christi Bay. Strong currents may be encountered in this cut. From **Mile 545.4W,** the waterway crosses the open water of Corpus Christi Bay in a south direction in depths of 12 feet to Laguna Madre. The channel is marked by lights and daybeacons.

(423) At **Mile 547.6W,** the waterway enters Land Cut and continues through a well-marked channel that extends for about 120 miles through shallow **Laguna Madre** to Port Isabel.

(424)

Small-craft facilities

(425) Several small-craft facilities are in the area.

(426) Between **Miles 552.1W** and **562.0W**, on both sides of the waterway, are numerous marked and unmarked private channels that lead through an area obstructed by oil wells and pipelines to private petroleum facilities.

(427)

ENC - US5TX24M
Chart - 11308

(428) **Baffin Bay**, extending west from **Mile 579.5W**, is a commercial and sport fishing area and the site of oil exploration and drilling. A marked private natural channel with reported depths of 2 feet in 1982 extends west up Baffin Bay for about 14 miles to a small-craft facility at Riviera Beach on the north side of the entrance to Laguna Salada. Minor services and a launching ramp are available at the facility. Strangers are advised to keep in the marked channel because of the many sunken rocks and other obstructions in the bay. A privately marked natural channel with reported depths of 6 feet in 1982 extends 4 miles farther up Laguna Salada to a boat basin and boatyard. The boatyard that builds boats can handle craft up to 50 feet or 20 tons using a large trailer for hull and engine repairs. Gasoline, diesel fuel, water, electricity and a launching ramp are available during daylight.

(429) Between **Miles 587.6W** and **611.9W**, the waterway passes through **Land Cut**, a long cut in the sand and mud of Laguna Madre. In this stretch, private short oil company side channels extend on either side of the waterway.

(430)

ENC - US5TX13M
Chart - 11303

(431) **Port Mansfield**, 1 mile west of **Mile 629.8W**, has berths, gasoline, diesel fuel and limited marine supplies. (See chapter 11 for more complete information.)

(432) At **Miles 643.9W** and **644.5W, Arroyo Colorado Cutoff** leads west from the waterway and joins Arroyo Colorado to form a route to **Rio Hondo** and **Port Harlingen**. (See chapter 11 for more complete information.)

(433)

ENC - US5TX12M
Chart - 11302

(434) At the south end of Laguna Madre at **Mile 665.9W,** the waterway enters a reverse curve cut between Port Isabel and **Long Island** and joins deep Brownsville Ship Channel at **Mile 668.4W.** (See chapter 11 for more complete information.)

(435) **Port Isabel**, **Mile 666.4W**, has several small-craft facilities. (See chapter 11 for additional information about Port Isabel.)

(436) From **Mile 668.4W**, the waterway follows the Brownsville Ship Channel for 13 miles to Port Brownsville.

(437) **Port Brownsville**, at **Mile 681.8W**, the west terminus of the Intracoastal Waterway, and the city of **Brownsville**, 5 miles west-southwest of the port, are described in chapter 11.

Chart Coverage in Coast Pilot 5—Chapter 13
NOAA's Online Interactive Chart Catalog has complete chart coverage
https://charts.noaa.gov/InteractiveCatalog/nrnc.shtml
19°N
18°N
65°W
66°W
67°W
68°W
NORTH ATLANTIC OCEAN
CARIBBEAN SEA
PUERTO RICO
Isla de Culebra
Isla de Vieques
Cape San Juan
San Juan
Arecibo
Ponce
Mayaguez
Cabo Rojo
Isla Desecheo
Isla de Mona

Puerto Rico

(1) This chapter describes the islands of the Commonwealth of Puerto Rico, which includes Puerto Rico, Mona, Vieques, Culebra and a few smaller islands. Port information is provided for San Juan, Fajardo, Radas Roosevelt (Roosevelt Roads), Yabucoa, Laguna de Las Mareas, Bahía de Jobos, Ponce, Guayanilla, Guánica, Mayaguez, Arecibo, Isabel Segunda, Ensenada Honda and other smaller ports.

(2) Nine hundred miles east-southeast of Key West, FL, is the island of **Puerto Rico**. Puerto Rico is the smallest and easternmost of the **West Indies** group known as the **Greater Antilles**; the larger islands are Cuba, Jamaica and Hispaniola. To the north of Puerto Rico is the Atlantic Ocean, and on the south is the **Caribbean Sea**.

(3) Puerto Rico, the big island, is about 96 miles long, west to east, and about 35 miles wide. The interior of Puerto Rico is mountainous and very rugged. The highest mountains are nearer the south and east coasts and have elevations up to 4,400 feet. There are many fertile valleys, and along the coasts are more or less narrow strips of lowland from which the higher land rises abruptly.

(4) The sea bottom is similar to the land. Close to the island are narrow banks from which the bottom pitches off rapidly to great depths. Under favorable conditions, the shoals frequently are marked by a difference in the color of the water.

(5)

Caution

(6) Mariners are advised that local fishermen commonly mark the position of their fish nets and fishtraps with plastic bleach bottles. Care should be taken to avoid destroying this fishing gear.

(7) Puerto Rico has several hundred streams, some of good size, but none are navigable for anything but small boats. The mouths of the streams generally are closed by bars except during short periods of heavy rainfall. From the location of the mountain divides, the streams on the south and east sides of the island are short and fall rapidly to the sea, whereas those on the north and west sides are longer and slope more gently.

(8)

COLREGS Demarcation Lines

(9) The lines established for Puerto Rico are described in **33 CFR 80.738**, chapter 2.

(10)

Vessel Traffic Management

(11) (See **33 CFR Part 161, Subpart A**, chapter 2, for regulations requiring notifications of arrivals, departures, hazardous conditions and certain dangerous cargoes to the Captain of the Port.)

(12)

Anchorages

(13) Under ordinary conditions, the first requirement for anchorage is shelter from the east trade winds. Anchorages are numerous. Anchorages are along the south, east and west coasts with no suitable deep-draft anchorages outside of San Juan Harbor along the north coast. Strong north winds and heavy seas may occur from November to April. During the hurricane season gales may strike from any direction. The best hurricane harbors are Bahías de San Juan, de Guánica, de Guayanilla and de Jobos and Ensenada Honda (on Isla de Culebra).

(14)

Currents

(15) Along the Atlantic and Caribbean coasts of Puerto Rico, the currents are greatly influenced by the trade winds. In general, there is a west drift caused by prevailing east trade winds; the velocity averages about 0.2 knot and is said to be strongest near the island. A decided west set has been noted near the 100-fathom curve along the Caribbean coast from Isla Caja de Muertos to Cabo Rojo. Offshore of Bahía de Tallaboa a current of 0.5 knot has been observed setting northeast across and against the east wind. With variable winds or light trade winds it is probable that tidal currents are felt at times along the Atlantic and Caribbean coasts of Puerto Rico. Currents are weak in the passage north of Isla Caja de Muertos and Cayo Berberia.

(16) Predictions of the tidal current in Canal de Guanajibo and at three locations off the east coast of Puerto Rico may be obtained from the Tidal Current prediction service at *tidesandcurrents.noaa.gov*. Links to a user guide for this service can be found in chapter 1 of this book.The times of slack water and of maximums of flood and ebb in the middle of Canal de la Mona are 2 to 3 hours later than in Canal de Guanajibo. The times of south and north currents in the passages east of Puerto Rico, as far as Isla Culebrita, are believed to be about the same as the times of west and east currents, respectively, in Pasaje de Vieques.

(17) In Canal de la Mona, on the northwest end of the bank about 13 miles west of Punta Guanajibo, there is a current velocity of about 1 knot; slacks and strengths occur about 15 minutes later than in Canal de Guanajibo.

(18) In Sonda de Vieques, there are strong tidal currents over the shoals in the west part and around Isla Cabeza de Perro. In Pasaje de San Juan and Pasaje de Cucaracha,

estimated velocities of about 2 knots have been reported. In the wider passages between Cayo Icacos and Cayo de Luis Peña, it is estimated that the current velocity is less than 1 knot. From Isla de Culebra the south current sets toward Punta Este, Isla de Vieques, around which tidal currents are strong.

(19) In Canal de Luis Peña, the southeast current is deflected north of Bahía Tarja and thence sets toward the south end of Cayo de Luis Peña; the current is weak off the entrance to Bahía de Sardinas. The northwest current sets directly through the channel. The current velocity is about 2 knots.

(20)

Weather

(21) Puerto Rico is a tropical, hilly island that lies directly in the path of the east trade winds. Bathed by waters whose temperatures seldom drop below 80°F, the coastal climate is mild year round, with a small daily and annual temperature range. The rugged topography does cause a wide variation over short distances in wind, temperature and rainfall. ODAS weather buoys are at San Juan, Ponce and Rincón. For more information, visit www.caricoos.org.

(22) The outstanding feature of the marine weather is the steadiness of the east trade winds. Northeast through southeast winds blow about 80 percent of the time year round. Easterlies are particularly dominant in summer when the Bermuda High has shifted north. From November through April, northeasterlies are the secondary direction but give way to southeasterlies in spring. The trade-wind regime is occasionally interrupted by cold fronts that have survived a journey from the United States and by easterly waves. As the cold front approaches, winds shift toward the south, and then as the front passes they gradually shift through the southwest and northwest quadrants back to the northeast. The easterly wave passage is characterized by winds out of the east-northeast ahead of it, followed by an east-southeast wind.

(23) Gale-force winds are unlikely but can occur with a strong front, thunderstorm, or tropical cyclone. Summer gales usually blow from the east semicircle, while winter gales are more likely in the northeast quadrant. Windspeeds of 17 to 33 knots blow about 30 percent of the time. In summer, the trades tend to strengthen during the day, and average windspeeds are highest during this season. Morning averages of 12 to 13 knots give way to 13- to 15-knot averages during the afternoon.

(24) Near the coast, a land-sea breeze effect helps exert a diurnal influence on the wind. If the pressure gradients are weak, a land breeze may develop during the night; northeasterly on the south coast and southeasterly on the north coast. The sea breeze develops during the morning hours and reinforces the trades on all but the west coast. Along the west coast, it opposes the trades and tends to weaken them.

(25) Seas in the area usually run less than 8 feet. Waters are roughest off the north and west coasts in winter and midsummer. For example, waves of 8 feet or more are encountered off these coasts 10 to 12 percent of the time in July. High seas are usually associated with strong winds out of the northeast through southeast blowing over a long fetch of water. Extreme wave heights are generated by hurricanes and can reach 40 feet or more in deep water.

(26) The tropical cyclone season extends from June through November. The most active period in this region is from August through the first half of October, although "off-season" storms occasionally brush the area. Most tropical cyclones affecting this area develop east of the Lesser Antilles and move toward the west or northwest. They usually pass north or south of the island; occasionally they pass directly over it as was the case of hurricane Georges in September 1998. In addition to strong winds and rough seas, these storms can bring torrential rains and flooding to the island. Georges raked the island from east to west causing at least $2 billion in damages and 12 deaths, destroying at least 33,000 homes and caused power and water loss to nearly 80% of the island.

(27) Another navigational weather hazard in these waters are thunderstorms. While they can occur in winter, they are most likely from May through November. At sea, they are encountered 2 to 7 percent of the time during this period, while shore stations report thunder on an average of 5 to 15 days each month during the summer. In addition to strong gusty winds, heavy rains may briefly reduce visibilities to near zero. However, visibility problems are infrequent in these waters since fog is a rarity.

(28)

Routes

(29) Vessels bound from Straits of Florida (24°25'N., 83°00'W.) to San Juan can proceed by rhumb lines through the following positions:

(30) 23°34'N., 80°26'W.;

(31) 22°34'N., 78°00'W.;

(32) 22°07'N., 77°24'W.;

(33) 20°50'N., 73°43'W.;

(34) 19°45'N., 69°50'W.;

(35) 18°29'N., 66°08'W.

(36) From the east coast of the United States, the route to San Juan is direct by great circle.

(37) Distances from San Juan are 1,017 miles to Straits of Florida, 1,252 miles to Norfolk, 1,399 miles to New York and 1,486 miles to Boston.

(38)

Pilotage, Puerto Rico

(39) Pilotage is compulsory for all foreign vessels and U.S. vessels under register when entering or leaving the harbors of Puerto Rico. Coastwise vessels having on board an officer licensed as a pilot for the waters of Puerto Rico and all pleasure yachts are exempt from pilotage unless a pilot is actually engaged. The pilot service at each port is under the supervision and direction of a Pilotage Commission: ships' agents should notify the pilot local office 24 hours in advance so a pilot will be available at

(66)

Spanish-English Geographic Glossary		
Agua – Water	Embarcadero – Wharf, Quay	Occidental – Western
Amarillo – Yellow	Ensenada – Bay, Cove	Oeste – West
Anclaje, Ancladero – Anchorage	Escollo – Shelf, Reef	Oriental – Eastern
Arena – Sand	Este – East	Pantano – Marsh
Arrecife – Reef	Estero – Creek, Inlet	Pasaje – Passage
Arroyo – Small Stream	Estrecho – Strait	Península – Peninsula
Bahía – Bay	Exterior – Exterior	Pico – Peak
Bajo – Shoal	Farallón – Rocky Islet	Piedra – Stone, Rock
Banco – Bank	Golfo – Gulf	Playa – Beach
Barra – Bar	Gran, Grande – Great	Pueblo – Town
Blanco – White	Interior – Interior	Puerto – Port, Harbor
Boca – Mouth, Entrance	Isla – Island	Punta – Point
Boquerón – Wide Mouth	Isleta – Islet	Rada – Roadstead
Cabeza de Bajío – Shoal Head	Istmo – Isthmus	Rincón – Inside Corner
Cabeza de la Cumbre – Summit Head	Lago – Lake	Río – River
Cabo – Cape	Laguna – Lagoon	Roca – Rock
Caleta – Cove	Laja – Flat Rock	Roja – Red
Canal – Channel	Largo – Long	Septentrional – Northern
El Arroyo – Creek, Channel	Mar – Sea	Sierra – Mountain Range
Castillo – Castle	Medio – Middle	Sonda – Sound
Cayo – Key	Meridional – Southern	Sur – South
Cerro – Hill	Monte, Montana – Mountain	Tierra – Land
Ciénaga – Marsh	Morro – Headland, Bluff	Verde – Green
Cordillera – Mountain Chain	Negro – Black	Viejo – Old
Costa – Coast	Norte – North	
Desembarcadero – Landing	Nuevo – New	

the expected time of arrival of a vessel. Pilots provide 24-hour service and board vessels from motorboats. Detailed information on pilotage procedures is given in the text for the ports concerned.

(40)

Towage

(41) Large tugs are available at San Juan, Puerto Yabucoa, and Bahía de Guayanilla; smaller tugs are available at some of the other ports. Arrangements for tugs should be made in advance by ships' agents. (See the text for the ports concerned as to the availability of tugs.)

(42)

Quarantine, customs, immigration and agricultural quarantine

(43) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(44) Puerto Rico collects no customs duties on merchandise entering the island from the continental United States or its dependencies. Merchandise entering from foreign countries is subject to the duties of the United States, which are collected at the ports of Puerto Rico by the U.S. Customs Service. Ports of entry are listed in Appendix A. At least 24-hours' advance notice of arrival at a port should be given to the local customs officer.

(45) **Agricultural quarantine laws** are enforced by officials at San Juan, Fajardo, Ponce and Mayaguez.

(46) The United States immigration laws apply to Puerto Rico. Passports and visas are required.

(47)

Ports Authority

(48) The control of all the ports of Puerto Rico is vested in the Commonwealth Government whose authority is exercised through the Puerto Rico Ports Authority. Appointed Commonwealth Captains of the Port have administrative charge of the harbors; they collect the port fees and assign vessels to anchorage or to berths alongside wharves.

(49) At ports where commonwealth and federal officials are not stationed, inspectors usually come from the nearest represented port or from San Juan as required.

(69)

METEOROLOGICAL TABLE – COASTAL AREA OFF CANAL DE LA MONA, PUERTO RICO
Between 17°N to 19°N and 67°W to 69°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1
Wave Height > 9 feet [1]	2.2	2.1	1.9	1.4	0.7	1.2	1.9	1.7	1.5	1.0	2.1	2.7	1.7
Visibility < 2 nautical miles [1]	0.2	0.2	0.2	0.2	0.4	0.3	0.4	0.3	0.6	0.5	0.3	0.2	0.3
Precipitation [1]	2.6	3.2	2.2	2.1	4.6	3.3	3.7	3.1	4.2	4.2	4.4	3.8	3.4
Temperature > 69° F	99.8	99.7	99.8	99.8	99.9	100.0	100.0	100.0	99.9	100.0	99.9	99.9	99.9
Mean Temperature (°F)	78.1	77.6	78.0	79.0	80.5	81.8	82.2	82.8	82.8	82.4	81.2	79.4	80.5
Temperature < 33° F [1]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean RH (%)	78	78	78	78	81	81	80	80	80	80	78	78	79
Overcast or Obscured [1]	4.6	5.2	4.0	4.9	11.8	10.9	10.7	8.2	9.6	8.8	6.9	5.3	7.6
Mean Cloud Cover (8ths)	3.2	3.2	3.1	3.3	4.2	4.2	4.0	3.8	4.0	3.9	3.6	3.4	3.7
Mean SLP (mbs)	1016	1016	1016	1015	1015	1016	1016	1015	1014	1013	1013	1015	1015
Ext. Max. SLP (mbs)	1031	1030	1029	1030	1028	1026	1029	1029	1026	1026	1025	1029	1031
Ext. Min. SLP (mbs)	1001	1001	1002	1001	1002	1004	1003	1001	1000	1000	999	1001	999
Prevailing Wind Direction	E	E	E	E	E	E	E	E	E	E	E	E	E
Thunder and Lightning [1]	0.5	0.3	0.2	0.6	2.8	3.6	3.7	4.5	6.5	6.6	3.1	1.3	2.9

[1] Percentage Frequency

(50)

Wharves

(51) The ports of San Juan, Yabucoa, Laguna de Las Mareas, Ponce, Bahía de Tallaboa, Bahía de Guayanilla, Ensenada (Bahía de Guanica), Mayaguez and Aguadilla all have wharves where large vessels can go alongside to load and unload cargo. At the other ports, the wharves are only used by small vessels.

(52)

Supplies

(53) All kinds of supplies are available at San Juan, Ponce and Mayaguez. Gasoline, water and marine supplies are available at most of the smaller ports. If necessary, supplies can be trucked from San Juan in a few hours.

(54)

Repairs

(55) San Juan is the only port where major repairs to large ocean-going vessels can be made. A 691-foot graving dock is available. Small vessels, motorboats and yachts can be repaired at some of the marinas around the island.

(56)

Communications

(57) There are good highways to all the principal cities, and roads connect the smaller towns. Regular air service is maintained between San Juan, Ponce and Mayaguez. Air service is also available from San Juan to the Virgin Islands, the United States and some foreign countries.

(58) Many cruise lines operate from San Juan, Ponce and Mayaguez to the United States and foreign ports. Small inter-island vessels operate from most of the ports of Puerto Rico to the Virgin Islands and other West Indies ports.

(59) Telephone is available through all the ports of Puerto Rico. Radio communication to all points, including ships at sea, is available through commercial systems.

(60)

Currency

(61) The monetary unit is the United States dollar.

(62)

Standard time

(63) Puerto Rico uses Atlantic standard time, which is 4 hours slow of Coordinated Universal Time. Puerto Rico does not observe daylight saving time.

(64)

Language

(65) Spanish is the official language of Puerto Rico, although many of the native people are bilingual; most of the island's geographic features have Spanish names. English is a required subject in the schools and is preferred for business purposes by a large part of the commercial community.

(67)

ENC - US3PR10M
Chart - 25640

(68) **Canal de la Mona (Mona Passage)**, 61 miles wide between the west end of Puerto Rico and the east end of Hispaniola, is one of the principal entrances to the Caribbean Sea. Three small islands are located in the passage: Isla de Mona and Isla Monito about midway in the south part and Isla Desecheo about 12 miles west of the extremity of Puerto Rico in the north part.

(70) On the west side of Canal de la Mona, a bank extends from Cabo Engaño, the east extremity of Hispaniola, for 23 miles, with a least depth of 26 fathoms. Depths of 5 to 20 fathoms have been reported on the bank about 7 miles south-southeast of Cabo Engaño. Strong tide rips and heavy swells, caused by the meeting of contrary currents, are visible for many miles and mark the position of this bank. On the east side of the passage, an extensive bank makes off from the west coast of Puerto Rico extending

up to 15 miles offshore. The west coast of Puerto Rico is described later in this chapter.

(71)

Currents

(72) Tidal currents set generally south and north through Canal de la Mona. Varying nontidal flows, depending to a great extent upon the velocity and direction of the wind, combine with the tidal current. An average nontidal current of about 0.2 knot setting approximately north-northwest is generally experienced during all seasons. In summer, when the trade wind has slackened and blows more from the east and east-southeast, a strong countercurrent sets east off the south coast of Hispaniola. This countercurrent occasionally induces a north set in the passage.

(73) A 3.5-knot current, setting approximately west-southwest, has been reported in the passage north of Isla de Mona. Observations made on the northwest edge of the bank about 13 miles west of Punta Guanajibo, Puerto Rico, gave a velocity of about 1 knot for both south and north strengths.

(74) The tidal currents also set with considerable velocity, especially near the shore south of Cabo Engaño, where they have been reported to set with a velocity of 3.5 knots during the month of May, with ebb currents setting northeast for 3 hours and flood currents setting southwest for 9 hours. The duration of these currents has also been reported to be the reverse and at other times to be of the usual duration of 6 hours. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(75) The passage presents little difficulty in navigation, except that caution must be used in the vicinity of Isla Saona off the southeast coast of Hispaniola, which is low and foul. This island should be given a berth of at least 6 miles. Heavy squalls may be expected in the passage, particularly in the summertime.

(76)

Isla de Mona to Punta Sardina

(77) **Isla de Mona** (18°05'N., 67°54'W.), 6 miles long east and west and 4 miles wide, lies in the middle of the south part of Canal de la Mona. Temporary anchorage and landing can be made in places on the south and west sides of the island during good weather, but on many days anchorage and landings are impracticable. The attendants for the Puerto Rico Department of Natural Resources and a state police detachment are the only inhabitants of the island.

(78) The island is composed of limestone and from east appears perfectly flat on top, breaking off abruptly at the water in a vertical whitish cliff about 175 feet high. On the northwest and northeast coasts are extensive caves that run in every direction but are so obstructed by stalactites and stalagmites in places that it is almost impossible to pass. They were used as hideouts by pirates for nearly three centuries. The west, south and southeast sides of the island are fringed with detached coral reefs through which boat passages lead.

(79) The 100-fathom curve lies about 1 mile offshore, except on the southeast side, where it is about 1.7 miles off, and on the southwest side, where it is only about 0.3 mile off. With a strong wind from any direction, the sea draws around the island and generally into all the anchorages. **Anclaje Sardinera**, on the west coast, is the best anchorage during southeast winds, and **Anclaje Isabela**, just south of Punta Arenas, is good during northeast winds. Boat landings can be made at Anclaje Sardinera and Playa de Pájaros.

(80) Isla de Mona and Isla Monito are within a **Designated Critical Habitat** for the Hawksbill Sea Turtle. (See **50 CFR 226.101** and **226.209**, chapter 2, for regulations and limits.)

(81)

Currents

(82) In Anclaje Sardinera the tidal currents set north and south with a velocity of about 0.5 knot. A northerly current with a velocity of 0.5 knot has been experienced off Playa de Pájaros.

(83) **Isla De Mona Light** (18°05'11"N., 67°50'47"W.), 323 feet above the water, is shown from a tower near **Cabo Noroeste** on the north side of the island. The structure of the former Isla de Mona Light on **Punta Este**, the east extremity of the island, remains.

(84) Vertical cliffs with deep water close to shore extend from Punta Este north and west to **Cabo Barrionuevo**, the northwest cape of the island. Here a mass of rock, shaped like two saw teeth on top, projects from the base of the cliff. This feature can be observed from north and southwest.

(85) **Playa de Pájaros**, about 1.5 miles southwest of Punta Este, has a boat harbor with 3 to 8 feet of water inside the reefs. The south and main entrance has reported depths of 7 to 12 feet. The landing place, formerly used by Coast Guard vessels, has 7 to 8 feet alongside, but with south winds a swell sets into the landing.

(86) The southernmost point of the island is surmounted by a large balanced rock. **Punta Arenas (Oeste)**, the westernmost point, is a low, narrow ridge, covered with brush, which projects nearly a mile west of the cliffs; a reef extends 0.3 mile west of the point.

(87) **Isla Monito**, 3 miles northwest of Isla de Mona, is a 213-foot high bare rock 0.2 mile in diameter. The passage between the two islands is deep and clear.

(88) **Isla Desecheo**, 27 miles northeast of Isla de Mona and 12 miles west of Punta Higuero, is a 715-foot high wooded island a mile in diameter. The island is visible for more than 30 miles in clear weather and is one of the best landmarks for Canal de la Mona and the west coast of Puerto Rico. Isla Desecheo is a forest reserve

(108)

METEOROLOGICAL TABLE – COASTAL AREA OFF NORTHERN PUERTO RICO
Between 18°N to 20°N and 65°W to 68°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.2	0.3	0.2
Wave Height > 9 feet [1]	1.9	1.3	1.4	1.2	0.7	0.5	1.7	1.5	1.2	0.8	1.7	3.1	1.4
Visibility < 2 nautical miles [1]	0.2	0.2	0.2	0.2	0.3	0.2	0.4	0.3	0.3	0.3	0.2	0.2	0.2
Precipitation [1]	3.2	2.9	2.3	2.4	3.7	2.9	3.2	3.5	3.8	4.1	4.4	4.2	3.3
Temperature > 69° F	99.6	99.6	99.6	99.8	99.9	99.9	100.0	100.0	100.0	100.0	99.9	99.9	99.8
Mean Temperature (°F)	77.6	77.3	77.7	78.5	80.0	81.6	82.1	82.6	82.7	82.2	80.8	78.9	79.9
Temperature < 33° F [1]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean RH (%)	77	77	77	78	80	80	80	80	79	79	78	77	78
Overcast or Obscured [1]	4.6	4.7	4.2	5.4	11.2	9.8	9.1	8.1	8.3	7.9	6.8	6.6	7.0
Mean Cloud Cover (8ths)	3.4	3.4	3.2	3.4	4.2	4.1	4.1	3.8	3.9	3.9	3.8	3.7	3.7
Mean SLP (mbs)	1017	1017	1017	1016	1015	1017	1017	1016	1014	1013	1014	1016	1016
Ext. Max. SLP (mbs)	1030	1031	1031	1030	1028	1029	1029	1029	1026	1026	1026	1028	1031
Ext. Min. SLP (mbs)	1000	1001	1002	1001	1002	1003	1003	1000	1001	1000	999	1000	999
Prevailing Wind Direction	E	E	E	E	E	E	E	E	E	E	E	E	E
Thunder and Lightning [1]	0.2	0.2	0.1	0.4	2.2	2.4	2.6	2.8	4.8	5.4	2.8	1.0	1.9

[1] Percentage Frequency

and a native-bird reserve; it is uninhabited and has no anchorages along its shores.

(89) The U.S. Navy has advised that a survey (1974) of Isla Desecheo and adjacent waters revealed the presence of unexploded ordnance resulting from past usage as a target area. Mariners are urged to use extreme caution when in this area.

(90) **Punta Higuero**, the most west point of the mainland of Puerto Rico, is projecting and prominent with the land back of it rising abruptly to rolling hills that ascend gradually to **Pico Atalaya**, 6 miles inland to the southeast. **Punta Higuero Light** (18°21'43"N., 67°16'15"W.), 90 feet above the water, marks the end of the point.

(91) Steep-to reefs with less than 12 feet of water over them extend up to 0.4 mile offshore from Punta Higuero to beyond Punta Borinquen to the northeast.

(92) **Bahía de Aguadilla**, 7 miles northeast of Punta Higuero, is exposed north and west, but with ordinary east trade winds anchorage is smooth. There are frequent rough spells during the winter when the wind is from north.

(93) **Aguadilla** is on the east shore of the bay. Radio towers south of the town are prominent. The 1,208-foot-high naval communication tower (18°24.0'N., 67°10.6'W.) is the most prominent feature from offshore. The small white shaft of the Columbus Monument is about 1 mile south of city hall but is completely obscured by palm trees.

(94) Large vessels load raw sugar and molasses at the conveyor pier with mooring buoys and dolphins 1.1 miles north of Aguadilla; depths of 40 feet or more are at the outer end of the pier.

(95) A U.S. Air Force fuel pier, with pipelines for handling aviation fuels, is 1.8 miles north of Aguadilla. Depths of 30 feet were reported alongside the platforms at the outer end of the pier. Depths of 6 feet and less were reported alongside the emergency crash boat basin finger piers that extend off the southeast end of the fuel pier.

(96)

Pilotage, Bahía de Aguadilla

(97) Pilots for Bahía de Aguadilla are available at Mayaguez. See Pilotage, Puerto Rico (indexed as such) early this chapter.

(98)

Quarantine, customs, immigration and agricultural quarantine

(99) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(100) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(101) Aguadilla is a **customs port of entry.**

(102)

Coast Guard

(103) A U.S. Coast Guard air station is at Borinquen Airport, north of Aguadilla.

(104)

Fish haven

(105) A fish haven with an authorized minimum depth of 11 fathoms is about 1.8 miles northwest of Aguadilla in 18°27'30"N., 67°10'06"W.

(106) The **north coast** of Puerto Rico from Canal de la Mona to San Juan extends in an almost east direction for 60 miles. From Punta Borinquen for 27 miles to Arecibo, there are numerous rocky cliffs with sand beaches and dunes between them. The prominent features are the high hills in the interior and high cliffs along the coast. The hills that terminate a mile west of Arecibo are mostly smooth grassy slopes backed by conical wooded hills up to 800 feet high.

(107) Between Arecibo and San Juan, the coast is indented by several coves and bights, although none of them afford

sheltered anchorage. The first 17 miles to nearly Punta Puerto Nuevo consists of sandy beaches and dunes with occasional rocky bluffs, then there are numerous hummocks and rocky bluffs with short beaches between them in the 16-mile stretch to San Juan. A line of breakers enclosing numerous rocks lies as close as 0.5 mile offshore. A range of conical hills is west of San Juan.

(109) In addition to the marine and aerolights near Punta Borinquen, the marine lights at Arecibo and San Juan, several stacks, radio towers and towns are prominent from offshore along the north coast. All dangers will be avoided by staying a mile or more offshore.

(110) **Punta Borinquen**, at the northwest end of Puerto Rico, is steep-to with deep water within 0.5 mile of shore, but vessels should stay several miles offshore because of a small arms firing area in the vicinity of the light. The extreme west part of the point is low, but it is backed by steep wooded slopes 0.5 mile inland.

(111) **Punta Borinquen Light** (18°29'50"N., 67°08'56"W.), 292 feet above the water, is shown from a gray cylindrical tower. A 200-foot rock bluff begins 0.8 mile southwest of the light and extends northeast and east along the north coast of Puerto Rico.

(112) A boat landing may be made in calm weather in the sandy cove on the west side of **Punta Sardina**, 7.3 miles east of Punta Borinquen Light.

(113)

Punta Penon to Punta Salinas

(114) **Punta Peñón**, 16 miles east of Punta Borinquen Light, is a slight projection with lower land between it and the foothills. A rocky islet lies west of the point and a chain of bare rocks and a small islet extend 0.8 mile east of it.

(115) **Puerto Arecibo**, 26 miles east of Punta Borinquen Light and 33 miles west of San Juan, is an open bight somewhat protected by the headland of **Punta Morrillos** on the east side with a 1,200-foot breakwater extending from it to **Roca Cocinera**. Only fishing vessels, pleasure craft and a chemical supply barge use the port. **Arecibo** is along the southwest shore of the bight.

(116) **Arecibo Light** (18°28'55"N., 66°41'55"W.), 120 feet above the water, is shown from a 120-foot white hexagonal tower attached to a dwelling on the hill close to the shore near the north end of Punta Morrillos. Radio towers and stacks are prominent around Arecibo.

(117) A dredged channel, marked by buoys, leads from the Atlantic Ocean to a bulkhead wharf on the south side of the breakwater of Puerto Arecibo. In 2022, a depth of 24.7 feet was available in the entrance channel with 6.5 to 18.6 feet in the basin off the 400-foot bulkhead wharf.

(118) A pipeline on the wharf is used by barges to supply liquid chemicals to storage tanks of a chemical company. Gasoline can be obtained at the wharf in an emergency. Fishing vessels and small craft anchor south of the wharf.

(119) **Danger zones** for artillery and small-arms ranges extend up to 10 miles offshore in the vicinity of **Punta Puerto Nuevo**, 42 miles east of Punta Borinquen Light. (See **33 CFR 334.1450**, chapter 2, for limits and regulations.)

(120) A boat landing can be made in calm weather inside the rock islets that extend a mile west of Punta Puerto Nuevo. An aero radiobeacon (18°28.2'N., 66°24.8'W.), marked by a flashing red light is prominent southwest of Punta Puerto Nuevo.

(121) Several large dome-shaped structures are prominent on **Punta Salinas**, a narrow projecting point 3 miles west of San Juan. A large blue water tank, 1.9 miles inshore of the point, shows up well from offshore.

(122)

Bahia de San Juan

(123) **Bahía de San Juan**, the most important commercial harbor in Puerto Rico, is about 60 miles east of Punta Borinquen and 30 miles west of Cabo San Juan. It is the only harbor on the north coast that affords protection in all weather. It is protected on the north by the relatively high land of Isla San Juan and on the south, east and west by the adjacent low mangrove swamps of the Puerto Rico mainland.

(124) The bay is about 3 miles long in a southeast direction and varies in width from 0.6 to 1.6 miles, but the entire southwest side is shoal. The southwest shore is divided into two large bights by **Punta Catano**, the point that extends about 0.6 mile northeast into the harbor.

(125) Metropolitan **San Juan**, the capital and principal port of Puerto Rico, includes Isla San Juan on the north side of Bahía de San Juan and the communities surrounding the bay. The principal cruise tourism facilities are on the south side of Isla San Juan (Old San Juan) and on the north side of Isla Grande. Container cargo terminals are located at **Puerto Nuevo** in the southeast part of the bay.

(126) The principal imports into the harbor include foodstuffs, textiles, building materials, machinery, fertilizers and petroleum products. Exports include sugar, molasses, fruit, tobacco, coffee, petrochemicals, pharmaceuticals and alcoholic products. Over half the commerce of Puerto Rico passes through San Juan. Most commercial and government activities are located here.

(127)

Prominent features

(128) **Isla de Cabras**, on the west side of the entrance to Bahía de San Juan, is low with cliffs 32 to 36 feet high at its north end and is marked by an unlighted tower. **Las Cabritas** are three small islands and rocks 0.1 mile northeast of the island. The island is connected to the mainland by a causeway at **Punta Palo Seco**. A small stone structure of **El Canuelo** is on the south extremity of Isla de Cabras. Care needs to be taken to properly identify islands, particularly when approaching from the west, as Isla de Cabras can easily be mistaken for Isla San Juan.

(129) **Isla San Juan**, on the east side of the entrance to the harbor, is generally bold and rocky, with a ridge 100 feet high extending along its north side. At each end of

the island are large stone forts connected by a continuous high wall. **Fort San Cristobal** is on the summit of the ridge in the east part, and **Castillo del Morro** is on the extreme west point of the island at the entrance to the harbor and is protected by a breakwater. The city wall extends from the castle along the channel side of the island to the Governor's Palace.

(130) **Puerto San Juan Light** (18°28'16"N., 66°07'25"W.), 169 feet above the water, is shown from a buff-colored tower on the summit of Castillo del Morro.

(131) The white marble dome of the capitol building, 1 mile east of the light, and a white church 0.4 mile farther east are prominent landmarks.

(132) Several tanks and towers, as well as the dome of a convention center, are prominent on Island Grande; an aerolight is shown from a small air traffic control tower about 750 yards southeast of its northwest end. Many radio towers, stacks and tanks surround Bahía de San Juan.

(133)

COLREGS Demarcation Lines

(134) The lines established for San Juan are described in **33 CFR 80.738**, chapter 2.

(135)

Channels

(136) From deep water in the North Atlantic Ocean, an entrance channel (Bar Channel) leads south into Bahía de San Juan, thence turns southeast (Anegado Channel) and splits into two channels near Punta Catano. Graving Dock Channel continues southeast to a deep-draft anchorage, and Army Terminal Channel turns southward and leads to a turning basin at Bahía de Puerto Nuevo—Puerto Nuevo Channel connects the two basins. San Antonio Channel leads northeast from Anegado Channel to the wharves between Isla San Juan and Isla Grande. Bar Channel, Anegado Channel, Graving Dock Channel and Army Terminal Channel are marked by lighted ranges and lighted and unlighted buoys; San Antonio Channel is not marked with aids to navigation. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A.

(137)

Caution

(138) When approaching the entrance channel (Bar Channel), with quartering and following seas that are especially predominant in winter, speeds of not less than 10 knots are recommended. This requirement for speed permits sufficient time to commence turning into Anegado Channel while maintaining ship control. A cause of confusion and groundings is that the north side Anegado Channel markers are not visible, virtually, until the turn into it should already have been commenced. Positive identification of channel marks is imperative.

(139) Vessels should proceed with caution when dredging is in progress in the channels. (See **33 CFR 162.260**, chapter 2, for regulations.)

(140) **Caño de Martin Peña**, at the southeast end of Bahía de San Juan, is a narrow slough that connects with lakes and lagoons that extend east for 7 miles. An unmarked channel with a reported depth of 3 feet extends 1.5 miles above the entrance. A fixed bridge at the entrance to the slough has a clearance of 21 feet. Two overhead cables about 0.5 mile above the entrance have a least clearance of 31 feet. Two fixed highway bridges 0.75 mile above the entrance have a least clearance of 22 feet. The bridges 1.5 miles above the entrance, the head of navigation, have a least width of 44 feet and a clearance of 7 feet.

(141)

Anchorages

(142) General and special anchorages are in Bahía de San Juan. (See **33 CFR 110.1**, **110.74c**, and **110.240**, chapter 2, for limits and regulations.) A line of mooring dolphins, marked by lights, extends from Isla Grande to just outside the east end of Anchorage E. Care must be maintained during or in the event of a wind shift due to a limited swing area in Anchorage E for larger vessels. Anchorage D at the eastern end of San Antonio Channel is limited to small vessels with low mast height due to the proximity to the Isla Grande airport.

(143)

Dangers

(144) **Bajo Colínas**, on the west side of the entrance to Bahía de San Juan, has depths from 6 to 21 feet, is rocky and extends 700 yards from Isla de Cabras. The shoal area is defined by breakers.

(145) **Bajo Santa Elena**, on the east side of the entrance, has depths of 7 to 18 feet extending 200 yards from shore.

(146) Inside the harbor, the areas outside the channel limits marked by buoys are shallow with depths varying from 4 to 18 feet with many shoals having less than 1 foot over them.

(147)

Currents

(148) The currents along the north shore of Puerto Rico are greatly influenced by the direction and strength of the winds. The prevailing east trade winds generally cause a west drift. In Bahìa de San Juan a slight west flow prevails. When north seas set into the harbor entrance, an undertow and surge may be felt as far as San Antonio Channel.

(149)

Weather

(150) San Juan is located on the northeast coast of the island of Puerto Rico in 18°28'N., 66°07'W. It is surrounded by the waters of the Atlantic Ocean and Bahía de San Juan. Santurce, directly to the east of Bahía de San Juan, is the urbanized section of San Juan. The surrounding terrain is level with a gradual upslope inland. Mountain ranges, with peak elevations of 4,000 feet, extend east and west through the central portion of Puerto Rico and are located

15 to 20 miles east and south of the capital city. This mountain range has a decided influence on the rainfall in the San Juan area, especially summertime thunderstorms.

(151) The climate is tropical marine, slightly modified by insular influences when land breezes blow. Radiational cooling frequently causes land winds at night; consequently, somewhat lower nightime temperatures occur than would normally be experienced with sea breezes. This air drainage from the higher altitudes in the interior of the island to the coastal areas gives delightfully invigorating night temperatures, especially during December to March, inclusive. Minimum temperatures during this period are frequently 2° to 3° higher within the city than at Isla Verde Airport, which is located 6.5 miles east and slightly inland. By the same token, maximum temperatures are 1° to 2° lower in the city.

(152) San Juan has a small annual temperature range, which is a characteristic of all tropical marine climates. The difference between the average temperatures of the warmest and coolest months is about 5.8°F in San Juan and is representative of most of the coastal localities in the island. The average temperature at San Juan is 80.4°F with an average maximum of 86.4°F and an average minimum of 73.8°F. The small seasonal variation in temperature is also true concerning the absolute range of temperature. For the San Juan-Isla Verde Airport area, the highest temperature of record is 98°F, recorded in October 1981, and lowest, 60°F, recorded in March 1959.

(153) San Juan's average annual rainfall is 53 inches, with fairly even distribution throughout the year. May is the wettest month, averaging 5.97 inches, and February is the driest, averaging 2.26 inches. At Isla Verde Airport, about 12 miles west of this mountain range, the annual rainfall is about 64 inches. The heavier monthly amounts normally occur during the period from May to December, inclusive. Rainfall is generally of the showery type except for the continuous rains that occur in connection with the passage of tropical storms, or when the trailing edge of a cold front that has swept across the continental United States penetrates far enough south to have a definite effect upon Puerto Rico rainfall. This infrequently occurs from November to April. Sunshine is plentiful, with only an average of 5 days a year entirely without sunshine, although there is an average of 255 days a year with measurable precipitation. The average duration of the showers is not more than 10 to 15 minutes, although on many occasions, especially in the summer, a series of intermittent showers will extend over a period of an hour or two. Being marine, the climate is naturally humid. Relative humidity averages about 85 percent in the nighttime and 65 percent near midday. Dense fogs never occur in the San Juan area.

(154) The east trade winds, aided by the daily recurrence of the land and sea breezes, constitute the most characteristic feature of the climate for San Juan throughout the year. The wind is almost constantly from the ocean during daylight. Usually, after sunset, the wind shifts to the south or southeast, off the land with lighter winds. This daily variation in the circulation pattern of surface winds is a contributing factor to the delightful climate of the island. The seawater temperature about San Juan ranges from a minimum of 78°F in March to a maximum of about 83°F in September.

(155) Heavy north winds pile up heavy seas and breakers in the harbor entrance.

(156) Puerto Rico is in the tropical hurricane region of the east Caribbean where the season for these storms begins June 1 and ends November 30. Several hurricanes affect this area every season, usually passing the area to the north. In 1928, the National Weather Service's anemometer blew away after recording an extreme wind speed of 139 knots, the highest value in Puerto Rico to date. A hurricane caused considerable loss of life and great property damage in San Juan in 1932, and in 1956, Hurricane Betsy passed over Puerto Rico. Hurricane winds were felt at San Juan, but there was no loss of life reported, and property damage was not great. Hurricane Hugo passed very close to the city in 1989 with 110-knot wind gusts causing significant damage. Since 1950, 20 tropical systems have come within 150 miles of San Juan. In most recent memory, hurricane Georges caused major damage as it crossed Puerto Rico from east to west in 1998. Georges was discussed earlier in the chapter.

(157) Mild temperatures, refreshing sea breezes in the daytime, plenty of sunshine and adequate rainfall make the climate of San Juan enjoyable and exceptionally favorable for tourists and visitors.

(158) The National Weather Service maintains an office at Isla Verde International Airport; **barometers** may be compared there.

(159)

Routes

(160) Owing to the swells and currents on the coast of Puerto Rico, especially during the winter northerlies, inbound vessels should steer for a point about 4 miles north of **Punta del Morro**, the northwest point of Isla San Juan, before lining up on the entrance to Bahía de San Juan. This precaution permits early adjustments to course and speed while still having sea room to do so. A **181°** lighted range and lighted buoys mark the entrance channel into the harbor.

(161) From west, Punta Salinas will appear as an island when first sighted and must not be mistaken for Isla de Cabras.

(162) The harbor is easy of access in ordinary weather, but it should not be entered at night without local knowledge. During winter northers, dangerous conditions may prevent entering the harbor. The bend inside the entrance can be difficult when the northeast trades are blowing strongly, as they may force a vessel almost broadside to swells. Vessels outbound should avoid getting too close to Bajo Colnas; this is particularly so with long vessels in a strong north breeze.

(181)

Facilities at San Juan, Puerto Rico

Name	Location	Berthing Space (feet)	Depths* (feet)	Purpose	Owned/ Operated by:
South side of Isla San Juan					
Pier 1	18°27'42"N., 66°06'50"W.	770	27 to 32	Berthing for cruise ships and military vessels	Puerto Rico Ports Authority
Pier 3	18°27'40"N., 66°06'42"W.	1,102		N/A	Puerto Rico Ports Authority
Pier 4	18°27'40"N., 66°06'36"W.	1,146		N/A	Puerto Rico Ports Authority
Pier 6 (marginal wharf)	18°27'51"N., 66°06'30"W.	947	30	Puerto Rico Pilotage Commission offices	Puerto Rico Ports Authority
Pier 9	18°27'45"N., 66°06'15"W.	• 300 east • 650 west	• 23 • 27		Puerto Rico Ports Authority
Pier 10	18°27'44"N., 66°06'11"W.	600	34	Receipt and shipment of general cargo	Puerto Rico Ports Authority
Pier 11	18°27'42"N., 66°06'04"W.	580	27	Receipt and shipment of general cargo	Puerto Rico Ports Authority
Pier 12	18°27'42"N., 66°05'57"W.	250	34	N/A	Puerto Rico Ports Authority
Pier 13	18°27'42"N., 66°05'50"W.	450	34	Receipt and shipment of general cargo	Puerto Rico Ports Authority
Pier 14	18°27'42"N., 66°05'44"W.	446	34	Receipt and shipment of general cargo	Puerto Rico Ports Authority
Pier 15	18°27'40"N., 66°05'33"W.	900	27	Receipt and shipment of general cargo	Puerto Rico Ports Authority
North side of Isla Grande					
Pan American West Terminal	18°27'32"N., 66°05'44"W.	1,500	34	Container and trailer cargo	Puerto Rico Ports Authority
Pan American East Terminal	18°27'34"N., 66°05'57"W.	1,500	18	Berthing for cruise ships	Puerto Rico Ports Authority
South side of Isla Grande					
Pier 15 "Outfitting Pier"	18°26'58"N., 66°05'21"W.	1,000	34	N/A	Puerto Rico Drydock and Marine Works, Inc.
Pier 16	18°26'54"N., 66°05'14"W.	525	34	Receipt and shipment of general and bulk cargo and containers	Puerto Rico Ports Authority
South Side of Puerto Nuevo Channel					
Puerto Nuevo Docks and Trailership Terminal: (205) Berths A and B	18°26'00"N., 66°06'00"W.	1,000	29	Receipt and shipment of general cargo	Puerto Rico Ports Authority
Berth C, Puerto Rico Maritime Shipping Authority Roll-on/Roll-off Terminal	18°26'00"N., 66°06'00"W.	600	23-28	Receipt and shipment of roll-on/roll-off cargo	Puerto Rico Ports Authority
Berths D, E, F, G, H, J, K, L, and M	18°26'00"N., 66°06'00"W.	5,700	26-31	Receipt and shipment of general and containerized cargo	Puerto Rico Ports Authority
Catano Oil Dock	18°25'45"N., 66°26'38"W.	350	24	Receipt and shipment of petroleum products	Puerto Rico Ports Authority Various Oil Companies
Army Terminal Pier	18°25'46"N., 66°06'30"W.	• 200 face • 600 east & west	• 25-east • 20-west	Receipt and shipment of general cargo	Puerto Rico Ports Authority Trailer Bridge
Puma Energy Oil Dock	18°25'42"N., 66°06'38"W.	400	34	Receipt of petroleum products	Puerto Rico Ports Authority Borinquen Refinery
Molinos Wharf	18°25'57"N., 66°06'37"W.	600	30	Receipt of grain	Puerto Rico Ports Authority
Nutri Mix Wharf	18°26'02"N., 66°06'37"W.	400	30	Receipt of grain	Puerto Rico Ports Authority
Eldelcar Wharf	18°26'06"N., 66°06'37"W.	200	30	Receipt of petroleum products	Puerto Rico Ports Authority
Pan American Mill Wharf	18°26'09"N., 66°06'37"W.	600	30	Receipt of grain	Puerto Rico Ports Authority

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

(163)

Port Control

(164) All vessels equipped with a radiotelephone approaching Bahía de San Juan shall contact San Juan Port Control on VHF-FM channel 14, giving a 1 to 2 hour notice of ETA.

(165) Vessels preparing to leave their berths shall call the port control tower on VHF-FM channel 14 to obtain clearance to depart.

(166) All vessels, particularly tugs with a tow, are cautioned to closely follow the procedure indicated above to avoid close quarters and risk of collision situations in Bar and Anegado Channels.

(167)

Pilotage, Bahía de San Juan

(168) See Pilotage, Puerto Rico (indexed as such) early this chapter. Pilotage can be arranged by contacting the pilot station on VHF-FM channel 14, by telephone

787–722–1169, or by fax 787–725–3720. Pilot services are generally arranged for at least 24 hours in advance through the ships' agents. If advance arrangements have not been made, a minimum 4-hour notice is required.

(169) Pilots board vessels 3 miles north of Lighted Buoy 2 from motorboats that are painted black with white tops and have the word PILOT or the letter "P" in white on both sides of the bow; 24-hour service is available.

(170) Vessels requiring pilot services are advised to navigate with caution and maintain a safe distance, never closer than 3 miles in a generally north direction from the harbor entrance, and hold that distance until boarded by the pilot. When small-craft warning signals are in place, with heavy seas breaking outside, the harbor is difficult and dangerous to negotiate and the arrival of the pilot on board may be considerably delayed. Pilot boats communicate over the same frequencies as the San Juan Port Control.

(171)

Towage

(172) Tugs up to 6,000 hp are available for docking, undocking and up to 9,000 hp for long-distance towing and salvage. Use of tugs is not compulsory unless required by the pilot.

(173)

Quarantine, customs, immigration and agricultural quarantine

(174) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(175) **Quarantine** is enforced in accordance with the regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) San Juan has several hospitals.

(176) San Juan is a **customs port of entry**.

(177)

Coast Guard

(178) A **Sector Office** is in San Juan. (See Appendix A for address.) A **security zone** has been established off the coast of La Puntilla in San Juan Harbor around the San Juan Coast Guard sector office. (See **33 CFR 165.776**, chapter 2, for limits and regulations.)

(179)

Wharves

(180) The port of San Juan has numerous wharves and piers of all types, most of which are owned by the Puerto Rico Ports Authority. The major deepwater facilities are listed in the facilities table for San Juan. These piers/wharves are located on the south side of Isla San Juan, the north and south sides of Isla Grande, along the south side of Puerto Nuevo Channel and alongside the Army Terminal Turning Basin at the south end of the harbor. The port has over 200,000 square feet of transit sheds, 1.5 million square feet of open storage, and 73 acres of marshaling yards. Most of the piers have freshwater connections and access to highways; shore power is not available.

(182)

Supplies

(183) All types of marine supplies are available at San Juan. Water can be obtained at nearly all piers. Bunker fuel oil, fuel and diesel is available alongside most piers and at anchorage from barges. Gasoline and diesel fuels are available by tank truck.

(184)

Repairs

(185) San Juan is equipped to make major repairs to ocean-going vessels. A floating drydock with a capacity of 1,100 tons, 150 feet long and 70 feet wide is available; draft, 16 foot wingwalls; operated by PR Drydock and Marine Works, Inc. Heavy mechanical welding, electrical and general ship repairs provided by San Juan Towing and Marine Services, Inc.

(186)

Small-craft facilities

(187) The Club Naútico de San Juan, at the southeast end of Isla San Juan, has limited nonmember berths with electricity, gasoline, diesel fuel, water, ice and pumpout.

(188) About 200 yards south of the club is a marina with berths, gasoline, diesel fuel, electricity, marine supplies, water, ice, and a 60-ton lift for hull, engine, and electronic repairs.

(189) Small craft may anchor northwest of La Puntilla outside of the main channel; however, the primary anchorage is Anchorage D at the east end of San Antonio Channel.

(190)

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(191) The north coast of Puerto Rico from San Juan to Cabo San Juan trends in an east by south direction for 30 miles. The shore is low and sandy except for occasional bluffs. The low land extends 2 to 4 miles inland and then the mountains rise to three prominent peaks toward the east part of the island. The coast is indented by many coves with reefs and rocky islets extending 0.5 to a mile offshore; breakers show at many of the reefs. All dangers will be avoided by staying 2 miles or more offshore.

(192)

Punta Cangrejos

(193) The 7.3-mile stretch of coast from San Juan to **Punta Cangrejos** is bold and rugged with outlying rocks and reefs. A shallow inlet with least depths of 2 to 4 feet is west of the reef off Punta Cangrejos. The entrance to the inlet is marked by a lighted buoy and a private **146.5°** lighted range. The privately dredged entrance to **Laguna La Torrecilla**, in the northeast part of the inlet, had a reported controlling depth of 7 feet in 1982. The channel is crossed by a fixed bridge with a clearance of 15 feet. A private yacht club is on the south side of the entrance to the lagoon and a public marina on the north side. Berths, electricity, gasoline, diesel fuel, water, ice, a launching

ramp and minor hull, engine and electronic repairs are available.

(194)

Punta Vacia Talega

(195) **Punta Vacía Talega**, 12 miles east of San Juan, is a 60-foot-high brush-covered ridge with low bluffs at the water's edge. **Río Grande de Loíza**, 14 miles east of San Juan, shows as a wide gap in the trees. It is the largest river in Puerto Rico but cannot be entered because of the sandbar across the entrance.

(196) A rocky patch with a least depth of 2½ fathoms is 1.5 miles north of **Punta Picúa**, 21 miles east of San Juan. The patch breaks in a moderate swell and is marked by a lighted buoy.

(197) Three tall apartment buildings are prominent at **Luquillo** just east of Punta Embarcaderos, 24 miles east of San Juan.

(198) **Sierra de Luquillo**, the mountains in the northeast part of Puerto Rico, are prominent features in clear weather for this part of the coast. **Roca El Yunque**, the westernmost of the three closely connected peaks 5 miles inland and 10 miles from the east end of the island, is the highest and most prominent.

(199)

Cabo San Juan

(200) **Cabo San Juan**, the northeast point of Puerto Rico, is a bluff hill 200 feet high. **Cabezas de San Juan**, two 100-foot clifflike heads, are at the north end of the cape. **Cabo San Juan Light** (18°22'53"N., 65°37'05"W.), 260 feet above the water, is shown from a cylindrical tower on the front of a white rectangular dwelling with a black band around the base on the highest part of the cape.

(201)

Las Cucarachas to Pasaje de Barriles

(202) Beginning 1.5 miles north of Cabo San Juan, a chain of islands, islet, rocks and reefs extends southeast for 20 miles to Isla de Culebra. The chain is nearly steep-to on the north and south sides; the dangers will be avoided by giving both sides a berth of 0.5 mile. Several passages are between the groups of rocks and reefs, but they should be used only with extreme caution because many reefs with little water over them are near the limits of the channels.

(203) **Las Cucarachas**, a group of rocks up to 15 feet high, a mile north of Cabo San Juan, lie at the northwest end of the chain. A light is shown from a skeleton tower, with a green and white diamond-shaped daymark, on a cylindrical concrete base on one of the rocks. A shoal with depths of 14 to 30 feet extends 0.9 mile northwest of the light and a rock awash is 0.2 mile from the light in the same direction.

(204) **Pasaje de San Juan**, between Cabo San Juan and Las Cucarachas, is 0.7 mile wide and has depths of 32 to 72 feet. The passage is one of the principal channels leading into Sonda de Vieques.

(205) **Los Farallones**, a group of rugged bare rocks 30 feet high, are 0.8 mile east of Las Cucarachas. Deep water is close to the north and west sides of the rocks, but a shoal with several bare rocks extends to Cayo Icacos. A reef on which the sea breaks is 0.2 mile south of Los Farallones and continues about 0.4 mile west from the northwest end of Cayo Icacos. The west end of the reef should be given a berth of 300 yards or more.

(206) **Pasaje Cucaracha**, between Las Cucarachas and Los Farallones, is 0.3 mile wide. Depths of 17 to 23 feet extend about 350 yards southeast from Las Cucarachas, and a 23-foot spot is 200 yards west of Los Farallones. A **218°** course for Cabo San Juan Light will lead through the passage over a least depth of 36 feet. It is the best passage for sailing vessels entering the northwest end of Sonda de Vieques with the usual east trade winds.

(207) **Cayo Icacos**, 1.3 miles east of Cabo San Juan and the second largest of the chain, is a 40-foot hummocky island covered with a scrubby growth. A small wharf and buildings of a former limestone quarry are near the southwest point of the island. A prominent tower is in about the center of the island.

(208) **Cayo Ratones**, 250 yards east of Cayo Icacos, is 60 feet high; the east summit is a large bare ledge. A number of bare rocks are off its north side, and a reef awash is between the island and Cayo Icacos.

(209) **Cayo Lobos**, 0.5 mile east-southeast of Cayo Ratones, is 25 feet high with several bare rocks and islets up to 75 feet high off the north side. A chain of bare rocks and islets up to 30 feet high continues southeast for 2.2 miles to Cayo Diablo. A 300-yard-wide channel with depths of 15 to 40 feet is between Cayo Ratones and the bare rocks northwest of Cayo Lobos. A tourist resort and private landing field occupy Cayo Lobos. A concrete pier is on the west side of the island with a lighted gasoline sign located on the pier. A 7-foot-deep unmarked channel leads to the pier from about 0.25 mile west with shoal coral areas to the north and south of the channel.

(210) **Cayo Diablo**, 5 miles southeast of Cabo San Juan, is low with a 40-foot grassy hummock at its east end. White beaches are on the north and south sides.

(211) Between Cayo Diablo and Cayo Lobito, 8 miles east-southeast, are two groups of rocks 2 to 15 feet high known as **Arrecife Hermanos** and **Arrecife Barriles**, with numerous reefs either awash or with little water over them in the chain. **Pasaje de Hermanos**, a 2-mile-wide passage 3.3 miles east-southeast of Cayo Diablo, has shoals of 15 to 30 feet and is only recommended for those with local knowledge. **Pasaje de Barriles**, a 1.5 mile-wide passage 6.7 miles east-southeast of Cayo Diablo and 1.3 miles west of Cayo Lobito, has depths of 36 to 48 feet and may be used by large vessels. Best water is on the east side of the passage. A 28-foot shoal is 1.8 miles west of Cayo Lobito.

(212)

Cayo Lobito to Canal de Grampus

(213) **Cayo Lobito**, 13 miles east of Cabo San Juan, is the westernmost of the chain of islands extending for over 3 miles northwest of Isla de Culebra. **Cayo Tuna** and a bare ledge are close to the northwest end of the island. **Roca Columna** is a detached 75-foot bare pinnacle rock on the south end of the island.

(214) **Cayo Lobo**, a mile southeast of Cayo Lobito, is a triangular island covered with scrub grass, the highest part being at the west end. The three points of the island are high with rocky bluffs.

(215) **La Pasa de los Cayos Lobos**, the 0.5-mile-wide passage between Cayo Lobito and Cayo Lobo, has depths of 60 feet or more.

(216) **Cayo Lobito Light** (18°20'00"N., 65°23'31"W.), 110 feet above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on Cayo Lobito.

(217) **El Mono**, 0.5 mile southeast of Cayo Lobo, is a small irregular 15-foot ledge with several heads. The 0.4-mile-wide passage between Cayo Lobo and El Mono has depths of 36 to 93 feet.

(218) **Las Hermanas**, 1.3 miles off the west coast of Isla de Culebra, consist of three islets. **Cayo Yerba**, the northernmost, 66 feet high, has a smooth grassy slope on the east side and rocky bluffs on the west side. **Cayo Ratón**, the southwesternmost and smallest, 46 feet high, is grassy on top and rocky on the sides; a low rock is close to its southeast side. **Cayo del Agua**, the southeasternmost, is low in the middle and 39 feet high at its east part. The islet is rocky with many large boulders scattered over and near it. A shoal with 5 feet at its end extends nearly 0.1 mile west. The passage between Cayo Ratón and Cayo del Agua should be avoided.

(219) **Cayo de Luis Peña**, off the west side of Isla de Culebra and the largest island of the chain, rises to a peak of 476 feet in the center, with the south and north ends joined to the island by low necks. **Punta Cruz**, the southwest point of the island, has a prominent whitewashed cliff. The 0.3-mile passage between Cayo del Agua and Cayo de Luis Peña has depths of 30 feet or more.

(220) **Isla de Culebra**, 16 miles east of Puerto Rico, is about 6 miles long east and west. The island is fairly high, with broken and ragged terrain. **Monte Resaca**, a mountain about in the center, rises to 650 feet, and **Cerro Balcón**, about 1.5 miles east-southeast of it, is 551 feet high. The island is barren and brown in appearance. The north shore is steep-to, with the 20-fathom curve extending about 1.5 miles off and nearly parallel to it.

(221) Isla de Culebra is a former **Naval Defensive Sea Area and Airspace Reservation**. A **danger area** for aerial gunnery and bombing extends from off the south to off the north sides of the island. (See **33 CFR 334.1460**, chapter 2, for limits and regulations.)

(222) The U.S. Navy reported that it ceased all active gunnery and bombing exercises and weapons training activities within the danger area as of 1975. The Navy advises that since Isla de Culebra and the islands in the vicinity were once used as naval sea and air weapons targets, unexploded ordnance remaining from previous target practice presents a hazard on the northwest peninsula of Isla de Culebra, north of a line running between 18°19'55"N., 65°18'58"W., and 18°19'31"N., 65°14'34"W., and within the immediate offshore vicinity, including Cayo Lobo, Cayo Botijuela, Alcarraza, Los Gemelos, El Ancón, Piedra Stevens, Cayo Ballena, Cayo Tiburón, Cayos Geniqui and in Cabo del Pasaje. **Mariners are advised to exercise extreme caution in the area**.

(223) The main industries of the island of Culebra are tourism, construction and government employment. Vegetables and some tropical fruits are grown in quantities sufficient only for local consumption. The rainy season lasts from June to October, but the rainfall is much lighter than in Puerto Rico. There are no fresh water streams, and rain water stored in cisterns forms the principal water supply. No freshwater is available for vessels. The principal harbor is Ensenada Honda, one of the most secure in the Leeward Islands.

(224) Isla de Culebra and the surrounding keys are within a **Designated Critical Habitat** for the Green Sea Turtle. (See **50 CFR 226.101** and **226.208, chapter 2, for regulations and limits.)**

(225) **Punta Noroeste**, the northwest point of Isla de Culebra, is at the end of a prominent projecting ridge. A reef extends 200 yards northwest from the high bare rock close to the point.

(226) A shoal area with several rocks extends 2.2 miles northwest from Punta Noroeste. **Cayo Botijuela**, 2 feet high, and **Roca Lavador**, awash, are the northwesternmost rocks of the group.

(227) **Alcarraza**, 1.6 miles northwest of Punta Noroeste, is a 144-foot bare round rock with perpendicular sides and a whitish appearance. **Pasaje Lavador**, between Roca Lavador and Alcarraza, is a 0.5-mile-wide passage with depths of 45 feet or more.

(228) **Los Gemelos**, 1.1 miles northwest of Punta Noroeste, consists of a 20-foot rock 50 yards in diameter with a low rock close to its southwest side and another small rock 100 yards northwest. **La Pasa de la Alcarraza**, between Alcarraza and Los Gemelos, is a 0.3-mile-wide passage with depths of 38 feet or more.

(229) **El Ancón**, 0.9 mile northwest of Punta Noroeste, is a rock with 7 feet over it that breaks when there is considerable sea.

(230) **Piedra Stevens**, 0.6 mile north-northwest of Punta Noroeste, is a 30-foot rock 100 yards in diameter with a 27-foot shoal extending 100 yards south of it.

(231) **La Pasa de Los Gemelos**, between Los Gemelos and El Ancon on the west and Piedra Stevens on the east, is a 0.5-mile-wide passage with depths of 45 feet or more; it is the safest passage northwest of Punta Noroeste.

(232) **Canal Piedra Stevens**, between Punta Noroeste and Piedra Stevens, is a 0.3-mile-wide passage with depths of 35 feet or more.

(233) The **north coast** of Isla de Culebra has sandy beaches between rocky bluffs for 2 miles, then the shoreline becomes generally bold and rocky, with sand beaches in the coves and occasional coral reefs fringing the shore. A 23-foot shoal is 1.0 mile east by north of Punta Noroeste, and a 17-foot spot is the same distance east of the point; otherwise depths of 30 feet or more are 0.4 mile off the north coast.

(234) A **danger area** for aerial gunnery and bombing extends 6.5 miles off the coast; limits and regulations are given in **33 CFR 334.1460**, chapter 2.

(235) **Bahía Flamenco**, 1.8 miles southeast of Punta Noroeste, is constricted by reefs.

(236) **Cayo Matojo**, 3.2 miles east by south of Punta Noroeste, is a 20-foot-high island off **Punta Resaca**, a projecting point separating Bahía de Marejada and Bahía de Oleaje.

(237) **Roca Speck**, 100 yards off **Punta Manchita**, 4.8 miles southeast of Punta Noroeste, is low and bare. **Punta Garay** is a projecting point 0.8 mile southeast of the rock.

(238) **Cabeza de Perro**, the east point of Isla de Culebra, is a pointed rocky bluff. A break in the reef 0.3 mile north of the point leads to a boat landing. **Pelá**, 0.5 mile southwest of the point, is a 30-foot-high cay that presents a prominent bluff facing southeast.

(239) **Cayo Norte**, 0.5 mile off the northeast shore of Isla de Culebra, is somewhat oval in shape and covered with a thick scrubby growth. The highest peak, 338 feet high, is in the west part of the island. **Cayo Sombrerito**, a 59-foot rocky islet, extends about 300 yards north of the southeast end of the island.

(240) Several rocky islets and islands extend up to 1.0 mile northeast from Cayo Norte. **Cayo Ballena** and **Cayo Tiburón**, the northwesternmost group, are 10 to 20 feet high with foul ground between. **Cayos Geniqui**, the southeasternmost group, are two connected islands; the 79-foot west island is flat and grass covered on top, the 82-foot east island is pointed on top.

(241) **Isla Culebrita**, 0.6 mile off the east coast of Isla de Culebra, is irregular in shape and about a mile in length. The island is formed by three hills with low land between them and is covered with a scrubby forest growth. **Isla Culebrita Light** (18°18'49"N., 65°13'39"W.), 305 feet above the water, is shown from a stone-colored cylindrical tower with red trim on a flat-roofed dwelling on the summit of the island. A Coast Guard boat landing is on the west side of the island. The east end of the island is a bare high cliff. **Cayo Botella** is a grass-covered 30-foot island on an extensive coral reef that extends 0.5 mile northwest of Isla Culebrita.

(242) The islands, islets and reefs on the east and south sides of Isla de Culebra form a protected passage and several well-protected anchorages.

(243) **Canal de Cayo Norte**, between Cayo Norte and the Isla de Culebra, is a 0.5-mile-wide passage with depths of 28 feet or more through the middle.

(244) **Canal Tiempo**, between Cayo Norte and the reefs northwest of Isla Culebrita, is a 180-yard-wide passage with depths of 30 feet or more. The narrow passage should not be attempted without local knowledge because of the 7- to 12-foot shoals on either side. The approach to Canal Tiempo can be made between Cayo Norte and Cayo Tiburon, or between Cayo Tiburon and Cayos Geniqui. The passages are at least 0.3 mile wide with depths of 30 feet or more.

(245) **Tierra a Medio**, between Isla de Culebra and Isla Culebrita, is a shoal area with depths of 13 to 29 feet that obstructs the south end of Canal de Cayo Norte.

(246) **Canal de Culebrita** and **Canal del Sur** are a continuation of the protected passage on the east and southeast side of Isla de Culebra. The passages have a least width of 0.2 mile and depths of 26 feet or more. **Arrecife Culebrita**, extending nearly 3 miles southwest from Isla Culebrita, protects the inside passage from south. The southwest limit of the reef is marked by a buoy. **Cabezas Puercas** and **Cabezas Crespas**, shoal areas with depths of 2 to 28 feet and nearly awash in places, obstruct the southwest part of Canal del Sur. A buoy marks the southwest end of Cabezas Puercas, and a lighted buoy marks the east side of Cabezas Crespas.

(247)

Anchorages

(248) The best anchorage is in Canal de Culebrita in 60 feet of water with the extreme west end of Cayo Botella in line with the east side of Cayo Sombrerito, and the southeast extremity of Isla Culebrita bearing 067°. Vessels can anchor closer under the lee of Isla Culebrita according to draft.

(249) **Puerto del Manglar**, at the southeast end of Isla de Culebra, is a small but well-sheltered bay. The entrance is constricted to a width of 100 yards by reefs, but once inside vessels can anchor in depths of 18 to 37 feet near the middle of the bay; sand and mud bottom. The sides and head of the bay are shallow.

(250) **Bahía de Almodovar**, on the south side of Puerto del Manglar, is a small bight, well sheltered from all winds, where small boats can anchor in depths of 19 to 24 feet. The bight is entered from Puerto del Manglar over a 10-foot bar 0.2 mile northwest of Pelá.

(251)

Currents

(252) The current velocity is 1.5 knots between Cayo Norte and Cayos Geniqui and sets south and north and 2 knots in Canal del Sur and sets southwest and northeast.

(253)

Routes

(254) To enter Canal de Cayo Norte from north, steer **132°** between Cayo Norte and Isla de Culebra until 300 yards off Punta Garay, then draw in toward the Culebra side to avoid the middle ground, heading **146°** between Tierra a

Medio and Isla de Culebra. The fringing reef off Cabeza de Perro may be avoided by giving the shoal a berth of more than 300 yards.

(255) To enter Canal Tiempo from north, steer toward Cayo Norte and, having passed 150 yards west of Cayo Tiburon, bring the west extremity of Cayo Botella in line with Cabeza de Perro and steer **186°** until Cerro Balcón on Isla de Culebra bears **240°**, then make a sharp turn and head for Cerro Balcón on **241°**, passing midway between the 23-foot spot on the north side and the 12-foot spot on the south side of the channel; continue southwest, swinging to get on course **146°**, passing 300 yards off Punta Garay.

(256) If going through Canal del Sur, after leaving Canal de Culebrita, steer about **224°** with Isla Culebrita Light astern, passing 150 to 200 yards off the northwest side of Cabezas Puercas until west-northwest of Buoy 4, then either swing left to pass midway between Buoys 3 and 4, and thence to Sonda de Vieques, or continue on **237°** with Buoy 3 astern. A clear depth of 35 feet is on the course line, but vessels drawing more than 30 feet should attempt the passage only in calm weather because of frequent swells.

(257) **Bajos Grampus** comprises a group of small coral heads rising from a bank of 60 feet lying 2 to 4 miles from the southeast extremity of Isla de Culebra. The south head, on which there is a depth of 23 feet, lies with Punta del Soldado in range with the south extremity of Cayo de Luis Peña bearing 293°. A lighted buoy is on the south side of Bajos Grampus. A 23-foot spot at the northwest extremity of Bajos Grampus is 2.4 miles north-northwest of the buoy. Virgin Passage is discussed in chapter 14.

(258) **Canal de Grampus** is a channel between this west knoll and Arrecife Culebrita; it is a clear navigable unmarked channel about 0.6 mile wide. The tidal current sets diagonally across Canal de Grampus southwest and northeast.

(259) To pass south of Bajos Grampus, keep on or south of the line of Sail Rock and Signal Hill on St. Thomas Island until Cayos Geniqui show east of Cabo del Pasaje, the northeast point of Isla Culebrita. Bajos Grampus will then be cleared, and the course can be shaped as desired.

(260)

Ensenada Honda to San Ildefonso

(261) **Ensenada Honda**, on the south side of Isla de Culebra between bluff **Punta Vaca** on the east and **Punta del Soldado** on the west, is the most secure anchorage in the area. The harbor is about 1.5 miles long and in some parts 0.5 mile wide but of irregular shape with several small shallow bays indenting the shore. The land around the bay is hilly and partly covered with a scrubby forest growth.

(262)

Channels

(263) The entrance to Ensenada Honda is obstructed by shoals with depths of 4 to 26 feet, but the entrance channels are marked by buoys and unlighted ranges. The controlling depth into the harbor is 26 feet.

(264)

Dangers

(265) **Bajo Amarillo**, 0.8 mile east of Punta del Soldado, is a 0.3-mile-long shoal with a least depth of 7 feet. The southwest end is marked by a lighted buoy.

(266) **Bajo Grouper**, 0.2 mile north of Bajo Amarillo, is 0.3 mile in length with a least depth of 4 feet. A buoy marks the east extremity of the shoal.

(267) **Bajo Camarón**, 0.2 mile south of Punta Vaca, has a least depth of 9 feet over the 0.2-mile-long shoal. A buoy is at the south end.

(268) **Bajo Snapper**, 0.3 mile west of Punta Vaca, has a least depth of 6 feet over the shoal about 300 yards in diameter.

(269) Many other shoals with depths of 18 feet or less are near the limits of the entrance channels.

(270)

Routes

(271) From south, bring the left tangent of Punta Vaca to bear **008°** before the south end of Cayo de Luis Peña closes behind Punta del Soldado and steer for Punta Vaca close up to Bajo Camarón; then swing on to the entrance range bearing **296°**. After passing Buoy 8, avoid approaching the 17-foot shoal on the west side of the channel too closely, and steer in on the inner range bearing **323°**until abeam of Buoy 12, then open the range to the west and anchor according to draft.

(272) From southeast, bring Punta Vaca in range with Monte Resaca, bearing about **322°**, and continue on this course past the buoy marking Cabezas Crespas until the entrance range comes on; then continue as directed in the preceding paragraph.

(273) From west, when 0.5 mile south of Punta del Soldado Light, steer **064°** for about 1.3 miles until the left tangent of Punta Vaca bears **008°**, then head in on that course and follow directions above.

(274) **San Ildefonso** is on the northeast side of Ensenada Honda. A house on a small hill above the wharf is prominent. The wharf is a concrete L-shaped boat landing pier extending about 100 feet offshore. Depths of about 12 feet are alongside.

(275) Only small boats can make a landing at the west end of Ensenada Honda. Vessels calling at Culebra use Bahía de Sardinas.

(276)

Punta del Soldato to Bahia Tarja

(277) The 5.5-mile-long **Southwest Coast** of Isla de Culebra from Punta del Soldado to Punta Noroeste is indented by small coves and reefs, but the dangers are within 0.4 mile of the shore. The coves between Punta Melones and Punta Tamarindo Grande are sheltered by Cayo de Luis Pena.

(278) **Punta del Soldado**, the south point of Isla de Culebra, is wooded and terminates in a rocky bluff. A light is on the west side of the point.

(279) **Bahía de Sardinas**. 1.5 miles northwest of Punta del Soldado, is the harbor for the towns of Culebra and Clark Village. The boat and ferry landing at **Playa de Sardinas** has a depth of 8 feet at the end. Fishing boats use the harbor.

(280) **Culebra**, locally known as **Dewey**, and **Clark Village**, both located on the neck of land between Bahía de Sardinas and the head of Ensenada Honda, are the only towns on Isla de Culebra. A local person is designated to handle insular immigration and customs traffic. Available supplies include gasoline in drums and groceries. Telephone and telegraph communications are available. A ferry service for both passengers and cargo operates between Isla de Culebra, Isla de Vieques, and the town of Fajardo; commercial air transport is available to Puerto Rico.

(281) **Punta Melones**, the northwest point of Bahía de Sardinas, is low and narrow, terminating in a small pinnacle rock.

(282) **Punta Tamarindo Grande**, 1.7 miles northwest of Punta Melones, consists of a 75-foot hill with reddish bluffs at the end and a low neck behind it. Two low detached rocks are off its end.

(283) Cayo de Luis Peña and the chain of islands and reefs to the northwest have been described previously in this chapter.

(284) **Canal de Luis Peña**, between the north end of Cayo de Luis Peña and Isla de Culebra, is a 0.3-mile-wide passage with depths of 21 to 65 feet. Strong currents and baffling winds render the passage hazardous for sailing vessels.

(285)

Anchorages

(286) Good anchorage with ordinary trade winds can be found between Cayo de Luis Peña and Isla de Culebra in depths of 30 to 79 feet. The rocky patch with depths of 42 to 53 feet, 0.6 mile west of Punta Melones, should be avoided in anchoring. A comfortable anchorage for small vessels in depths of 20 to 30 feet is in the entrance to **Bahía Tamarindo**, a mile northwest of Punta Melones. A fair anchorage in depths of 40 to 55 feet is about 0.3 mile off the northwest side of Cayo de Luis Peña.

(287)

Currents

(288) In Canal de Luis Pena the southeast current is deflected north of **Bahia Tarja**, just north of Punta Melones, and thence sets toward the south end of Cayo de Luis Pena; it is weak at the entrance to Bahia de Sardinas. The northwest current sets directly through the passage. The current velocity is about 2 knots.

(289)

Sonda de Vieques to Punta Boca Quebrada

(290) **Sonda de Vieques** extends from the east coast of Puerto Rico to Virgin Passage between the chain of islands and reefs including Isla de Culebra on the north and Isla de Vieques on the south. The sound is about 20 to 22 miles long and from 8 to 15 miles wide. The east part is clear with depths of 7 to 17 fathoms, except for Bajos Grampus southeast of Isla de Culebra. The west part has numerous shoals and reefs extending as much as 8 miles off the east coast of Puerto Rico.

(291) A **danger area** for aerial gunnery and bombing extends about 6.5 miles north and 4 miles southwest of Isla de Culebra. (See **33 CFR 334.1460**, chapter 2, for limits and regulations.) In 2007, it was reported that this area is no longer used for bombing and gunnery target exercises.

(292) **Explosives anchorages** are in Sonda de Vieques north of Isla de Vieques. (See **33 CFR 110.1** and **110.245**, chapter 2, for limits and regulations.) In 2009, it was reported that this area is no longer used for Naval weapons practices.

(293) **Isla Palominos**, 3.5 miles southeast of Cabo San Juan, is a small 165-foot-high island with a rounded grassy summit and surrounded by steep-to reefs up to 0.6 mile from shore. A lighted buoy is on the northeast side.

(294) Good anchorage is afforded about 0.5 mile off the west side of the island in about 40 feet on the following bearings: Cabo San Juan Light 313°; Las Cucarachas Light 331°; and Punta Águila, the extreme northwest point of Isla Palominos, 037°.

(295) **Bajo Blake**, 2 miles east of Isla Palominos, is 0.4 mile in diameter and has a least depth of 20 feet. The south side is marked by a buoy.

(296) **Bajo Hodgkins**, 7 miles southeast of Isla Palominos, is a narrow 0.8-mile-long ridge with a least depth of 27 feet.

(297) The area between Bajo Hodgkins and the east coast of Puerto Rico is full of shoals and should be used only with local knowledge. Many of the shoals have rocks awash or reefs on which the sea breaks while others have rocks that show 1 to 15 feet.

(298)

Anchorages

(299) Deep-draft vessels can find good anchorage in 28 to 60 feet during ordinary weather in **Rada Fajardo**, in the northwest end of Sonda de Vieques between Cabo San Juan and Isla Palominos.

(300)

Routes

(301) Vessels bound from San Juan to Isla de Culebra and east frequently enter Sonda de Vieques through Pasaje de San Juan and proceed south of the chain of islands and reefs to gain comparatively smooth water.

(305)

METEOROLOGICAL TABLE – COASTAL AREA OFF ISLA DE VIEQUES ISLAND
Between 18°N to 19°N and 65°W to 66°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.2	0.0	0.3	0.1	0.1
Wave Height > 9 feet [1]	0.9	0.3	0.4	0.4	0.2	0.3	0.6	0.7	0.9	0.5	0.4	2.1	0.6
Visibility < 2 nautical miles [1]	0.1	0.2	0.1	0.3	0.6	0.1	0.2	0.4	0.3	0.1	0.2	0.3	0.2
Precipitation [1]	3.0	2.2	2.7	2.8	4.7	3.1	3.8	4.4	4.7	3.0	5.2	4.7	3.4
Temperature > 69° F	99.9	99.8	99.6	99.8	99.8	99.9	99.9	100.0	100.0	100.0	99.9	100.0	99.9
Mean Temperature (°F)	78.1	77.9	78.0	79.1	80.4	82.0	82.6	82.9	83.0	82.7	81.3	79.4	80.0
Temperature < 33° F [1]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean RH (%)	77	76	75	76	80	79	79	79	79	80	78	75	77
Overcast or Obscured [1]	3.9	3.1	3.7	4.8	11.8	10.3	8.3	9.2	8.2	7.4	6.1	7.4	6.3
Mean Cloud Cover (8ths)	3.4	3.4	3.3	3.5	4.3	4.3	4.1	4.0	4.1	4.0	3.8	3.9	3.7
Mean SLP (mbs)	1017	1017	1017	1016	1015	1017	1017	1015	1014	1013	1013	1015	1016
Ext. Max. SLP (mbs)	1028	1030	1028	1026	1023	1028	1027	1026	1025	1025	1023	1022	1030
Ext. Min. SLP (mbs)	1002	1001	1002	1001	1002	1003	1007	1002	1001	1000	1000	1000	1000
Prevailing Wind Direction	E	E	E	E	E	E	E	E	E	E	E	NE	E
Thunder and Lightning [1]	0.1	0.1	0.0	0.1	1.2	1.2	1.7	1.5	3.6	4.1	2.2	0.4	1.0

[1] Percentage Frequency

(302) A buoyed north-south route along the east coast of Puerto Rico is used by vessels with a draft of 22 feet or less. Large deep-draft vessels bound for the south coast of Puerto Rico usually enter Sonda de Vieques through Pasaje de San Juan and continue around the east coast of Isla de Vieques. Vessels from northeast points use Virgin Passage and pass south of Isla de Vieques to go to ports on the south coast of Puerto Rico.

(303)

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(304) **Isla de Vieques**, 6 miles off the nearest point of the east coast of Puerto Rico, forms the south side of Sonda de Vieques. It is 18 miles long east and west and 3.5 miles wide near its middle. A range of hills extends the entire length of the island with a prominent hill at each end—**Monte Pirata** near its west end and **Cerro Matias Jalobre**, 3 miles from the east end. The island is wooded in places, especially its east half and around Monte Pirata.

(306) Principal products are horses and cattle. Vegetables and tropical fruits are grown for local consumption. The rainy season lasts from May to October, but the rainfall is less than in adjacent parts of Puerto Rico. The island is subject to drought; the principal water source is rainfall stored in cisterns.

(307) Boats carrying supplies and passengers dock at Isabel Segunda on Bahía de Mulas on the north coast. When the trade wind is north of east a heavy surf runs and landing is difficult on the open north coast.

(308) **Naval restricted areas** extend 1,500 yards offshore around the west part of the island. (See **33 CFR 334.1480**, chapter 2, for limits and regulations.) In 2009, it was reported that this area is no longer used for Naval weapons practices.

(309) **Explosives anchorages** are off the north and west coasts of the island. (See **33 CFR 110.1** and **110.245**, chapter 2, for limits and regulations.) In 2009, it was reported that this area is no longer used for Naval weapons practices.

(310) **Pasaje de Vieques** is the strait lying between Puerto Rico and Isla de Vieques. **Radas Roosevelt** is the open-water portion of the passage lying within the shoals and banks north of the west end of Isla de Vieques and between that island and Puerto Rico. The current velocity is about 0.7 knot in the passage and floods southwest and ebbs northeast.

(311) **Punta Arenas**, at the northwest end of Isla de Vieques, is low and covered with a scrubby growth, with a white spit at its end. The point changes shape continually; at times the outer coconut trees are in the water.

(312) At the west end of Isla de Vieques, south of Punta Arenas, there is a smooth anchorage with east winds but exposed to the south and west.

(313) **Escollo de Arenas** is a continuation northwest of a shoal that fringes the north side of Isla de Vieques to a distance of about 1 mile and extends east nearly to Punta Mulas. The west edge of the shoaler part of the bank extends 3.3 miles north-northwest from Punta Arenas to its outer end, where it is marked by a lighted buoy. Spots with depths of 5 feet are on the bank for 0.8 mile north of Punta Arenas, and thence to the lighted buoy, the bank is steep-to with about 40 feet on each side. The bank sometimes shows by discolored water and rips.

(314)

Currents

(315) A strong southwest set is noted frequently north of Escolla de Arenas. The bank itself is generally indicated by the tide rips.

(316) A 1.2-mile causeway extends from shore at **Desembarcadero Mosquito**, 3.9 miles east of Punta Arenas. A pier extends from the west side of the causeway about 350 yards from the seaward end. The causeway and pier are marked at the outer ends by Navy-maintained lights.

(317) **Arrecife Mosquito**, a reef awash, is 1.9 miles to the northeast of Desembarcadero Mosquito. The reef is steep-to, and the sea always breaks on it. A shoal with a depth of 17 feet is about 0.5 mile west-northwest from the reef. During ordinary weather a fairly smooth anchorage is 0.3 mile south of Arrecife Mosquito, in 40 feet, sandy bottom. Several spots with a least depth of 9 feet are in the approaches to the anchorage, and vessels drawing more than that depth should use it only with local knowledge.

(318) **Arrecife Corona**, a reef awash, is about 0.3 mile long and about 0.3 mile east of Arrecife Mosquito. Several shoals are around the reef, including a 9-foot spot 0.2 mile south. **Bajo Merail**, a shoal with least depth of 2 feet lies 0.8 mile south of Arrecife Corona.

(319) **Caballo Blanco**, a low grassy islet, marked by a light, is 1.7 miles northwest of Punta Mulas. Several shoals surround the islet, the outer of which are 0.6 mile north and 0.2 mile south. **Bajo Comandante**, a shoal about 600 yards in extent with a least depth of 7 feet, lies about midway between Caballo Blanco and the shore. There are spots with a least depth of 23 feet in the channel between Caballo Blanco and Bajo Comandante.

(320) **Bahía de Mulas**, 8 miles east of Punta Arenas and 10 miles west of Punta Este, is an open bight on the north coast of Isla de Vieques. **Isabel Segunda** (P.O. Vieques), the principal town on the island, is on the southeast side of the bay.

(321) **Punta Mulas Light** (18°09'16"N., 65°26'37"W.), 68 feet above the water, is shown from a 32-foot white octagonal tower on a dwelling on a low bluff point on the northeast side of the bay. An old Spanish brick fort and building is prominent on a hill 0.5 mile southeast of the light. A depth of 12 feet can be taken to the 300-foot pier on the east side of the bay. Depths of 4 to 12 feet are along the pier.

(322) Small vessels and schooners anchor north and south of the pier at Isabel Segunda according to draft. Large vessels anchor 0.5 mile or more offshore in the bay. The outer anchorage is exposed, but the small-boat anchorage affords fair shelter during ordinary weather. With north winds a heavy sea makes into the bay causing small craft to drag anchor. The nearest hurricane anchorages are Ensenada Honda (Isla de Culebra) and Ensenada Honda (east coast of Puerto Rico).

(323) The approach to Bahía de Mulas is obstructed by numerous unmarked shoals with depths of 5 to 30 feet. The chart is the best guide.

(324) A local person is designated to handle insular immigration and customs traffic. Supplies and passengers are landed at the pier. Some cattle are exported. Available supplies include gasoline in drums and groceries. Telephone and telegraph communications are available. A ferry carries passengers and supplies between Isabel Segunda, Isla de Culebra and Fajardo; the mail is delivered by airplane.

(325) A **danger area** of a bombing and target area is off the northeast and southeast coasts of Isla de Vieques. (See **33 CFR 334.1470**, chapter 2, for limits and regulations.) The northeast corner and the west boundaries of the north and south parts of the area are marked by buoys. In 2003, the Navy ceased all active gunnery, bombing and weapons training activity within the danger area. Unexploded ordnance remains present a hazard; extreme caution is advised.

(326) Schedules of all operations by the U.S. Marine Corps and the Navy on Isla de Vieques and vicinity are promulgated weekly and distributed to local authorities on Isla de Culebra, Isla de Vieques and Fajardo by the Commanding Officer, Atlantic Fleet Weapons Training Facility, Roosevelt Roads, PR.

(327) **Cabellos Colorados**, 3.1 miles east of Punta Mulas, is rocky and steep-to. **Puerto Negro** is a boat landing 4.8 miles east of Punta Mulas Light. It can be entered only by small craft with local knowledge. The entrance through the reefs is about 100 yards wide, with depths of 6 to 18 feet, and is generally indicated by breakers on either side. Anchorage space is limited; most of it is foul. **Punta Brigadier**, 0.6 mile west of the entrance, is marked by **Roca Roja**, a large bare rock close-in. **Punta Goleta** is the east entrance point.

(328) **Roca Cucaracha** 3.4 miles west-northwest of Punta Este Light, consists of two small rocks, close together, about 3 feet high. The rocks are about 0.3 mile from shore, and the depths inside them are 6 to 14 feet.

(329) **Caño Hondo** extends 0.6 mile east of Roca Cucaracha to the reefs forming Bahía Salinas. It is open north and has depths of 18 to 42 feet. It has no sheltered anchorage except for small craft, which can anchor at its southeast end. A narrow channel with a depth of 8 feet south of **Isla Yallis**, about 15 feet high and 250 yards from shore, leads from Cano Hondo to Bahía Salinas.

(330) **Bahía Salinas**, 1.6 miles west of Punta Este, has an anchorage with depths of 12 to 24 feet. It is the best landing along the north coast east of Bahía de Mulas. It affords good shelter for small craft with local knowledge but should not be attempted by strangers. The bay is protected on the north by a reef 0.6 mile long, the highest part of which is awash. The entrance from east is between the reef and those reefs which fringe the shore. About 1.5 miles northwest of Punta Este is a high bluff point with bare white cliffs to the east.

(331) **Punta Este**, the east point of the island, is moderately low and grassy, with rocky bluffs at the water. A light, 43 feet above the water, is shown from a tower with a red and white diamond-shaped daymark on the point.

(332) The south coast of Isla de Vieques is irregular and indented by sandy bays. **Bahía Salina del Sur**, 2 miles west of Punta Este, is 0.5 mile in diameter and affords a boat landing with the wind north of east. **Roca Alcatraz** consists of several rocks 10 to 15 feet high, 0.4 mile from the points at the entrance. A larger islet, **Cayo Conejo**, about 40 feet high, wooded on top and with a large bare rock close to its southeast end, lies 0.3 mile off the west entrance point. Anchorage is in the west half of the bay in 18 to 24 feet, sheltered from winds north of east. The clearer entrance is between Roca Alcatraz and the island

off the west point of the bay. For 1 mile west of the island, shoals with 18 feet and less extend nearly 0.5 mile from shore.

(333) **Ensenada Honda**, about 6 miles west of Punta Este, is 1.2 miles wide and has several bare rocks and reefs awash. The bay is rough with southeast winds, but with the wind north of east it affords a good boat landing. Owing to the foul ground in the bay, it should be avoided without local knowledge. A reef bare at low water is off the entrance 0.8 mile east-northeast from **Punta Conejo**, the west entrance point. **Cayo Jalovita** and **Cayo Jalova** are small Islands on the east side of the harbor.

(334) In 1978, three submerged rocks were reported to be about 1.4 and 1.9 miles south-southwest of Punta Conejo.

(335) **Bahía de la Chiva** is a shallow bight on the west side of Punta Conejo. **Isla Chiva**, about 30 feet high, is a cay in the entrance to the bight. A reef with 2 to 18 feet of water over it extends nearly 0.5 mile from shore 1.5 to 2.1 miles west of Punta Conejo. **Bahía Tapón**, a bight north of the reef, has depths of 2 to 3 feet. In 2013, unexploded ordnance was reported about 600 yards south of Bahía de la Chiva in the waters surrounding Isla Chiva. Vessels are cautioned not to transit or anchor around Isla Chiva.

(336) An offshore fueling line, marked by buoys, extends about 700 yards from the tank west of Bahía de la Chiva.

(337) A naval **restricted area** is off the south shore of Isla de Vieques. (See **33 CFR 334.1480**, chapter 2, for limits and regulations.)

(338) **Puerto Ferro**, 9 miles west of Punta Este, is a boat harbor with 6 to 8 feet of water at the entrance and 7 to 15 feet inside. Its entrance is 250 yards wide, with high land on both sides, and is prominent. A sunken rock lies about 0.5 mile inside the entrance in 18°06'21"N., 65°25'30"W.

(339) **Puerto Mosquito** is a boat harbor about 1 mile west of Puerto Ferro Light. Least depths in the narrow entrance are 2 to 3 feet. A sunken rock is on the west side of the entrance in 18°05'43.5"N., 65°26'32.5"W.

(340) **Ensenada Sun Bay**, 2.3 miles west of Puerto Ferro Light, is about 0.6 mile wide. It offers anchorage in 18 to 24 feet exposed to winds from southeast to southwest. A shoal extends 200 yards west from the east point of the bay, and a shoal with 17 feet over it lies west from the middle of the entrance. The depths in the south half of the bay are 17 to 27 feet. Several sunken rocks are about 100 and 250 yards west and southwest, respectively, off the east entrance point.

(341) **Puerto Real**, on the south coast of Isla de Vieques 3 miles west of Puerto Ferro Light, provides good anchorage in ordinary weather. The port is somewhat protected by **Punta de Tierra** on the east and **Cayo Real** on the south; depths are 15 to 25 feet. A pier in the northeast part of Puerto Real has 10 feet alongside and is marked on the seaward end by a private light. The radio tower lights 0.3 mile inshore are prominent.

(342) The principal outlying danger is a large area covered 13 to 15 feet, about 0.7 mile south of the island and 0.9 to 1.3 miles west-southwest from the south end of Cayo Real. A smaller area, covered 23 feet, is about 0.4 mile southwest from the south end of Cayo Real. A detached area, covered by 15 feet of water, is 0.2 mile from the island and 0.6 mile west from the north point of Cayo Real. Vessels can anchor in 35 feet, about 550 yards west of Cayo Real.

(343) **Punta Vaca**, 3 miles west of Puerto Real, is the southernmost point of the island. Outlying rocks are a short distance offshore.

(344) **Punta Boca Quebrada**, 2.9 miles west-northwest of Punta Vaca, is a low wooded point that terminates in a dry ledge outside of a white sand beach. From Punta Boca Quebrada the coast trends north for 1 mile to Punta Arenas.

(345)

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(346) The **east coast** of Puerto Rico extends 10 miles south from Cabo San Juan to Punta Puerca and then 22 miles southwest to Punta Tuna. The coast is very irregular with projecting rocky bluffs separating the numerous small shallow coves and bays and with grass-covered or mangrove hills within a mile of the shore. Reefs awash or bare at low water and shoals with less than 10 feet over them extend more than a mile offshore in places. A depth of 24 feet can be carried through a partially buoyed channel from 2 to 5 miles off the east coast, but entrance caution is necessary to avoid the shoals near the route. The principal ports on the east coast are Fajardo and the private oil-handling facilities at Puerto Yabucoa.

(347)

Playa Canalejo to Bahia de Fajardo

(348) **Playa Canalejo**, 0.2 mile south-southeast of Cabo San Juan Light, is a shallow indentation leading to the ruins of a small pier.

(349) **Punta Gorda**, 1.4 miles south of Cabo San Juan Light, is a conspicuous high head. A 360-foot hill, 0.4 mile west-northwest from the point, is the north end and highest part of a high ridge that extends southwest nearly to Playa de Fajardo.

(350) A channel, marked by a light and daybeacons, leads to a small-boat harbor.

(351) **Punta Batería**, 2.2 miles south of Cabo San Juan Light, is a rocky 70-foot cliff from which a grassy ridge makes inland.

(352) **Bahía de Fajardo**, 2.5 miles south of Cabo San Juan Light, affords good shelter for medium-draft vessels. It is somewhat protected on the east and south by two islands and surrounding reefs. Ferry service for both passengers and cargo operates between Playa de Fajardo, Isla de Culebra, Isla de Vieques and the Virgin Islands. Commercial air transport is available to the Virgin Islands. Small interisland vessels trade in general cargo, building materials and livestock.

(353)

Prominent features

(354) Cabo San Juan Light is the principal landmark in making the approach to Bahía de Fajardo. A hotel with two cupolas, each marked by a red light, just south of Punta Gorda, and two stacks of a sugar central and a radio tower near Fajardo are prominent.

(355)

Channel

(356) The principal entrance to Bahía de Fajardo is from north through the unmarked channel west of Bajo Laja, although small vessels can enter from east and south with local knowledge. The north entrance has a controlling depth of 23 to 30 feet to Buoy 3, thence 11 feet to the public pier. The controlling depth from east is 17 feet to Buoy 3, and from south, 9 to 11 feet to the public pier.

(357)

Anchorages

(358) Large vessels anchor northeast of Punta Bateria according to draft. During ordinary weather the protection is fair and the holding ground is good. Small vessels anchor inside the bay on either side of the entrance channel.

(359) The hurricane anchorages for large vessels are Ensenada Honda (Isla de Culebra) and Ensenada Honda, 10 miles south of Fajardo. Small vessels can anchor south of Isleta Marina.

(360)

Dangers

(361) The approaches to Bahía de Fajardo have reefs that usually show breakers and shoals with 7 to 18 feet over them. Inside the bay depths range from 3 to 24 feet.

(362) **Bajo Laja**, with least depths of 7 to 10 feet over it, lies on the east side of the north entrance and is unmarked.

(363) **Isleta Marina**, with surrounding reefs up to 0.5 mile, is on the east side of the bay.

(364) **Arrecife Corona Carrillo** and a long reef to the west obstruct the south entrance to the bay. **Bajo del Río**, a bank with depths of less than 5 feet, extends more than 0.2 mile offshore along the south entrance to the bay.

(365)

Currents

(366) The current velocity is 0.3 knot in the south-southeast direction on the flood and 1.1 knot in a north-northwest direction on the ebb in the channel in Bahía de Fajardo.

(367)

Pilotage, Bahía de Fajardo

(368) See Pilotage, Puerto Rico (indexed as such) early this chapter. A local pilot is available.

(369)

Towage

(370) Tugs are not available at Fajardo.

(371)

Quarantine, customs, immigration and agricultural quarantine

(372) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(373) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(374) Fajardo is a **customs port of entry**. A deputy collector of customs handles customs matters and acts as immigration inspector. The customhouse is on the waterfront at Playa de Fajardo.

(375)

Harbor regulations

(376) Local regulations are enforced by a Commonwealth Captain of the Port.

(377)

Wharves

(378) The landing facilities are at **Playa de Fajardo** on the southwest side of Bahía de Fajardo. The westerly 300-foot public pier has 12 feet at the outer end and 8 feet alongside; two private lights are off the outer end of the pier. An 80-foot bulkhead pier with 12 feet alongside for the ferry boat is 100 yards west of the public pier.

(379) A privately owned pier 125 yards east of the public pier is 400 feet long with 5 feet at the outer end. The former limestone pier to the east is in ruins.

(380)

Supplies and repairs

(381) Water is available and gasoline can be trucked in. Groceries can be obtained from **Fajardo**, 1.5 miles inland. Limited facilities are available for repairs. The principal source of marine supplies is San Juan, 38 miles by highway from Playa de Fajardo.

(382)

Small-craft facilities

(383) A marina on Isleta Marina, on the east side of Bahía de Fajardo, has facilities for small craft. Depths of 8 to 12 feet can be taken to the marina. Berths, electricity, gasoline, diesel fuel, water, ice and marine supplies are available at the finger piers. Lifts to 100 tons and a 100-foot marine railway can haul out vessels for hull, engine and electronic repairs. Vessels to 65 feet long can be accommodated at the marina.

(384) Three private marinas at Playa Sardinera, north of Playa de Fajardo, have facilities for small craft. Reported depths of 8 to 12 feet can be taken to the berths inside a 700-foot breakwater that is marked on the seaward end by a light. Gasoline, diesel fuel, water, ice and marine supplies are available.

(385) A marina at the hotel just south of Punta Gorda has berthing facilities inside a manmade basin. A depth of 12 feet can be taken through the lighted entrance and then 12 to 7 feet to the berths. Berths, electricity, gasoline, diesel fuel, water and ice are available.

(386)

Isla de Ramos to Punta Puerca

(387) **Isla de Ramos**, 4 miles south of Cabo San Juan Light, is 0.2 mile in diameter and covered with palm trees except on its summit, which is a grassy 35-foot knoll with a house on top. A reef surrounds the island to a distance of 200 to 300 yards. A buoyed shoal with a least depth of 16 feet is 0.6 mile east-southeast of the island.

(388) **Cayo Largo**, 1.5 miles east of Isla de Ramos, consists of a narrow 1.8-mile-long ridge steep-to on all sides. The south half is awash at low water, and the sea always breaks on it; the north half has depths of 4 to 15 feet. Buoys mark the west side. The velocity of the current is 0.5 knot in the channel west of Cayo Largo; it floods south and ebbs northwest.

(389) **Isla Pineros**, 8 miles south of Cabo San Juan Light, is a 1-mile long wooded island with a 249-foot peak near the middle. **Isla Cabeza de Perro**, just east of Isla Pineros, has a large detached rock off the rocky bluff northeast end. **Cabeza de Perro Light** (18°14'59"N., 65°34'35"W.), 80 feet above the water, is shown from a skeleton tower with a red and white diamond-shaped daymark on the east point of the island. **Pasaje Medio Mundo**, west of Isla Pineros, is foul, but a depth of 15 feet can be taken through the narrow crooked channel by small boats with local knowledge.

(390) **Punta Puerca**, 10 miles south of Cabo San Juan, is a prominent bold wooded head with a high rock bluff at the shoreline. The highest point, 0.3 mile inland, is the site of several large white dish-shaped radar tracking units. The units show up well from offshore.

(391)

Small-craft facilities

(392) A marina at Bahía Demajagua has facilities for small craft. Fuel, water, electricity, pumpout, repairs, a marina store and a lift capacity to 100 tons are available among other services. Vessels to 200 feet can be accommodated at the marina.

(393)

Ensenada Honda

(394) **Ensenada Honda**, 10 miles south of Cabo San Juan Light, is the site of the **Roosevelt Roads United States Naval Station**. In 2007, the naval station was reported closed. The harbor is well protected by the circular shore and the reefs, which constrict the entrance to 0.3 mile. The harbor is included in a **restricted area** that extends from **Punta Figueras**, 3.5 miles north of Ensenada Honda, to 2 miles west of the entrance. (See **33 CFR 334.1480**, chapter 2, for limits and regulations.)

(395) **Bahía de Puerca**, a mile northeast of Ensenada Honda, has depths of 37 feet or more, leading to a pier with 37 feet alongside at the head of the bay. A 26-foot spot is 150 yards southwest of the pier. The 1,000-foot pier consists of a series of caissons connected by walkways; a large inactive graving dock is inshore of the pier.

(396) **Isla Cabras**, on the east side of the entrance to Ensenada Honda, has a rocky bluff on the east side. The island is connected to the mainland by a causeway. **Cabra de Tierra** is the southernmost point of a low neck covered with mangroves and palms separating Ensenada Honda from Bahía de Puerca.

(397) **Punta Cascajo**, the west point at the entrance to Ensenada Honda, has rocky cliffs on the south side and a bare reef 250 yards off the southeast side. Many houses are on the high part of the point, and trees fringe the shoreline. An unnamed cove just northwest of the point is blocked at the entrance by a permanent shark net.

(398) The southwest approach to Ensenada Honda is marked by a **025°24'** lighted range. (The front range light is on Isla Cabras and the rear range light is on Punta Puerca.)

(399)

Channels

(400) A dredged channel, marked by lighted and unlighted buoys, a light and a **315°** lighted range, leads to a large turning basin in Ensenada Honda. Vessels anchor inside the harbor according to draft; the holding ground is soft mud, which may cause some dragging during a hurricane. In 1990, a controlling depth of 40 feet was available in the channel and turning basin.

(401)

Wharves

(402) **Pier 1**, U.S. Navy fuel pier, the more west pier on the northeast side of Ensenada Honda, is 450 feet long with 32 feet along the west side and 36 feet along the east side; water is available. A small boat landing with about 15 feet alongside is inshore of the east side of the fuel pier.

(403) **Pier 2**, U.S. Navy cargo pier, southeast of Pier 1, is 398 feet long with 32 feet alongside; water is available. An LST landing ramp is about 400 yards southeast of the cargo pier.

(404) **Pier 3**, a 1,200-foot-long U.S. Navy aircraft carrier pier marked at its seaward end by fixed red lights, is 0.25 mile south of Pier 2. Depths of about 39 feet are alongside.

(405)

Quarantine, customs, immigration and agricultural quarantine

(406) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(407) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(408) **Customs** and **immigration** services are handled by representatives from Fajardo.

(409) An **agricultural quarantine** official is at the Roosevelt Roads Naval Station.

(410)

Puerto de Humacao to Puerto de Naguabo

(411) **Puerto de Humacao**, 15 miles south-southwest of Cabo San Juan Light, affords some shelter for medium-draft vessels. The port is exposed southeast and south, and a heavy sea sometimes makes in with southeast winds. Small boats can make a landing at the port during good weather.

(412)

Prominent features

(413) **Punta Lima**, 3 miles northeast of Puerto de Humacao, is a projecting wooded hill with low land back of it. A reef 0.5 mile east of the point usually shows breakers on it.

(414) **Cayo Santiago**, 0.7 mile southeast of the waterfront at **Playa de Humacao**, is the most prominent feature when approaching the port. The island is low at the north end, rising to 162 feet at the south end. The Caribbean Primate Research Center maintains a monkey colony for experimental purposes on the island; no visitors are permitted.

(415) **El Morrillo**, 1.8 miles southwest of the port, is a small rocky hill that rises abruptly from the water and the lowland around it.

(416) **Morro de Humacao**, 3.5 miles southwest of the port, is a 100-foot rocky point with higher ground inland. Grass-covered **Cayo Batata** is 0.4 mile off the point. A bare ledge, with five rocks and a reef, awash and steep-to, extends up to 0.2 mile east and south of Cayo Batata.

(417)

Channels

(418) The principal entrance to Puerto de Humacao is from south through an unmarked channel leading west of **Bajo Parse** and **Bajo Evelyn**; small vessels can enter from north.

(419)

Anchorages

(420) Large vessels can anchor within 2.3 miles south of Cayo Santiago, as close inshore as draft permits.

(421) Ensenada Honda, 10 miles northeast, is the nearest hurricane anchorage.

(422) Small vessels anchor in depths of 3 to 10 feet in the northeast part of **Puerto de Naguabo**, 2 miles northeast of Puerto de Humacao. Good anchorage is afforded except with southeast or south winds. A boat landing in about 7 feet of water can be made at a small pier southeast of Puerto de Naguabo. Gasoline is available nearby.

(423)

Dangers

(424) Several shoal spots with depths of 12 to 18 feet are in the approaches to Puerto de Humacao. The 12-foot shoal 1.2 miles east of Cayo Santiago and the shoals at the south entrance are unmarked. The chart is the best guide. A shoal area with depths of 1 to 6 feet extends for 0.4 mile from Cayo Santiago towards the waterfront at Playa de Humacao. A wreck reportedly covered 8 feet is 300 yards southeast of the ruins of the long pier.

(425)

Small-craft facilities

(426) Berths with electricity, gasoline, diesel fuel, water, ice and marine supplies are available. A 50-foot marine railway and a 35-ton lift can handle craft for hull and engine repairs. Some groceries are available at Playa de Humacao, but most supplies must be obtained from **Humacao**, 6 miles inland. The principal source of marine supplies is San Juan, 44 miles by highway from Playa de Humacao.

(427) Humacao is a **customs port of entry**.

(428)

Palmas del Mar to Puerto Yabucoa

(429) **Palmas del Mar**, 21 miles south-southwest of Cabo San Juan Light, is a small-craft harbor enclosed by a breakwater. The entrance to the harbor is marked by private lights. A yacht club on the east side of the harbor along the breakwater provides berths with electricity, diesel fuel, and pumpout. A marina on the west side of the harbor provides berths with electricity, gasoline, diesel fuel, water, ice and marine supplies. A 50-foot marine railway and a 35-ton hoist can handle vessels for hull and engine repairs. It is reported that strong easterly winds cause breaking seas in the harbor entrance and surge inside the harbor.

(430) **Puerto Yabucoa**, 23.5 miles southwest of Cabo San Juan Light and 6 miles northeast of Punta Tuna Light, is an open bay with numerous reefs and sunken rocks with depths of less than 5 feet between rocky **Punta Guayanes** on the north and **Punta Quebrada Honda** on the south. The port is the site of a deep-draft oil-handling facility. Large tankers call here to deliver crude petroleum and load petroleum and petrochemical products.

(431)

Channels

(432) A privately dredged 500-foot channel leads from deepwater to a turning basin and petroleum wharf. A jetty extending about 200 yards from the northeast side of the basin entrance is marked by a light. The channel is marked by private lighted buoys, lights and a **296°50'** lighted range. In 2013, the reported controlling depth was 38 feet in the entrance channel and turning basin with 28 feet reported in the smaller basin to the west.

(433) The storage tank farm and several tall stacks are conspicuous northwest of the turning basin.

(434)

Anchorages

(435) A suitable anchorage is available for several deep-draft vessels southeast of Punta Guayanes.

(436)

Dangers

(437) The area seaward of the dredged channel is relatively open and free from dangers, but care should be exercised

(460)

METEOROLOGICAL TABLE – COASTAL AREA OFF SOUTHERN PUERTO RICO
Between 16°N to 18°N and 65°W to 68°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.2	0.2	0.1	0.2
Wave Height > 9 feet [1]	1.7	1.4	1.1	1.0	0.7	1.6	2.4	1.7	1.3	0.2	2.0	2.1	1.4
Visibility < 2 nautical miles [1]	0.2	0.2	0.2	0.3	0.4	0.2	0.4	0.4	0.5	0.3	0.5	0.3	0.3
Precipitation [1]	2.6	2.4	2.5	2.0	4.1	2.1	3.8	3.1	4.7	4.9	4.7	3.8	3.3
Temperature > 69° F	99.7	99.9	99.7	99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9
Mean Temperature (°F)	78.5	78.0	78.2	79.3	80.8	82.0	82.3	82.8	82.9	82.6	81.4	79.8	80.5
Temperature < 33° F [1]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean RH (%)	78	77	78	78	80	80	80	80	80	80	79	78	79
Overcast or Obscured [1]	3.1	2.8	4.6	4.1	10.6	8.0	9.9	8.1	10.0	8.5	5.7	4.3	6.4
Mean Cloud Cover (8ths)	3.2	3.3	3.3	3.4	4.2	4.1	4.0	3.9	4.0	3.9	3.7	3.5	3.7
Mean SLP (mbs)	1016	1016	1016	1015	1015	1016	1016	1015	1013	1013	1013	1014	1015
Ext. Max. SLP (mbs)	1032	1031	1030	1030	1028	1028	1027	1028	1025	1025	1026	1029	1032
Ext. Min. SLP (mbs)	1001	1001	1002	1001	1002	1004	1004	1000	1001	1000	999	1001	999
Prevailing Wind Direction	E	E	E	E	E	E	E	E	E	E	E	E	E
Thunder and Lightning [1]	0.3	0.3	0.1	0.3	2.0	1.8	2.2	3.2	5.1	5.9	2.4	0.9	1.9

[1] Percentage Frequency

in approaching the channel as depths shoal extremely rapidly at the channel entrance. Outcrops of hard seafloor material exist close to the edges of the channel; give the edges of the channel a good berth. A shoal area that is partially bare with breakers is 0.5 mile southwest of the channel. Prevailing winds from east-southeast cause a good swell in the basin most of the time.

(438)

Pilotage, Puerto Yabucoa

(439) See Pilotage, Puerto Rico (indexed as such) early this chapter. Local pilots are available. Pilots board inbound vessels about one mile seaward of the channel entrance.

(440)

Towage

(441) The use of a tug is compulsory for arriving and departing vessels. Tugs up to 3,800 hp are available.

(442)

Quarantine, customs, immigration and agricultural quarantine

(443) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(444) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(445)

Harbor regulations

(446) Local regulations are enforced by the local Commonwealth Captain of the Port.

(447)

Wharves

(448) The petroleum wharf on the north side of the main basin is 450 feet long with turning and berthing dolphins extending off the ends. Depth alongside is 50 feet. The barge and dry cargo wharf on the south side of the basin just inside the entrance is 200 feet long with a depth of 10 feet reported alongside.

(449) A pipeline trestle pier in ruins, formerly used for loading molasses, is at **Playa de Guayanes** in the north part of Puerto Yabucoa.

(450)

Supplies and repairs

(451) Bunker C, diesel oils and water are available at the petroleum wharf. Limited marine supplies are available in Puerto Yabucoa. Stores and supplies can be ordered through the ship agents for delivery to the vessel with at least 48 hours advance notice.

(452) No repair facilities are available.

(453)

Punta Veguas to Arrecife Sargent

(454) **Punta Yeguas**, 1.2 miles south of Punta Quebrada Honda, is a low point with a rocky bluff at the end, which rises gradually in a smooth grassy ridge that joins the east end of Cuchilla de Panduras.

(455) **Punta Toro**, the point 1.4 miles west-southwest of Punta Yeguas, is a 500-foot-high spur of **Cuchilla de Panduras**, which has elevations of over 1,800 feet to the north.

(456) **Punta Tuna Light** (17°59'18"N., 65°53'07"W.), 111 feet above the water, is shown from a white octagonal tower on a dwelling, near the end of the point. The point projects as a high cliff; a 400-foot hill 0.5 mile north is prominent.

(457) **Arrecife Sargent**, 0.5 mile southeast of Punta Tuna is 1.8 miles long and 0.3 mile wide at its widest point. Because it breaks the force of the southeast swell, the reef affords some protection from the southeast for vessels anchored well in by Punta Tuna where the reef is from 0.3 to 0.2 mile from shore. A bare part of the reef, 0.7 mile east of the light, has the appearance of a rowboat

and black can buoy. Other parts of the steep-to reef have depths of 5 to 17 feet. The break on the reef does not show well except when there is considerable sea, and on parts of it the sea rarely breaks. The natural channel between the reef and the shore is not recommended for strangers.

(458)

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(459) The south coast of Puerto Rico from Punta Tuna to Cabo Rojo extends in an almost west direction for 75 miles. The coast is very irregular with projecting brush-covered points between shallow coves and bays; fringing reefs close to shore make landing difficult and often dangerous in most places. Except at the east and west ends of Puerto Rico, the land is generally low near the shore with prominent high hills in the interior. Many reefs and islands are from 2 to 5 miles offshore, then the bottom increases rapidly to great depths, making soundings of little use to indicate danger or distance from shore. Numerous lights and other prominent features along the coast can be used for position determination. Safety will be ensured by giving a berth of at least 3 miles to the coast and to Isla Caja de Muertos. Small vessels with local knowledge sometimes hug the coast inside the outer reefs to avoid heavy seas outside.

(461)

Puerto Arroyo

(462) **Puerto Arroyo**, 11 miles west of Punta Tuna Light, is an open bay exposed to south winds.

(463) **Punta Figuras** is a projecting point on the east side of Puerto Arroyo. **Cerro Range**, 3 miles north of Punta Figuras, is a distinct sharp conical hill. The stacks of several sugar centrals are also prominent.

(464) The principal entrance channel is from southwest. Several shoals with depths of 24 to 30 feet are in this approach, and the bottom is irregular. There is a small-boat passage from east between Punta Figuras and Arrecife Guayama; the passage should be used only with local knowledge. Depths of 24 to 30 feet can be taken to the anchorage area, thence about 5 feet to the private pier at **Arroyo**. The east passage has depths of 13 to 30 feet to the anchorage.

(465) The best anchorage is in 23 to 30 feet a mile west-southwest of Punta Figuras. The prevailing southeast wind is always felt in the anchorage, although the force is somewhat broken by the outlying reef. Some small fishing vessels anchor near Arroyo according to draft. Bahía de Jobos, 10 miles west, is the nearest hurricane anchorage.

(466) **Arrecife Guayama**, 1 to 1.5 miles off Punta Figuras, is nearly 3 miles long and is dangerous to approach. The east part is awash and the sea usually breaks on it; the middle part has little water on it with patches awash on which the sea breaks. **Arrecife Corona**, 1.4 miles west of Punta Figuras, has a least depth of 5 feet.

(467) **Arrecife Algarrobo**, 2.3 miles west of Punta Figuras, is a coral reef that covers and uncovers. Another coral reef that uncovers is 0.3 mile west-southwest of Arrecife Algarrobo. A submerged coral reef with a least depth of 6 feet is 1.1 mile southwest of Arrecife Algarrobo. **Punta Barrancas** is the point on the west side of Puerto Arroyo and 3.8 miles west of Punta Figuras. A reef with a least depth of 11 feet extends 0.4 mile south of the point.

(468)

Small-craft facilities

(469) Berths, gasoline by truck, water, some marine supplies and engine repairs are available at Arroyo.

(470) Local harbor regulations for Puerto Arroyo are enforced by a Commonwealth Captain of the Port.

(471)

Laguna de Las Mareas

(472) **Laguna de Las Mareas** about 6.5 miles west of Punta Figuras is the site of a deep-draft oil-handling facility. Large tankers call here to deliver crude petroleum products and load petrochemicals and motor fuels.

(473)

Channels

(474) A privately dredged channel leads through the reef from deepwater to the facilities' basin and pier in Laguna de Las Mareas. The breakwater extending from the east entrance point, **Punta Ola Grande**, is marked at the seaward end by a light. The channel is marked by private lighted aids and a **017.7°** lighted range. Extreme caution is advised when entering the harbor.

(475) The 1,100-foot pier in the basin extends from the north shore and consists of a series of connected mooring and breasting dolphins with a 90-foot loading platform (pierhead) near its center. Depths of 38 feet were reported alongside.

(476)

Pilotage, Laguna de Las Mareas

(477) See Pilotage, Puerto Rico (indexed as such) early this chapter. Pilots board vessels 1.5 miles north of Lighted Buoy LM. A 48-hour and a 24-hour notice of time of arrival are requested.

(478)

Towage

(479) Tugs up to 3,800 hp are available for docking vessels. The tugs monitor VHF-FM channel 16.

(480)

Quarantine, customs, immigration and agricultural quarantine

(481) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(482) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(483) A hospital is at nearby Guayama.

(484)

Repairs

(485) The nearest port for major repairs is San Juan; limited emergency above-the-waterline repairs are available at Ponce.

(486)

Supplies

(487) No bunkers are available; in emergencies bunkers and lube oils may be delivered from Ponce. Limited quantities of water and facilities for offloading waste water are available at the pier. Marine supplies are available on 48-hour notice.

(488)

Bahia de Jobos to Punta Petrona

(489) **Bahía de Jobos**, 20 miles west of Punta Tuna Light, is a good hurricane anchorage. The harbor is formed by **Punta Pozuelo**, a projecting point on the east side, and many islands on the south and southwest sides. The shore and islands are low and are covered with thick brush and mangroves. The east part of the bay is shallow and is used only by local fishing boats.

(490)

Prominent features

(491) A light on the east end of **Cayos de Ratones** marks the entrance to Bahía de Jobos. The stacks at Central Aguirre show up well from offshore.

(492)

Channels

(493) The principal entrance to Bahía de Jobos is from the west between **Cayo Morrillo** and Cayos de Ratones, and thence through a channel leading to a turning basin and facilities of a power plant. The channel is marked by lighted and unlighted buoys.

(494) **Boca del Infierno**, a small-boat entrance into Bahía de Jobos between **Cayos Caribes** and **Cayos de Barca**, has a depth of 11 feet over the bar that breaks with a heavy sea. This passage should be used only with local knowledge.

(495)

Anchorages

(496) Vessels sometimes anchor just inside the entrance between Cayo Morrillo and Cayos de Ratones to await daylight. There is a good anchorage in depths of 24 to 35 feet with grassy bottom northeast of **Cayos de Pájaros**. The anchorage inside the bay is east of the marked channel leading to the barge loading platform of the power plant in depths of 19 to 23 feet, soft mud bottom. A slight swell makes in through Boca del Infierno with south winds.

(497)

Dangers

(498) Numerous wooded islands with reefs awash and steep-to surround the south and southwest part of Bahía de Jobos up to 1.5 miles from the mainland. There are passages between some of the island groups, but only the principal entrance east of Cayos de Ratones should be used by large vessels and small boats without local knowledge.

(499)

Pilotage, Bahía de Jobos

(500) See Pilotage, Puerto Rico (indexed as such) early this chapter. Pilots from Ponce serve this harbor. Vessels are boarded off Cayos de Ratones, 3.1 miles southwest of Bahía de Jobos Light.

(501)

Quarantine, customs, immigration and agricultural quarantine

(502) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(503) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(504) Puerto Jobos is a **customs port of entry**.

(505)

Wharves

(506) The fuel oil barge loading platform of the power plant, on the northwest side of the turning basin, has about 300 feet of berthing space with dolphins. Depths of 17 feet were reported alongside.

(507)

Supplies and repairs

(508) Supplies have to be obtained from inland towns; San Juan is 67 miles by highway. Some above-the-waterline emergency repairs can be made by the machine shop at Central Aguirre.

(509)

Small-craft facilities

(510) A small-craft facility is on the south side of Bahía de Jobos about 0.7 mile east of Punta Rodeo. The entrance channel to the facility is very narrow and should be navigated with caution. Gasoline, water, ice and a launching ramp are available.

(511) **Bahía de Rincón**, 26 miles west of Punta Tuna Light, is a 5-mile-wide bay used only by local fishing boats that anchor near **Playa de Salinas** in the northeast part. There is a good anchorage in depths of 24 to 30 feet in the east part of the bay during ordinary weather. The bay shoals to 18 feet and less within 1 mile of the shore in some places.

(512) **Arrecife Media Luna** and **Cayo Alfenique** obstruct the entrance to Bahía de Rincón from south. The reefs are partly bare or awash, steep-to, and the sea breaks on them. The west side is obstructed by **Cayos de Caracoles** and **Cayos Cabezazos**. Reefs awash or bare and nearly steep-to surround the islands, and the sea always breaks on their south sides. Foul ground with depths of 1 to 6 feet extends north to **Punta Petrona**, the west point of the bay.

(513) Depths of 23 to 28 feet can be taken to anchorage in Bahía de Rincón on either side of Arrecife Media Luna; avoid the 12-foot shoal 0.4 mile northwest of Cayos de

Ratones. Small vessels with local knowledge also use the narrow channel north of Cayos de Ratones.

(514)

Playa Santa Isabel to Isla del Frio

(515) The 15-mile indentation in the coast between Bahía de Rincón and Bahía Ponce is obstructed by islands and shoals up to 5 miles offshore. The stacks of several sugar centrals and several water tanks are prominent along the coast line. Anchorage in depths of 15 to 30 feet can be found within 0.5 mile of the shore during ordinary weather. Small local fishing boats anchor near the settlements along the shore.

(516) **Playa Santa Isabel**, 31 miles west of Punta Tuna Light, is a small settlement near the beach where water can be obtained. A depth of 4 feet can be taken to the landing. Gasoline, groceries and some supplies are available at **Santa Isabel**, 0.7 mile inland.

(517) **Cayo Berberia**, 33 miles west of Punta Tuna Light, is 2 miles offshore and is surrounded by a reef and shoals. The fringing reef, on which the sea breaks on the south and east sides, extends up to 0.4 mile from the island. A shoal with depths of 2 to 12 feet extends for 0.2 mile north of the island and over a mile west of it. In ordinary weather, a good anchorage in 45 to 60 feet of water 1 mile northwest of the island was reported by the NOAA Ship MT. MITCHELL. Care must be taken when approaching the area because of shoals with depths of 15 to 18 feet, 2 miles northwest of the island.

(518) **Isla Caja de Muertos**, about midway of the 75-mile stretch of coast between Punta Tuna Light and Cabo Rojo, is 5 miles offshore and prominent. The southwest end is low except for a 170-foot steep hill at the extreme southwest end. When viewed from a distance the 170-foot hill appears to be a separate island. At such times the hill is easily mistaken for Isla Morrillito. Care should be taken when shooting tangents to these islands. Landings can be made on the west side of the island during ordinary weather. **Isla Morrillito** is a small 31-foot flat-topped island 200 yards off the southwest point.

(519) **Isla Caja de Muertos Light** (17°53'35"N., 66°31'16"W.), 297 feet above the water, is shown from a 63-foot gray cylindrical tower on the summit of the island.

(520) Shoal water with depths of 3 to 18 feet extends up to 0.5 mile from the shore of Isla Caja de Muertos and Isla Morrillito. A reef extends about 0.4 mile seaward in all directions from a point on the northeast end of Isla Caja de Muertos in 17°54.0'N., 66°30.6'W. A bar with a least depth of 13 feet extends northeast from Isla Caja de Muertos gradually curving east and joins the shoal area west of Cayo Berberia. The sea rarely breaks on the bar; it is dangerous to approach.

(521) A passage north of Cayo Berberia and Isla Caja de Muertos is used in the daytime by small coasting vessels with local knowledge. There are several shoals with depths of 14 to 17 feet along the route.

(522) A good anchorage in ordinary weather in 90 to 115 feet of water about 0.8 mile northwest of the center of Isla Caja de Muertos was reported by the NOAA Ship MT. MITCHELL. The island offers a good lee.

(523) **Isla del Frio**, 4.3 miles north-northwest of Isla Caja de Muertos and 0.4 mile offshore, is surrounded by a 0.4-mile-long reef that is steep-to on the south edge.

(524)

Bahia de Ponce

(525) **Bahía de Ponce**, 43 miles west of Punta Tuna Light and 32 miles east of Cabo Rojo Light, is the most important commercial harbor on the south coast and one of the three leading ports of Puerto Rico. The harbor is protected from the prevailing east trade winds by Punta Peñoncillo and Isla de Gata with their surrounding reefs, but it is exposed to the south causing a swell at times in the anchorage. The port facilities are in the east part of the 3.5-mile-wide bay, which is surrounded by shoals and reefs; the north part of the bay shoals to less than 18 feet within 0.4 mile of the shore in places.

(526) **Ponce**, the second largest city in Puerto Rico, is 2 miles inland from the port at **Playa de Ponce**, and 71 miles by highway from San Juan. Most cargo is landed at the municipal pier and bulkhead on Punta Peñoncillo. The principal imports include foodstuffs, textiles, building materials and machinery. Exports include sugar, cement and canned fish.

(527)

Prominent features

(528) Isla Caja de Muertos with the light on its summit is the most prominent feature in the approach. The stacks of the cement factory west of Ponce, the large microwave tower in Ponce, the hotel on the hill back of Ponce and the radio towers and stacks surrounding the bay can be seen from well offshore. Also prominent is the aerolight at Mercedita Airport, about 2.5 miles east of Ponce.

(529) **Isla de Cardona**, in about the middle of the entrance to Bahía de Ponce, is marked by a light shown from a white tower near the middle of the island. **Isla de Gata**, south of the municipal pier on **Punta Peñoncillo**, is connected by a dike to **Punta Carenero**.

(530)

Channels

(531) The principal entrance is east of Isla de Cardona. A federal project provides for a 600-foot-wide entrance channel 36 feet deep, then an inner channel 200-foot-wide 36 feet deep leading to an irregular-shaped turning basin, with a 950-foot turning diameter adjacent to the municipal bulkhead. (See Notices to Mariners and latest editions of charts for controlling depths.)

(532) The entrance channel is marked by a **015°** lighted range, lights and buoys; do not confuse the rear range light with the flashing red radio tower lights back of it. A 0.2-mile-wide channel between Isla de Cardona and Las Hojitas is sometimes used by small vessels with local knowledge.

(533)

Anchorages

(534) The usual anchorage is northeast of Isla de Cardona in depths of 30 to 50 feet; however, vessels can anchor in 30 to 40 feet northwest of Las Hojitas, taking care to avoid the submerged sewer outfall. A small-craft anchorage is northeast of Las Hojitas in depths of 18 to 28 feet. (See **33 CFR 110.1** and **110.255**, chapter 2, for limits and regulations.) A well-protected anchorage for small boats in depths of 19 to 30 feet is northeast of the yacht club on Isla de Gata. A comfortable anchorage with little swell during ordinary weather in depths of 18 to 30 feet can be found in **Caleta de Cabullones**, the bight east of Isla de Gata.

(535) Bahía de Ponce is not safe as a hurricane anchorage because it is exposed to the south. The nearest hurricane anchorages are at Bahía de Jobos, 28 miles east, Bahía de Guayanilla, 8 miles west and Bahía de Guanica, 16 miles west.

(536)

Dangers

(537) **Bajo Tasmanian**, an extensive bank on the east side of the principal harbor entrance, is about a mile long with a least depth of 17 feet. The west part of the bank extends close to the range line and has a least depth of 19 feet.

(538) The bank on the west side of the entrance extends almost to Isla de Cardona and has general depths of 25 to 40 feet. There are a few detached spots of 16 and 17 feet within an area 0.5 mile southwest of the island.

(539) **Bajo Cardona** extends 600 yards east-southeast from Isla de Cardona with a least depth of 13 feet. A bare reef on which the sea breaks extends 300 yards northeast of the island; an area with a least depth of 8 feet continues in the same direction for 200 yards.

(540) A reef bare at low water and steep-to extends 300 yards west and southwest from Isla de Gata. The sea always breaks on the outer side of this reef.

(541) It is reported that with an east wind of 25 knots or more, the mud from the reef off Isla de Gata discolors the water across the channel to Isla de Cardona and beyond making the channel off the piers at Punta Peñoncillo appear shoal.

(542) Other unmarked shoals and reefs are dangerous in approaching Bahía de Ponce through any of the inshore passages. A reef with four islets extends southwest, 0.4 mile from Punta Cabullones, 2.5 miles east of Isla de Cardona. The reef is steep-to, and the sea breaks on the south side. **Roca Ahogado**, a rock in the middle of Caleta de Cabullones, has shoal water of 4 to 18 feet extending up to 0.2 mile from it.

(543) **Las Hojitas**, northwest of Isla de Cardona, is 0.8 mile long, oriented in a northeast-southwest direction. A coral reef is just below the surface on the southwest end. The remainder of the reef has depths of 2 to 11 feet.

(544) **Cayo Viejo**, 0.8 mile west of Isla de Cardona, is about 0.3 mile in diameter and has a least depth of 3 feet.

(545) **Isla de Ratones**, on the west entrance to Bahía de Ponce and a mile offshore, is a low island with a reef that bares at low water extending a mile east-southeast of it. **Cayo Arenas**, 0.5 mile east of Isla de Ratones, is surrounded by a reef and shoals that extend up to 200 yards from its shore. Crooked channels with a least depth of 10 feet are between these islands and the shore; they should be used only with local knowledge.

(546)

Weather

(547) The tropical climate of Bahia de Ponce features average rainfall of about 33 inches annually, a small diurnal and annual temperature range and pleasant summer sea breezes. Most of the rain is in the form of showers or thunderstorms, which are frequent from May through November. Thunder is heard on about 6 to 12 days each month; September is the most active month. Monthly precipitation extremes range from over five inches in October to less than one inch in January through March. Maximum temperatures range from the mid-80s in winter to around 90°F in August and September. Summer highs climb to 90°F or more on only 7 to 10 days each month, thanks to the sea breeze; however, 90°F or greater has been recorded in every month. The average annual temperature at Ponce is 78.8°F with an average maximum of 88.7°F and an average minimum of 68.4°F. The mean temperature difference between the warmest month (July) and the coolest month (January) is only 6.1°F. Winds are usually out of the southeast and east from spring to fall and northeast and east the remainder of the year. Windspeeds of 17 knots or more blow up to 2 percent of the time in March, April and July. Visibilities are generally good, except in showers.

(548)

Routes

(549) From east: When 3 miles south of Isla Caja de Muertos Light steer **303°** for 8 miles until Isla de Cardona Light bears 005°, distant 2.5 miles, then head in on the lighted range bearing **015°**. From west: When 4 miles south of Punta Brea, steer **079°** for 15.4 miles to the position off the entrance of Bahía de Ponce.

(550)

Pilotage, Bahía de Ponce

(551) See Pilotage, Puerto Rico (indexed as such) early this chapter. Pilots board vessels 1 mile from the entrance buoys.

(552)

Towage

(553) Tugs are available from South PR Towing in Guyanilla Harbor on VHF-FM channels 16 and 11.

(554)

Quarantine, customs, immigration and agricultural quarantine

(555) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(556) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(557) Ponce is a **customs port of entry**. The customhouse is at Playa de Ponce. The deputy collector of customs and his inspectors act as immigration inspectors.

(558)

Harbor regulations

(559) A Commonwealth Captain of the Port with an office at Playa de Ponce enforces the local rules and regulations for Bahia de Ponce.

(560)

Wharves

(561) The municipal pier and wharf on Punta Peñoncillo are administered by a board with a dock superintendent in charge. The municipal pier on the southeast side is 450 feet. An obstruction, with a least depth of 23 feet, consisting of submerged piles is, on the southeast side of the the pier. Transit sheds and pipelines for water, molasses and bulk cement are on the pier. Immediately northwest of the pier is a 63-foot-wide loading ramp that slopes to about 1 foot above the water.

(562) On the north side of Punta Peñoncillo is a 1,900-foot bulkhead wharf, locally known as Ponce Pier 1 and 2, has depths of 31 to 35 feet alongside; transit sheds and pipelines for water and diesel oil are on the wharf; general cargo is received.

(563) About 300 yards north of the Ponce Pier 1 and 2, the 610-foot Trailer Terminal pier has reported depths of 36 feet alongside.

(564) About 350 yards east of the municipal pier is an L-shaped pier with a 350-foot face that had reported depths of 30 feet alongside and 31 feet in the approach. Pipelines on the pier handle water and vegetable oil and unload polluted water from fishing vessels.

(565) A maneuvering basin extends 250 yards north of the municipal wharf, the northerly limits marked by buoys. The basin had reported depths of 35 to 50 feet with shoaling to lesser depths in the east end.

(566)

Supplies

(567) Most supplies are available at Ponce. If necessary, additional supplies can be brought in by truck from San Juan in a few hours. Freshwater, bunker C oil and diesel oil are available at the municipal pier; gasoline is available by truck.

(568)

Repairs

(569) Above-the-waterline repairs and minor electrical and small-engine repairs are available in Ponce. There is no drydock or large marine railway available at the port.

(570)

Small-craft facilities

(571) Berths with electricity, gasoline, diesel fuel, water, ice and a launching ramp are available. A 65-foot marine railway and a 50-ton lift can handle craft for hull, engine and electronic repairs.

(572)

Bahía de Tallaboa to Bahía de Guayanilla

(573) **Bahía de Tallaboa**, 27 miles east of Cabo Rojo Light, is an open bay somewhat protected by islands and surrounding reefs.

(574)

Prominent features

(575) The beach is intensely developed with tank farms, cracking towers, buildings and stacks. The most prominent objects are two large cracking towers, a large elevated water tank southeast of the cracking towers and a castlelike house on a hill above the extreme west edge of the bay. The two red and white striped stacks of the South Coast Steam Plant on the northeast shore of Bahía de Guayanilla and the large sugar mill stack northwest of Bahía de Guayanilla are also prominent from offshore.

(576)

Channels

(577) The principal entrance channel, marked by buoys, leads into Bahía de Tallaboa between **Cayo Caribe** on the east and **Cayo María Langa** and **Cayo Palomas** on the west. It is recommended that inbound vessels, when abeam of Buoy 4, steer directly for Buoy 6 until Buoy 5 is abeam to the west. This avoids the danger of being set onto the bank west of the channel by strong prevailing east winds. Shoals and reefs with depths of 10 feet and less extend from the islands nearly to the buoyed channel.

(578) It is reported 34 feet can be taken to the pier north of Cayo Río.

(579) There are numerous private piers and boathouses for yachts and small craft along the northeast shore of Bahía de Tallaboa extending from 66°42.2'W., to 66°43.0'W. This area is mostly foul with unmarked coral heads and reefs. Small craft should not attempt passage without local knowledge.

(580)

Anchorages

(581) Holding ground in Bahía de Tallaboa, charted as sticky, is poor, and dragging should be expected in winds greater than 25 knots. Bahía de Guayanilla, 1.5 miles west, is a good hurricane anchorage.

(582) Pilotage, towage, quarantine, customs, immigration agricultural quarantine services and harbor regulations for Bahía de Tallaboa are the same as for Bahía de Guayanilla (indexed as such), which is discussed later in this chapter.

(583)

Wharves

(584) A 2,100-foot pier, marked by a light at the seaward end, is in the north part of the bay about 0.3 mile northeast of Cayo Río. In 2012, a reported controlling depth of 34 feet was available along the outer 1,100 feet of the east

side. Crude petroleum and chemicals are received and petroleum products are shipped.

(585) A 35-foot-long barge wharf with dolphins is at the mouth of a 100-yard-wide outlet canal about 0.6 mile north of the tanker loading platform. In 1977, the controlling depth was 20 feet in the approach to the canal, thence in 1970, about 3 feet reported in the canal. The mouth of the canal is subject to silting.

(586) Anchorage should not be attempted shoreward of the loading platform as there is a possibility of rupturing the submerged chemical lines leading to the platform.

(587) **Bahía de Guayanilla**, 25 miles east of Cabo Rojo Light, is the largest hurricane harbor and one of the best in Puerto Rico. The reefs and islands to the southeast break the sea but not the wind; some dragging can be expected. The harbor, between low and wooded **Punta Guayanilla** on the east and bluff-faced **Punta Verraco** on the west, is protected at its entrance by extensive reefs that extend 1 mile or more offshore. The east part of the bay is a continuation of the industrial complex at Bahía de Tallaboa; large vessels call here to deliver and load petroleum and bulk chemical products.

(588)

Prominent features

(589) The features discussed for Bahía de Tallaboa are also prominent approaching Bahía de Guayanilla. The tanks of Punta Pepillo, the LNG tank of Eco Eléctrica and a large stack south of **Guayanilla**are conspicuous. A square white tower and a large white bulk storage tank bear 356° directly down the channel from the entrance.

(590) **Cerro Toro**, on the southwest side of Punta Verraco, has a 100-foot hill with a bluff head at its west end and a gentle slope northeast to the low part of Punta Verraco. There is a bright yellow spot in the bluffs on the southeast side. A low break separates the hills from **Punta Ventana**, 0.4 mile to the southwest. The hill and point usually show well.

(591)

Channels

(592) The entrance channel, marked by lighted and unlighted buoys and a **358.1°** lighted range, leads into Bahía de Guayanilla between shoals extending 0.4 mile from Cayo María Langa on the east and 1.4 miles from Punta Verraco on the west. Private lighted bouys and a **014°** private lighted range mark the channel to the pier in the north part of the bay. An obstruction, determined to be a metal plate, with a depth of 24 feet is on the east side of the pier. Another obstruction, a metal pipe, with a depth of 24 feet is near the approach to the offshore piers in the east part of the bay.

(593)

Anchorages

(594) The usual anchorage is 0.5 to 1 mile northeast of Punta Verraco in depths of 35 to 50 feet, although vessels can anchor any place in the bay according to draft. There is good holding bottom of thick mud. Small fishing boats anchor in the north end of the bay. A good hurricane anchorage for small craft drawing less than 10 feet can be had in the center of the cove about 1 mile 035° from Punta Gotay. The approach channel to the cove is about 200 yards north of Cayo Mata, thence east between two jutting points of land. Local knowledge is advised before attempting to navigate the channel.

(595)

Dangers

(596) Cayo María Langa is surrounded by reefs on which the sea breaks. The 30-foot curve is 0.3 mile south and about 0.6 mile east-southeast from the island, descending abruptly to great depths.

(597) **Arrecife Fanduco**, the southwest end of the shoal that extends 0.6 mile south of Punta Guayanilla and 0.4 mile west of Cayo María Langa, is partly bare at low water, and the sea always breaks on it. A shoal with depths of 8 to 12 feet extends 0.2 mile south-southwest from **Punta Gotay**, the west end of Punta Guayanilla. The outer end of the shoal is marked by the Entrance Range Front Light.

(598) **Arrecife Guayanilla** and **Arrecife Unitas**, on the west side of the entrance to Bahía de Guayanilla, form the south and southeast sides of the reefs, which extend 1.1 miles from Punta Verraco. The reefs are mostly bare at low water, and the sea always breaks on them. The 30-foot curve is about 0.2 mile from the south side, and the slope is abrupt to great depths. It has been reported that several deep-draft vessels have grounded on the 30-foot and shallower banks off the southeast end of Arrecife Guayanilla while approaching the harbor entrance.

(599)

Routes

(600) Vessels approaching in the daytime from east or west can follow the coast at a distance of 2.5 miles until the entrance to Bahía de Guayanilla is recognized, then follow the channel marked by buoys into the harbor. At night vessels should keep well offshore to avoid the reefs off the entrance until the entrance buoys are identified.

(601)

Pilotage, Bahía de Guayanilla

(602) See Pilotage, Puerto Rico (indexed as such) early this chapter. Vessels are usually boarded 3 miles outside the entrance buoys for Bahía de Guayanilla and Bahía de Tallaboa. Pilots can be contacted on VHF-FM channels 11 and 16. At least 2 hours' advance notice of arrival should be given.

(603)

Towage

(604) Tugs up to 4,000 hp are available for Bahía de Guayanilla and Bahía de Tallaboa. The tugs monitor VHF-FM channel 16.

(605)

Quarantine, customs, immigration and agricultural quarantine

(606) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(607) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(608)

Harbor regulations

(609) Local regulations are enforced by a Commonwealth Captain of the Port whose office is at Playa de Guayanilla.

(610)

Wharves

(611) An offshore pier extends southwest from the south end of Punta Guayanilla to deep water near the entrance channel. There is a main ship berth at the outer end and, from there, pipelines extend north and south. The total berthing area is about 1,300 feet. The pier is used for shipment of liquid natual gas.

(612) **Pierless Oil Wharf**, on the west side of Punta Guayanilla at Punta Gotay, is 100 feet long with dolphins and had a reported depth of about 38 feet alongside.

(613) Two piers at the end of a causeway, 0.4 mile southwest of Punta Pepillo, provide about 2,700 feet of berthing space. Depths alongside are reported to be about 36 feet. The ends of the piers are marked by private lights. There are pipelines on the piers for water and petroleum products. A 250-foot work-barge wharf with dolphins 0.1 mile east of the north pier has a reported depth of about 16 feet alongside.

(614) **Pierless distributing plant wharf** off Punta Pepillo is about 820 feet long with dolphins. Depths of 30 feet were reported alongside. Private lights mark the wharf.

(615) **The Demaco Company** has a 1,100-foot pier in the north part of the bay. The privately dredged approach channel leading to the pier is marked by private lighted buoys and a private **014°** lighted range. In 2012, a reported controlling depth of 30 feet was reported in the approach channel, thence depths of 39 feet were reported alongside the pier. A 200-foot-long tug pier is about 0.1 mile east of the pier.

(616)

Supplies

(617) Bunker C, light diesel oil, other petroleum products and at times marine diesel oil are available at the two piers at the end of the causeway, 0.4 mile southwest of Punta Pepillo; 3 days advance notice is required to obtain the marine diesel oil. Any bunker or diesel can be delivered by truck at South PR Towing. Groceries and marine supplies can be obtained from Ponce, 12 miles by highway from Bahía de Guayanilla.

(618)

Repairs

(619) No repair facilities are available. Above-the-waterline and minor electrical and small engine repairs can be made in Ponce.

(620)

Bahía de Guánica

(621) **Bahía de Guánica**, 16 miles east of Cabo Rojo Light, is small but one of the best hurricane harbors in Puerto Rico. The bay is protected by the steep, high and wooded shores on the east and west sides. Large vessels call to load fertilizer at **Guánica**.

(622)

Prominent features

(623) An abandoned lighthouse tower on Punta Meseta is prominent in the daytime. Power transmission towers located on either side of the channel and a 39-foot water tower northwest of **Punta Meseta** are visible from seaward. Once inside the harbor, the most prominent objects are two stacks at the former sugar mill, a cupola at a large house near the former sugar mill and a fixed crane at the fertilizer wharf 0.5 mile north of Punta Meseta.

(624)

Channels

(625) The approach to Bahía de Guánica is about 1 mile southeast of **Punta Brea** (17°56.0'N., 66°55.2'W.), thence through a channel leading north to a turning basin. The channel continues from the turning basin northwest to the town of **Ensenada**. The entrance channel is marked by lighted bouys and a **354.9°** lighted range; buoys mark the turning basin.

(626) An overhead power cable with a clearance of 150 feet crosses the channel about 0.4 mile inside the entrance.

(627)

Anchorages

(628) Vessels may anchor any place in the bay according to draft. The bottom is soft and holding ground is good, except in the entrance. Small fishing boats anchor off Playa de Guánica.

(629)

Dangers

(630) **Cayos de Cana Gorda**, 2 miles east of the entrance to Bahía de Guánica, extend 0.8 mile southwest from **Punta Ballena**. They are low and covered with mangrove and do not show well from seaward. Reefs partly bare at low water surround them to a distance of 0.3 mile.

(631) **Arrecife Coral**, a mile east of the entrance, is an extensive coral reef partly bare at low water. The west end of the reef is nearly a mile southeast from Punta Meseta. Foul ground is between it, the north shore and Cayos de Cana Gorda.

(632) **Corona La Laja**, 0.9 mile south of Punta Meseta, is about 0.2 mile in diameter with 8 to 17 feet over it; the sea seldom breaks on the shoal. A ridge with depths of 22 to 24 feet extends over 0.3 mile west of the shoal almost to the buoyed channel.

(633) Between the west side of the entrance channel and Punta Brea are several detached spots from 20 to 30 feet; the chart is the best guide.

(634) **Ensenada las Pardas**, an open bay north of Punta Brea, is fringed with reefs, mostly bare at low water on which the sea breaks; the reefs make out as much as 0.4 mile from the shore.

(635)

Routes

(636) From a position 2.5 miles south of Punta Meseta, pass Entrance Lighted Buoy 2, thence steer to pass midway between Buoy 3 and Lighted Buoy 4, thence pass Buoy 5 and steady on the **354.9°** lighted entrance range into the harbor. Care should be taken to avoid 20-foot shoals west of Buoy 3 and east of Lighted Buoy 4.

(637)

Pilotage, Bahía de Guánica

(638) See Pilotage, Puerto Rico (indexed as such) early this chapter. Pilots from Bahía de Guayanilla serve Bahía de Guánica. Vessels are usually boarded 1.2 miles south of the entrance Lighted Buoy 2. Pilots may be contacted on 2182 and 2738 kHz. Several hours' notice must be given to allow the pilot to come from Guayanilla.

(639)

Towage

(640) Tugs from Bahía de Guayanilla are available if necessary.

(641)

Quarantine, customs, immigration and agricultural quarantine

(642) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(643) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(644) Guánica is a **customs port of entry**.

(645)

Harbor regulations

(646) Local regulations are enforced by a Commonwealth Captain of the Port whose office is near Playa de Guánica.

(647)

Wharves

(648) A 440-foot fertilizer bulkhead wharf with a conveyor, 0.5 mile north of Punta Meseta, has 28 feet reported alongside. A chemical pier with dolphins, 0.7 mile north of Punta Meseta, has 24 feet reported alongside; a conveyor system and pipelines are available.

(649)

Punta Jorobado to Bajo Casabe

(650) The 13.5-mile stretch of coast between Punta Jorobado and Cabo Rojo includes numerous cays, islets and reefs, some of which extend as much as 4 miles offshore. The area is important as a commercial fishing ground; many small fishing boats base in the coves and fishing villages.

(651) A range of high hills shows up inland for virtually the whole distance. The highest points are **Cerro Vertero**, 4.4 miles northwest of Punta Jorobado, and **Cerro Mariquita**, 6 miles northeast of Cabo Rojo.

(652) **Punta Jorobado**, 2 miles west of Punta Brea, is a small projecting point with a hummock 92 feet high. **Arrecife Baúl** is a reef lying 0.7 mile southeast of the point. **Turrumoto II**, a mile west of Punta Jorobado, is a sandy islet 300 yards wide surrounded by reefs. **Bahía Montalva**, the bay about 2.8 miles northwest of Punta Jorobado, offers some protection behind **Arrecife Romero** and **Arrecife Enmedio** for craft drawing up to 12 feet, but care is required in entering. **Turrumote I**, an islet 3.6 miles west of Punta Jorobado, is small and sandy, with shoals of 9 to 21 feet deep extending southeast and southwest.

(653) At **La Parguera**, 8.5 miles east of Cabo Rojo Light, there is a somewhat protected harbor for small boats. Depths of 6 to 10 feet can be taken to the landing. Berths, electricity, gasoline and some groceries are available. A small marine railway can handle craft up to 60 feet for hull repairs only.

(654) **Arrecife Margarita**, 9 miles west of Punta Jorobado, is 1.5 miles south of **Punta Tocón**, and its west end is about 2 miles southeast of Cabo Rojo. Rocks awash and depths up to 28 feet are on this reef, which extends nearly 4.5 miles in an east-west direction.

(655) **Cabo Rojo**, the southwest point of Puerto Rico, is a low neck 1.5 miles long, at the south end of which are two hills with yellow bluff faces; the east hill is 118 feet high, and the west hill is 75 feet high. **Cabo Rojo Light** (17°56'01"N., 67°11'32"W.), 121 feet above the water, is shown from a gray hexagonal tower attached to a flat-roofed dwelling on the southeast point of the cape.

(656) The **west coast** of Puerto Rico extends 26 miles north from Cabo Rojo to Punta Higuero and then 11 miles northeast to Punta Borinquen. The coast is irregular with projecting wooded points between shallow bays. Places for small boat landings can be found in ordinary weather, but landing is dangerous in rough weather. In the south part the land is low near the shore with prominent high hills in the interior. Between Cabo Rojo and Bahía de Mayaguez reefs with depths of 30 feet or less extend up to 13 miles offshore; lighted buoys mark the extension of the shoal area. North of Bahía de Mayaguez the dangers are within 1 to 2 miles of the shore. Small vessels with local knowledge use an 18-foot buoyed passage 1 to 2 miles offshore between Cabo Rojo and Bahía de Mayaguez.

(657) **Punta Águila**, 1.7 miles northwest of Cabo Rojo Light, consists of 2 small bluff heads with lower land behind them. A shoal with depths of 12 to 16 feet extends 1 mile west from the point. Water and gasoline are available at a fishing village a mile north of the point.

(658) **Bajo Casabe** is a shoal that makes off between Punta Aguila and Punta Melones. The 18-foot curve is about 0.4 mile from shore at Punta Melones. Depths of 24 to 42 feet are near the west edge, which is fairly steep-to. A shoal with 22 to 28 feet extends west from the south part of Bajo Casabe, its west end lying about 2.7 miles west-northwest from Punta Águila.

(659)
Bahia de Boqueron

(660) **Bahía de Boqueron**, 6 miles north of Cabo Rojo, is a good harbor for vessels passing through Canal Guanajibo. It is easily entered but is rarely used, except by small local boats. The better hurricane anchorage is at Guánica. The bay is 2.6 miles wide at the entrance between Punta Melones and Punta Guaniquilla and extends 2 miles to its head where it is a mile wide. There are two entrances, north and south of **Bajo Enmedio**, the latter a rocky area with depths of 4 to 17 feet that lies across the middle of the bay. A lighted buoy marks its south edge.

(661) **Punta Melones**, the south point, is a bluff at the water's edge, backed by a 230-foot hill. Punta Guaniquilla, the north point, is sharply projecting and prominent.

(662) For 0.6 mile inside Bajo Enmedio the depths are 21 to 35 feet. A ridge with depths of 20 to 23 feet extends in a north and south direction near the middle of the bay between Bajos Roman and Ramito. The depths east of the ridge decrease gradually from 26 to 12 feet.

(663) **Canal Norte** is the channel leading into the bay between Punta Guaniquilla and the north end of Bajo Enmedio. It has a least width of about 350 yards, with depths of 21 to 28 feet. Owing to its nearness to the shore, this channel is easily followed and is the better one for strangers. **Canal Sur**, the south channel, leads between Bajos Enmedio and Palo. It is 350 yards wide between the 30-foot curves, with depths of 34 to 39 feet in the middle.

(664) Anchorage can be had with soft bottom anywhere in Bahía de Boqueron, except on the shoals where the bottom is hard.

(665) **Bajo Palo** is a shoal that extends nearly 0.7 mile north from the south shore of the bay, between 0.4 and 0.8 mile northeast of Punta Melones. A depth of 5 feet is 0.3 mile from shore, and north of this the water deepens gradually from 8 to 13 feet at its north end. The west side of the shoal is steep-to.

(666) **Bajo Ramito** is a small shoal with a depth of 7 feet and 20 to 24 feet close-to, 0.5 mile from the south side of the bay, and 1.7 miles northeast from Punta Melones. **Roca Velasquez**, a rock that should be avoided by all vessels, lies nearly 0.2 mile west from the village of Boqueron. Several submerged rocks are scattered throughout a 0.5-mile radius west and southwest of the village. **Bajo Roman** is a small patch on which the least depth is 11 feet, with a surrounding depth of 27 feet. It lies about 0.4 mile from the north shore and 1 mile southeast from Punta Guaniquilla.

(667) **Boqueron**, a small fishing settlement on the north side at the head of the bay, is principally a bathing resort for Mayaguez. A private boating club has depths of 3 to 5 feet alongside. Berths, electricity, gasoline, diesel fuel, water, ice, a launching ramp and some marine supplies are available.

(668)
Canal de Guanajibo to Cayo Fanduca

(669) **Canal de Guanajibo**, a buoyed passage inside the reefs between Punta Aguilla and Bahía de Mayaguez, has a least depth of 18 feet at its north end on the ridge extending northeast from Escollo Negro. The least depth at the south end of the channel is 23 to 24 feet on a bank making west from Bajo Casabe. The current velocity is about 1 knot and sets north and south in the channel.

(670) **Bajos Resuello**, the shoals off the entrance to Bahía de Boqueron, consist of three shoals separated by channels having depths of 36 to 49 feet; the south extremity of the shoals is west from Punta Melones and is marked by a buoy.

(671) **Bajo Corona Larga** consists of two shoals with depth of 24 to 66 feet between them. The northwest shoal, 1.3 miles long, is 4.5 miles west from Punta Guaniquilla; it has a least depth of 12 feet at its north end. The southeast shoal is 1 mile long and has depths on the coral heads of 16 to 18 feet.

(672) **Punta Carenero**, the north point at the entrance to Puerto Real, is low with many coconut trees, and at the water is a fringe of mangrove. **Punta La Mela**, the south point of Puerto Real, is low and covered with coconut trees that extend south to **Punta Boca Prieta**. A good anchorage in 36 feet is 0.5 mile west of Punta La Mela.

(673) **Cerro Buena Vista**, an 850-foot hill 3.4 miles east of Puerto Real, is a prominent and useful landmark for many miles, especially from west. From that direction it shows a knob at the summit, with a steep convex slope on its north side.

(674) **Puerto Real**, 8 miles north of Cabo Rojo, is a circular basin 0.7 mile in diameter used by local fishing vessels and small pleasure craft. Depths in the basin are 6 to 15 feet with shoal water toward the east end. **Puerto Real**, a small fishing community, is on the north shore of the basin. Water, gasoline and some groceries are available. A small marine railway can haul out craft for minor repairs.

(675) **Escollo Media Luna**, a rocky patch with a least depth of 25 feet, is 12 miles northwest of Cabo Rojo and 6.5 miles offshore. **Las Coronas** consists of a shoal of numerous heads with depths of 9 to 14 feet, the south end of which is 3.2 miles northwest of Punta Guaniquilla. The shoal extends 1 mile north and 2.5 miles east-northeast toward Punta Ostiones and, together with the shoals extending off that point, forms a ridge across Canal de Guanajibo. The depths are 9 to 15 feet on the shoalest section of this ridge 3 miles west-southwest from Punta Ostiones, and depths of 13 to 17 feet are along the center portion of the ridge.

(676) **Escollo Negro** is the north shoal on the west side of Canal de Guanajibo. It is about 2.2 miles long in a northeast direction and about 1.3 miles wide. Depths are 7 to 12 feet. A buoy marks an 18-foot passage across the ridge into Canal de Guanajibo.

(677) **Arrecife Tourmaline** extends 5 miles west from Escollo Negro, with a width of 2.7 miles, its northwest end lying 9.2 miles west from Punta Guanajibo. On the west and south parts of the reef are depths of 30 to 42 feet, decreasing to 18 and 24 feet on its northeast part. A 30-foot spot off the northwest end of the reef is marked by a lighted buoy.

(678) **Punta Ostiones**, 9.5 miles north of Cabo Rojo and 1.3 miles north of the entrance to Puerto Real, is projecting and prominent, especially as seen from south. **Cayo Fanduca**, 0.8 mile southwest from Punta Ostiones and about 0.5 mile from shore, consists of a few bare rocks. A narrow channel between it and the shore has a depth of about 3 feet, but it should not be attempted by strangers.

(679)

Bahia de Mayaguez

(680) **Bahía de Mayaguez**, about halfway along the 34-mile stretch of the west coast between Cabo Rojo and Punta Borinquen, is one of the three leading ports of Puerto Rico. The open roadstead is easy to enter day or night and is a good harbor in all but hurricane weather. The shipping terminal is in the north part of the 3.8-mile-wide bay which is protected somewhat by the shoals that extend across the entrance. Depths of 30 to 60 feet are in the north part of the bay, but the south part is shoal.

(681) **Mayaguez**, the largest city on the west coast of Puerto Rico, is a mile south of the terminal and 101 miles by highway from San Juan. The principal imports include foodstuffs, building materials, machinery, fertilizers, textiles and some petroleum products. Exports include clothing, fruit, vegetables and tuna fish.

(682)

Prominent features

(683) **Punta Guanajibo**, 14 miles north of Cabo Rojo Light, is a 165-foot flat-topped ridge on the south side of Bahía de Mayaguez. A reform school on the point shows well from south.

(684) **Cerro Anterior**, a 433-foot saddle-shaped hill 1.5 miles inshore at Mayaguez, is conspicuous, and **Pico Montuoso**, a dome-shaped peak 9 miles eastward of the bay, is readily identified from west.

(685) The city hall clock tower and a church are conspicuous above the other buildings at Mayaguez. Several red and white radio towers are visible along the south shore of the bay. A tall blue water tank is prominent behind the radio towers.

(686) Storage tanks and two closely positioned stacks are visible.

(687) A group of storage tanks and a tall boom on a conveyor pier are prominent about 750 yards southeast of **Punta Algarrobo**.

(688)

Channels

(689) The principal entrance channel is between the lighted buoys marking Manchas Grandes and Manchas Interiores. Federal project depths in the Approach and Terminal Channels are 30 feet. (See Notice to Mariners and latest editions of charts for controlling depths.) The approach to the terminal is marked by a lighted **092°** range, and the approach to the anchorage is marked by a daybeacon 0.2 mile south of Punta Algarrobito.

(690) A secondary channel with depths of 18 feet or more leads into the bay from north inside of Manchas Exteriores and Manchas Interiores and west of Arrecife Algarrobo.

(691)

Anchorages

(692) The usual anchorage is southwest of the shipping terminal in depths of 30 to 50 feet; the holding ground is good. The nearest hurricane anchorage is on the south coast of Bahía de Guánica, a distance of 60 miles.

(693) Small fishing boats anchor in depths of 3 to 12 feet along the shore south of the shipping terminal. Pleasure craft anchor in depths of 7 to 12 feet along the shore 1.2 miles south of the terminal. Some small boats use Puerto Real, 10 miles south of Bahía de Mayaguez, as a hurricane anchorage.

(694)

Dangers

(695) **Escollo Rodriguez**, a bank with depths of 3 to 18 feet extending north for 2.5 miles from Punta Guanajibo, has a reef at the west end that is awash and always breaks. **Roca Blanca**, 0.7 mile northeast of the reef, has 9 feet over it with deep water close-to.

(696) **Manchas Grandes**, on the south side of the principal entrance, has depths of 10 to 20 feet and extends south to Escollo Rodriguez.

(697) **Manchas Interiores** and **Manchas Exteriores** with depths of 12 to 18 feet extend in a northwest direction for 2 miles on the north side of the principal entrance. The west side of the shoals are steep-to, but broken ground on the east side extends to within a mile of the shore; some spots have depths of 18 feet.

(698) **Arrecife Algarrobo**, a mile northwest of the terminal, has a few heads that bare at low water; the sea frequently breaks on the reef.

(699) **Bajo Mondongo**, 500 yards southwest of the terminal, is a small shoal partly awash. A sunken wharf is off **Punta Algarrobito**, 0.4 mile south of the terminal.

(700) When winds are out of the west or southwest, a surge is felt in the harbor causing vessels to pound against the terminal wharf. Smaller vessels are forced to anchor off under such conditions.

(701)

Currents

(702) The current velocity is about 1 knot and sets north and south across the entrance to Bahía de Mayaguez.

(703)

Weather

(704) The tropical climate of Bahía de Mayaguez features average rainfall of more than 78 inches annually, a small diurnal and annual temperature range and a sea breeze

that opposes the trade winds. About 8 to 11 inches of rain falls on 11 to 14 days each month from May through October. Thunder is heard on 12 to 15 days each month during this period. Maximum temperatures range from the mid-80s (°F) in winter to around 90°F in summer and climb to 90°F or above on 10 to 19 days each month from April through October. Winds mainly blow out of the east-northeast, and sea breezes are not common. Visibilities are good, except in showers.

(705)

Routes

(706) From south: When abeam of Arrecife Tourmaline Lighted Buoy 8, steer **060°** for about 7.5 miles, then head in on the lighted entrance range bearing **092°**. Note that this range leads to the north edge of the Approach Channel. If proceeding to the shipping terminal leave the range when abeam of Lighted Buoy 5 and steer **096°** to line up with the Terminal Channel. If proceeding to anchorage leave the range just after passing between the buoys marking Manchas Interiores and Manchas Grandes and head for the daybeacon 0.2 mile south of Punta Algarrobito, then anchor according to draft.

(707) From north: When Punta Higuero Light bears 120°, distant 2.3 miles, steer **153°** for about 10.7 miles and enter on the lighted range.

(708)

Pilotage, Bahía de Mayaguez

(709) See Pilotage, Puerto Rico (indexed as such) early this chapter. Vessels are boarded 1.1 miles west of the entrance Lighted Buoy 3.

(710)

Quarantine, customs, immigration and agricultural quarantine

(711) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(712) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(713) Mayaguez is a **customs port of entry**. The deputy collector of customs and his inspectors act as immigration officers.

(714) **Agricultural quarantine** officials are stationed in Mayaguez. (See Appendix A for address.)

(715)

Harbor regulations

(716) A Commonwealth Captain of the Port with an office on the Ports Authority shipping terminal wharf enforces the local rules and regulations for Bahía de Mayaguez.

(717)

Wharves

(718) The **Ports Authority Terminal**, in the north part of the bay, is under the control of the City Government and Private Administration.

(719) The 1,280-foot bulkhead wharf (18°13'12"N., 67°09'39"W.) has a reported depth of about 28 feet alongside. Covered transit sheds, pipelines for water, fuel oil, molasses and conveyors are available. General cargo is received.

(720) About 750 feet northwest of the terminal wharf, a bulkhead wharf extends about 1,300 feet.

(721) The easternmost wharf is about 525 feet long with 20 feet alongside; covered storage, pipelines for water and diesel fuel are available.

(722) Immediately northwest of the easternmost wharf, 595 feet long with about 30 feet alongside; fresh water is available.

(723) Immediately northwest of the middle wharf, 200 feet long with about 30 feet alongside; fresh water is available.

(724) The **Pecuarias de Puerto Rico conveyor pier** (18°13'27"N., 67°10'10"W.) is a 31-foot pier with dolphins with depths of 25 feet reported alongside. A conveyor system is used to receive bulk grains.

(725)

Supplies

(726) Most supplies are available at Mayaguez. If necessary, supplies can be brought in from San Juan by truck in a few hours. Water and diesel oil are available at the terminal; gasoline can be trucked in.

(727)

Repairs

(728) Machine shops in Mayaguez can make above-the-waterline repairs to vessels.

(729) **Bahía de Anasco**, 4.5 miles northwest of Bahía de Mayaguez, is somewhat foul in the north part for about a mile from shore. There are shoals with 16 to 17 feet over them inside the 10-fathom curve. A tall stack, 1.8 miles inland, is prominent, and the entrances to the several rivers that empty into the bay show as breaks in the coconut groves.

(730) **Punta Cadena**, together with the **Cerros de San Francisco** extending east, is quite prominent. The dome-shaped hills slope upward to **Pico Atalaya**, 3 miles inland. From the point to Punta Higuero many rocks and coral reefs extend up to 0.6 mile offshore, then the bottom increases rapidly to great depths, making soundings of little use to indicate danger or distance from shore.

(731) Canal de la Mona and the west coast of Puerto Rico north of Punta Higuero has been described previously in this chapter.

(732)

Navassa Island

(733) **Navassa Island** (18°24'N., 75°01'W.), a United States possession claimed in 1857, formally annexed by presidential proclamation in January 1916, and under the jurisdiction of the U.S. Fish and Wildlife Service, is about 527 miles southeast of Key West and about 30 miles west of Hispaniola. The island is about 1.9 miles long and 1.1 miles wide. The shoreline consists of steep, jagged, undercut rock formations that rise as much as 50 feet from the sea. The interior comprises about 1.8 square miles of terrain sloping steeply upward to a lofty, undulating

tableland with scattered trees and cactus. The island is uninhabited except for a few wild goats. There is no water on the island, and the terrain is extremely rugged. The island is reported visible on radar at 22 miles.

(734) **Lulu Bay**, a small indentation on the southwest side, fronts the ruins of a former phosphate mining operation. Small craft can anchor here, but caution should be exercised due to the close proximity of the undercut rock and the frequent surge that has been observed to be as much as 7 to 10 feet. In 2006, significant tide rips were reported on the northwest and southeast points of the island. The rips were most prominent prior to sunrise and after sunset. Vessels can anchor about 0.4 mile west-southwest of Lulu Bay with the light bearing about 080°; sand and coral bottom.

(735) Requests to visit Navassa Island should be made to the Commander, Seventh Coast Guard District, Miami, FL. (See Appendix A for address.)

(736) Navassa Island is also described in Pub. No. 147, Sailing Directions (Enroute), Caribbean Sea, published by the National Geospatial-Intelligence Agency.

Chart Coverage in Coast Pilot 5—Chapter 14
NOAA's Online Interactive Chart Catalog has complete chart coverage
https://charts.noaa.gov/InteractiveCatalog/nrnc.shtml
64°30'W
65°W
64°45'W
VIRGIN ISLANDS
18°30'N
Jost Van Dyke Island
Tobago Island
TORTOLA
ST. THOMAS
Peter Island
SIR FRANCIS DRAKE CHANNEL
ST. JOHN
Norman Island
PILLSBURY SOUND
18°15'N
Charlotte Amalie
MAR CARIBE
18°N
Christiansted
17°45'N
Frederiksted
Port Alucroix
ST. CROIX
17°30'N

Virgin Islands

(1) This chapter describes the United States **Virgin Islands**, which include the islands of St. Thomas, St. John and St. Croix and about 40 small islets or cays. Information is given on the ports and harbors of the islands including Charlotte Amalie, Christiansted, Port St. Croix, Cruz Bay and Frederiksted. A general description of the British Virgin Islands is also included; more complete information is given in Pub. No. 147, Sailing Directions (Enroute), Caribbean Sea, Vol. I, published by the United States National Geospatial-Intelligence Agency, and West Indies Pilot, Volume II, published by the United Kingdom Ministry of Defense Hydrographic Department.

(2)

Note

(3) In this chapter a chart number marked by an asterisk indicates that the chart is published by National Geospatial-Intelligence Agency.

(4) The **United States Virgin Islands**, separated from the easternmost island of the Puerto Rico group by 8-mile-wide Virgin Passage, were purchased from Denmark in 1917 and United States citizenship conferred upon the islanders in 1927. Under the revised Organic Act of 1954, legislative powers are vested in a Senate, whose members are elected by the islanders for 2-year terms. The Governor, who has certain veto powers, is elected by the people of the U.S. Virgin Islands. The capital is Charlotte Amalie, on the island of St. Thomas.

(5) The **British Virgin Islands** are north and east of the United States group. The United States-United Kingdom boundary extends southeast between Hans Lollik and Little Tobago Islands, thence through the narrows between St. John and Tortola Islands, and thence south through Flanagan Passage between Flanagan and Norman Islands.

(6)

Prominent features

(7) Making the Virgin Islands from the north, Virgin Gorda (British) will be seen on the extreme left, rising in a clear, well-defined peak about 1,400 feet high. Next to Virgin Gorda, Tortola (also British) will appear most conspicuous; the highest mountain appears flattened and elongated from north but rises to an elevation of about 1,800 feet. Immediately west of Tortola will be seen the rugged, pointed peaks of Jost Van Dyke (British), rising to about 1,100 feet, and behind them the irregular small peaks rising from the tableland of St. John (U.S.) to heights of 800 to 1,300 feet.

(8) From about 20 miles north of the islands, a separation will be observed between St. Thomas and St. John, but St. John, Jost Van Dyke, Tortola and Virgin Gorda will appear to be one large island. St. Thomas is less rugged in outline than the other islands, but it may be recognized from its large midisland saddle that has horns nearly 1,600 feet high; the saddle is equally conspicuous from the south.

(9)

COLREGS Demarcation Lines

(10) The lines established for the Virgin Islands are described in **33 CFR 80.738**, chapter 2.

(11)

Vessel traffic management

(12) (See **33 CFR Part 161, Subpart A**, chapter 2, for regulations requiring notifications of arrivals, departures, hazardous conditions and certain dangerous cargoes to the Captain of the Port.)

(13)

Routes

(14) From Charlotte Amalie to the Straits of Florida, proceed through Virgin Passage and thence as direct as safe navigation permits along the north coasts of Puerto Rico and Hispaniola, and then along the north coast of Cuba through Old Bahama and Nicholas Channels to destination. The distance is 1,086 miles.

(15) Bound to Baltimore, New York or Boston, pass west of Sail Rock and, when clear of Virgin Passage, take a great circle course direct to destination. Distances from Charlotte Amalie are 1,418 miles to Baltimore, 1,435 miles to New York and 1,517 miles to Boston.

(16)

Currents

(17) The currents among the Virgin Islands, although of considerable importance to navigators, are not well established by observation. The tidal current is said to set southeast and northwest. In the general vicinity of the islands there is an oceanic current with a velocity of about 0.2 knot that sets in a direction varying from northwest to west. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(18)

Weather

(19) The following description of weather conditions in the Virgin Islands was prepared by the Office of

(24)

METEOROLOGICAL TABLE – COASTAL AREA OFF VIRGIN ISLANDS
Between 17°N to 19°N and 64°W to 66°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.3	0.0	0.3	0.1	0.1
Wave Height > 9 feet [1]	1.1	0.7	1.0	0.7	0.4	0.5	0.8	0.8	1.0	0.4	1.3	1.6	0.9
Visibility < 2 nautical miles [1]	0.1	0.2	0.2	0.2	0.5	0.2	0.4	0.4	0.4	0.2	0.7	0.3	0.3
Precipitation [1]	2.9	2.3	2.9	2.5	5.3	3.9	3.6	4.4	4.5	3.8	6.6	4.9	3.7
Temperature > 69° F	99.7	99.8	99.6	99.9	99.9	100.0	99.9	100.0	100.0	100.0	100.0	100.0	99.9
Mean Temperature (°F)	78.1	77.9	77.9	79.0	80.5	81.9	82.4	82.7	82.8	82.5	81.2	79.5	80.1
Temperature < 33° F [1]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean RH (%)	77	76	76	77	80	79	79	80	79	80	78	77	78
Overcast or Obscured [1]	3.3	3.1	4.2	4.3	11.3	8.2	7.9	7.9	8.9	7.3	6.3	6.0	6.0
Mean Cloud Cover (8ths)	3.3	3.3	3.3	3.5	4.3	4.1	4.0	3.9	4.1	3.9	3.8	3.7	3.7
Mean SLP (mbs)	1016	1016	1016	1015	1015	1016	1017	1015	1014	1013	1013	1015	1015
Ext. Max. SLP (mbs)	1032	1031	1030	1028	1027	1028	1027	1028	1025	1026	1025	1028	1032
Ext. Min. SLP (mbs)	1001	1001	1002	1001	1002	1003	1005	1001	1001	1000	999	1000	999
Prevailing Wind Direction	E	E	E	E	E	E	E	E	E	E	E	E	E
Thunder and Lightning [1]	0.1	0.1	0.1	0.1	1.5	1.4	1.8	2.3	4.3	4.4	2.3	0.7	1.3

[1] Percentage Frequency

Climatology, Environmental Data and Information Service.

(20)

Wind

(21) One of the outstanding features of the climate in the Virgin Islands is the steadiness of the trade winds. They blow almost without exception from an east direction, or between north-northeast and south-southeast. The highest mean maximum wind speeds usually occur in the winter from late December to the end of January. Superimposed on the trade winds are the land and sea breezes, which are important in most coastal areas. Night winds are lighter than the daytime winds. About daybreak the wind speed begins to pick up, reaching a maximum late in the morning or early afternoon. A return to the lighter nighttime winds begins during the late afternoon, usually about 1600. It must be remembered that these islands are located in the path of occasional tropical storms or hurricanes and extremely high winds may be experienced during such passages. Thirteen tropical systems have passed within 50 miles of Charlotte Amalie since 1950 including Georges in 1998, Marilyn in 1995, Hugo in 1989, and Donna in 1960. Both Hugo and Donna provided winds in excess of 130 knots. (See chapter 3 for information about hurricanes.)

(22)

Precipitation

(23) The time of maximum rainfall expectancy is roughly from May through November or December, with showers providing most of the rain. The heavier rains have usually been associated with tropical cyclones and hurricanes that are most likely to reach the area during the months of August, September and October or with frontal systems or east waves that may reach the area in these or other months. The average annual rainfall at Charlotte Amalie is 41 inches, with a maximum rainfall during September and a minimum in February. The average annual temperature at Charlotte Amalie is 80.4°F, with a average maximum of 85.7°F and an average minimum of 74.7°F. Each month, April through November, has recorded maximum temperatures in excess of 90°F with the all-time maximum, 92°F, occurring in six separate months: May, and July through November, of various years. The extreme minimum temperature recorded at Charlotte Amalie is 63°F, recorded in January 1956.

(25)

Pilotage, U.S. Virgin Islands

(26) Vessels of and above 100 gross registered tons and those vessels carrying explosives and dangerous cargo must engage for the services of an Insular Government pilot in order to enter, leave or shift berths in a U.S. Virgin Islands port. Vessels of less tonnage and vessels of the United States or foreign governments are exempt from pilotage unless a pilot is actually employed. Exempted vessels when requiring the services of a pilot will be charged the regular rate. Pilots will take all classes of vessels in or out, day or night, unless otherwise noted. Arrangements for pilots shall be made 24 hours prior to ship's arrival. Email: sttpilots@gmail.com; FAX 340-777-9694.

(27)

Quarantine, customs, immigration and agricultural quarantine

(28) National quarantine laws are enforced in the U.S. Virgin Islands by officers of the U.S. Public Health Service. All vessels from foreign ports, vessels with sickness on board and vessels from domestic ports where certain quarantinable diseases prevail are subject to inspection. (See Public Health Service, chapter 1.)

(29) The **customs** collection district of the U.S. Virgin Islands is under the jurisdiction of the U.S. Treasury Department but has its own customs laws. Imports

manufactured in the United States enter free of duty. All foreign goods coming into the islands are subject to an import duty of 6 percent, ad valorem, unless specified as free of duty, even if imported from continental United States.

(30) **Agricultural quarantine** laws are enforced by officials at Charlotte Amalie and Christiansted.

(31) The United States immigration laws apply in the U.S. Virgin Islands. Passports and visas are required by persons other than U.S. citizens.

(32)

Wharves

(33) Deep-draft facilities are at Charlotte Amalie, St. Thomas Island, and on St. Croix Island at Frederiksted, and at the private facilities at Port St. Croix and in Limetree Bay. Vessels drawing up to 16 feet can go alongside Gallows Bay Dock at Christiansted, St. Croix Island. At other places only small craft go alongside the wharves.

(34)

Speed limit restrictions

(35) Motorboats shall not exceed a speed in excess of 6 miles per hour in the waters of Cruz Bay, St. John (east of Lind Point to the north and Galge Point to the south), and in the waters of Red Hook Bay (west of Redhook Point in range of the western end of Shark Island), and in the waters of St. Thomas Harbor, there is no set speed restriction. Vessels shall maintain safe speed and are responsible for their own wake.

(36)

Supplies

(37) Bunker fuels, diesel oil and gasoline are available only at Port St. Croix on an emergency basis. Diesel fuel, water and marine supplies are available at Charlotte Amalie. Limited marine supplies can be obtained at Christiansted and Frederiksted. Gasoline, diesel fuel and marine supplies for small craft are available at the marinas around the islands.

(38)

Repairs

(39) There are no facilities at any of the ports for major repairs to deep-draft vessels. Machine shops at Charlotte Amalie, Christiansted and Frederiksted can make minor above-the-waterline repairs.

(40)

Communications

(41) The islands of St. Thomas, St. John and St. Croix have good highways. Regular air service is maintained between St. Thomas Island, St. Croix Island, San Juan, United States, and some foreign ports. Cruise ship lines call at Charlotte Amalie and Frederiksted. Small interisland vessels operate from United States Virgin Island ports to the British Virgin Islands, Puerto Rico and other West Indies ports.

(42) Telephone, radio and cable service facilities are available on the islands of St. Thomas, St. John and St. Croix.

(43)

Currency

(44) The monetary unit is the U.S. dollar.

(45)

Standard time

(46) The U.S. Virgin Islands use Atlantic standard time, which is 4 hours slow of Coordinated Universal Time. The U.S. Virgin Islands do not observe daylight saving time.

(47)

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Chart - 25640

(48) Most of the Virgin Islands are situated on the south side of **Virgin Bank**, which extends in an east and east-northeast direction for 86 miles from the east end of Puerto Rico. For about 50 miles the bank trends east, averaging 25 miles in width, and then swings slightly east-northeast, increasing in width to 32 miles. It terminates close beyond the southeast extremity of Anegada Island in a point several miles wide.

(49) The bank is an ocean shelf, with abrupt drops in depths near its edges. On the north side of the island group, west of 64°40'W. and within half a mile of the islands, the general depths range from 18 to 40 fathoms except for the outlying banks. East of this line, the depths gradually decrease until soundings of 6 fathoms are found about 0.8 mile off the west end of Anegada Island. On the south side of the island group, the depths differ considerably from those on the north side. The south side is bold and wall sided and lies from 1 to 7 miles off the islands; general depths of 8 to 33 fathoms are found in this area. Close within the outer edge of the bank is a narrow ledge of coral that extends almost unbroken from Horse Shoe Reef, at Anegada Island, to Isla de Vieques. This ledge, about 200 yards wide, has depths of 11 to 19 fathoms.

(50) **Whale Banks**, about 13 miles north of Tortola Island and 15 miles west of Anegada Island, are two patches with depths of 12 to 20 fathoms on the north bank and a least depth of 10 fathoms on the south bank. **Turtle Head**, a coral reef covered 6 fathoms, is about 10 miles north of Jost Van Dyke Island and 13 miles northwest of Tortola Island. **Barracouta Banks** about 8 miles northwest of Jost Van Dyke, consist of several patches covered by 11 to 20 fathoms. **Kingfish Banks** about 5 miles north-northeast of Jost Van Dyke Island, are two coral patches with 8 fathoms over them.

(51)

Virgin Passage

(52) **Virgin Passage** is 8 miles wide between Savana Island and Isla Culebrita, with depths of from 11 to 17

fathoms in the south part and up to 27 fathoms in the north part. It is clear except for Bajos Grampus on the southwest side and Sail Rock on the southeast side.

(53)

Tidal currents

(54) In the middle of the passage the current velocity is about 0.5 knot and sets south and north. On the east side of the passage near Savana Island the velocity increases to about 2 knots. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(55)

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(56) **Sail Rock**, on the east side of Virgin Passage about 7.6 miles east-southeast of Isla Culebrita, is so called from its resemblance to a vessel under sail. It rises precipitously from the sea to a height of 125 feet. It is about 100 yards in diameter, quite barren, and light gray in color. It is steep-to on all sides, but a rock awash is about 200 yards west of the islet. A lighted buoy is about 0.5 mile west of the islet.

(57) **St. Thomas Island**, commercially the most important of the U.S. Virgin Islands, is 34 miles east of Puerto Rico. It is 12 miles long and from 1 to 3 miles wide. A lofty ridge extends along its whole length. **Signal Hill**, nearly in the center of the island, is 1,504 feet high, and **Crown Mountain**, 1.7 miles to the west, is 1,550 feet high. Lights are shown from towers on the summit of each.

(58) The west half of St. Thomas presents the appearance of a steep ridge sloping precipitously to the north and the south, with numerous ravines widening at their lower ends into small tracts of level land on the seacoast. Between these level tracts the coast is usually bold with rocky promontories of considerable height. The higher hills are flat topped and plateau like, whereas the lower ones are for the most part dome shaped. The country is almost entirely wooded; the region west of Perseverance Bay is under considerable development.

(59) The east end of St. Thomas has the appearance of two main ridges, separated by a large basin and sloping to the north and south with numerous smaller ridges and spurs making off from them. St. Thomas is almost surrounded by small islands and cays, in general, bold and steep-to, with very few hidden dangers to guard against.

(60) **Savana Island**, 2 miles west-southwest from the west end of St. Thomas, is nearly a mile long and 0.5 mile wide. **Savana Island Light** (18°20'15"N., 65°04'59"W.), 300 feet above the water, is shown from a white tower at the southwest end of the island. The island is covered with a dense growth of vines, small trees, and underbrush. The entire northwest shore is bold and precipitous with rock cliffs rising abruptly from the water's edge to as much as 120 feet. **Din Point** is a bold dark headland, with cliffs 80 to 100 feet high, at the northwest extremity of the island. The southeast shore of the island is generally rocky with short stretches of gravel beach in the bights. Depths of 34 feet and less extend up to 0.5 mile from the east side of the island. Just north of **Virgin Point**, the southwest extremity of the island, the cliffs are of crushed rock and sandstone formation and from offshore appear as red cliffs. Detached rocks extend 200 yards south of Virgin Point. **Domkirk Rock**, a crag with twin steeple-shaped pinnacles that resemble a cathedral, is 100 yards southeast of Virgin Point. Some rocks 8 to 10 feet high and steep-to are on a sunken ledge that extends about 700 yards off the northeast point.

(61) The currents in the vicinity of the northeast point of Savana Island are very strong, and small boats should give the reef a wide berth. Boat landings may be made in smooth weather.

(62) **Kalkun Cay**, in the middle of **Savana Passage**, is a narrow islet, 275 yards long and about 20 to 30 yards wide, which is covered with grass and small underbrush. About 0.5 mile southeast of the cay is **Saltwater Money Rock**, 7 feet high, steep-to, with a clear channel between.

(63) **Little St. Thomas** is a low grass-covered peninsula connected with the west end of the island of St. Thomas by a sandspit. A 50-foot hill is near the northeast point and a 21-foot bluff is at the south end. **Mermaids Chair**, 15 feet high, is a conspicuous rock that has the shape of a chair at the apex of a triangular coral reef projecting from the southwest point of Little St. Thomas. Small boats stay in the small gravel cove south of the peninsula when the sea is too rough to land at Sandy Bay or Botany Bay. A boat passage is between Little St. Thomas and a 42-foot islet 100 yards to the north.

(64) **Big Current Hole** is a passage separating West Cay from Little St. Thomas. There are rocks awash extending east from West Cay; the outer one, **Drum Rock**, 2 feet high, constricts the channel, and the strong currents and heavy tide rips render the passage difficult. Small boats using this passage, when passing through from south, head for Drum Rock and leave it close-to on the port hand.

(65) **West Cay**, 0.2 mile northwest of Little St. Thomas, consists of 2 hills, 121 and 114 feet high, connected by a neck of low land. The small stretch on the east side of the cay is gravel. Landing may be made in the bight on the south side.

(66) **Salt Cay**, 242 feet high and 0.6 mile northwest of Little St. Thomas, is generally rocky and rugged, particularly on the north coast where cliffs rise precipitously to 100 and 150 feet high. Many rocks awash are close-to on the southwest, west and east sides of the cay. The channel between Salt Cay and West Cay is shallow, and breakers extend across it.

(67) **Salt Cay Passage** is about a mile wide, with deep water in the channel, and is free of dangers.

(68) **Dutchcap Cay**, a mile northwest of Salt Cay, rises abruptly from the sea to 278 feet high, with cliffs 100 feet high on the north shore.

(69) **Cockroach Island**, 3.3 miles north-northwest from the west end of St. Thomas Island, is 151 feet high and of irregular shape. The south shore is bold and precipitous with white rocky cliffs rising abruptly from the water's edge to a height of 120 feet. The north shore is rocky with cliffs back from the shore rising to a height of 80 feet and indented by numerous small bights and crevices. **Cricket Rock**, 0.5 mile east-northeast from Cockroach Island, is 46 feet high, bold and steep-to, with sharp pinnacle rocks on top.

(70) **Dutchcap Passage**, just south of these islands, is free of dangers.

(71)

Currents

(72) In navigating the passages between this group of islands, it is necessary to guard against the tidal currents, which in Savana Passage run with a velocity of 3 knots and in the others about 1 knot. Sailing vessels beating up against the northgoing current should stand well to south of Savana Island, so as to avoid the strength of the inshore current.See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(73) The **north coast** of St. Thomas Island is very irregular with rocky cliffs and sandy beaches in the shallow bays. Much of the beach is fringed with coral reef making landing difficult in most places. The bays in the east half of the island are open to the prevailing east trade winds. Islands, rocks and shoals are as much as 3 miles from the shore.

(74) **Sandy Bay** and **Botany Bay** are shallow bights separated by a rocky point at the west end of St. Thomas Island. Small-boat landings can be made during calm weather.

(75) **Santa Maria Bay**, 2.5 miles east of Botany Bay, has depths of 20 feet or more and is a fair shelter, but it is seldom used because of rollers.

(76) **Inner Brass Island** and **Outer Brass Island** are off the north side of St. Thomas about 4 miles from the west end of the island. A 24-foot channel is between St. Thomas and Inner Brass Island; **Brass Channel**, between the two small islands, has a depth of 42 feet.

(77) Inner Brass Island has a generally rocky shore, with reefs extending as much as 300 yards off the east side. There are detached rocks and rocks awash within that area. Occasional large swells are prevalent between the southern tip of the point and the Dorthea Point. The swells are largest during winter months. Northwest of the south tip is a fine sand beach with a fringing coral reef. The reef has several breaks through which small-boat landings can be made. A well-sheltered anchorage for local boats is off the southwest side of the island.

(78) The east shore of Outer Brass Island is bold and precipitous with rocky cliffs rising vertically from the water. The west shore is rocky and slopes up uniformly. **Cave Cove**, in about the middle of the west shore, has a large cave opening into it. **Rough Point**, the north extremity of the island, is sharp and jagged, and, on calm days, landings can be made on its west side. A 15-foot spot is about 330 yards west of Rough Point.

(79) Landings may be made on St. Thomas Island through breaks in the fringing coral reef in **Caret Bay** and **Neltjeberg Bay** southwest and south of Inner Brass Island. **Hull Bay**, southeast of Inner Brass Island, is shoal with a reef and heavy surf along the southwest shore. More reefs lay along the western shoreline, though a small craft channel runs in the middle of the bay. Numerous fishing and recreational boats are moored in Hull Bay; a ramp is available.

(80) **Lizard Rocks**, a group of bare rocks/rocks awash about 13 feet high, are 0.7 mile offshore and 0.8 mile west of Inner Brass Island. **Ornen Rock**, covered 6 feet, is a mile east of Inner Brass Island. Waves do not ordinarily break over Ornen Rock but may during a heavy ground swell.

(81) **Magens Bay** is a prominent bight on the north shore of St. Thomas. It is 1.6 miles long and 0.6 mile wide. Its east side is formed by a long, narrow tongue of land called Peterborg, which terminates to the northwest at **Picara Point**, nearly midway between Hans Lollik and the Brass Islands, and its west side by St. Thomas Island and **Tropaco Point**. Prominent is a 50-foot cliff at the end of Tropaco Point. The bay, safe only for small vessels, is open to the northwest and consequently exposed to rollers. Peterborg and the west side of St. Thomas are being extensively developed. Entering from the north or northwest, avoid Ornen Rock, and from the east, during calm seas, the rocks 30 yards northeast of Picara Point. During heavy ground swells, a confused sea exists in the area of these rocks, and the point should be given a wide berth.

(82) The depth in Magens Bay varies from 5 to 12 fathoms, but the south portion has a bank of 1¼ fathoms, extending 0.3 mile from the shore, surrounded by depths of 2 to 3 fathoms. A fine sand beach is at the head of the bay. **Reseau Bay** and **Lerkenlund Bay**, small bights on the west shore of Magens Bay, are used by fishermen to beach their boats.

(83) **Hans Lollik Island**, 713 feet high, 1.3 miles long and about 0.8 mile wide, is 1.8 miles northeast of Picara Point. The west side of the island is precipitous and rocky, except in a bay on the west side that has a gravel beach. **Coconut Bay**, on the southeast face, is protected by off-lying **White Horseface Reef**. This bay is a protected anchorage for small boats and may be entered through a channel southwest of the reef. **Hansa Rock**, close inshore at the south point, is 19 feet high and south of a small bay that is accessible to small boats in calm seas. **Hans Lollik**

Rock, awash and on which the sea always breaks, is over 0.3 mile east-southeast of the south point of Hans Lollik Island.

(84) **Little Hans Lollik Island** is 0.2 mile north of Hans Lollik Island and connected with it by a coral ledge over which the sea breaks. There is an opening in the reef; extreme caution should be used when navigating through the reef. The shoreline consists mostly of rocky cliffs from 20 to 60 feet high. **Steep Rock**, the only detached rock on the east shore of the island, is 25 feet high.

(85) **Pelican Cay**, 200 yards north of Little Hans Lollik Island, is a 20-foot grassy islet accessible in calm seas. Between the two are several rocks awash, and a reef over which the sea breaks is close northeast of Little Hans Lollik Island. Except for these dangers, the channels on either side of the Hans Lollik group are clear.

(86)

Mandal Bay to Capella Islands

(87) **Mandal Bay**, 3 miles east of Picara Point, is shoal, with a sandy beach at its head. **Mandal Point**, just east of the bay, is 277 feet high, with cliffs 100 to 120 feet high at the water's edge. An unmarked channel, west of the point, has a rock jetty on either side that leads through the reefs and a landcut to a small dredged harbor. The channel has shifting sandbars and can be shallow. On the east side of the bay, a rubble mound breakwater extends 270 feet from shore on the north side of the channel entrance, and a smaller rubble mound jetty extends 70 feet from shore on the south side. A depth of about 10 feet was reported in the channel in 1972. To the southeast of Mandal Bay is **Tutu Bay** with fringing reef on the east side—the bay often experiences heavy waves.

(88) Water generally breaks on a reef close northeast of Mandal Point. A 22-foot spot is 0.3 mile east of the point.

(89) **Coki Point**, 1.9 miles east-southeast of Mandal Point, has a 47-foot high bluff with a sandy beach on the north side and shoreline foul with coral and fringing reef east and west of the beach. It forms the north shore of **Water Bay**. A conspicuous 235-foot cone-shaped hill is just south of Water Bay. **Turtleback Rock**, 2 feet high, is off the entrance to Water Bay 0.3 mile southeast of Coki Point. Midway between Water Bay and Cabes Point is a small sandy beach located at Footer Point. There are several boulders off **Footer Point** placed as a breakwater that are covered by water. **Cabes Point** is a low rocky hook 1 mile southeast of Coki Point. **Shark Island**, 32 feet high, is about 0.3 mile east-southeast of Cabes Point. Foul ground encircles the island with several visible rocks 125 yards off the northeast end.

(90) Just to the west of the Cabes Point is a small cove locally referred to as Lindquist Bay. Shallow reef are prominent on the west and east sides with a sand beach in the center, commonly referred to as Lindquist Beach. An unmarked channel lies in the middle of the cove.

(91) **St. John Bay**, on the southeast side of Cabes Point, has a shallow fringe reef at the west and east ends. A channel lies near the center of the bay and small boats can land ashore. A strong current runs between Shark Island and **Prettyklip Point**, locally referred to as Sapphire Beach.

(92) Just southeast of Prettyklip Point is a spit of land with hotels and condominiums. A marina is located in the alcove west of the spit. Buoys reported mark the channel to the marina.

(93) **Redhook Bay**, at the east end of St. Thomas Island, consists of a south arm called **Muller Bay** and the west arm, **Vessup Bay**. Ferry boats to St. John Island use a small L-shaped pier in the northeast part of Vessup Bay. In 1972, a depth of 9 feet was reported at its face. The channel through Redhook Bay into Vessup Bay is marked by private buoys. A marina is 200 yards west of the L-shaped pier. Berths, gasoline, electricity, water, ice and marine supplies are available. Repairs can be made to gasoline or diesel engines and to some electronic equipment. The National Park Service maintains an L-shaped pier on the south side of Vessup Bay; in 1972, depths of about 6 feet were reported alongside.

(94) **Cabrita Point**, the east end of St. Thomas, rises to a height of 210 feet. A neck of land joins the remainder of St. Thomas. A 23-foot spot lies 0.6 mile east-southeast of Cabrita Point.

(95) **Pillsbury Sound** is the body of water between St. Thomas, St. John and the cays that bound the sound on the north side. This body of water is an excellent roadstead about 2 miles in extent east and west and 1.5 miles north and south. This area is quite secure against rollers and all winds except from the south, which blow only in the hurricane months, but the area can become quite rough. The current attains a velocity of 2 knots.

(96) The depths in the sound are somewhat irregular, varying from 41 to 111 feet. All the main passages leading to it are deeper than the mean depth of the sound itself.

(97) **Thatch Cay**, at the northwest end of Pillsbury Sound, is 1.6 miles long. The island is in the form of a ridge, 482 feet high near the east end.

(98) **Bull Point** and **Mother East Point** are prominent projecting points on the north side. **Lee Point** is the west point and **Grouper Point** the east point of the island. There are mooring buoys reported between Lee Point and Mother East Point on the northwest side of Thatch Cay. **Grass Cay**, 0.5 mile east of Thatch Cay, is 0.8 mile long. The north shore consists of rocky cliffs in places 150 feet high. A narrow rocky ledge, covered 12 feet at its east end, is close to shore near the west end of Grass Cay, and a rock awash is 150 yards west of the same point. There are mooring buoys reported on the south side of Grass Cay for day use.

(99) **Mingo Cay**, east of Grass Cay, is 186 feet high. Between Mingo and Grass Cays is a narrow shoal passage with a bare rock 15 feet high close to the middle. It is only passable by dinghy on very calm days. Several bare rocks are east of this rock. **Lovango Cay** is east of Mingo Cay and separated from it by a shoal passage 300 yards wide; the tidal current is strong in the 13-foot

boat channel. Several houses and two private piers are in the bight along the south shore between **Murder Rock** and the southwest point. **Blunder Rocks**, 250 yards east of Lovango Cay, are 8 feet high. **Congo Cay**, a narrow pointed cay north of Lovango Cay, is separated from it by a channel with depths of 13 feet. **Carval Rock** is 0.3 mile east of Congo Cay. There are several smaller rocks between it and the cay. There are mooring buoys reported for day use between Congo Cay and Lovango Cay and on the south end of Carvel Rock.

(100) **Two Brothers** are two small 14-foot and 16-foot-high barren rocks lying in the middle of Pillsbury Sound; a light 23 feet above the water is shown from the larger rock. A ledge extends off their northeast side, deepening to 30 feet at a distance of 250 yards. Vessels can anchor in depths of 40 to 65 feet about 0.5 mile northeast of Two Brothers on sand and mud bottom.

(101) **Windward Passage** extends between Lovango and Durloe Cays; it is 0.3 mile wide. **Durloe Cays**, within the entrance, cannot be mistaken. On the northwest side of the channel are Carval Rock and Blunder Rocks. Vessels of deep draft may take the passage between Lovango and Durloe Cays. If the wind dies, sailing craft may anchor at any time; the bottom is coral and broken shell in less than 60 feet. With the northeast current running against the wind, this channel has a race that looks like broken water. Through Durloe Cays and between them and Hawksnest Point on St. John Island are deep and clear passages, but these are not recommended.

(102) **Middle Passage**, between Grass and Thatch Cays, is about 0.3 mile wide and presents no difficulties to powered vessels, the only dangers being a small rock awash nearly 150 yards west from the west end of Grass Cay, which is easily seen. Sailing vessels generally use this passage in leaving the sound. It may be entered from the north even on the ebb, provided the trades have not too much of a south slant.

(103) **Leeward Passage**, between Thatch Cay and the north side of St. Thomas, is about 0.4 mile wide, with general depths of 60 feet or more. A privately marked fish haven, covered at least 60 feet and centered in 18°21'12"N., 64°51'21.5"W., is near the east end of Leeward Passage.

(104)

Currents

(105) Tidal currents with velocities up to 4 knots in Middle Passage and Windward Passage, and weaker currents in Leeward Passage, have been reported. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(106) Three islands and several rocks extend southeast for 2 miles from the east end of St. Thomas. The islands are rugged, with cliffs fronting much of the shores. **Dog Rocks**, 9 feet high, are the most east danger of the group close off the east point of **Dog Island**. Current velocities up to 4 knots have been reported in the vicinity of Dog Island. Numerous rocks are as much as 0.35 mile from the shores of the islands.

(107) **Dog Island Cut** is between Dog Island and **Little St. James Island**. A submerged rock with a least depth of 10 feet is near midchannel at the north entrance to the cut. The cut should be used only by small boats with local knowledge. **St. James Cut**, between Little St. James Island and **Great St. James Island**, has a depth of 18 feet, but caution is necessary to avoid **Welk Rocks** in the east approach an **The Stragglers**, on the west side. A rock awash is about 125 yards northwest of the northeast point of Little St. James Island. A reef extends from this point almost to the rock.

(108) **St. James Bay**, between Great St. James Island and the east end of St. Thomas Island, provides secure anchorage in depths of 21 to 50 feet, except in hurricanes. Small craft can anchor securely in Christmas Cove either north or south of the small cay 300 yards offshore. **Cow Rock**, 7 feet high, is the west of a group of rocks in the south approach to the bay. **Calf Rock**, 2 feet high, is the east rock of the group.

(109) **Current Hole**, at the north end of St. James Bay, provides a passage from the south coast of St. Thomas Island to Pillsbury Sound. **Current Rock**, 13 feet high and marked by a light, is in about the center of the passage. A depth of 23 feet can be carried through the 100-yard-wide channel east of the rock. The current velocity reaches a maximum of 3 knots through Current Hole and sets north and south. To stem the current, sailing vessels using the passage should await a north current and a steady breeze.

(110) **Cowpet Bay**, in the north part of St. James Bay, is 0.3 mile wide between **Water Point** and **Deck Point**. The bay has depths of 8 to 21 feet. The St. Thomas Yacht Club has a pier and other private facilities at the head of the bay.

(111) **Jersey Bay**, west of Cowpet Bay, is 1.4 miles wide between Deck Point and the cays east of **Long Point**. The bay has several cays and dangerous rocks scattered throughout the west part. A 12-foot rock is about 0.25 mile east of the east point of Cas Cay. **Benner Bay**, locally known a **The Lagoon**, is a smaller bay in the north part of Jersey Bay. It is one of the most protected small-boat harbors on St. Thomas Island. Several yacht clubs and marinas along the north shore of the bay have complete facilities for small craft. Berths, gasoline, diesel fuel, water and some marine supplies are available. A 50-ton mobile hoist can handle craft up to 65 feet for hull, engine and electronic repairs. To reach the facilities, pass east of the buoy off **Red Point**, the east point of **Cas Cay**, and follow the best charted water toward the whitewashed area on **Rotto Cay**. Pass Rotto Cay keeping it 100 yards on your starboard and proceed past **Grassy Cay** keeping it close by on the starboard. Proceed past Grassy Cay to within 100 yards of **Bovoni Cay** then head in a north direction to the facilities. The channel leading into Benner Bay is privately maintained and marked. In

1981, severe shoaling was reported in the channel; the extent of shoaling is unknown. Mariners should seek local knowledge. Also, it was reported that submerged pilings may exist in the area. The waters between Cas Cay and Patricia Cay are shoal with prominent breakers, and entry in this area could be hazardous.

(112) The **south coast** of St. Thomas is very irregular with projecting rocky cliffs between coves and bays that are obstructed by rocks and shoals. Dangerous rocks extend up to a mile from shore.

(113) **Long Point**, the southeast extremity of St. Thomas Island, is the terminus of a high prominent ridge with rocky cliffs 50 feet high.

(114) **Bolongo Bay**, about 1.2 miles northwest of Long Point, has a barrier reef that often breaks. A small channel is navigable to small craft on the northeast side.

(115) **Packet Rock**, a coral shoal about 100 yards in extent with a depth of about 5 feet, lies 0.7 mile west-southwest of Long Point. The sea breaks over the rock only in heavy weather, and it cannot be seen until close-to. A buoy is 300 yards south-southeast of the rock.

(116) **Capella Islands**, of which the largest and westernmost is **Buck Island**, lie 1.7 miles southwest of Long Point and constitute a prominent landfall for making St. Thomas Harbor. The two small islands, of irregular outline, are partially covered with a scrubby growth and separated by a narrow channel almost closed by numerous uncovering rocks. A light, 139 feet above the water, is shown from a skeleton tower on the highest point of Buck Island, near its east end. A shallow ledge extends 100 yards off the west end, and off the north side the depth is 30 feet. A fish haven, covered 40 feet and marked by private buoys, is on the north side of a bight at the southwest end of Buck Island in about 18°16'42"N., 64°53'55"W.

(117) Between Capella Island and St. Thomas Island the currents are weak.

(118)

Frenchcap Cay to St. John Island

(119) **Frenchcap Cay** is about 3.6 miles southeast of Buck Island, and, like Buck Island, is a useful landfall for making St. Thomas Harbor. It is 350 yards long and 183 feet high and is covered with grass and steep-to. The shoreline for the most part consists of high rocky cliffs.

(120)

St. Thomas Harbor

(121) **St. Thomas Harbor**, in about the middle of the south coast of St. Thomas Island, is the only sheltered harbor in the Virgin Islands that can be entered by large vessels. Although the oval-shaped harbor is small and open to the south, it is well protected by the high hills surrounding the other sides and provides safe anchorage except during a hurricane.

(122) **Charlotte Amalie**, along the north shore of St. Thomas Harbor, is the most important city and capital of the U.S. Virgin Islands. Tourism comprises most of the commerce. Rum and bay rum are manufactured, and handicraft articles are made from raw materials imported from nearby islands.

(123) The port facilities are at the West Indian Dock on the south side of **Long Bay** and at the Ports Authority pier and quay on the north side of **West Gregerie Channel**. West Indian Dock, also known as Havensight Point on the east side of the harbor, has a dock that can berth cruise ships. Cruise ships also dock in Crown Bay at the homeport and Crown Bay docks south of **Little Krum Bay** in West Gregerie Channel. The principal imports include foodstuffs, textiles, clothing, building materials, machinery and petroleum products—exports include rum, perfumes and sundry articles.

(124)

Prominent features

(125) **Muhlenfels Point**, the east entrance point to St. Thomas Harbor, is high and steep at the shoreline. A large hotel on the point is conspicuous.

(126) **Hassel Island**, on the west side of the harbor entrance, is indented by shallow coves and has several high wooded hills. **Cowell Point** is the south end of a ridge sloping up to **Cowell Battery**, the highest point on the island.

(127) **Signal Hill**, about a mile northwest of St. Thomas Harbor, is the second highest peak on the island with a lighted tower on top. From it the main ridge extends east-southeast, passing less than 0.5 mile north of Charlotte Amalie. The town is built around the three spurs that extend south from the ridge. **Frenchman Hill** is the west spur. **Berg Hill**, in the center, has a square white building on its south slope near the top. On **Government Hill**, the east spur, stands **Blackbeard Castle**, a remarkable 47-foot stone tower.

(128) To the east of Government Hill, **Bluebeard Hill** rises abruptly from the shore at **Frederiksberg Point** to a 224-foot summit on which **Bluebeard Castle**, an old 34-foot stone tower, is located.

(129) **Water Island**, southwest of the entrance to St. Thomas Harbor, is indented by several small shallow bays, and the hilly land is covered by small trees and dense underbrush. **Flamingo Point**, the south end, consists of brown rocky 100-foot cliffs. North of Flamingo Point on the west shore is **Flamingo Bay**, which leads to Flamingo Pond and a small boat harbor and marina. A square tower is on 256-foot **Providence Hill**, 0.8 mile north of the point. There is a small pier on Providence Point that is used by the ferry serving Water Island. **Red Point**, a mile northwest of Water Island, is a rugged red cliff on the west side of Lindbergh Bay.

(130)

Channels

(131) The entrance channel, west of Muhlenfels Point and close east of Scorpion Rock, leads close southwest of West Indian Dock. The entrance channel is marked by a lighted range and lighted buoys. Reported depths of 10 to 14 feet can be taken to the waterfront at Charlotte Amalie.

(132) **East Gregerie Channel** is between Hassel Island and Water Island. **Haulover Cut**, between Hassel Island and St. Thomas Island, has a least depth of 12 feet through the center of the narrow passage. At the southwest entrance, a reef that uncovers extends about 80 yards into the cut from Hassel Island. Rocks, submerged and awash, border the northwest side of the channel. East Gregerie Channel is marked by lighted buoys. Caution is advised for all vessels traversing this area since it is an active seaplane landing area.

(133) **West Gregerie Channel** is between Water Island and St. Thomas Island. The channel is marked by lighted buoys. A lighted radio tower at the base of Careen Hill has been reported to be an excellent mark to steer for when entering West Gregerie Channel.

(134) The conventional direction of buoyage changes at Gregerie Junction Channel Lighted Buoy GC. When transiting inbound West Gregerie Channel, the buoy should be taken to starboard. When transiting inbound East Gregerie Channel, the buoy should be taken to port. A channel does not exist between Lighted Buoy GC and Water Island.

(135) **Ruyter Bay**, a shoal bay on the northwest side of Water Island, has a privately owned L-shaped pier, about 100 feet long with a 30-foot length at the outer end; in 1972, depths of about 6 to 10 feet were reported alongside. A depth of about 8 feet can be carried with local knowledge when approaching the pier from the northwest.

(136)

Anchorages

(137) General, small craft and arrival inspection anchorages are in St. Thomas Harbor and off Lindbergh Bay. (See **33 CFR 110.1** and **110.250**, chapter 2, for limits and regulations.)

(138) **Inner Harbor (Alpha)**, north of West Indian Company Dock, is a deep-water anchorage. All classes of vessels may anchor. Caution is advised when anchoring near southern limits of anchorage within 492 feet either side of range. Cruise ships frequent these waters and require this area to maneuver. Occasionally large cruise ships will anchor here (Alpha) in which case commercial and private vessels may be required to relocate.

(139) **Outer Harbor (Bravo)**, south of Hassel Island and Water Island, is a deep-water anchorage used for vessels undergoing examination by Quarantine, Customs, Immigration and Coast Guard Authorities. All classes of vessels may anchor.

(140) **(Charlie)**, in Long Bay north of Yacht Haven Grand, is a small-craft anchorage.

(141) **(Echo)**, North of Alpha anchorage along the waterfront, is a small-craft anchorage.

(142) **(Foxtrot)**, South of Lindbergh Bay, is a deep-water anchorage.

(143) **Krum Bay**, northwest of Water Island, has depths of 34 feet in the entrance, shoaling to 8 feet near the head. A power plant maintains a lighted T-head pier and a barge dock on the west side of Krum Bay, about 0.1 mile and 0.4 mile, respectively, north of **Mosquito Point**, on the west side of the entrance. The bay affords excellent anchorage for small vessels during a hurricane.

(144) **Lindbergh Bay**, close west of Krum Bay, is used as an anchorage by small sloops and motorboats. The entrance depths are 29 feet, gradually decreasing to a fine sand beach and small pier at the head of the bay.

(145)

Dangers

(146) **Green Cay**, 1 mile southeast of Muhlenfels Point, is a small 24-foot islet covered with low underbrush. The islet is near the center of a coral reef that extends about 450 yards southwest from shore. Another islet is 50 yards south of Green Cay.

(147) **Triangle** is a group of dangerous rocks between Green Cay and Muhlenfels Point. The north and southwest parts of the group are partly awash. **Barrel of Beef** is the east foul area of the group. A detached coral rock covered 18 feet and marked by a lighted buoy is nearly 0.7 mile south-southeast of Muhlenfels Point.

(148) **Point Knoll**, a coral head with several submerged rocks, extends 50 yards southwest from Muhlenfels Point; a depth of 20 feet is about 90 yards southwest of the coral head. **Rohde Bank**, 0.2 mile northwest of Muhlenfels Point, has a least depth of 19 feet.

(149) **Scorpion Rock**, in the entrance between Muhlenfels Point and Cowell Point, is a small coral rock with a least depth of 28 feet—a lighted buoy marks the rock.

(150) **Rupert Rock**, 0.5 mile north of Muhlenfels Point at the narrowest part of the entrance channel, is 12 feet high and white on top. A drying reef and foul ground with less than 6 feet over it extends 100 yards west from the rock. A lighted buoy and a daybeacon are west of the rock.

(151) Foul ground with depths less than 6 feet surround Hassel Island and Water Island up to 300 yards from shore.

(152) **Porpoise Rocks**, a mile west of the south end of Water Island, consists of three reefs with rocks bare or awash surrounded by depths of 6 to 17 feet—a lighted buoy is on the southwest side.

(153) An unmarked fish haven is off the south side of Porpoise Rocks.

(154) A rocky ledge extends 0.4 mile south of Red Point. A steep-to rock at the outer end has a least depth of 5 feet over it.

(155) An airport runway extension is on the east side **Brewers Bay** 0.6 mile northwest of Red Point. The runway extends about 800 yards west from shore and is surrounded by a rock dike. Caution is advised in the area.

(156) **Sandy Point Rock**, an elongated shoal extending 300 yards northwest from the north end of Water Island, has a least depth of 3 feet.

(157) Care should be taken when navigating in the main harbor of Charlotte Amalie, Haulover Cut and East Gregerie and West Gregerie Channels, because of their use as seaplane operating areas. The seaplanes generally

take off on a southeast heading from Cay Bay to Rupert Rock, and occasionally from Crown Bay through the East Gregerie Channel, also on a southeast heading. The seaplanes generally land on a northeast heading between the light in West Gregerie Channel and Haulover Cut, then proceed into Cay Bay. The seaplanes, when landing, usually traverse the narrow Haulover Cut area at a high rate of speed. Vessels navigating in these waters should remain alert to the presence of seaplanes when operating in the areas defined above.

(158)

Currents

(159) An equatorial current is reported to run starting in East Gregerie Channel and travel out West Gregerie Channel at a velocity of about 1 to 3 knots. Caution should be exercised to avoid being set onto the piers in the bay, particularly with a strong east wind.

(160)

Routes

(161) From west: pass 1.0 mile or more off the south end of Water Island, then enter the Pilot Boarding area from the south, steer for Muhlenfels Point until on the entrance range and then proceed into the harbor on a heading of **344°**. The prominent white catchment area on the west side of Berg Hill helps in picking up the range in the daytime. From south: pass a mile or more west of Buck Island and enter on the range. From east: set a course to pass about midway between Buck Island and St. Thomas Island and enter on the range.

(162)

Pilotage, St. Thomas

(163) See Pilotage, U.S. Virgin Islands (indexed as such) early this chapter. Pilotage is available from the St. Thomas Pilots, Virgin Island Port Authority. Office address is: P.O. Box 2616, Charlotte Amalie, St. Thomas, U.S.VI 00803; FAX 340–777–9694; Email: sttpilots@gmail.com. Pilots monitor VHF-FM channels 14 and 16 only within one hour of ship's scheduled arrival time.

(164) The pilots boathouse (station) is on the waterfront at St. Thomas Old Marine Terminal.

(165) St. Thomas Pilots serve the main harbors of Charlotte Amalie, St. John, East and West Gregerie Channels, Crown Bay and Southwest Roads.

(166) Pilots board vessels entering St. Thomas Harbors from four points at the entrances. Vessels entering via West Gregerie Channel are boarded about 0.5 mile west of West Gregerie Channel Lighted Buoy 2 or 0.5 mile south of Flamingo Point. For vessels entering through East Gregerie Channel, the pilot will board in the Pilot Boarding Area south of East Gregerie Channel Lighted Buoy WR1. Vessels entering the port through the main harbor entrance channel can pick up the pilot from a position in the channel south of St. Thomas Harbor Entrance Lighted Buoy 2.

(167) The pilot boats, HARRY MAGRAS, 45 feet long, and WINSTON PARRIS, 42 feet long, each have black hulls with white superstructures. Both boats have the word PILOT on their superstructures, painted in orange. The pilot boats display the standard pilot signals; "HOTEL" flag by day and a white light over a red light at night (all-around lights). The pilot boats and pilot station monitor VHF-FM channels 16 and 14 and work on channel 14. Vessels to be boarded should contact the pilot boat prior to arrival for vessel speed (approximately 6 to 8 knots) and boarding side and rig the pilot ladder about 3 feet above the water.

(168)

Towage

(169) Tugs up to 3,000 hp are available for docking vessels. The tugs monitor VHF-FM channels 16 and 14. Notice of at least 24 hours required for tugs in most circumstances.

(170)

Quarantine, customs, immigration and agricultural quarantine

(171) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(172) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(173) Seamen requiring emergency hospital attention are taken to the municipal hospital.

(174) Charlotte Amalie is a **customs port of entry**. Vessels are boarded at anchorage or at their berths. The main Customs office is in the Blyden Marine Termainal along the waterfront in Main Harbor.

(175)

Coast Guard

(176) The Coast Guard has a **Marine Safety Detachment** in Charlotte Amalie under Sector San Juan. The mailing address is 3300 Veterans Drive, St. Thomas, VI 00802.

(177)

Harbor regulations

(178) Local rules and regulations for the Port of St. Thomas are enforced by the Port Authority Dockmasters at Blyden Terminal.

(179)

Wharves

(180) The **West Indian Dock**, along the south side of Long Bay, is the primary cruise ship terminal at Charlotte Amalie. The well-protected 3,025-foot marginal wharf has depths of 35 feet reported alongside except for 31 feet alongside the easternmost 300 feet.

(181) The **waterfront of Charlotte Amalie** is a concrete marginal wharf with reported depths of 4 to 18 feet alongside. It is primarily used by small sailing vessels. The dock is also used for ferry boats, harbor tour boats and a hotel water taxi.

(182) **Kings Wharf**, a 300-foot finger pier extending from the point east of the waterfront, is used by Coast Guard vessels. In 1982, depths of 9 feet were reported along the north side and 13 feet along the south side. A 6-foot depth is about 200 yards east-southeast from the outer end of the pier in 18°20'27"N., 64°55'49"W.

(183) The **waterfront of Crown Bay,** known as Sandfill Dock, is a curved concrete marginal wharf, approximately 1,160 feet long, operated by the Virgin Islands Port Authority. Depths of 13 to 27 feet are reported alongside. The wharf is used primarily for receipt of general cargo.

(184) The **Crown Bay Passenger Facility**, operated by the Virgin Islands Port Authority, is in **Crown Bay** on the north side of West Gregerie Channel. The pier, which extends east from shore, has an 880-foot south face and a 930-foot north face and depths of 31 to 38 feet alongside. Just north are the Cargo Port Docks; Crowley, 958 feet long with 28 to 30 feet alongside and Tropical, north or Crowley, 540 feet long with 28 to 30 feet alongside.

(185)

Supplies

(186) Groceries and some marine supplies are available at Charlotte Amalie. When available, water can be delivered from pipelines at the West Indian Dock, Crown Bay Passenger Facility or at anchorage from a barge.

(187)

Repairs

(188) A 100-foot-long drydock, just south of the Crown Bay Passenger Facility, can handle vessels up to 130 feet long. Machine shops can make minor above-the-waterline repairs. For larger vessels, the nearest facilities are at San Juan and the Panama Canal.

(189)

Small-craft facilities

(190) A marina on the east side of Long Bay has finger piers with 10 to 18 feet alongside. Berths, water, electricity and marine supplies are available. A fuel pier with 28 feet alongside has gasoline and diesel fuel.

(191) A marina on the west side of Cay Bay, north of Hassel Island, has berthing and mooring facilities in about 15 feet of water. Gasoline, electricity, water, ice and marine supplies are available. The approach to the marina is in a seaplane operating area so be alert for aircraft.

(192) A marina, on the north side of Crown Bay Passenger Facility, has finger piers with reported 12 to 15 feet alongside. Gasoline, electricity, water, ice and marine supplies are available.

(193)

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(194) **Saba Island**, 202 feet high and triangular in shape, is 2.4 miles west of Flamingo Point. The north part of the island is low, but the south part has precipitous red cliffs 150 feet high along the south shore. Two small lagoons surrounded by mangroves are near the north end. A landing can be made on the sand beach along the northwest shore. About 150 yards east of the island is a reef with a bare rock 5 feet high and numerous rocks awash over which the sea always breaks. Another reef awash lies 100 yards south of the west end of the island.

(195) **Turtledove Cay**, 50 feet high, 100 yards north of Saba Island, is connected with Saba Island by a reef bare at low water. About 0.1 mile west of the cay is a cluster of rocks awash. Between these rocks and the cay is a boat channel. **Dry Rock**, about 0.5 mile southwest of Saba Island, comprises a group of rocks bare and awash; the highest rock is 2 feet high. **Flat Cays**, 0.8 mile northeast from Saba Island and 1.3 miles southwest from Red Point, consists of two small islets, 32 and 11 feet high, respectively. About 300 yards east of the south cay is a rock awash, surrounded by a breaking reef.

(196)

Currents

(197) Inshore the current is weak, but between Flat Cays and Saba Island, a tidal current sets east-southeast and west-northwest with velocities up to 1 knot. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(198) **Southwest Road**, between Flat Cays and Perseverance Bay, affords an excellent anchorage with the wind as far south as east-southeast.

(199) Vessels may anchor as convenient after entering through any of the channels between the islands and shoals south. Sailing vessels should enter from the east between Water Island and Porpoise Rocks, favoring Water Island, and pass between Flat Cays and the shoal south of Red Point.

(200) In 1993, a submerged wreck, covered 28 feet, was reported by the NOAA ship MT. MITCHELL in the west approach to Southwest Road in about 18°18'48.1"N., 65°02'29.0"W.

(201) **Range Cay**, an islet 21 feet high, lies close to the shore 0.7 mile northwest of Red Point. **Black Point**, 1.2 miles northwest of Red Point, terminates in rocky cliffs 40 to 50 feet high.

(202) **Perseverance Bay**, between Black Point and **Lucas Point** to the west, has depths of 13 fathoms, about 0.4 mile from the shore. Coral reefs, bare at low water, fringe the beach. Lucas Point rounded and rocky, is marked by 60-foot cliffs.

(203) **Fortuna Bay**, between Lucas Point and **David Point**, consists of two small bays separated by a broad point that is high and faced by precipitous cliffs 200 feet high. The shore is generally rocky with cliffs up to 70 feet high.

(204) **St. John Island**, about 2 miles east of St. Thomas Island, is 8 miles long and up to 4 miles wide. Its east end for 3 miles is formed by a narrow neck of land from 1 mile to less than 0.5 mile across, and from its inner end the coast turns sharply south, forming a deep bight that terminates at Ram Head, the south point of the island. The central and west portions are comprised of irregular hills, the highest of which is **Bordeaux Mountain**, 1,277 feet high. The hills and mountains are mostly covered with trees, brush and some patches of grass.

(205) Most of the offshore waters surrounding St. John are part of the Virgin Islands National Park and the Virgin Islands Coral Reef National Monument. Anchoring is not permiteed anywhere within the park along the south side of St. John (except for dinghies under 16 feet). Moorings must be used instead. Anchoring is also prohibited in Virgin Islands Coral Reef National Monument. For more information about how and where to secure your boat around St. John see the Marine Use Visitor Information Interactive Map at *nps.gov/viis/index.htm*.

(206) Most of the population of St. John Island is located in two small towns, Cruz Bay at the west end and Coral Bay at the east end. Tourism is the principal commerce; foodstuffs and building material are brought into Cruz Bay by small interisland vessels.

(207) Some groceries, gasoline, diesel fuel and water can be obtained at the town. Small ferryboats carry passengers and mail between St. Thomas Island and St. John Island. Land transportation is mostly by taxi or by small sightseeing buses. Telephone and radiotelephone services are available.

(208) The Government administration is at Cruz Bay.

(209)

Quarantine, customs, immigration and agricultural quarantine

(210) Cruz Bay is a **customs port of entry**.

(211) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(212) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(213)

Moravain Point to Fungi Passage

(214) **Moravian Point**, on the end of a peninsula south of Cruz Bay, is the westernmost part of St. John Island. **Mingo Rock**, which is awash and breaks, is 175 yards west-southwest of Moravian Point. A group of rocks awash are just to the west-southwest of Mingo Rock.

(215) **Steven Cay**, 0.4 mile west-northwest of Moravian Point, is 28 feet high and marked by a light off the north end. A 30-foot rock is just south of **May Point**, the south extremity of Steven Cay. **Skipper Jacob Rock** is 0.1 mile east of the south end of Steven Cay.

(216) **Enighed Pond**, east of Moravian Point, is entered through Turner Bay. A car ferry dock with daily service to Red Hook, St. Thomas, is at the head of Enighed Pond.

(217) **Cruz Bay**, on the west side of St. John Island, is a small cove used by small interisland vessels bringing supplies and tourists to the island. The entrance is marked by a light 12 feet above the water, and private buoys mark the channels through the cove. The Government House on the peninsula extending to **Battery Point** is a prominent landmark. A marina of the National Park Service is in the cove east of Battery Point; a depth of 6 feet can be taken to the 80-foot pier and bulkhead. A passenger ferry dock is on the southeast side of Cruz Bay.

(218) **Caneel Bay**, 0.8 mile northeast of Cruz Bay, is the site of the Caneel Bay Plantation resort development. A line of private marker buoys restricts the use of boats in the bay except for the channel leading to a small pier at the head of the bay. Motorboats provide transportation for tourists to St. Thomas from the pier.

(219) **Durloe Cays** are three islets west of Hawksnest Point. **Henley Cay**, the largest, is 70 feet high and about 300 yards wide, and has a small pier on the south side. **Ramgoat Cay**, 310 yards northeast of Henley Cay, is 30 feet high, and **Rata Cay**, the smallest, is 0.2 mile west-northwest of Henley Cay.

(220) **Hawksnest Point**, a projecting point forming the west shore of Hawksnest Bay, is wooded. In the north part is a circular hill 130 feet high. Off the extreme point is **Hawksnest Rock**, bare and 25 feet high. **Hawksnest Bay**, east of the point, is small and of no commercial importance. Off its south shore are numerous rocks.

(221) **Perkins Cay** is an islet close to the east point of Hawksnest Bay. **Trunk Cay**, a grass-covered islet 48 feet high, is about 0.5 mile east of Perkins Cay. **Trunk Bay**, between the two cays, is used extensively by skindivers. An area in the bay in which boats are restricted is marked by private buoys.

(222) **Johnson Reef**, a coral formation 0.4 mile northeast of Perkins Cay, is 500 yards long and over 0.2 mile wide; it breaks except in very smooth weather. A ledge, with a least depth of 20 feet, connects this reef with the mainland to the southeast. The reef is marked by a lighted buoy on its north side and by two private buoys on the south side.

(223) **Cinnamon Cay**, 32 feet high and covered with tall grass and cactus, is about 0.7 mile east of Trunk Cay in **Cinnamon Bay**. **America Point** is 2 miles east of Hawksnest Point; back of America Point rises **America Hill**, 526 feet high, which separates Cinnamon Bay from **Maho Bay**. The head of Maho Bay is shoal and has a fine sand beach. **Maho Point** is the tip of a short peninsula between Maho and Francis Bays, formed by the spur of a 198-foot hill 300 yards east.

(224) **Francis Bay**, south of Mary Point, is somewhat protected to the north by Whistling Cay and affords good anchorage in 50 feet, sandy bottom.

(225) **Whistling Cay**, the 202-foot islet 300 yards west of Mary Point, is covered with trees. Its north shore is precipitous, with cliffs 130 feet high. A gravel beach is along the southeast side. **Fungi Passage**, between the cay and Mary Point, has a least depth of 21 feet, but on account of the baffling winds from the adjacent high land it is difficult for sailing vessels.

(226)

Mary Point to Lameshur Bay

(227) **Mary Point**, a 578 foot-high headland in the form of a ridge, is connected with St. John by a low divide, separating Francis Bay from Mary Creek. The west end of the peninsula has bluffs 135 feet high; the north shore

consists of high weatherbeaten cliffs with large boulders along the waterline.

(228) **The Narrows**, a channel about 0.3 mile wide between the 10-fathom curves, is the west entrance to the passage between the north coast of St. John and the southwest coast of Tortola. This passage leads into Flanagan Passage and Sir Francis Drake Channel. Tidal currents in The Narrows and the passage east attain velocities of 2 to 4 knots.

(229) **Leinster Bay** is a double indentation between **Mary Peninsula** on the west and **Leinster Point** on the east; it is about 0.8 mile in length. **Mary Creek**, the west part of this bight, makes well in behind high land to north. The east part, **Waterman Bay**, is partially protected by **Watermelon Cay**, 30 feet high, 250 yards west of Leinster Point. The cay is bold and is separated from St. John Island by a channel 200 yards wide with 12 feet of water. Mooring buoys are reported in the cay. Vessels may anchor under the cay about 200 yards from shore. **Annaberg Point**, 96 feet high, southwest of Waterlemon Cay, is faced by a conspicuous landslide.

(230) **Threadneedle Point**, 0.5 mile east of Leinster Point, is precipitous, with cliffs up to 70 feet high. From Threadneedle Point the coast trends in a general east-southeast direction for 3.5 miles to **East End Point**, the east extremity of the island. **Haulover Bay**, 3 miles southeast of Leinster Bay, offers the best anchorage of the small bights along the north coast.

(231) **Privateer Point**, the easternmost point of St. John Island, is a projecting point 164 feet high. **Red Point**, a headland west of Privateer Bay, is the south end of a high ridge.

(232) **Flanagan Island**, 127 feet high, lies 0.7 mile southeast of Privateer Point. A rock off the west side is 45 feet high.

(233) **Flanagan Passage**, the westernmost of the passages leading into Sir Francis Drake Channel from the south, consists of a group of channels separating St. John and Norman Islands. The channel between Privateer Point and Flanagan Island is 0.7 mile wide; that between Flanagan Island and the Indians is about 1.2 miles wide; and that between Flanagan and Norman Islands is 1.4 miles wide.

(234) Approaching Flanagan Passage from east, haul close around the west side of Norman Island, inside Santa Monica Rock, which may be done at a distance of 300 yards. From west, line up the Indians and Mount Bellevue, the highest hill on the east end of Tortola, and enter west of Santa Monica Rock on a heading of about **016°**.

(235) **Coral Bay**, the large bay extending north into St. John between Red Point and **Ram Head**, is open to the southeast. The narrowest part of the entrance, between Moor Point and Lagoon Point, is 1.2 miles wide. **Leduck Island**, 85 feet high, lies in the entrance to Coral Bay, midway between Red Point and Ram Head.

(236)

Currents

(237) The current velocity is about 0.7 knot and sets southwest and northeast across the entrance to Coral Bay; between Flanagan Island and Privateer Point its velocity is reported to be 1.5 knots. In the bay there is no current, and the range of tide is about 1 foot.

(238) **Moor Point** is the thin rocky southwest extremity of East End Peninsula. **Turner Point** is the knob at the end of the peninsula separating Round Bay and Hurricane Hole. **Fortberg Hill**, the prominent 425-foot hill west of Hurricane Hole, is nearly circular in shape and covered with trees. **Lagoon Point**, the south entrance point of Coral Harbor, is fringed by a coral reef 200 yards wide and bare at low water. **Sabbat Point**, 0.5 mile south of Lagoon Point, is the end of a long high rock forming the buttress of **Sabbat Hill**, 101 feet high.

(239) **Ram Head**, the south point of St. John, is a bold headland, with two conspicuous hills. The east side of the head has rocky cliffs 100 to 150 feet high. A heavy sea generally runs off the point.

(240) The only danger in the approach to Coral Bay for vessels drawing less than 18 feet is **Eagle Shoal**, about 0.7 mile south of **Leduck Island**. Eagle shoal consists of three round patches of coral with a least known depth of 1½ feet. Coral Bay has no towns; the community is scattered among several points along the shore.

(241) **Round Bay**, the northeast of the three arms of Coral Bay, is 0.9 mile wide at the entrance. The several shoal patches of about 2¼ fathoms should be avoided. **Pelican Rock**, 7 feet high, is in the northeast part of the bay. The best anchorage in Round Bay is off Moor Point.

(242) **Hurricane Hole**, the north arm of Coral Bay, is 0.6 mile wide at the entrance west of Turner Point. The shoreline is indented by several small bays that afford protection from almost any direction for small vessels. A shoal with rocks awash extends out 100 yards on the west side of Hurricane Hole.

(243) **Coral Harbor**, the northwest arm of Coral Bay, is narrow, and the deep part of the bay is restricted to a width of 100 yards or less by encroaching shoals from the side and head of the harbor. The entrance channel into the harbor is marked by private buoys. The anchorage ground, although smooth with ordinary winds, is narrow, and being on a lee shore it is available only for small vessels. A small-boat wharf with 3 feet alongside is at the head of the bay.

(244) The south coast of St. John is very irregular with bold projecting points terminating in cliffs over 100 feet high between the small bays and coves that have fringing reefs and shoals near the shores. The dangers are within 0.5 mile of the coast.

(245) **Lameshur Bay**, 1.5 miles northwest of Ram Head, is divided into three smaller bays by projecting points. The easterly one affords good shelter for small vessels in 7 fathoms about 0.2 mile offshore. The middle bay has a good anchorage generally used by sailboats and a sand beach.

(246) The shore for 0.6 mile west of Lameshur Bay consists of very prominent 150-foot white cliffs.

(247)

Reef Bay to Great Cruz Bay

(248) **Reef Bay**, 2.7 miles west of Ram Head, is a large open bight, but the shores are fringed by coral reefs. A passage leads through the reefs to a protected small-boat harbor in **Genti Bay**.

(249) **Great Cruz Bay**, 5.5 miles west of Ram Head, affords good shelter for small vessels. The depth is 21 feet in the entrance, decreasing to 9 feet in the middle of the bay.

(250)

St. Croix Island

(251) **St. Croix Island**, 32 miles south of St. Thomas and St. John Islands and 50 miles southeast of the mainland of Puerto Rico, is the largest of the U.S. Virgin Islands. The island is 19 miles long and averages about 3.5 miles wide. The north side is somewhat mountainous, particularly in the west part. **Mount Eagle**, 1,165 feet high and about 5 miles from the west end, is the highest point on the island. Southward from the mountains, the land is composed of fertile undulating valleys. The south side is nearly straight and generally low.

(252) Water commerce with St. Croix Island is handled through Christiansted on the north coast, Frederiksted on the west coast and the industrial complexes in Port St. Croix and Limetree Bay along the central south coast. Tourism accounts for a good part of the commerce on the north, east and west coasts; a petroleum refinery is the major commerce on the south coast. St. Croix Senepol cattle are raised and exported to nearby islands and worldwide.

(253)

Currents

(254) There is usually a slight west current between St. Croix Island and St. Thomas Island. A strong westerly or easterly current observed between 1 to 3 knots, depending on weather conditions, has been observed at Christiansted Harbor on the north side of Protestant Cay in Schooner Channel, while a moderate west flow is reported outside the light at Fort Louise Augusta.

(255) National Ocean Service parties have reported that off East Point tidal currents of about 1 knot set northwest and southeast in calm weather. Close to East Point strong currents set north and south. Trade winds increase the northwest flow and decrease the southeast flow. A very strong west current setting around East Point and through Buck Island Channel was noted when the trade wind was blowing. A strong northwest current was noted off Southwest Cape.

(256) In 1982, the NOAA Ship MT. MITCHELL reported a prevailing west current with a drift of 1 to 1½ knots on the south side of St. Croix, with a countercurrent inside the reef along the shore.

(257)

Weather

(258) The weather at St. Croix is wholly influenced by the maritime tropics and the prevalent trade winds. The average temperature at St. Croix is 80.2°F with an average maximum of 86.3°F and an average minimum of 73.6°F. August is the warmest month with an average temperature of 82.5°F and January is the coolest month with an average temperature of 77.2°F, allowing for an annual spread of only 5.3°F. Temperatures in excess of 90°F have occurred in each month except January and February, and the all-time maximum (93°F) has occurred numerous times during the months of April, September, October, and November. The coolest temperature on record is 61°F, recorded in January 1955. The average annual precipitation for St. Croix is 41.24 inches; 25% of this amount falls during the peak hurricane months of August and September. Since 1950, at least 27 tropical cyclones have come within 50 miles of St. Croix. Of these 27 storms, 23 of them affected St. Croix during the two-month period of August and September. Hurricane Georges did considerable damage throughout all the Virgin Islands in September 1998. Hurricane Marilyn caused much damage in the region during September 1995, and hurricane Hugo raked the region with 120-knot winds as the center passed directly over the island in September 1989.

(259) There is no regular land breeze at St. Croix Island, but when the trade wind is light during the day it generally falls calm in the night. From June to September, when the trade wind is usually light, occasionally strong winds from the southwest blow across the island with much rain. The ground swell accompanying northers is especially heavy in the vicinity of White Horse.

(260)

Local regulations

(261) Local rules and regulations for St. Croix are enforced by the U.S. Virgin Islands Port Authority, Gallows Bay, Christiansted, St. Croix, UVI 00820. No radio watch is maintained at the Port Authority, but contact may be made through the marine operator.

(262) **Hams Bluff**, the northwest extremity of St. Croix Island, is a conspicuous 100-foot cliff with the land back of it rising to high hills. **Hams Bluff Light** (17°46'09"N., 64°52'15"W.), 394 feet above the water, is shown from a white cylindrical tower.

(263) From Hams Bluff, the north coast of St. Croix Island has slightly jutting rocky points with sandy beaches between for 5.5 miles to Baron Bluff.

(264) **Baron Bluff** is the sea front of the triple spurs of a 395-foot hill. From Baron Bluff east to **Salt River**, the shore consists of low rocky cliffs.

(265) **Salt River Bay** is 1.5 miles east of Baron Bluff. A narrow passage with depths of 6 feet leads through a reef into the bay. The shores of the bay are mostly mangrove

swamps with several openings leading to boat landings. A marina with berths, electricity, water, ice and a launching ramp is in the bay; minor repairs can be made.

(266) A reported unlighted spar buoy is on the north side at the entrance to Salt River Bay reef. There are two reported dive moorings on the east and west walls off Salt River Canyon.

(267) **White Horse**, 400 yards north of Salt River Point, is a rock over which the sea always breaks. A boat channel with a depth of about 11 feet leads between the rock and the shore.

(268) From Salt River Point, the coast turns abruptly southeast for 3 miles to Christiansted. In this area, the hills near the coast are covered with grass and low bushes, and the low shoreline has a narrow sand beach.

(269)

Christiansted Harbor

(270) **Christiansted Harbor**, on the north coast of St. Croix Island 10 miles east of Hams Bluff and 7.7 miles west of East Point, is a port of call for vessels drawing up to 16 feet. The harbor is protected by a reef and bank that extends clear across the entrance, except for the channel opening. **Gallows Bay** is in the southeast part of the harbor. Most of the harbor is shoal.

(271) **Christiansted**, on the south shore of the harbor, is the largest town on St. Croix Island. The principal imports include foodstuffs, building materials, petroleum products and clothing. Exports include rum and cattle.

(272)

Prominent features

(273) **Fort Louise Augusta**, on the east side of the harbor entrance, is an old battery ruin with a modern house structure on projecting point. Christiansted Harbor Channel Entrance Range Front Light, 45 feet above the water, is shown near the fort.

(274) **Protestant Cay**, an islet in the harbor, is surmounted by an old stone building and a hotel. The ruins of Fort Sofia Frederika are at the north end of the cay.

(275)

Channels

(276) The entrance is north of Fort Louise Augusta through a crooked dredged channel marked by buoys, lights and a **164°** lighted entrance range, thence east and south of Protestant Cay to a turning basin and to Gallows Bay Dock. In 2022, the controlling depth was 14 feet, with 12 to 17 feet in the basin with lesser depths along the northeast, southeast and southwest limits of the basin. Shoaling has occurred close to the edges of the marked channel into Christiansted Harbor; extreme caution is advised in transiting the channel.

(277) Inside the harbor, a privately dredged channel with private aids leads west of the main channel to facilities in the southwest part of the bay. In 2014, a depth of 16 feet was reported in the channel and alongside the berthing facilities.

(278) A channel, with natural depths to 11 feet and marked by private lighted buoys, is east of Round Reef and used by schooners and small boats.

(279) A 15-foot passage over the south portion of Scotch Bank is used by small vessels coming from the east; local knowledge is necessary.

(280)

Anchorages

(281) Vessels anchor east-northeast of Protestant Cay in depths of 9 to 30 feet according to draft. Holding ground in this area is reported to be hard; caution is advised to ensure against dragging. Small boats anchor in Gallows Bay and along the east side of the harbor. A yacht anchorage, supervised by the U.S. Virgin Islands Port Authority, is on the west side of Protestant Cay. During a hurricane or gale vessels anchor in Gallows Bay and small boats sometimes anchor in Salt River Bay.

(282)

Dangers

(283) **Scotch Bank**, a 1.8-mile-long sand shoal extending northeast from Fort Louise Augusta, is on the east side of the harbor entrance. Depths of 2 to 20 feet are on the shoal, which is easily seen except when the sun is ahead.

(284) **Long Reef**, a 2-mile-long strip nearly awash in places, forms the northwest side of the harbor. Shoal water extends east from the reef to the channel marked with buoys.

(285) **Round Reef**, west of Fort Louise Augusta, is circular with a spot bare at low water near its center and several spots with depths of 1 foot.

(286) The harbor is shoal with depths less than 6 feet outside the circuitous channel marked by buoys. Several visible wrecks and submerged obstructions are along the east side of the harbor.

(287)

Routes

(288) Approaching Christiansted Harbor from northeast, give Buck Island a berth of 2 miles or more to avoid the bar north of it. From west, all dangers will be avoided by staying 1 mile or more off the north coast. The entrance is marked by a lighted **164°** range, and buoys, lights and daybeacons mark the entrance channel into the harbor.

(289)

Pilotage, Christiansted

(290) See Pilotage, U.S. Virgin Islands (indexed as such) early in this chapter. Vessels are boarded from a motorboat just outside **Christianstead Harbor Channel Lighted Buoy 1**. Strangers are advised to take a pilot and should not attempt to enter at night without one.

(291)

Quarantine, customs, immigration and agricultural quarantine

(292) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(293) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See

Public Health Service, chapter 1.) Juan Luis Hospital and Medical Center are located mid-isle just west of Christiansted.

(294) Christiansted is a **customs port of entry**.

(295)

Harbor regulations

(296) Local rules and regulations for Christiansted harbor are enforced by the **harbormaster**, whose office is on the waterfront at Gallows Bay.

(297)

Wharves

(298) Gallows Bay Dock (17°44'57"N., 64°41'57"W.), in the east part of Gallows Bay, has berthing space of 400 feet on the north side and 300 feet on the south side; depths of 16 feet are reported alongside. A roll-on/roll-off ramp with 16 feet alongside is east of the dock. Forklifts, mobile cranes up to 70 tons and covered and uncovered storage are available. General cargo is received and shipped.

(299) Kings Wharf, the west 250-foot section of a 600-foot bulkhead stone quay 300 yards west of Gallows Bay Dock and just north-northwest of the fort, has reported depths of about 8 feet alongside. The wharf is used by tour boats, private vessels and ferries to Protestant Cay. The wharf is administered by the National Park Service and is for day-use only by permit. Permits are obtained from the National Park Service Headquarters at Fort Christiansted; visitor information telephone, 340–773–1460.

(300) A 380-foot-long pier, 0.9 mile west of Gallows Bay Dock, is operated by the Virgin Island Cement Company. Pipelines for handling raw cement and fuel oil are on the pier. A reported depth of 17 feet is alongside.

(301) An L-shaped pier, just west of the long pier, has about 200 feet of berthing space with 17 feet reported alongside and is operated by Masonry Products, Inc. A pipeline for handling raw cement is on the pier.

(302)

Supplies and repairs

(303) Some marine supplies and limited amounts of water are available at Christiansted. Gasoline and diesel fuel are available near the waterfront; bunkers can be trucked in from the south side of the island. Facilities for repairs to oceangoing vessels are limited to minor above-the-waterline repairs.

(304)

Small-boat facilities

(305) St. Croix Marine Inc., northeast of Gallows Bay Dock, has four finger piers; two, 100 feet long, and two, 200 feet long; depths of 11 feet are reported alongside. A marine lift at the facility can can handle craft to 60 tons. Berths, gasoline, diesel fuel, pumpout, dry and wet storage, water, ice and marine supplies are available. Hull, engine and electronic repairs are also available.

(306)

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(307) Beyond Fort Louise Augusta, the north coast trends east for 7.3 miles to East Point, the east end of the island. The coast is fringed by coral reefs, behind which in several places small vessels may find protection.

(308) **Punnett Point**, 1.4 miles east of Fort Louise Augusta, forms the east side of **Punnett Bay**, a semicircular cove 0.2 mile wide. Northeast of Punnett Point, at a distance of about 0.4 mile, is **Green Cay**, an islet 55 feet high at its south end. South to the beach and between Green Cay and Pull Point, the area has depths of only 6 to 18 feet with numerous coral heads.

(309) A marina is in **Southgate Pond** 0.2 mile east of Punnett Point. The entrance channel is protected on the west side by a breakwater. In 1982, 10 feet was reported in the entrance channel, with 8 to 10 feet available in the basin. Berths, gasoline and diesel fuel are available.

(310) **Pull Point**, 2.3 miles east-northeast of Fort Louise Augusta, is a small projecting point terminating in cliffs 35 feet high. A stone house is visible at the point. **Chenay Bay** is the bight west of the point.

(311) **Buck Island**, 340 feet high, is 4.3 miles east-northeast of Fort Louise Augusta and about 1.5 miles off St. Croix. The island is on the south edge of a coral bank that extends west about 0.8 mile then sweeps around a mile north of the island. This forms **Buck Island Bar**, 1.5 miles long. Shoals extend about 1.8 miles east of Buck Island. The island lies on the route from east to Christiansted Harbor. A light, 339 feet above the water, is shown from a red pyramidal skeleton tower on the summit of the island. Buck Island lies within the Buck Island Reef National Monument, the boundary of which is marked by private buoys.

(312) **Diedrichs Point**, the south extremity of Buck Island, is low. Several spots with 12, 17 and 20 feet lie from 1 mile east of the island to 1.7 miles east-southeast of it. **Buck Island Channel** lies between Buck Island and the adjacent reefs and St. Croix. Moderate-draft vessels may approach it from either north or east. **Channel Rock**, awash, lies 1.8 miles west of East Point.

(313) The north coast of St. Croix from Pull Point to East Point is fringed by a coral reef. Behind this reef are several anchorages for small boats, but local knowledge is necessary to use them. Entrance is made at **Coakley Bay**, a bight 0.8 mile east of Pull Point. The opening in the end of the reef can be entered by steering **180°** with Coakley Mill directly ahead. A light in about 17°46.1'N., 64°38.2'W., marks the east side of the opening and should be kept close aboard when entering. In 1982, a large coral head, covered 7 feet, was reported about 100 to 150 yards west of the light.

(314) **Pow Point**, 1.5 miles east of Pull Point, is rocky with a 130-foot hill 250 yards inland. **Tague Point**, 1.1 miles east of Pow Point, is sharp and rocky with a 155-foot hill 0.2 mile south-southwest. **Tague Bay**, 0.7 mile wide

between the bluffs at Tague Point and **Romney Point**, has a curving beach of sand and shingle. The bay provides anchorage for light-draft vessels entering behind the reef through a break northeast of Tague Point. Caution is advised when navigating the area due to strong surge currents. There is a private yacht club along the shore; water and ice are available.

(315) **Cottongarden Point**, a prominent rocky point with a 55-foot knoll, is 1.6 miles east of Tague Point and opposite the east end of the long reef paralleling the coast. **Cramer Point**, a public beach and park operated by the Insular Government, is west of the point.

(316) **East Point**, the east extremity of St. Croix, is a bluff. A 225-foot hill is 100 yards west-northwest, and **Morne Rond**, 380 feet high, is a conspicuous round hill near the point.

(317) **Lang Bank**, an extensive bank 3 to 5 miles wide stretches 9 miles northeast from the east end of St. Croix Island. Along its edge is a wall-sided narrow coral ledge which, commencing about 3 miles east of Buck Island, sweeps around in a convex form for about 14 miles, terminating 2 miles south from East Point. Its north part is from half a mile to 1 mile wide, with depths of 5½ to 10 fathoms. The south portion is about 100 to 600 yards wide, with 7 to 10 fathoms on it. The shoalest part of Lang Bank breaks in heavy weather and should be given a wide berth.

(318) From East Point, the south coast of St. Croix Island trends west-southwest for 20 miles to Southwest Cape. This coast is bordered by a dangerous broken coral reef that extends from East Point to nearly abreast of Long Point, 3.6 miles east of Southwest Cape. Behind this reef are several anchorages suitable for small local boats. Along the coast are many small bights and indentations, but all are shallow and do not afford anchorage except for small craft. Many old mills and the aerolight on the southwest part of the island are prominent.

(319) **Point Cudejarre**, a sharp point with a 25-foot bluff and a 120-foot hill north-northwest, is 0.3 miles southwest of East Point. **Grass Point**, 3 miles west-southwest of East Point, is a long narrow point marked by a 43-foot knob.

(320) **Mount Fancy**, about 4.7 miles west of East Point, is a conspicuous double hill, 245 feet high, which forms the east point of **Great Pond Bay**. Good anchorage for vessels of 10-foot draft, in hard sand bottom, can be had in this bay. An entrance range is the east tangent of Milord Point in line with Sight Mill; when about 100 yards off the point, haul around to **064°**, pass west of a 7-foot shoal 200 yards east of Milord Point, and run for 0.3 mile, anchoring in 13 to 14 feet. **Milord Point**, the west entrance point of the bay, is a promontory of **Fareham Hill**, 192 feet high and prominent.

(321) **Vagthus Point**, sharp and rocky, is 9.5 miles west-southwest of East Point. **Canegarden Bay**, 1.2 miles wide, forms an irregular crescent to the west of Vagthus Point.

(322) **Limetree Bay**, close west of Canegarden Bay, is the site of a private deep draft oil handling facility HOVENSA LLC, a joint venture of Hess Oil and PDVSA of Venezuela. Large tankers call here to deliver crude oil and to load petroleum and petrochemical products.

(323)

Channels

(324) **Limetree Bay Channel**, privately dredged, leads from deep water to a large turning basin with east and west basins. The channel is privately marked by a **334°** lighted range visible 4° on each side of the channel centerline and by an auxiliary **334°** lighted range, close east of the first range, visible 4° on each side of the channel centerline, and by lights and lighted buoys. In 2012, the reported controlling depth in the channel was 60 feet with a draft limit of 55 feet.

(325)

Pilotage, Limetree Bay

(326) See Pilotage, U.S. Virgin Islands (indexed as such) early in this chapter. Pilotage is compulsory. Pilots board vessels about 3 miles south-southeast of Limetree Bay Channel Lighted Buoy 1. Vessels are requested to call HOVENSA or U.S. Coast Guard in advance for clearance on VHF-FM channel 11 for approach procedures and docking instructions. Night entry is limited to vessels not over 100,000 deadweight tons. There are no restrictions on sailings.

(327)

Towage

(328) HOVENSA maintains a large fleet of tugs capable of handling vessels to 300,000 deadweight tons.

(329)

Quarantine, customs, immigration and agricultural quarantine

(330) **Quarantine, customs, immigration** and **agricultural quarantine** matters are handled by representatives from Christiansted who board vessels at their berths. Documents required are the same as at U.S. ports.

(331)

Wharves

(332) A total of ten oil-handling docks are in the bay. A sulfur conveyor and a roll-on/roll-off dry cargo dock is on the north side of the east basin. Reported depths alongside are from 38 to 55 feet at the oil docks and 17 feet at the roll-on/roll-off dock.

(333) A 1,400-foot container wharf and two roll-on/roll-off ramps are 0.3 mile west of the causeway. Depths of 32 feet are reported alongside. Deck heights are 12 feet at the container wharf and 3 feet and 6 feet at the roll-on/roll-off ramps. A 30-ton container crane, 52 acres open storage and 30,000 square feet covered storage are available.

(334)

Supplies

(335) Dry goods and food supplies are handled by local ship chandlers. Bunker fuels and diesel oil are supplied by the refinery. Limited amounts of fresh water are available.

(336) **Krause Lagoon** indents the south shore of St. Croix Island immediately west of Limetree Bay and about 12.3 miles west-southwest of East Point. The coal-fired energy plant and remnants of a bauxite ore and alumina plant at the head of the channel are apparent. Large vessels previously called here to deliver bauxite ore and coal fuel supplies and load alumina.

(337) Three 215-foot silos marked by strobe lights are prominent at Port St. Croix.

(338)

Channels

(339) Krause Lagoon Channel, a privately maintained dredged 35-foot channel with dikes paralleling it on either side in the north part, leads from deep water through the reefs to a turning basin and two wharves at the head of the channel. The channel is privately marked by lighted buoys, lights and a **349.5°** lighted range. In 1988, the controlling depth was 33 feet.

(340)

Currents

(341) The current in Krause Lagoon is reported to set west and to vary in velocity with the wind. The current does not completely dissipate until inside Port St. Croix.

(342)

Pilotage, Port St. Croix

(343) See Pilotage, U.S. Virgin Islands (indexed as such) early in this chapter. Vessels entering Krause Lagoon Channel are boarded about 2.5 miles south-southwest of Krause Lagoon Channel Entrance Lighted Buoy 1. Vessels entering Limetree Bay are boarded about 3 miles southeast of Limetree Bay Channel Entrance Lighted Buoy 1. The area within a 4-mile radius of Limetree Bay Channel Entrance Lighted Buoy 2 is constantly congested with mostly very large heavy-laden tank vessels entering and leaving Limetree Bay Channel. Maneuverabilities for these vessels are restricted. All vessels are advised to avoid loaded tank vessels and use extreme caution in and near this 4-mile area. The area from 5 to 10 miles south of Krause Lagoon Channel Entrance Lighted Buoy 1 is sometimes congested with vessels waiting to meet a pilot at the designated boarding areas; vessels bound for the Container Terminal or the Gordon Finch Molasses Terminal should contact the Virgin Islands Port Authority Dock Master on VHF-FM channels 14 or 16 or telephone 340-778-3131 to arrange a pilot and receive berthing instructions. All other traffic into Krause Lagoon contact Cape Towing Caribbean on VHF-FM channels 14 or 16 for active operations information or approach procedures and docking instructions.

(344)

Towage

(345) Tugs are supplied by Cape Towing Caribbean, Borinken Towing and Salvage and Hovensa Marine.

(346)

Quarantine, customs, immigration and agricultural quarantine

(347) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(348) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(349)

Wharves

(350) The concrete bulkhead wharves on the east and west sides of the terminal each have 1,000 feet of berthing space. The berths on the west side of the terminal are used for discharging molasses and coal, and those on the east side are used for ethanol and other liquid fuels. There is a small pier, open to the public for launching small craft, on the east side of the entrance channel just north of the Gordon Finch Pier.

(351)

Supplies

(352) Emergency supplies of bunker fuels, diesel oil and fresh water are available. The terminal has no ballast disposal facilities.

(353) Dumping of waste oil in the harbor is prohibited. Masters are cautioned that the discharge of any oil, oily waste or other refuse in the harbor can result in serious damage to the shore plant cooling water intakes, and every precaution should be exercised to prevent such an occurrence.

(354)

Long Point to Frederiksted

(355) **Long Point**, 3.6 miles east of Southwest Cape, is a low projecting point covered with grass. West of the point is **Long Point Bay**, which is shoal. **Southwest Shoal**, 1.2 miles south of Long Point, has only 6 feet of water over it, and east to Krause Point the outlying reefs are the most dangerous along the south coast. They generally break, but as several shoal spots are south, the area should be approached with caution.

(356) The area out to the 100-fathom curve between Long Point and Southwest Cape and between Long Point and the entrance to Krause Lagoon Channel and Limetree Bay Channel is used extensively by recreational and commercial trap and line fishermen, both day and night. Most of the trap and line fishing is done in water less than 15 fathoms. Large vessels are requested to exercise caution and to consider these fishing activities when approaching and departing from the industrial complex in Krause Lagoon and Limetree Bay.

(357) A channel, privately marked and entered about 2.2 miles 118° from Southwest Cape, leads in an east

direction to mooring buoys about 1.1 miles east of Long Point; channel and mooring buoys are maintained by Texaco Caribbean Inc., St. Croix, Virgin Islands. The channel is primarily for the use of tankers arriving at the mooring buoys.

(358) **Southwest Cape**, the southwest extremity of St. Croix Island, is a low point projecting 1.2 miles in a southwest direction. The point is covered by low bushes and trees. A shoal area, sand and coral, extends south, with a least depth of 9 feet, at a distance of 0.8 mile from the shore. A buoy marks the southwest extremity of this shoal. The 5-fathom curve is 1.6 miles south of Long Point and nearly a mile south of Southwest Cape, but west of the point it is only 200 yards off. The 100-fathom curve lies nearly 2.5 miles southwest of Southwest Cape. **Southwest Cape Light** (17°40'40"N., 64°53'59"W.), 45 feet above the water, is shown from a gray skeleton tower near the tip of the cape.

(359) Caution is necessary in approaching Southwest Cape. The point, fringed by shoals, is low for some 3 or 4 miles to the high land of the interior. This may cause the mariner to overestimate the distance from the coast, especially at night.

(360) **Sandy Point**, the west extremity of the island, is 0.5 mile north-northwest of Southwest Cape.

(361) The west coast of St. Croix Island trends north-northeast from Southwest Cape for 2.4 miles to Frederiksted, thence northwest for 2 miles, and then curves northeast for 2 miles to Hams Bluff. The coast consists mostly of sand beach with the land back of it sloping gently upward in the south part and the hills gradually working west to the shore in the north part. The slopes are covered by grass and bushes. The beach is steep-to with the 10-fathom curve lying 0.5 mile or less offshore.

(362) **Frederiksted**, on the west coast of St. Croix Island, 2.4 miles north of Southwest Cape and 3.7 miles south of Hams Bluff, is a port of call for cruise ships and government vessels and occasionally for small cargo vessels. Large vessels can dock at the long municipal pier in the 4-mile-wide open roadstead. Imports include building materials and vehicles.

(363)

Prominent features

(364) **Fort Frederik** is a red brick structure 125 yards northeast of the municipal pier.

(365) A radar tracking station (17°43'13"N., 64°51'18"W.), illuminated at night, is on **St. George Hill** about 1.5 miles east of Frederiksted. The station is prominent, especially at night, when it is visible for over 20 miles.

(366)

Anchorages

(367) Small boats anchor near the waterfront. Anchorage between the municipal pier and the warping buoys to the south is prohibited.

(368)

Currents

(369) The Frederiksted harbor pilot reports that a westerly current from 225° to 315°, with a set of not more than 1 knot, and 2 knots in extreme cases, may be experienced when approaching the pier. In addition, the pilot reports that there seems to be an almost ever-present circular current beginning about 0.25 mile off the pier with an initial set to the south and a final set to the north when abeam of the pier's end.

(370) **Restricted areas** have been established off the west coast of St. Croix Island, north and south of Frederiksted Harbor. (See **33 CFR 334.1490**, chapter 2, for limits and regulations.)

(371)

Routes

(372) From the south, the shoals south of Southwest Cape will be avoided by staying a mile or more offshore. At night stay in the white sector of Frederiksted Harbor Light on the approach to the pier.

(373)

Pilotage, Frederiksted

(374) See pilotage, U.S. Virgin Islands (indexed as such) early this chapter. Vessels are boarded 1 mile off the municipal pier.

(375)

Quarantine, customs, immigration and agricultural quarantine

(376) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(377) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) A municipal hospital is at Frederiksted.

(378)

Harbor regulations

(379) Local rules and regulations for Frederiksted harbor are enforced by a **dockmaster**, whose office is on the shoreward end of the municipal pier. Copies of the regulations may be obtained from the Virgin Islands Port Authority, Gallows Bay, Christianstead, St. Croix, VI 00820.

(380)

Wharves

(381) A 1,895-foot pier, including the mooring, extends from the waterfront at Frederiksted. A 402-foot loading platform (pierhead) is about 203 feet inshore of the outer dolphin. Depths along both sides of the pier decrease from about 59 feet at the outer end to about 35 to 48 feet alongside the loading platform, and thence lesser depths inshore of the east end of the loading platform. In heavy winds, large vessels sometimes drop their outboard anchor to assist in maneuvering alongside.

(382) The pilot advises that with strong winds from the west, and especially from the northwest, the pier is not a safe berth because of the unusual rise and fall of the water

at dockside. Under these conditions, a strong wind-driven current with an easterly set can be expected. Mariners should approach the pier at a 45° angle to avoid damage resulting from scraping along the pier.

(383) A roll-on/roll-off facility with landing ramp is close south of the municipal pier. A line of submerged pilings and dolphins extends about 80 yards southwest from the ramp. Depths in the approach and alongside the ramp are about 14 feet.

(384) A landing platform for ships' tenders is on the south side of the east end of municipal pier; depths of about 8 to 10 feet reported alongside.

(385)

Supplies and repairs

(386) Water, bunker fuels, diesel oil and gasoline can be trucked in from nearby. Limited above-the-waterline repairs are available.

(387) Submarine cables extend west-southwest to the 100-fathom contour from **Sprat Hole**, 1.6 miles north of Frederiksted. Mariners are requested not to anchor in this area.

(388)

Little Tobago Island to Frenchman Cay

(389) A general description of the **British Virgin Islands** is in included in this chapter for a convenient reference to both the United States and British groups. Complete information is included in Pub. No. 144, Sailing Directions (Enroute), Caribbean Sea, published by the National Geospatial-Intelligence Agency, and West Indies Pilot, Vol. II, published by the British Ministry of Defense Hydrographic Department.

(390) **Little Tobago Island**, 3.5 miles northeast of Hans Lollik Island, is nearly 0.5 mile long and 279 feet high. It is steep-to except on its southeast side. **Tobago Island**, 1 mile northeast of Little Tobago Island, is 0.8 mile long and about 538 feet high. A small rock, awash and steep-to, is about 100 yards off the north point. The southeast side of the island is fringed with coral, but elsewhere the coastal cliffs are steep-to. A few rocks lie close off the northwest point.

(391) **Watson Rock**, steep-to and 89 feet high, is about 0.3 mile west of the southwest point of Tobago Island. **King Rock**, 0.6 mile south of the southwest point, is awash and steep-to. It is near the south end of a bank, over which are general depths of 6 to 9 fathoms, extending about 0.7 mile south of Tobago Island.

(392) **Mercurius Rock**, 0.8 mile east of the north end of Tobago Island and the only danger between that island and Jost Van Dyke Island, is small and steep-to. It is covered 7 feet. When using the passage between Tobago and Jost Van Dyke Islands, the east side should be favored.

(393) **Jost Van Dyke Island**, about 2 miles east of Tobago, is 3.5 miles long, lofty, rugged and steep-to. Near the middle of the north part a summit rises to 1,070 feet. **Great Harbor** and **Little Harbor**, on the south side of the island, are suitable only for small vessels. Great Harbor is about 0.5 mile in extent, with depths of 4 fathoms to about 0.2 mile from its head, and Little Harbor has depths of about 8 fathoms inside the entrance.

(394) **Little Jost Van Dyke Island**, connected by a shallow ledge to the northeast end of Jost Van Dyke Island, is 308 feet high. **Green Cay**, 108 feet high, is a small islet close east of Little Jost Van Dyke Island. **Sandy Cay**, nearly 1 mile south of Green Cay, is 66 feet high at its east end. It is surrounded by shoal water, and foul ground extends 200 yards from the east and west ends. The channel between it and Jost Van Dyke Island is 0.6 mile wide; the island shore must be favored.

(395) **Tortola**, the largest of the British Virgin Islands, is 10 miles in length and 3.5 miles wide. **The West End**, the west extremity, is about 2 miles northeast of Mary Point, St. John. The highest summit in the Virgin Islands is 1,709-foot **Mount Sage** in the west part of the island; rugged hills rise somewhat abruptly from the shores on all sides.

(396) **Great Thatch Island**, about 0.6 mile north of Mary Point from which it is separated by The Narrows, is 1.7 miles long and near its center rises to a peak 613 feet high. The east point is bold and steep-to. **Thatch Island Cut**, the channel between Great Thatch and The West End, is deep. Sailing vessels should not attempt Thatch Island Cut from the north except with a south current, as the eddies and currents are very strong.

(397) **The Narrows**, between St. John Island and Great Thatch Island, give access to the channel that extends between Tortola and St. John and leads to Sir Francis Drake Channel and Flanagan Passage. Tidal currents in The Narrows and the passage eastward attain velocities of from 2 to 4 knots.

(398) **Little Thatch Island**, 0.4 mile south of The West End, is about 0.5 mile long. **Frenchman Cay**, about 0.3 mile east of Little Thatch Islet, is 400 feet high. **Sopers Hole** is a deep little basin, 1 mile long and about 0.3 mile wide, between Frenchman Cay and Little Thatch Island, on the south, and the west end of Tortola, on the north side. At the east end of Sopers Hole the muddy bottom is the best holding ground. There is a small pier on the north side of Sopers Hole.

(399) In the center of Sopers Hole is a depth of 13 fathoms which gradually decreases to 6 fathoms at 100 yards from the shore; the bottom is sandy. The passage between Little Thatch Island and Frenchman Cay is from 6 to 7 fathoms deep.

(400) Vessels from south may enter Sopers Hole by the passage between Frenchman Cay and Little Thatch Island or by that between the latter island and the west end of Tortola. These passages are not difficult, but the west ends of Tortola and Little Thatch Island must be given a berth of more than 200 yards.

(401) Sailing vessels taking Thatch Island Cut should approach it with a south current, which will shoot a vessel into it. A vessel coming from the east will find the passage east of Little Thatch Island the best, as she will have a leading wind, can luff up closer under the west end of

Frenchman Cay, which is steep-to, and shoot into Sopers Hole with either a south or north current. When leaving, pass out to the north through Thatch Island Cut, or, if bound into Sir Francis Drake Channel, round the west end of Little Thatch Island at a distance of somewhat more than 200 yards and haul to the wind. With the east tidal current of 3 or 4 knots on the lee beam, she will have a fair set through the channel between St. John and Tortola. The west tidal current has a similar velocity. There is no danger on either shore. A vessel must be prepared to meet the gusts and baffling winds that rush out from the valleys of Tortola.

(402) On the northwest side of Tortola are numerous small bays or bights, of which Cane Garden Bay, the largest, is the only one on the north side of the island that affords anchorage even for small vessels. Within the entrance are depths of 18 to 24 feet. A 5-fathom shoal lies in the approach to the bay, about 0.4 mile north of the south entrance point.

(403)

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Chart - *25611

(404) **Road Harbor**, on the south side of Tortola 6 miles east of its west end, is the only port of entry in the British Virgin Islands for all vessels. Sopers Hole at the west end of Tortola is a limited port of entry. The harbor is exposed southeast, but the other sides are surrounded by high hills with their spurs reaching the shores.

(405) **Road Town**, on the west shore of Road Harbor, is the capital of the British Virgin Islands. Imports include foodstuffs, building material and general merchandise. Livestock are exported.

(406)

Prominent features

(407) There are four prominent landmarks in Road Town, these being Fort Burt Hotel; a group of four pink buildings situated on the west side of the harbor on Burt Point; the Administration Building (Customhouse), a white flatroofed building standing behind the main wharf; and about midway between these two positions stands the Administration Residence (Commissioner's House), an isolated, white concrete building standing on a low knoll. To the north of the Administration Building, the white belfry of the Anglican church shows above Wickham Cay, a low mangrove-covered islet, in the northwest part of the harbor. The floodlighted oil tanks on Shirley Point on the east side of the harbor north of Scotch Bank are reported to be conspicuous.

(408)

Channels

(409) The principal channel into Road Harbor is between Scotch Bank and Lark Bank, thence on the lighted range to the pier at Road Town. Small vessels also enter the harbor between the lighted buoy marking the outer limits of the coral reef about 400 yards east of Burt Point and Lark Bank. The controlling depth is 36 feet to the anchorage area, but only 7½ feet to the dock.

(410)

Anchorages

(411) Deep-draft vessels anchor in depths of 8 to 12 fathoms inside of Scotch and Lark Banks. Anchorage may also be obtained in the north part of the harbor, north of Harbor Rock, in about 8 fathoms. Vessels proceeding to the deep-draft anchorage should steer **321°** from a point about 1.5 miles 180° from Half Moon Point until the lighted buoy off Burt Point is abeam. Ships desiring to make the north anchorage should proceed as to the deep-draft anchorage until the Commissioner's House is abeam. Ships desiring to anchor south of Harbor Spit should proceed as previously mentioned until the range lights come in line 290°, which will lead to a depth of about 9 fathoms between Burt Point and Harbor Spit. The best berth is just south of the range line.

(412) **Careening Cove**, in the lee of the dry reef off Burt Point, is small but well sheltered, with depths of 4 to 6 feet.

(413)

Dangers

(414) Although depths of 36 to 48 feet can be taken to the anchorage areas in Road Harbor, irregular bottom, and many patches of rock and coral, with depths of 13 to 36 feet, lie within about 1.5 miles of Hog Valley Point (Hog Point) and 2 miles of Slaney Point.

(415) Depths of from 22 to 25 feet will be found over extensive shoals with limits of about 1.1 miles south of Hog Valley Point and 1.1 miles south of Slaney Point. A 17-foot patch is about 0.5 mile southeast of Hog Valley Point, and a 18-foot patch is about 0.75 mile southwest of Slaney Point.

(416) A coral reef about 250 yards wide and partially covered by mangrove extends northeast from Slaney Point to Burt Point; a lighted buoy marks the outer limits of the reef at Burt Point.

(417) **Denmark Banks**, 0.5 mile southeast of Burt Point, has two rocky patches with a least depth of 13 feet. The Bluff, bearing 073° and open south of Nora Hazel Point, leads south of these banks. **Lark Bank**, 0.4 mile east of Burt Point, has a least depth of 15 feet over a coral head. **Scotch Bank**, 0.8 mile east of Burt Point and marked by a buoy at its south edge, has a least depth of 10 feet.

(418) **Harbor Spit**, 0.4 mile north of Burt Point, is an extension of the shoal water in the northwest part of the harbor. Depths on the spit are from 4 to 17 feet; a buoy marks the southeast end of the spit. **Harbor Rock**, 250 yards southeast from the end of the spit, has a least depth of 20 feet.

(419)

Tides

(420) The tides in Road Harbor are chiefly diurnal, and the range is small.

(421)

Pilotage, Road Harbor

(422) No licensed pilots are available, but reliable mariners are available to bring ships into the harbor.

(423)

Wharves

(424) A 180-foot cargo pier at Road Town has depths of 7½ feet at the head and on the sides. A 106-foot passenger pier to the south has depths of 7 feet alongside. Small sloops are used for lighterage when necessary.

(425)

Supplies

(426) Limited amounts of groceries and water are available. Gasoline and diesel fuel can be obtained from offshore pipelines on the northeast side of Road Harbor.

(427)

Repairs

(428) A small marine railway in Careening Cove can handle boats about 40 feet in length and 6 feet in draft. Another marine railway in **Bauger Bay**, on the northeast side of Road Harbor, can handle small boats of 6-foot draft for repairs.

(429)

Communications

(430) Daily passenger launch service is maintained between Road Harbor and St. Thomas. Radiotelephone and radiotelegraph communications are available. There is air service between other islands.

(431)

Guana Island to Round Rock Passage

(432) **Guana Island**, 810 feet high and 1.7 miles long, is about 0.3 mile north of Tortola. The passage between these islands has a depth of about 29 feet in the fairway. On the west headland separating **White Bay** and **Muskmelon Bay** is a large rock shaped like an iguana's head, known locally as **Lizard Head Rock**. A safe anchorage in 7 to 12 fathoms is in the entrance to White Bay.

(433) **Great Camanoe**, a mile east of Guana Island, is about 2.5 miles long. It consists of two parts connected by a low narrow neck of land between **Lee Bay** and **Cam Bay**. **Scrub Island** is close east of Great Camanoe, from which it is separated by a narrow channel with many shoals and rocks.

(434) **Little Camanoe** and **Marina Cay** are southwest and southeast, respectively, of the south end of Great Camanoe. They are all connected to the north side of Beef Island by a shoal bank on which are several rocks and reefs. The channel north of Beef Island is quite open and easily navigated by large yachts. **Shallow Rock** is a 3-foot shoal off the west point of **Trellis Bay** on the north coast of Beef Island. A light is shown from **Bellamy Cay** in the middle of the bay. A small marine railway is in the bay.

(435) A hotel is on Marina Cay; launches, yachts, air compressors for aqualungs and other diving equipment are available.

(436) **Beef Island**, about 2.4 miles long and 660 feet high in its east part, is separated from the east end of Tortola by a narrow shoal channel that should be used only with local knowledge. A bascule bridge with an unknown clearance crosses the channel. **The Bluff**, the south extremity of the island, is a good landmark for vessels bound to Road Harbor. During strong northeast winds excellent anchorage will be found in the lee of Beef Island, about 0.7 mile west of The Bluff. An airfield is on Beef Island. **Buck Island**, 1.1 miles southwest of Beef Island and close off the southeast side of Tortola, is 170 feet high at its southeast end.

(437) **Sir Francis Drake Channel** is a passage bounded on the northwest by Tortola, on the east by Virgin Gorda and on the south and southeast by the chain of islands extending between Virgin Gorda and St. John. The channel can be entered by most vessels through any of the passages in the latter chain of islands from the south or the passages on either side of **Dog Islands** from the northwest.

(438) The depths around Buck Island are irregular, especially in the approach to Road Harbor, and caution is advised. Anchorage can be found anywhere in the channel east of Buck Island, but the bottom is hard, being a thin bed of sand over coral, and therefore requires a good scope of chain.

(439) In Sir Francis Drake Channel there is scarcely any current except close inshore, where small vessels may gain some advantage from it when beating to windward during the northeast flow.

(440) **Flanagan Passage**, the westernmost of the passages leading into Sir Francis Drake Channel from the south, is a group of channels between St. John and Norman Islands. It and connecting passages have been described previously in this chapter.

(441) **Norman Island**, 1.6 miles east of Flanagan Island, is about 2.3 miles long and 427 feet high near its southwest extremity. Foul ground is close off its northeast end and southern expanse. **Ringdove Rock**, covered by 2 fathoms, is about 300 yards west of the northwest point of Norman Island. **Santa Monica Rock**, 0.7 mile southwest of Norman Island, is a small patch 1¾ fathoms deep.

(442) **Pelican Island**, 180 feet high, is about 0.5 mile north of Ringdove Rock. About 200 yards west of it are **The Indians**, four remarkable small pinnacle rocks, 50 feet high. A 6½-fathom shoal lies 0.7 mile north-northwest of Pelican Island.

(443) **The Bight**, a small inlet on the west side of Norman Island, provides excellent anchorage. The shores are steep-to, and Ringdove Rock is the only danger when entering. The wind in the lee of the island, however, is so baffling that sailing vessels may have to anchor at the entrance and warp in. Although the bight is open to northwest, St. John Island prevents any sea from setting in, and holding ground is good. Safe anchorage with the

regular trade wind may also be found in **Privateer Bay**, on the west side of Treasure Point.

(444) **Peter Island**, northeast of Norman Island, is in the form of an elbow, 440 feet high at its west part. **Carrot Rock**, 82 feet high, lies about 0.3 mile off the south end of the island, and **Carrot Shoal**, covered 1½ fathoms, is about 0.4 mile southwest of the rock. Some 4¾-fathom patches lie within 0.5 mile of the north side of the island.

(445) **Great Harbor**, a small bight on the north side of Peter Island, is about 0.5 mile in extent. It may be entered easily at any time. Deep water is close to shore, and the holding ground is excellent. **Little Harbor**, a short distance west of Great Harbor, is smaller and more exposed but has characteristics very similar to the latter.

(446) Owing to the shape of Peter Island, the passage between it and Norman Island is rather crooked but has a least depth of 5¾ fathoms. It is seldom taken by sailing vessels. Carrot Shoal can be avoided by keeping Norman Island abroad.

(447) **Dead Chest**, nearly 0.5 mile off the northeast end of Peter Island, is an islet 200 feet high; a group of rocks extends about 0.2 mile south from its east end. A 4½-fathom patch lies about 0.7 mile northwest of the islet.

(448) **Blonde Rock**, covered 1½ fathoms, is about 0.6 mile east-northeast of Dead Chest. **Salt Island Passage**, 1.5 miles wide between Dead Chest and Salt Island, is generally smooth. Blonde Rock can be avoided by keeping 0.5 mile from the east side of the passage.

(449) **Salt Island**, about 2 miles northeast of Peter Island, rises to a height of 380 feet in its north part. A rock awash lies close off its northeast end. The passage between Salt and Cooper Islands is constricted to a width of about 0.3 mile by the rocks and an islet off the nearest point of Cooper Island. This passage should never be attempted by a sailing vessel. **Cooper Island**, northeast of Salt Island, is 1.7 miles long and 509 feet high at its south end. **Dry Rocks** are 300 yards off the northeast side of Cooper Island, and **Carval Rock**, 110 feet high and steep-to, is 0.8 mile east-northeast of **Markoe Point**, the south point of Cooper Island.

(450) **Ginger Island**, about 1 mile east of Cooper Island, is marked by a light at its northeastern end. The island is steep-to at its northeast and southeast ends, and some rocks lie close off its west end. The passage between Ginger and Cooper Islands may be taken by powered vessels, but sailing vessels may meet trouble.

(451) **Round Rock**, 220 feet high, is the southernmost of a chain of islets and rocks extending south-southwest from the southwest end of Virgin Gorda. **Round Rock Passage**, between Ginger Island and Round Rock, is the easternmost of the passages leading into Sir Francis Drake Channel from the south. It is best for vessels coming from the south. The passage is about 0.7 mile wide and easily located from its position in relation to Fallen Jerusalem, 1.2 miles to the northeast. Sailing vessels will find it advantageous to use this passage as the islets on the weather side offer no obstruction to the prevailing winds. The southeast and northwest tidal currents attain a velocity of about 1 knot.

(452)

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(453) **Virgin Gorda** is easily distinguished on making the land, as it rises gradually to the distinct summit of 1,370-foot **Virgin Peak**. The island, extremely irregular in outline, consists of a central portion from which there are peninsulas extending east and south-southwest. The east peninsula consists of irregular rugged hills that terminate at **Pajaros Point** in an astounding pinnacle rock 120 feet high. The southwest peninsula is more regular in outline and 250 to 450 feet high, but it is joined to the central portion by an isthmus only 200 yards wide.

(454) The west side of the southwest peninsula consists of immense granite blocks that lie scattered about on the shore. **Colison Point** is the northwest extremity of the peninsula. The islets and rocks to the south as far as Round Rock, 2 miles distant, are also of granite; the largest, about 140 feet high, nearly 0.5 mile from the south end of the island, is named **Fallen Jerusalem**because of of its resemblance to a town in ruins.

(455) Several islets are in the north part of Sir Francis Drake Channel. **Great Dog**, the southeasternmost, is 270 feet high and steep-to at its west end; rocks fringe its north and south sides. **George Dog**, the northernmost, is 250 feet high and has some detached rocks about 0.2 mile north of it. **Cockroach Rock** lies about 0.2 mile west of it. A rock covered 2 fathoms is about 0.1 mile south of Cockroach Rock. **West Dog**, the westernmost, is 150 feet high, with its west side bold and steep-to. A rock covered 2½ fathoms is about 0.1 mile east of West Dog.

(456) **Tow Rock**, 1.2 miles west-northwest of West Dog, has a depth of 2½ fathoms over it but is steep-to; it may be avoided by passing close to West Dog or Scrub Island.

(457) **Seal Dogs**, 1.3 miles northeast of George Dog and 1 mile west of **Mountain Point**, the northwest extremity of Virgin Gorda, are a cluster of three small islets. The north islet is the smallest and only 6 feet high, the southeasternmost is 74 feet high, and the westernmost and largest is 100 feet high. The passage is clear on either side of the group.

(458) In **Western Roads**, off the west side of Virgin Gorda, are two excellent anchorages for vessels of any draft. The north is situated in the bight between Mountain and Colison Points and is partially protected to the northwest by Dog Islets. It seldom, however, blows hard to the west of north, and the only thing to be prepared for is the ground swell in the winter when it is better to anchor in about 13 fathoms of water, midway between Great Dog and Virgin Gorda. Here, with good ground tackle and a long scope of chain, there will be nothing to fear, as the rollers seldom are accompanied by much wind.

(459) The south anchorage, in 13 fathoms, between Colison Point and Fallen Jerusalem, is the best for sailing

vessels because, if necessary, they can weigh and run out to west with more ease than from the north anchorage. The holding ground is good at both places, and the water is usually smooth. A small patch of 4¼ fathoms lies 0.4 mile west of Colison Point, and **Burrow Rock**, with 1½ fathoms, is 1 mile south of Colison Point. The anchorages may be approached from either north or south as the passages are clear except between West Dog and Scrub Island, where Tow Rock lies. On the north side of Virgin Gorda are several small slightly wooded islets and cays.

(460)

ENC - Chart - *25610

(461) **Mosquito Island**, about 0.6 mile long and 290 feet high, the highest of the islets off the north side of Virgin Gorda, is 1 mile east-northeast of Mountain Point. The channel separating it from **Anguilla Point**, on Virgin Gorda, is shoal and only 175 yards wide. The northeast end is fringed by a reef, and a chain of small detached rocks extends 300 yards north-northeast. **Mosquito Rock**, the outermost, is 23 feet high.

(462) **Colquhoun Reef**, which dries in patches, extends nearly 0.6 mile southeast from Mosquito Rock and is steep-to on its northeast side. On the southwest side is a small sandy islet, about 2 feet high and sparsely covered with coarse grass. **Prickly Pear Island**, the largest of the islets off the north side of Virgin Gorda, is about 0.8 mile east of Mosquito Island. It is 1 mile long and 237 feet high. **Asbestos Point**, its east end, is 0.2 mile from the nearest part of a small peninsula of the east arm of Virgin Gorda, and the channel between is shallow and foul. In the middle of it is **Saba Rock**, 15 feet high.

(463) **Cactus Reef**, extending 300 yards west of Cactus Point, the northwest end of Prickly Pear Island, is steep-to on its north side; the sea breaks on it even with a slight swell.

(464) **Gorda Sound** is an excellent and roomy harbor between Virgin Gorda on the south and Mosquito Island, Colquhoun Reef and Prickly Pear Island on the north. It is sheltered from all winds and protected from rollers. As there is no health officer or other Government representative, vessels before visiting it should obtain pratique at Road Harbor, Tortola.

(465) In the approach are uniform depths of 9 to 12 fathoms. The entrance between the 3-fathom curves of Colquhoun and Cactus Reefs is about 250 yards wide with depths of 17 to 42 feet. Deeper water is inside the entrance. Private buoys mark the outer limits of Cactus and Colquhoun Reefs.

(466) The west portion of the sound is foul, with several shoals of 2 to 3 fathoms and some coral patches of less than a fathom. **Gorda Rock**, 0.3 mile southeast of Colquhoun Reef, has a least depth of 30 feet. **Creek Shoal**, off the south side of the entrance to **Gun Creek**, is of coral sand with a least depth of 21 feet.

(467) **Oyster Rock**, about 150 yards off the south shore in the approach to Biras Creek, is a pinnacle rock with only 2 feet of water on it, surrounded by a shallow patch. **Biras Creek** is in the southeast corner of Gorda Sound.

(468) The tide in Gorda Sound is chiefly diurnal. The tidal currents at the entrance are seldom more than 0.5 knots, but the inward current sets toward Prickly Pear Island. Between Mosquito Island and Anguilla Point, the eastgoing current has a velocity of from 1 to 1.5 knots.

(469)

Routes

(470) Powered vessels coming from the east approach Gorda Sound by Necker Island Passage, which lies between Virgin Gorda and Herman Reefs. The approach is dangerous at night. Bring Virgin Peak to bear **261°** and steer for it on that bearing until the north extremity of Necker Island bears 279°, distant 6.8 miles. Then alter course to pass at least 0.5 mile north of Necker Island. When Virgin Peak bears 211°, steer for it until Gnat Point bears 177° and Mosquito Rock bears 255°, then steer for the center of the entrance channel between Cactus and Colquhoun Reefs, which should be entered on a **170°** course; no marks can be given for this narrow channel, but with a favorable light no difficulty should be experienced in passing safely through it.

(471) Coming from north it is better to pass west of Anegada and approach with Virgin Peak on a bearing between 132° and 155°.

(472) Sailing vessels can follow the direction for powered vessels, but if coming from the north and passing east of Anegada, they should not attempt to pass close to windward of Horse Shoe Reef. This has caused many disasters.

(473) **Eustatia Island**, on the shoal bank east of Prickly Pear Island, is 172 feet high and 0.3 mile long. Its north side is foul for 300 yards off, from which a barrier reef extends to Pajaros Point. Outside this foul ground there are two detached patches with depths less than 3 fathoms, one about 0.6 mile east-northeast and the other about 0.5 mile east of the east extremity of Eustatia Island. These patches lie on an extensive bank with depths of from 3 to 5 fathoms.

(474) In the lee of this barrier reef is **Eustatia Sound**, in which small vessels will find safe anchorage. The main entrance is through a small cut in the reef about 0.5 mile east of Eustatia Island; there are also several other small passages through the reefs that can be used, but these should be avoided by strangers because the ground is foul for some distance outside the entrance. Several rocks and shoals are in the sound.

(475) **Virgin Sound**, a channel 0.2 mile wide, extends between the reefs and shoals north of Prickly Pear and Eustatia Islands and those south of Necker Island. It affords good temporary anchorage in 7 to 8 fathoms, but care must be taken to avoid the reefs on either side. The tidal currents set east and west with a velocity of about 0.5 knot.

(476) **Necker Island**, 0.7 mile north of Eustatia Island, is nearly 0.5 mile long and 107 feet high at its north part. The northeast side is fairly bold and steep-to, with depths of 6 to 10 fathoms within 300 yards. The southeast and west sides are foul and dangerous up to 0.5 mile offshore. Foul ground, near which is a reef that dries, extends about 0.3 mile south of Necker Island.

(477) **The Invisibles**, about 0.8 mile east of Necker Island, are three small rocky heads covered 4 to 5 feet. Depths of 5 to 8 fathoms are between the Invisibles and the reefs on the east side of Necker Island; greater depths are close off the east end. Caution is required when navigating in this area as the rocks do not always break and are hard to see.

(478)

ENC - Chart - *25609

(479) **Anegada**, the northeasternmost island of the Virgin Group, lies with **East Point**, its southeast end, about 12 miles north-northeast of Pajaros Point. Anegada is 9 miles long, about 30 feet high and covered with brushwood except at a few places cleared for cultivation. Numerous saltwater lagoons are in the west interior. The principal settlement is on the south side, 2.5 miles from East Point.

(480) The island is about 1.5 miles within the edge of the Virgin Bank, but the depths decrease so rapidly that sounding is of little help. The island is low, and owing to the strength and irregularity of the tidal currents in the vicinity, it is extremely dangerous to approach at night. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about times, directions, and velocities of the current at numerous locations throughout the area. Links to a user guide for this service can be found in chapter 1 of this book.

(481) Anegada is skirted on its north side by a narrow barrier reef that is about 0.1 mile off at **Soldier Point**, the north point, and 1.5 miles east at East Point. Thence **Horse Shoe Reef**, a most dangerous reef upon which many vessels have been lost, extends southeast for nearly 8 miles. From its southeast end detached coral heads and shoal ledges extend 4.5 miles southwest, where they terminate in Herman Reefs, which break only with a swell or a strong breeze. Horse Shoe Reef breaks in any weather.

(482) **The White Horse**is a heap of white dead coral, 3 feet high, 2 miles west of the elbow of Horse Shoe Reef.

(483) The edge of the bank is 2.5 miles east of the elbow of Horse Shoe Reef. Here are depths of 34 fathoms close within the 100-fathom curve and 10 fathoms about 1 mile farther in. Abreast Herman Reefs, the edge of the bank is little more than a mile distant. The south end lies 5.5 miles east-northeast of Pajaros Point. A detached 5-fathom patch is 0.7 mile south of the reefs.

(484) **Robert Reef**, 3.5 miles west of Herman Reefs, is a small rocky patch with 4½ fathoms on it. Another small rocky head, with 3¾ fathoms, is 1.1 miles north-northeast of this reef. **Hawks Bill Bank**, about 2 miles north-northwest of Robert Reef, is a small rocky ledge with 2¾ to 5½ fathoms.

(485) The reef skirting the north side of Anegada terminates about 300 yards off **West End**, but the south side of the island is foul with detached coral patches lying up to 3.5 miles offshore. A 5-fathom patch is 3.3 miles west of West End.

(486) Good temporary anchorage may be found in 5 to 6 fathoms about 1 mile off West End. During the period of rollers, October to May, however, it is advisable to anchor south of the island. The bank west of Anegada is chiefly fine sand, and in good weather vessels may anchor on it in safety, taking care to avoid the dangers.

Navigation Rules

(1) Following is an amalgamation of the **International (72 COLREGS) and Inland Navigation Rules**, their Annexes, and associated Federal rules and regulations.

(2) Text unique to Inland Rules is *italicized* and set apart in a text box or within *‹‹ double angle brackets ››*. International Rules are set apart in a text box or denoted with ‹ single angle brackets ›.

(3) Text within {curly brackets} denotes additions made by the U.S. Coast Guard Office of Navigation Systems.

(4) Disparate paragraph or section numbering are shown side by side separated by a dagger, i.e. (a)□(b).

(5) Instances of "…§§83.xx / in / with / of … this section / subpart / part of this Rule, etc." are redacted, and herein are shown as the enumerated rule(s) they referred to, i.e. 72 COLREGS Rule 18(e) states: "...with the Rules of this Part" and the same Inland Rule states: "...with the Rules of this Subpart (Rules 4-19) (§§83.04 through 83.19)", but, herein it is stated as "...with Rules 4-19.

(6) Instances of paragraph / section (x) are redacted, and herein are shown as §(x).

(7) Rules denoted with an asterisk also have an associated implementing or interpretative rule (i.e. 33 CFR 81-90), which can be found in chapter 2.

(8)

Part A—General

(9)

Rule 1—Application (International)
(a) These Rules shall apply to all vessels upon the high seas and in all waters connected therewith navigable by seagoing vessels.
(b) Nothing in these Rules shall interfere with the operation of special rules made by an appropriate authority for roadsteads, harbors, rivers, lakes, or inland waterways connected with the high seas and navigable by seagoing vessels. Such special rules shall conform as closely as possible to these Rules.
(c) Nothing in these Rules shall interfere with the operation of any special rules made by the Government of any State with respect to additional station or signal lights, shapes or whistle signals for ships of war and vessels proceeding under convoy, or with respect to additional station or signal lights or shapes for fishing vessels engaged in fishing as a fleet. These additional stations or signal lights, shapes or whistle signals shall, so far as possible, be such that they cannot be mistaken for any light, shape, or signal authorized elsewhere under these Rules.
(d) Traffic separation schemes may be adopted by the Organization for the purpose of these Rules.
(e) Whenever the Government concerned shall have determined that a vessel of special construction or purpose cannot comply fully with the provisions of any of these Rules with respect to number, position, range or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signaling appliances, such vessel shall comply with such other provisions in regard to number, position, range or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signaling appliances, as the Government shall have determined to be the closest possible compliance with these Rules in respect to that vessel.

(10)

Rule 1—Application (Inland)
(a) These rules apply to all vessels upon the inland waters of the United States, and to vessels of the United States on the Canadian waters of the Great Lakes to the extent that there is no conflict with Canadian law. These Rules have preemptive effect over State or local regulation within the same field.
(b)(i) These rules constitute special rules made by an appropriate authority within the meaning of Rule 1(b) of the International Regulations for Preventing Collisions at Sea, 1972, including annexes currently in force for the United States ("International Regulations"). *(ii) All vessels complying with the construction and equipment requirements of the International Regulations are considered to be in compliance with these Rules.*
(c) Nothing in these Rules shall interfere with the operation of any special rules made by the Secretary of the Navy with respect to additional station or signal lights and shapes or whistle signals for ships of war and vessels proceeding under convoy, or by the Secretary with respect to additional station or signal lights and shapes for fishing vessels engaged in fishing as a fleet. These additional station or signal lights and shapes or whistle signals shall, so far as possible, be such that they cannot be mistaken for any light, shape or signal authorized elsewhere under these Rules. Notice of such special rules shall be published in the Federal Register and, after the effective date specified in such notice, they shall have effect as if they were a part of these Rules.
(d) Traffic separation schemes may be established for the purposes of these Rules. Vessel traffic service regulations may be in effect in certain areas.

Rule 1—Application (Inland)

(e) Whenever the Secretary determines that a vessel or class of vessels of special construction or purpose cannot comply fully with the provisions of any of these Rules with respect to the number, position, range, or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signaling appliances, the vessel shall comply with such other provisions in regard to the number, position, range, or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signaling appliances, as the Secretary shall have determined to be the closest possible compliance with these Rules. The Secretary may issue a certificate of alternative compliance for a vessel or class of vessels specifying the closest possible compliance with these Rules. The Secretary of the Navy shall make these determinations and issue certificates of alternative compliance for vessels of the Navy.

(f) The Secretary may accept a certificate of alternative compliance issued by a contracting party to the International Regulations if it determines that the alternative compliance standards of the contracting party are substantially the same as those of the United States.

(g) The operator of each self-propelled vessel 12 meters or more in length shall carry, on board and maintain for ready reference, a copy of these Rules.

(11)

Rule 2—Responsibility

(12) (a) Nothing in these Rules shall exonerate any vessel, or the owner, master, or crew thereof, from the consequences of any neglect to comply with these Rules or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

(13) (b) In construing and complying with these Rules due regard shall be had to all dangers of navigation and collision and to any special circumstances, including the limitations of the vessels involved, which may make a departure from these Rules necessary to avoid immediate danger.

(14)

Rule 3—General Definitions

(15) For the purpose of these Rules, except where the context otherwise requires:

(16) (a) The word "vessel" includes every description of watercraft, including non-displacement craft, WIG craft, and seaplanes, used or capable of being used as a means of transportation on water.

(17) (b) The term "power-driven vessel" means any vessel propelled by machinery.

(18) (c) The term "sailing vessel" means any vessel under sail provided that propelling machinery, if fitted, is not being used.

(19) (d) The term "vessel engaged in fishing" means any vessel fishing with nets, lines, trawls, or other fishing apparatus which restrict maneuverability, but does not include a vessel fishing with trolling lines or other fishing apparatus which do not restrict maneuverability.

(20) (e) The term "seaplane" includes any aircraft designed to maneuver on the water.

(21) (f) The term "vessel not under command" means a vessel which through some exceptional circumstance is unable to maneuver as required by these Rules and is therefore unable to keep out of the way of another vessel.

(22) (g) The term "vessel restricted in her ability to maneuver" means a vessel which from the nature of her work is restricted in her ability to maneuver as required by these Rules and is therefore unable to keep out of the way of another vessel. The term "vessels restricted in their ability to maneuver" shall include but not be limited to: (i) A vessel engaged in laying, servicing, or picking up a navigational mark, submarine cable or pipeline; (ii) A vessel engaged in dredging, surveying or underwater operations; (iii) A vessel engaged in replenishment or transferring persons, provisions or cargo while underway; (iv) A vessel engaged in the launching or recovery of aircraft; (v) A vessel engaged in mine clearance operations; (vi) A vessel engaged in a towing operation such as severely restricts the towing vessel and her tow in their ability to deviate from their course.

(23)

Rule 3h (International)

(h) The term "vessel constrained by her draft" means a power-driven vessel which because of her draft in relation to the available depth and width of navigable water is severely restricted in her ability to deviate from the course she is following.

(24) (i) The word "underway" means that a vessel is not at anchor, or made fast to the shore, or aground.

(25) (j) The words "length" and "breadth" of a vessel mean her length overall and greatest breadth.

(26) (k) Vessels shall be deemed to be in sight of one another only when one can be observed visually from the other.

(27) (l) The term "restricted visibility" means any condition in which visibility is restricted by fog, mist, falling snow, heavy rainstorms, sandstorms, or any other similar causes.

(28) (m) The term "Wing-In-Ground (WIG)" craft means a multimodal craft which, in its main operational mode, flies in close proximity to the surface by utilizing surface-effect action.

(29)

Rules 3n–3s (Inland)

(n) "Western Rivers" means the Mississippi River, its tributaries, South Pass, and Southwest Pass, to the navigational demarcation lines {30 CFR 80} dividing the high seas from harbors, rivers and other inland waters of the United States, and the Port Allen-Morgan City Alternate Route, and that part of the Atchafalaya River above its junction with the Port Allen-Morgan City Alternate Route including the Old River and the Red River.

Rules 3n–3s (Inland)
(o) "Great Lakes" means the Great Lakes and their connecting tributary waters including the Calumet River as far as the Thomas J. O'Brien Lock and Controlling Waters (between mile 326 and 327), the Chicago River as far as the east side of the Ashland Avenue Bridge (between mile 321 and 322), and the Saint Lawrence River as far east as the lower exit of Saint Lambert Lock.
(p) "Secretary" means the Secretary of the Department in which the Coast Guard is operating.
(q) "Inland Waters" means the navigable waters of the United States shoreward of the navigational demarcation lines {30 CFR 80} dividing the high seas from harbors, rivers and other inland waters of the United States and the waters of the Great Lakes on the United States side of the International Boundary.
(r) "Inland Rules" or "Rules" means these Inland Navigational Rules and the annexes thereto, which govern the conduct of vessels and specify the lights, shapes, and sound signals that apply on inland waters.
(s) "International Regulations" means the International Regulations for Preventing Collisions at Sea, 1972, including annexes currently in force for the United States.

(30) **Implementing Rule**—See **33 CFR 89.25**, chapter 2, for regulations.

(31)

Part B—Steering and Sailing Rules

(32)

I—Conduct of Vessels in Any Condition of Visibility

(33)

Rule 4—Application

(34) Rules 4 through 10 apply in any condition of visibility.

(35)

Rule 5—Lookout

(36) Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

(37)

Rule 6—Safe Speed

(38) Every vessel shall at all times proceed at a safe speed so that she can take proper and effective action to avoid collision and be stopped within a distance appropriate to the prevailing circumstances and conditions. In determining a safe speed the following factors shall be among those taken into account:

(39) (a) By all vessels:

(40) (i) The state of visibility; (ii) The traffic density including concentrations of fishing vessels or any other vessels; (iii) The maneuverability of the vessel with special reference to stopping distance and turning ability in the prevailing conditions; (iv) At night, the presence of background light such as from shore lights or from back scatter from her own lights; (v) The state of wind, sea and current, and the proximity of navigational hazards; (vi) The draft in relation to the available depth of water.

(41) (b) Additionally, by vessels with operational radar:

(42) (i) The characteristics, efficiency and limitations of the radar equipment; (ii) Any constraints imposed by the radar range scale in use; (iii) The effect on radar detection of the sea state, weather and other sources of interference; (iv) The possibility that small vessels, ice and other floating objects may not be detected by radar at an adequate range; (v) The number, location and movement of vessels detected by radar; (vi) The more exact assessment of the visibility that may be possible when radar is used to determine the range of vessels or other objects in the vicinity.

(43)

Rule 7—Risk of Collision

(44) (a) Every vessel shall use all available means appropriate to the prevailing circumstances and conditions to determine if risk of collision exists. If there is any doubt such risk shall be deemed to exist.

(45) (b) Proper use shall be made of radar equipment if fitted and operational, including long-range scanning to obtain early warning of risk of collision and radar plotting or equivalent systematic observation of detected objects.

(46) (c) Assumptions shall not be made on the basis of scanty information, especially scanty radar information.

(47) (d) In determining if risk of collision exists the following considerations shall be among those taken into account:

(48) (i) Such risk shall be deemed to exist if the compass bearing of an approaching vessel does not appreciably change.

(49) (ii) Such risk may sometimes exist even when an appreciable bearing change is evident, particularly when approaching a very large vessel or a tow or when approaching a vessel at close range.

(50)

Rule 8—Action to Avoid Collision

(51) (a) Any action taken to avoid collision shall be taken in accordance with Rules 4 through 19 and shall if the circumstances of the case admit, be positive, made in ample time and with due regard to the observance of good seamanship.

(52) (b) Any alteration of course and/or speed to avoid collision shall, if the circumstances of the case admit, be large enough to be readily apparent to another vessel observing visually or by radar; a succession of small alterations of course and/or speed should be avoided.

(53) (c) If there is sufficient sea room, alteration of course alone may be the most effective action to avoid a closequarters situation provided that it is made in good time, is substantial and does not result in another closequarters situation.

(54) (d) Action taken to avoid collision with another vessel shall be such as to result in passing at a safe distance. The

effectiveness of the action shall be carefully checked until the other vessel is finally past and clear.

(55) (e) If necessary to avoid collision or allow more time to assess the situation, a vessel shall slacken her speed or take all way off by stopping or reversing her means of propulsion.

(56) (f)(i) A vessel which, by any of these Rules, is required not to impede the passage or safe passage of another vessel shall, when required by the circumstances of the case, take early action to allow sufficient sea room for the safe passage of the other vessel.

(57) (ii) A vessel required not to impede the passage or safe passage of another vessel is not relieved of this obligation if approaching the other vessel so as to involve risk of collision and shall, when taking action, have full regard to the action which may be required by Rules 4 through 19.

(58) (iii) A vessel, the passage of which is not to be impeded remains fully obliged to comply with Rules 4 through 19 when the two vessels are approaching one another so as to involve risk of collision.

(59)

Rule 9—Narrow Channels

(60) (a) *‹‹(i)››* A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable.

(61)

Rule 9a (Inland)

(ii) Notwithstanding Rule 9(a)(i) and Rule 14(a), a power-driven vessel operating in narrow channel or fairway on the Great Lakes, Western Rivers, or waters specified by the Secretary, and proceeding downbound with a following current shall have the right-of-way over an upbound vessel, shall propose the manner and place of passage, and shall initiate the maneuvering signals prescribed by Rule 34(a)(i), as appropriate. The vessel proceeding upbound against the current shall hold as necessary to permit safe passing.

(62) (b) A vessel of less than 20 meters in length or a sailing vessel shall not impede the passage of a vessel ‹ which *›‹that››* can safely navigate only within a narrow channel or fairway.

(63) (c) A vessel engaged in fishing shall not impede the passage of any other vessel navigating within a narrow channel or fairway.

(64) (d) A vessel ‹ shall *›‹must››* not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within that channel or fairway. The latter vessel ‹ may *›‹must››* use the signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.

(65)

Rule 9e (International)

(e)(i) In a narrow channel or fairway when overtaking can take place only if the vessel to be overtaken has to take action to permit safe passing, the vessel intending to overtake shall indicate her intention by sounding the appropriate signal prescribed in Rule 34(c)(ii). The vessel to be overtaken shall, if in agreement, sound the appropriate signal prescribed in Rule 34(c)(i) and take steps to permit safe passing. If in doubt she may sound the signals prescribed in Rule 34(d).

Rule 9e (Inland)

(e)(i) In a narrow channel or fairway when overtaking, the power-driven vessel intending to overtake another power-driven vessel shall indicate her intention by sounding the appropriate signal prescribed in Rule 34(c) and take steps to permit safe passing. The power-driven vessel being overtaken, if in agreement, shall sound the same signal and may, if specifically agreed to, take steps to permit safe passing. If in doubt she shall sound the signal prescribed in Rule 34(d).

(66) (e)(ii) This rule does not relieve the overtaking vessel of her obligation under Rule 13.

(67) (f) A vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal prescribed in Rule 34(e).

(68) (g) Any vessel shall, if the circumstances of the case admit, avoid anchoring in a narrow channel.

(69)

Rule 10—Traffic Separation Schemes

(70) (a) This Rule applies to traffic separation schemes ‹ adopted by the Organization › and does not relieve any vessel of her obligation under any other rule.

(71) (b) A vessel using a traffic separation scheme shall:

(72) (i) Proceed in the appropriate traffic lane in the general direction of traffic flow for that lane.

(73) (ii) So far as is practicable keep clear of a traffic separation line or separation zone.

(74) (iii) Normally join or leave a traffic lane at the termination of the lane, but when joining or leaving from either side shall do so at as small an angle to the general direction of traffic flow as practicable.

(75) (c) A vessel, shall so far as practicable, avoid crossing traffic lanes but if obliged to do so shall cross on a heading as nearly as practicable at right angles to the general direction of traffic flow.

(76) (d)(i) A vessel shall not use an inshore traffic zone when she can safely use the appropriate traffic lane within the adjacent traffic separation scheme. However, vessels of less than 20 meters in length, sailing vessels and vessels engaged in fishing may use the inshore traffic zone.

(77) (ii) Notwithstanding Rule 10(d)(i), a vessel may use an inshore traffic zone when en route to or from a port, offshore installation or structure, pilot station or any other place situated within the inshore traffic zone, or to avoid immediate danger.

(78) (e) A vessel, other than a crossing vessel or a vessel joining or leaving a lane shall not normally enter a separation zone or cross a separation line except:

(79) (i) in cases of emergency to avoid immediate danger;

(80) (ii) to engage in fishing within a separation zone.

(81) (f) A vessel navigating in areas near the terminations of traffic separation schemes shall do so with particular caution.

(82) (g) A vessel shall so far as practicable avoid anchoring in a traffic separation scheme or in areas near its terminations.

(83) (h) A vessel not using a traffic separating scheme shall avoid it by as wide a margin as is practicable.

(84) (i) A vessel engaged in fishing shall not impede the passage of any vessel following a traffic lane.

(85) (j) A vessel of less than 20 meters in length or a sailing vessel shall not impede the safe passage of a power-driven vessel following a traffic lane.

(86) (k) A vessel restricted in her ability to maneuver when engaged in an operation for the maintenance of safety of navigation in a traffic separation scheme is exempted from complying with this Rule to the extent necessary to carry out the operation.

(87) (l) A vessel restricted in her ability to maneuver when engaged in an operation for the laying, servicing or picking up of a submarine cable, within a traffic separation scheme, is exempted from complying with this Rule to the extent necessary to carry out the operation.

(88)

II—Conduct of Vessels in Sight of One Another

(89)

Rule 11—Application

(90) Rules 11 through 18 apply to vessels in sight of one another.

(91)

Rule 12—Sailing Vessels

(92) (a) When two sailing vessels are approaching one another, so as to involve risk of collision, one of them shall keep out of the way of the other as follows:

(93) (i) when each has the wind on a different side, the vessel which has the wind on the port side shall keep out of the way of the other;

(94) (ii) when both have the wind on the same side, the vessel which is to windward shall keep out of the way of the vessel which is to leeward;

(95) (iii) if a vessel with the wind on the port side sees a vessel to windward and cannot determine with certainty whether the other vessel has the wind on the port or on the starboard side, she shall keep out of the way of the other.

(96) (b) For the purposes of this Rule, the windward side shall be deemed to be the side opposite that on which the mainsail is carried or, in the case of a square-rigged vessel, the side opposite to that on which the largest fore-and-aft sail is carried.

(97)

Rule 13—Overtaking

(98) (a) Notwithstanding anything contained in the Rules 4 through 18, any vessel overtaking any other shall keep out of the way of the vessel being overtaken.

(99) (b) A vessel shall be deemed to be overtaking when coming up with a another vessel from a direction more than 22.5 degrees abaft her beam, that is, in such a position with reference to the vessel she is overtaking, that at night she would be able to see only the sternlight of that vessel but neither of her sidelights.

(100) (c) When a vessel is in any doubt as to whether she is overtaking another, she shall assume that this is the case and act accordingly.

(101) (d) Any subsequent alteration of the bearing between the two vessels shall not make the overtaking vessel a crossing vessel within the meaning of these Rules or relieve her of the duty of keeping clear of the overtaken vessel until she is finally past and clear.

(102)

Rule 14—Head-on Situation

(103) (a) *‹‹Unless otherwise agreed››* when two power-driven vessels are meeting on reciprocal or nearly reciprocal courses so as to involve risk of collision each shall alter her course to starboard so that each shall pass on the port side of the other.

(104) (b) Such a situation shall be deemed to exist when a vessel sees the other ahead or nearly ahead and by night she could see the masthead lights of the other in a line or nearly in a line and/or both sidelights and by day she observes the corresponding aspect of the other vessel.

(105) (c) When a vessel is in any doubt as to whether such a situation exists she shall assume that it does exist and act accordingly.

(106)

Rule 14d (Inland)

(d) Notwithstanding Rule 14(a), a power-driven vessel operating on the Great Lakes, Western Rivers, or waters specified by the Secretary, and proceeding downbound with a following current shall have the right-of-way over an upbound vessel, shall propose the manner of passage, and shall initiate the maneuvering signals prescribed by Rule 34(a)(i), as appropriate.

(107)

Rule 15—Crossing Situation

(108) (a) When two power-driven vessels are crossing so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way and shall, if the circumstances of the case admit, avoid crossing ahead of the other vessel.

(109)

Rule 15b (Inland)

(b) Notwithstanding Rule 15(a), on the Great Lakes, Western Rivers, or water specified by the Secretary, a power-driven vessel crossing a river shall keep out of the way of a power-driven vessel ascending or descending the river.

(110)

Rule 16—Action by Give-way Vessel

(111) Every vessel which is directed to keep out of the way of another vessel shall, so far as possible, take early and substantial action to keep well clear.

(112)

Rule 17—Action by Stand-on Vessel

(113) (a)(i) Where one of two vessels is to keep out of the way, the other shall keep her course and speed.

(114) (ii) The latter vessel may, however, take action to avoid collision by her maneuver alone, as soon as it becomes apparent to her that the vessel required to keep out of the way is not taking appropriate action in compliance with these Rules.

(115) (b) When, from any cause, the vessel required to keep her course and speed finds herself so close that collision cannot be avoided by the action of the giveway vessel alone, she shall take such action as will best aid to avoid collision.

(116) (c) A power-driven vessel which takes action in a crossing situation in accordance with Rule 17(a)(ii) to avoid collision with another power-driven vessel shall, if the circumstances of the case admit, not alter course to port for a vessel on her own port side.

(117) (d) This Rule does not relieve the give-way vessel of her obligation to keep out of the way.

(118)

Rule 18—Responsibilities Between Vessels

(119) Except where Rules 9, 10, and 13 otherwise require:

(120) (a) A power-driven vessel underway shall keep out of the way of: (i) a vessel not under command; (ii) a vessel restricted in her ability to maneuver; (iii) a vessel engaged in fishing; (iv) a sailing vessel.

(121) (b) A sailing vessel underway shall keep out of the way of: (i) a vessel not under command; (ii) a vessel restricted in her ability to maneuver; (iii) a vessel engaged in fishing.

(122) (c) A vessel engaged in fishing when underway shall, so far as possible, keep out of the way of: (i) a vessel not under command; (ii) a vessel restricted in her ability to maneuver.

(123)

Rule 18d (International)

(d)(i) Any vessel other than a vessel not under command or a vessel restricted in her ability to maneuver shall, if the circumstances of the case admit, avoid impeding the safe passage of a vessel constrained by her draft, exhibiting the signals in Rule 28.

(ii) A vessel constrained by her draft shall navigate with particular caution having full regard to her special condition.

(124) (e) A seaplane on the water shall, in general, keep well clear of all vessels and avoid impeding their navigation. In circumstances, however, where risk of collision exists, she shall comply with Rules 4 through 19.

(125) (f)(i) A WIG craft shall, when taking off, landing and in flight near the surface, keep well clear of all other vessels and avoid impeding their navigation;

(126) (ii) a WIG craft operating on the water surface shall comply with Rules 4 through 19 as a power-driven vessel.

(127)

III—Conduct of Vessels in Restricted Visibility

(128)

Rule 19—Conduct of Vessels in Restricted Visibility

(129) (a) This Rule applies to vessels not in sight of one another when navigating in or near an area of restricted visibility.

(130) (b) Every vessel shall proceed at a safe speed adapted to the prevailing circumstances and conditions of restricted visibility. A power-driven vessel shall have her engines ready for immediate maneuver.

(131) (c) Every vessel shall have due regard to the prevailing circumstances and conditions of restricted visibility when complying with Rules 4 through 10.

(132) (d) A vessel which detects by radar alone the presence of another vessel shall determine if a closequarters situation is developing and/or risk of collision exists. If so, she shall take avoiding action in ample time, provided that when such action consists of an alteration in course, so far as possible the following shall be avoided:

(133) (i) An alteration of course to port for a vessel forward of the beam, other than for a vessel being overtaken;

(134) (ii) An alteration of course toward a vessel abeam or abaft the beam.

(135) (e) Except where it has been determined that a risk of collision does not exist, every vessel which hears apparently forward of her beam the fog signal of another vessel, or which cannot avoid a close-quarters situation with another vessel forward of her beam, shall reduce her speed to be the minimum at which she can be kept on her course. She shall if necessary take all her way off and in any event navigate with extreme caution until danger of collision is over.

(158)

(136)

Part C—Lights and Shapes

(137)

Rule 20—Application

(138) (a) Rules 20 through 31 shall be complied with in all weathers.

(139) (b) The Rules concerning lights shall be complied with from sunset to sunrise, and during such times no other lights shall be exhibited, except such lights which cannot be mistaken for the lights specified in these Rules or do not impair their visibility or distinctive character, or interfere with the keeping of a proper look-out.

(140) (c) The lights prescribed by these Rules shall, if carried, also be exhibited from sunrise to sunset in restricted visibility and may be exhibited in all other circumstances when it is deemed necessary.

(141) (d) The Rules concerning shapes shall be complied with by day.

(142) (e) The lights and shapes specified in these Rules shall comply with the provisions of Annex I of these Rules.

(143)

Rule 20f (Inland)

(f) A vessel's navigation lights and shapes may be lowered if necessary to pass under a bridge.

(144)

Rule 21—Definitions

(145) (a) "Masthead light" means a white light placed over the fore and aft centerline of the vessel showing an unbroken light over an arc of the horizon of 225° and so fixed as to show the light from right ahead to 22.5° abaft the beam on either side of the vessel *‹‹except that on a vessel of less than 12 meters in length the masthead light shall be placed as nearly as practicable to the fore and aft centerline of the vessel››*.

(146) (b) "Sidelights" means a green light on the starboard side and a red light on the port side each showing an unbroken light over an arc of the horizon of 112.5° and so fixed as to show the light from right ahead to 22.5° abaft the beam on its respective side. In a vessel of less than 20 meters in length the sidelights may be combined in one lantern carried on the fore and aft centerline of the vessel *‹‹, except that on a vessel of less than 12 meters in length the sidelights when combined in one lantern*

(166)

Rule 23—Power-driven Vessels Underway

23(a) **International/Inland**

Power-driven Vessel Underway
50 meters or greater in length

23(a) **International/Inland**

Power-driven Vessel Underway
Less than 50 meters in length

23(b) **International/Inland**

Air-cushion vessel when operating in the *non-displacement* mode—Vessels less than 50 meters in length

23(b) **International/Inland**

Air-cushion vessel when operating in the *displacement* mode—Vessels less than 50 meters in length

23(d)(i) **International/Inland**

Power-driven Vessel
Less than 12 meters in length

23(d)(ii) **International**

Power-driven Vessel
Less than 7 meters in length

23(e) **Inland**

Power-driven Vessel
on the Great Lakes

shall be placed as nearly as practicable to the fore and aft centerline of the vessel››.

(147) (c) "Sternlight" means a white light placed as nearly as practicable at the stern showing an unbroken light over an arc of the horizon of 135° and so fixed as to show the light 67.5° from right aft on each side of the vessel.

(148) (d) "Towing light" means a yellow light having the same characteristics as the "sternlight" defined in Rule 21(c).

(149) (e) "All-round light" means a light showing an unbroken light over an arc of the horizon of 360°.

(150) (f) "Flashing light" means a light flashing at regular intervals at a frequency of 120 flashes or more per minute.

(151)

Rule 21g (Inland)

(g) "Special flashing light" means a yellow light flashing at regular intervals at a frequency of 50 to 70 flashes per minute, placed as far forward and as nearly as practicable on the fore and aft centerline of the tow and showing an unbroken light over an arc of the horizon of not less than 180 degrees nor more than 225 degrees and so fixed as to show the light from right ahead to abeam and no more than 22.5 degrees abaft the beam on either side of the vessel.

(152)

Rule 22—Visibility of Lights

(153) The lights prescribed in these Rules (Subpart C) shall have an intensity as specified in Annex I to these

Rules (33 CFR part 84), so as to be visible at the following minimum ranges:

(154) (a) In a vessel of 50 meters or more in length: (i) a masthead light, 6 miles; (ii) a sidelight, 3 miles; (iii) a sternlight, 3 miles; (iv) a towing light, 3 miles; (v) a white, red, green or yellow all-round light, 3 miles;*«and (vi) a special flashing light, 2 miles. »*

(155) (b) In a vessel of 12 meters or more in length but less than 50 meters in length: (i) a masthead light, 5 miles; except that where the length of the vessel is less than 20 meters, 3 miles; (ii) a sidelight, 2 miles; (iii) a sternlight, 2 miles; (iv) a towing light, 2 miles; (v) a white, red, green or yellow all-round light, 2 miles; *«and (vi) a special flashing light, 2 miles. »*

(156) (c) In a vessel of less than 12 meters in length: (i) a masthead light, 2 miles; (ii) a sidelight, 1 mile; (iii) a sternlight, 2 miles; (iv) A towing light, 2 miles; (v) a white, red, green or yellow all-round light, 2 miles; *«and (vi) a special flashing light, 2 miles. »*

(157) (d) In an inconspicuous, partly submerged vessel or objects being towed: (i) A white all-round light, 3 miles. (ii) [Reserved]

(159)

Rule 23—Power-driven Vessels Underway

(160) (a) A power-driven vessel underway shall exhibit: (i) a masthead light forward; (ii) a second masthead light abaft of and higher than the forward one; except that a vessel of less than 50 meters in length shall not be obliged to exhibit such a light but may do so; (iii) sidelights; and (iv) a sternlight.

(161) (b) An air-cushion vessel when operating in nondisplacement mode shall, in addition to the lights prescribed in Rule 23(a) Air Cushion Vessel in Displacement Mode, exhibit an all-round flashing yellow light *‹‹, where it can best be seen››*.

(162) (c) A WIG craft only when taking off, landing and in flight near the surface shall, in addition to the lights prescribed in Rule 23(a), exhibit a high intensity allround flashing red light.

(163) (d)(i) A power-driven vessel of less than 12 meters in length may in lieu of the lights prescribed in Rule 23(a) exhibit an all-round white light and sidelights.

(164)

Rule 23d (International)
(ii) a power-driven vessel of less than 7 meters in length whose maximum speed does not exceed 7 knots may in lieu of the lights prescribed in Rule 23(a) exhibit an all-round white light and shall, if practicable, also exhibit sidelights.
(iii) the masthead light or all-round white light on a power-driven vessel of less than 12 metres in length may be displaced from the fore and aft centre line of the vessel if centreline fitting is not practicable, provided that the sidelights are combined in one lantern which shall be carried on the fore and aft centre line of the vessel or located as nearly as practicable in the same fore and aft line as the masthead light or the all-round white light.

Rule 23e (Inland)
(e) A power-driven vessel when operating on the Great Lakes may carry an all-round white light in lieu of the second masthead light and sternlight prescribed in Rule 23(a). The light shall be carried in the position of the second masthead light and be visible at the same minimum range.

(165) Regulations containing specifics on **Law Enforcement** and **Public Safety Vessel** lighting are in **Annex V–Pilot Rules, 33 CFR 88.05** and **33 CFR 88.07**, chapter 2.

(167)

Rule 24—Towing and Pushing

(168) (a) A power-driven vessel when towing astern shall exhibit: (i) instead of the light prescribed in Rule 23(a)(i) or 23(a)(ii), two masthead lights in a vertical line. When the length of the tow, measuring from the stern of the towing vessel to the after end of the tow, exceeds 200 meters, three such lights in a vertical line; (ii) sidelights; (iii) a sternlight; (iv) a towing light in a vertical line above the sternlight; and (v) when the length of the tow exceeds 200 meters, a diamond shape where it can best be seen.

(169) (b) When a pushing vessel and a vessel being pushed ahead are rigidly connected in a composite unit they shall be regarded as a power-driven vessel and exhibit the lights prescribed in Rule 23.

(170) **Interpretive Rule**—See **33 CFR 90.3** and **33 CFR 82.3**, chapter 2, for regulations.

(171) (c) A power-driven vessel when pushing ahead or towing alongside, except ‹ in the case of a composite unit *›‹‹as required by Rules 24(b) and (i)››*, shall exhibit: (i) instead of the light prescribed in Rule 23(a)(i) or 23(a)(ii), two masthead lights in a vertical line; (ii) sidelights; and (iii) ‹ a sternlight *›‹‹two towing lights in a vertical line››*.

(172) (d) A power-driven vessel to which paragraphs (a) or (c) of this Rule applies shall also comply with Rule 23 *‹‹(a)(i) and››* (a)(ii).

(173) (e) A vessel or object being towed, other than those ‹ mentioned *›‹‹referred››* in Rule 24(g), shall exhibit: (i) sidelights; (ii) a sternlight; (iii) when the length of the tow exceeds 200 meters, a diamond shape where it can best be seen.

(174) (f) Provided that any number of vessels being towed alongside or pushed in a group shall be lighted as one vessel *‹‹except as provided in Rule 24(f)(iii)››*.

(175) (i) a vessel being pushed ahead, not being part of a composite unit, shall exhibit at the forward end, sidelights, and *‹‹a special flashing light››*;

(176) (ii) a vessel being towed alongside shall exhibit a sternlight and at the forward end, sidelights, and *‹‹a special flashing light››*;

(188)

Rule 24—Towing and Pushing (International/Inland)

(177)

Rule 24f (Inland)
(iii) when vessels are towed alongside on both sides of the towing vessel a sternlight shall be exhibited on the stern of the outboard vessel on each side of the towing vessel, and a single set of sidelights as far forward and as far outboard as is practicable, and a single special flashing light;

(178) (g) An inconspicuous, partly submerged vessel or object, or combination of such vessels or objects being towed, shall exhibit:

(179) (i) if it is less than 25 meters in breadth, one all-round white light at or near the forward end and one at or near the after end except that dracones need not exhibit a light at or near ‹ the forward ›‹*each*› end.

(180)

Rule 24g (International)
(ii) if it is 25 meters or more in breadth, two additional all-round white lights at or near the extremities of its breadth;
Rule 24g (Inland)
(ii) if it is 25 meters or more in breadth, four all-round white lights to mark its length and breadth;

(181) (iii) if it exceeds 100 meters in length, additional allround white lights between the lights prescribed in Rule 24(g)(i) ‹‹*and (ii)*›› and so that the distance between the lights shall not exceed 100 meters. ‹‹*Provided that any*

(196)

Rule 25—Sailing Vessels Underway and Vessels Under Oars (International/Inland)

vessels or objects being towed alongside each other shall be lighted as one vessel or object››.

(182) (iv) a diamond shape at or near the aftermost extremity of the last vessel or object being towed; and ‹ if the length of the tow exceeds 200 meters an additional diamond shape where it can best be seen and located as far forward as is practicable. ›

(183)

Rule 24g (Inland)

(v) the towing vessel may direct a searchlight in the direction of the tow to indicate its presence to an approaching vessel.

(184) (h) Where from any sufficient cause it is impracticable for a vessel or object being towed to exhibit the lights or shapes prescribed in Rule 24(e) or (g), all possible measures shall be taken to light the vessel or object towed or at least to indicate the presence of ‹ such *››‹the unlighted››* vessel or object.

(185) **Interpretive Rule**—See **33 CFR 90.7** and **33 CFR 82.7**, chapter 2, for regulations.

(186) (i) Where from any sufficient cause it is impracticable for a vessel not normally engaged in towing operations to display the lights prescribed by paragraph (a), (c), *«or (j)»* of this Rule, such vessel shall not be required to exhibit those lights when engaged in towing another vessel in distress or otherwise in need of assistance. All possible measures shall be taken to indicate the nature of the relationship between the towing vessel and the vessel being towed ‹ as authorized by Rule 36, in particular by illuminating the towline *››«and the vessel being assisted. The searchlight authorized by Rule 36 may be used to illuminate the tow».*

(187)

Rule 24j (Inland)

(i) Notwithstanding paragraph (c) of this Rule, on the Western Rivers (except below the Huey P. Long Bridge at mile 106.1 Above Head of Passes on the Mississippi River) and on waters specified by the Secretary, a power-driven vessel when pushing ahead or towing alongside, except as paragraph (b) of this Rule applies, shall exhibit: (i) sidelights; and (ii) two towing lights in a vertical line.

(189)

Rule 25—Sailing Vessels Underway and Vessels Under Oars

(190) (a) A sailing vessel underway shall exhibit: (i) sidelights; (ii) a sternlight.

(191) (b) In a sailing vessel of less than 20 meters in length the lights prescribed in Rule 25(a) may be combined in one lantern carried at or near the top of the mast where it can best be seen.

(210)

Rule 26—Fishing Vessels (International/Inland)

(192) (c) A sailing vessel underway may, in addition to the lights prescribed in Rule 25(a), exhibit at or near the top of the mast, where they can best be seen, two allround lights in a vertical line, the upper being red and the lower green, but these lights shall not be exhibited in conjunction with the combined lantern permitted by Rule 25(b).

(193) (d)(i) A sailing vessel of less than 7 meter in length shall, if practicable, exhibit the lights prescribed in Rule 25(a) or (b), but if she does not, she shall *«exhibit an all around white light or»* have ready at hand an electric torch or lighted lantern showing a white light which shall be exhibited in sufficient time to prevent collision.

(194) (ii) A vessel under oars may exhibit the lights prescribed in this rule for sailing vessels, but if she does not, she shall *«exhibit an all around white light or»* have ready at hand an electric torch or lighted lantern showing a white light which shall be exhibited in sufficient time to prevent collision.

(195) (e) A vessel proceeding under sail when also being propelled by machinery shall exhibit forward where it can best be seen a conical shape, apex downwards. *«A vessel of less than 12 meters in length is not required to exhibit this shape, but may do so.»*

(197)

Rule 26—Fishing Vessels

(198) (a) A vessel engaged in fishing, whether underway or at anchor, shall exhibit only the lights and shapes prescribed in this Rule.

(199) (b) A vessel when engaged in trawling, by which is meant the dragging through the water of a dredge net or other apparatus used as a fishing appliance, shall exhibit: (i) two all-round lights in a vertical line, the upper being green and the lower white, or a shape consisting of two cones with their apexes together in a vertical line one above the other; (ii) a masthead light abaft of and higher than the all-round green light; a vessel of less than 50 meters in length shall not be obliged to exhibit such a light but may do so; (iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.

(200) (c) A vessel engaged in fishing, other than trawling, shall exhibit: (i) two all-round lights in a vertical line, the upper being red and the lower white, or a shape consisting of two cones with their apexes together in a vertical line one above the other; (ii) when there is outlying gear extending more than 150 meters horizontally from the vessel, an all-round white light or a cone apex upwards in

the direction of the gear; (iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.

(201)

Rule 26d (International)
(d) The additional signals described in Annex II to these Regulations apply to a vessel engaged in fishing in close proximity to other vessels engaged in fishing.

(202) (e) A vessel ‹ when › not engaged in fishing shall not exhibit the lights or shapes prescribed in this Rule, but only those prescribed for a vessel of her length.

(203) *« (f) Additional signals for fishing vessels in close proximity. »* {Same as International Rules Annex II}

(204) 1□(i) The lights mentioned herein shall ‹,if exhibited in pursuance of Rule 26(d),› be placed where they can best be seen. They shall be at least 0.9 meters apart but at a lower level than lights prescribed in Rule 26. ‹(b)(i) and (c)(i)› The lights shall be visible all round the horizon at a distance of at least 1 mile but at a lesser distance from the lights prescribed by ‹these Rules›*«Rule 26(a)-(c)»* for fishing vessels.

(205) 2□(ii) Signals for trawlers.

(206) (a)□(1) Vessels ‹of 20 meters or more in length› when engaged in trawling, whether using demersal or pelagic gear, ‹shall›*«may»* exhibit: (i)□(A) when shooting their nets—two white lights in a vertical line; (ii)□(B) when hauling their nets—one white light over one red light in a vertical line; (iii)□(C) when the net has come fast upon an obstruction—two red lights in a vertical line.

(207) (b)□(2) ‹A›*«Each»* vessel ‹of 20 meters or more in length› engaged in pair trawling ‹shall›*«may»* exhibit: (i) □(A) by night, a searchlight directed forward and in the direction of the other vessel of the pair; (ii)□(B) when shooting or hauling their nets or when their nets have come fast upon an obstruction, the lights prescribed in Rule 26(f)(2)(a)□(f)(ii)(1).

(208) 3□(iii) Signals for purse seiners.

(209) (a)□(1) Vessels engaged in fishing with purse seine gear may exhibit two yellow lights in a vertical line. These lights shall flash alternately every second and with equal light and occultation duration. These lights may be exhibited only when the vessel is hampered by its fishing gear.

(211)

Rule 27—Vessels Not Under Command or Restricted in Their Ability to Maneuver

(212) (a) A vessel not under command shall exhibit: (i) two all-round red lights in a vertical line where they can best be seen; (ii) two balls or similar shapes in a vertical line where they can best be seen; (iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.

(213) (b) A vessel restricted in her ability to maneuver, except a vessel engaged in mineclearance operations, shall exhibit: (i) three all-round lights in a vertical line where they can best be seen. The highest and lowest of these lights shall be red and the middle light shall be white; (ii) three shapes in a vertical line where they can best be seen. The highest and lowest of these shapes shall be balls and the middle one a diamond; (iii) when makingway through the water, a masthead light(s), sidelights and a sternlight in addition to the lights prescribed in Rule 27(b)(i); (iv) when at anchor, in addition to the lights or shapes prescribed in Rule 27(b)(i) and (ii), the light, lights, or shapes prescribed in Rule 30.

(214) (c) A power-driven vessel engaged in a towing operation such as severely restricts the towing vessel and her tow in their ability to deviate from their course shall, in addition to the lights or shape prescribed in Rule 27(b)(i) and (ii), exhibit the lights or shape prescribed in Rule 24.

(215) (d) A vessel engaged in dredging or underwater operations, when restricted in her ability to maneuver, shall exhibit the lights and shapes prescribed in Rules 27(b)(i), (ii) and (iii) and shall in addition when an obstruction exists, exhibit: (i) two all-round red lights or two balls in a vertical line to indicate the side on which the obstruction exists; (ii) two all-round green lights or two diamonds in a vertical line to indicate the side on which another vessel may pass; and (iii) when at anchor, the lights or shapes prescribed in this paragraph instead of the lights or shapes prescribed in Rule 30.

(216)

Rule 27d (Inland)
(iv) Dredge pipelines that are floating or supported on trestles shall display the following lights at night and in periods of restricted visibility.
(1) One row of yellow lights. The lights must be: (A) flashing 50 to 70 times per minute, (B) visible all round the horizon, (C) visible for at least 2 miles, (D) not less than 1 and not more than 3.5 meters above the water, (E) approximately equally spaced, and (F) not more than 10 meters apart where the pipeline crosses a navigable channel. Where the pipeline does not cross a navigable channel the lights must be sufficient in number to clearly show the pipeline's length and course.
(2) Two red lights at each end of the pipeline, including the ends in a channel where the pipeline is separated to allow vessels to pass (whether open or closed). The lights must be: (A) visible all round the horizon, and (B) visible for at least 2 miles, and (C) one meter apart in a vertical line with the lower light at the same height above the water as the flashing yellow light.

(217) (e) Whenever the size of a vessel engaged in diving operations makes it impracticable to exhibit all lights and shapes prescribed in Rule 27(d), the following shall be exhibited: (i) Three all-round lights in a vertical line where they can best be seen. The highest and lowest of these lights shall be red and the middle light shall be white; (ii) a rigid replica of the International Code flag "A" not less than 1 meter in height. Measures shall be taken to ensure its all-round visibility.

(221)

Rule 27—Vessels Not Under Command or Restricted in Their Ability to Maneuver (International/Inland)

27(a)

Vessel Not Under Command
Not making way

27(a)(iii)

Vessel Not Under Command
Making way

27(b)

Vessel Restricted in Her Ability to Maneuver—Making way; less than 50 meters in length

27(b)

Vessel Restricted in Her Ability to Maneuver—At anchor; less than 50 meters in length

27(c)

Vessel engaged in towing operation which severely restricts towing vessel and her tow in their ability to deviate from their course—Length of tow does not exceed 200 meters; towing vessel less than 50 meters in length.

27(d)

Vessel engaged in dredging or underwater operations when restricted in ability to maneuver—Making way with an obstruction on the starboard side.

27(d)

Vessel engaged in dredging or underwater operations when restricted in ability to maneuver—Not making way with an obstruction on the starboard side.

27(e)

Small vessel engaged in diving operations

27(e)

Small vessel engaged in diving operations

27(f)

Vessel engaged in mineclearance operations
Vessel less than 50 meters in length.

27(f)

Vessel engaged in mineclearance operations
Vessel 50 meters or greater in length.

(224)

Rule 28—Vessel Constrained by Their Draft (International)

A vessel constrained by her draft may, in addition to the lights prescribed for power-driven vessels in Rule 23, exhibit where they can best be seen three all-round red lights in a vertical line, or a cylinder.

(218) (f) A vessel engaged in mine clearance operations shall, in addition to the lights prescribed for a power-driven vessel in Rule 23 or to the lights or shape prescribed for a vessel at anchor in Rule 30 as appropriate, exhibit three all-round green lights or three balls. One of these lights or shapes shall be exhibited near the foremast head and one at each end of the fore yard. These lights or shapes indicate that it is dangerous for another vessel to approach within 1000 meters of the mineclearance vessel.

(219) (g) Vessels of less than 12 meters in length, except ‹ those ›*«when»* engaged in diving operations, ‹ shall not be ›*«is not»* required to exhibit the lights ‹ and ›*«or»* shapes prescribed in this Rule.

(220) (h) The signals prescribed in this Rule are not signals of vessels in distress and requiring assistance. Such signals are contained in Annex IV to these Rules.

(222)

Rule 28—Vessels Constrained by Their Draft

(223) See graphic, **Rule 28—Vessels Constrained by Their Draft**.

(225)

Rule 29—Pilot Vessels

(226) (a) A vessel engaged on pilotage duty shall exhibit: (i) at or near the masthead, two all-round lights in a vertical line, the upper being white and the lower red; (ii) when underway, in addition, sidelights and a sternlight; (iii) when at anchor, in addition to the lights prescribed in Rule 29(a)(i), the light, lights, or shape prescribed in Rule 30 for vessels at anchor.

(227) (b) A pilot vessel when not engaged on pilotage duty shall exhibit the lights or shapes prescribed for a similar vessel of her length.

(228)

Rule 30—Anchored Vessels and Vessels Aground

(229) (a) A vessel at anchor shall exhibit where it can best be seen: (i) in the fore part, an all-round white light or one ball; (ii) at or near the stern and at a lower level than the light prescribed in Rule 30(a)(i), an all-round white light.

(230) **Interpretive Rule**—See **33 CFR 90.5** and **33 CFR 82.5**, chapter 2, for regulations on vessels at anchor.

(231) (b) A vessel of less than 50 meters in length may exhibit an all-round white light where it can best be seen instead of the lights prescribed in Rule 30(a).

(232) (c) A vessel at anchor may, and a vessel of 100 meters and more in length shall, also use the available working or equivalent lights to illuminate her decks.

(233) (d) A vessel aground shall exhibit the lights prescribed in Rule 30(a) or (b) and in addition, if practicable, where they can best be seen: (i) two all-round red lights in a vertical line; (ii) three balls in a vertical line.

(234) (e) A vessel of less than 7 meters in length, when at anchor not in or near a narrow channel, fairway or where other vessels normally navigate, shall not be required to exhibit the lights or shape prescribed in Rule 30(a) and (b).

(235) (f) A vessel of less than 12 meters in length, when aground, shall not be required to exhibit the lights or shapes prescribed in Rule 30(d)(i) and (ii).

(236)

Rule 30 (Inland)
(g) A vessel of less than 20 meters in length, when at anchor in a special anchorage area designated by the Coast Guard, shall not be required to exhibit the anchor lights and shapes required by this Rule.
(h) The following barges shall display at night and if practicable in periods of restricted visibility the lights described in Rule 30(i): *(i) Every barge projecting into a buoyed or restricted channel.* *(ii) Every barge so moored that it reduces the available navigable width of any channel to less than 80 meters.* *(iii) Barges moored in groups more than two barges wide or to a maximum width of over 25 meters.* *(iv) Every barge not moored parallel to the bank or dock.*
(i) Barges described in Rule 30(h) shall carry two unobstructed all-round white lights of an intensity to be visible for at least 1 nautical mile and meeting the technical requirements as prescribed in Annex I.

Rule 30 (Inland)

(j) A barge or a group of barges at anchor or made fast to one or more mooring buoys or other similar device, in lieu of the provisions of Rule 30, may carry unobstructed all-round white lights of an intensity to be visible for at least 1 nautical mile that meet the requirements of Annex I and shall be arranged as follows:
(i) Any barge that projects from a group formation, shall be lighted on its outboard corners.
(ii) On a single barge moored in water where other vessels normally navigate on both sides of the barge, lights shall be placed to mark the corner extremities of the barge.
(iii) On barges moored in group formation, moored in water where other vessels normally navigate on both sides of the group, lights shall be placed to mark the corner extremities of the group.

(k) The following are exempt from the requirements of Rule 30:
(i) A barge or group of barges moored in a slip or slough used primarily for mooring purposes.
(ii) A barge or group of barges moored behind a pierhead.
(iii) A barge less than 20 meters in length when moored in a special anchorage area designated in accordance with 33 CFR 109.10.

(l) Barges moored in well-illuminated areas are exempt from the lighting requirements of Rule 30. These areas are as follows:

CHICAGO SANITARY SHIP CANAL	
(1) Mile 293.2 to 293.9	*(15) Mile 314.6*
(2) Mile 295.2 to 296.1	*(16) Mile 314.8 to 315.3*
(3) Mile 297.5 to 297.8	*(17) Mile 315.7 to 316*
(4) Mile 298 to 298.2	*(18) Mile 316.8*
(5) Mile 298.6 to 298.8	*(19) Mile 316.85 to 317.05*
(6) Mile 299.3 to 299.4	*(20) Mile 317.5*
(7) Mile 299.8 to 300.5	*(21) Mile 318.4 to 318.9*
(8) Mile 303 to 303.2	*(22) Mile 318.7 to 318.8*
(9) Mile 303.7 to 303.9	*(23) Mile 320 to 320.3*
(10) Mile 305.7 to 305.8	*(24) Mile 320.6*
(11) Mile 310.7 to 310.9	*(25) Mile 322.3 to 322.4*
(12) Mile 311 to 311.2	*(26) Mile 322.8*
(13) Mile 312.5 to 312.6	*(27) Mile 322.9 to 327.2*
(14) Mile 313.8 to 314.2	
CALUMET SAG CHANNEL	
(28) Mile 316.5	
LITTLE CALUMET RIVER	
(29) Mile 321.2	*(30) Mile 322.3*
CALUMET RIVER	
(31) Mile 328.5 to 328.7	*(34) Mile 331.4 to 331.6*
(32) Mile 329.2 to 329.4	*(35) Mile 332.2 to 332.4*
(33) Mile 330 west bank to 330.2	*(36) Mile 332.6 to 332.8*
CUMBERLAND RIVER	
(37) Mile 126.8	*(38) Mile 191*

(237)

Rule 31—Seaplanes

(238) Where it is impracticable for a seaplane or a WIG craft to exhibit lights or shapes of the characteristics or in the positions prescribed in Rules 20 through 31 she shall exhibit lights and shapes as closely similar in characteristics and position as is possible.

(239)

Part D—Sound and Light Signals

(240)

Rule 32—Definitions

(241) (a) The word "whistle" means any sound signaling appliance capable of producing the prescribed blasts and which complies with the specifications in Annex III to these Rules.

(242) (b) The term "short blast" means a blast of about one seconds duration.

(243) (c) The term "prolonged blast" means a blast of from four to six seconds duration.

(244)

Rule 33—Equipment for Sound Signals

(245) (a) A vessel of 12 meters or more in length shall be provided with a whistle, a vessel of 20 meters or more in length shall be provided with a bell in addition to a whistle, and a vessel of 100 meters or more in length shall, in addition be provided with a gong, the tone and sound of which cannot be confused with that of the bell. The whistle, bell and gong shall comply with the specifications in Annex III to these Regulations. The bell or gong or both may be replaced by other equipment having the same respective sound characteristics, provided that manual sounding of the prescribed signals shall always be possible.

(246) (b) A vessel of less than 12 meters in length shall not be obliged to carry the sound signaling appliances prescribed in Rule 33(a) but if she does not, she shall be provided with some other means of making an efficient signal.

(247)

Rule 34—Maneuvering and Warning Signs (International)

(a) When vessels are in sight of one, a power-driven vessel underway, when maneuvering as authorized or required by these Rules, shall indicate that manoeuvre by the following signals on her whistle:
–One short blasts to mean “I am altering my course to starboard”
–Two short blasts to mean “I am altering my course to port”
–Three short blasts to mean “I am operating astern propulsion”

(b) Any vessel may supplement the whistle signals prescribed in Rule 34(a) by light signals, repeated as appropriate, while the maneuver is being carried out:
(i) these signals shall have the following significance:
(ii) the duration of each flash shall be about one second, the interval between flashes shall be about one second, and the interval between successive signals shall not be less than ten seconds.
(iii) the light used for this signal shall, if fitted, be an all-round white, visible at a minimum range of 5 miles, and shall comply with the provisions of Annex I to these Regulations.
–One flash to mean “I am altering my course to starboard”
–Two flashes to mean I am altering my course to port”
–Three flashes to mean “I am operating astern propulsion”.

Rule 34—Maneuvering and Warning Signs (International)

(c) When in sight of one another in a narrow channel or fairway:
(i) a vessel intending to overtake another shall in compliance with Rule 9(e)(i) indicate her intention by the following signals on her whistle:
–Two prolonged blasts followed by one short blast to mean "I intend to overtake you on your starboard side"
–Two prolonged blasts followed by two short blasts to mean "I intend to overtake you on your port side".
(ii) the vessel about to be overtaken when acting in accordance with Rule 9(e)(i) shall indicate her agreement by the following signal on her whistle:
–one prolonged, one short, one prolonged and one short blast, in that order.

(d) When vessels in sight of one another are approaching each other and from any cause either vessel fails to understand the intentions or actions of the other, or is in doubt whether sufficient action is being taken by the other to avoid collision, the vessel in doubt shall immediately indicate such doubt by giving at least five short and rapid blasts on the whistle. Such signal may be supplemented by at least five short and rapid flashes.

(e) A vessel nearing a bend or an area of a channel or fairway where other vessels may be obscured by an intervening obstruction shall sound one prolonged blast. This signal shall be answered with a prolonged blast by any approaching vessel that may be within hearing around the bend or behind the intervening obstruction.

(f) If whistles are fitted on a vessel at a distance apart of more than 100 meters, one whistle only shall be used for giving maneuvering and warning signals.

(248)

Rule 34—Maneuvering and Warning Signs (Inland)

(a) When power-driven vessels are in sight of one another and meeting or crossing at a distance within half a mile of each other, each vessel underway, when maneuvering as authorized or required by these Rules,
(i) shall indicate that maneuver by the following signals on her whistle:
–One short blasts to mean "I intend to leave you on my port side"
–Two short blasts to mean "I intend to leave you on my starboard side"
–Three short blasts to mean "I am operating astern propulsion"
(ii) upon hearing the one or two blast signal of the other shall, if in agreement, sound the same whistle signal and take the steps necessary to effect a safe passing. If, however, from any cause, the vessel doubts the safety of the proposed maneuver, she shall sound the signal specified in Rule 34(d) and each vessel shall take appropriate precautionary action until a safe passing agreement is made

(b) Any vessel may supplement the whistle signals prescribed in Rule 34(a) by light signals:
(i) these signals shall have the following significance:
(ii) the duration of each flash shall be about one second.
(iii) the light used for this signal shall, if fitted, be an all-round white or yellow, visible at a minimum range of 2 miles, synchronized with the whistle and shall comply with the provisions of Annex I to these Regulations.
–One flash to mean "I intend to leave you on my port side"
–Two flashes to mean "I intend to leave you on my starboard side"
–Three flashes to mean "I am operating astern propulsion"

Rule 34—Maneuvering and Warning Signs (Inland)

(c) When in sight of one another:
(i) a power-driven vessel intending to overtake another power-driven vessel shall indicate her intention by the following signals on her whistle:
–One short blast to mean "I intend to overtake you on your starboard side"
–Two short blasts to mean "I intend to overtake you on your port side"
(ii) the power-driven vessel about to be overtaken shall, if in agreement, sound a similar sound signal. If in doubt she shall sound the signal prescribed in Rule 34(d).

(d) When vessels in sight of one another are approaching each other and from any cause either vessel fails to understand the intentions or actions of the other, or is in doubt whether sufficient action is being taken by the other to avoid collision, the vessel in doubt shall immediately indicate such doubt by giving at least five short and rapid blasts on the whistle. Such signal may be supplemented by at least five short and rapid flashes.

(e) A vessel nearing a bend or an area of a channel or fairway where other vessels may be obscured by an intervening obstruction shall sound one prolonged blast. This signal shall be answered with a prolonged blast by any approaching vessel that may be within hearing around the bend or behind the intervening obstruction.

(f) If whistles are fitted on a vessel at a distance apart of more than 100 meters, one whistle only shall be used for giving maneuvering and warning signals.

(g) When a power-driven vessel is leaving a dock or berth, she shall sound one prolonged blast.

(h) A vessel that reaches agreement with another vessel in a head-on, crossing, or overtaking situation, as for example, by using the radiotelephone as prescribed by the Vessel Bridge-to-Bridge Radiotelephone Act (85 Stat. 164; 33 U.S.C. 1201 et seq.), is not obliged to sound the whistle signals prescribed by this Rule, but may do so. If agreement is not reached, then whistle signals shall be exchanged in a timely manner and shall prevail.

(249)

Rule 35—Sound Signals in Restricted Visibility

(250) In or near an area of restricted visibility, whether by day or night the signals prescribed in this Rule shall be used as follows:

(251) (a) A power-driven vessel making way through the water shall sound at intervals of not more than 2 minutes one prolonged blast.

(252) (b) A power-driven vessel underway but stopped and making no way through the water shall sound at intervals of no more than 2 minutes two prolonged blasts in succession with an interval of about 2 seconds between them.

(253) (c) A vessel not under command, a vessel restricted in her ability to maneuver *«whether underway or at anchor»*, ‹a vessel constrained by her draft› , a sailing vessel, a vessel engaged in fishing and a vessel engaged in towing or pushing another vessel shall, instead of the signals prescribed in Rule 35(a) or (b), sound at intervals of not more than 2 minutes three blasts in succession, namely one prolonged followed by two short blasts.

(268)

(254)

Rule 35d (International)

(d) A vessel engaged in fishing, when at anchor, and a vessel restricted in her ability to maneuver when carrying out her work at anchor, shall instead of the signals prescribed in Rule 35(g) sound the signal prescribed in Rule 35(c).

(255) (e) A vessel towed or if more than one vessel is towed the last vessel of the tow, if manned, shall at intervals of not more than 2 minutes sound four blasts in succession, namely one prolonged followed by three short blasts. When practicable, this signal shall be made immediately after the signal made by the towing vessel.

(256) (f) When a pushing vessel and a vessel being pushed ahead are rigidly connected in a composite unit they shall 418 ¢ U.S. Coast Pilot 1, Appendix C 16 SEP 2018 be regarded as a power-driven vessel and shall give the signals prescribed in Rule 35(a) or (b).

(257) (g) A vessel at anchor shall at intervals of not more than 1 minute ring the bell rapidly for about 5 seconds. In a vessel 100 meters or more in length the bell shall be sounded in the forepart of the vessel and immediately after the ringing of the bell the gong shall be sounded rapidly for about 5 seconds in the after part of the vessel. A vessel at anchor may in addition sound three blasts in succession, namely one short, one long and one short blast, to give warning of her position and of the possibility of collision to an approaching vessel.

(258) (h) A vessel aground shall give the bell signal and if required the gong signal prescribed in Rule 35(g) and shall, in addition, give three separate and distinct strokes on the bell immediately before and after the rapid ringing of the bell. A vessel aground may in addition sound an appropriate whistle signal.

(259) (i) A vessel of 12 meters or more but less than 20 meters in length shall not be obliged to give the bell signals prescribed in Rule 35(g) and (h). However, if she does not, she shall make some other efficient sound signal at intervals of not more than 2 minutes.

(260) (j) A vessel of less than 12 meters in length shall not be obliged to give the above mentioned signals but, if she does not, shall make some other efficient sound signal at intervals of not more than 2 minutes.

(261) (k) A pilot vessel when engaged on pilotage duty may, in addition to the signals prescribed in Rule 35(a), (b) or (g), sound an identity signal consisting of four short blasts.

(262)

Rule 35 (Inland)
(l) The following vessels shall not be required to sound signals as prescribed in Rule 35(g) when anchored in a special anchorage area designated by the Coast Guard:
(i) a vessel of less than 20 meters in length; and
(ii) a barge, canal boat, scow, or other nondescript craft.

(263)

Rule 36—Signals to Attract Attention

(264) If necessary to attract the attention of another vessel, any vessel may make light or sound signals that cannot be mistaken for any signal authorized elsewhere in these Rules, or may direct the beam of her searchlight in the direction of the danger, in such a way as not to embarrass any vessel.

(265)

Rule 36 (International)
Any light to attract the attention of another vessel shall be such that it cannot be mistaken for any aid to navigation. For the purpose of this Rule the use of high intensity intermittent or revolving lights, such as strobe lights, shall be avoided.

(266)

Rule 37—Distress Signals

(267) When a vessel is in distress and requires assistance she shall use or exhibit the signals described in Annex IV to these Rules. (See graphic, **Rule 37—Distress Signals**).

(269)

Part E—Exemptions

(270)

Rule 38—Exemptions (International)
Any vessel (or class of vessel) provided that she complies with the requirements of — the International Regulations for the Preventing of Collisions at Sea, 1960, the keel of which is laid or is at a corresponding stage of construction before the entry into force of these Regulations may be exempted from compliance therewith as follows:
(a) The installation of lights with ranges prescribed in Rule 22, until 4 years after the date of entry into force of these Regulations.
(b) The installation of lights with color specifications as prescribed in §7 of Annex I to these Regulations, until 4 years after the entry into force of these Regulations.
(c) The repositioning of lights as a result of conversion from Imperial to metric units and rounding off measurement figures, permanent exemption.
(d)(i) The repositioning of masthead lights on vessels of less than 150 meters in length, resulting from the prescriptions of §3 (a) of Annex I to these Regulations, permanent exemption. (ii) The repositioning of masthead lights on vessels of 150 meters or more in length, resulting from the prescriptions of §3 (a) of Annex I to these Regulations, until 9 years after the date of entry into force of these Regulations.
(e) The repositioning of masthead lights resulting from the prescriptions of §2(b) of Annex I to these Regulations, until 9 years after the date of entry into force of these Regulations.
(f) The repositioning of sidelights resulting from the prescriptions of §2(g) and 3(b) of Annex I to these Regulations, until 9 years after the date of entry into force of these Regulations.
(g) The requirements for sound signal appliances prescribed in Annex II to these Regulations, until 9 years after the date of entry into force of these Regulations.
(h) The repositioning of all-round lights resulting from the prescription of §9(b) of Annex I to these Regulations, permanent exemption.

(271)

Rule 38—Exemptions (Inland)
Any vessel or class of vessels, the keel of which was laid or which is at a corresponding stage of construction before December 24, 1980, provided that she complies with the requirements of —
(a) The Act of June 7, 1897 (30 Stat. 96), as amended (33 U.S.C. 154-232) for vessels navigating the waters subject to that statute;
(b) §4233 of the Revised Statutes (33 U.S.C. 301-356) for vessels navigating the waters subject to that statute;
(c) The Act of February 8, 1895 (28 Stat. 645), as amended (33 U.S.C. 241-295) for vessels navigating the waters subject to that statute; or

Rule 38—Exemptions (Inland)

(d) §§3, 4, and 5 of the Act of April 25, 1940 (54 Stat. 163), as amended (46 U.S.C. 526 b, c, and d) for motorboats navigating the waters subject to that statute; shall be exempted from compliance with the technical Annexes to these Rules as follows:
(i) The installation of lights with ranges prescribed in Rule 22, vessels of less than 20 meters in length are permanently exempt;
(ii) The installation of lights with color specifications as prescribed in §7 of Annex I to these Rules, until 4 years after the effective date of the Inland Navigational Rules Act of 1980 (Pub. L. 96-591), except that vessels of less than 20 meters in length are permanently exempt;
(iii) The repositioning of lights as a result of a conversion to metric units and rounding off of measurement figures, are permanently exempt.
(iv) The horizontal repositioning of masthead lights prescribed by Annex I to these Rules, vessels of less than 150 meters in length are permanently exempted.
(v) Power-driven vessels of 12 meters or more but less than 20 meters in length are permanently exempt from the provisions of Rule 23(a)(i) and 23(a)(iv) provided that, in place of these lights, the vessel exhibits a white light aft visible all-around the horizon.

(272) **Implementing Rule**—See **33 CFR 81.20**, chapter 2, for regulations.

(273)

Part F—Verification of Compliance with the Provisions of the Convention

(274)

Rule 39—Definitions

(275)

Rule 39 (International)

(a) "Audit" means a systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled.
(b) "Audit Scheme" means the IMO Member State Audit Scheme established by the Organization and taking into account the guidelines developed by the Organization*.
(c) "Code for Implementation" means the IMO Instruments Implementation Code (III Code) adopted by the Organization by resolution A.1070(28).
(d) "Audit Standard" means the Code for Implementation.

(276)

Rule 40—Application

(277)

Rule 40 (International)

Contracting Parties shall use the provisions of the Code for Implementation in the execution of their obligations and responsibilities contained in the present Convention.

(278)

Rule 41—Verification of Compliance

(279)

Rule 41 (International)

(a) Every Contracting Party shall be subject to periodic audits by the Organization in accordance with the audit standard to verify compliance with and implementation of the present Convention.

(b) The Secretary-General of the Organization shall have responsibility for administering the Audit Scheme, based on the guidelines developed by the Organization*.

(c) Every Contracting Party shall have responsibility for facilitating the conduct of the audit and implementation of a programme of actions to address the findings, based on the guidelines developed by the Organization*.

(d) Audit of all Contracting Parties shall be:

(i) based on an overall schedule developed by the Secretary-General of the Organization, taking into account the guidelines developed by the Organization*; and

(ii) conducted at periodic intervals, taking into account the guidelines developed by the Organization*.

* Refer to the Framework and Procedures for the IMO Member State Audit Scheme, adopted by the Organization by resolution A.1067(28).

(280)

Annex I—Positioning and Technical Details of Lights and Shapes

(281)

Definitions

(282) (a) The term "height above the hull" means height above the uppermost continuous deck. This height shall be measured from the position vertically beneath the location of the light.

(283)

Annex I (Inland)

(b) High-speed craft means a craft capable of maximum speed in meters per second (m/s) equal to or exceeding: $3.7\nabla^{0.1667}$; where ∇ = displacement corresponding to the design waterline (cubic meters).

Note: The same formula expressed in pounds and knots is maximum speed in knots (kts) equal to exceeding 1.98(lbs) $3.7\nabla^{0.1667}$; where ∇=displacement corresponding to design waterline in pounds.

(c) The term "practical cut-off" means, for vessels 20 meters or more in length, 12.5 percent of the minimum luminous intensity (Table 14(b)) corresponding to the greatest range of visibility for which the requirements of Annex I are met.

(d) The term "Rule" or "Rules" has the same meaning as in Rule 3(r).

(284)

Vertical Positioning and Spacing of Lights

(285) (a) On a power-driven vessel of 20 meters or more in length the masthead light shall be placed as follows: (i) The forward masthead light, or if only one masthead light is carried, then that light, at a height above the hull of not less than ‹ 6 ›*«5»* meters, and, if the breadth of the vessel exceeds ‹ 6 ›*«5»* meters, then at a height above the hull not less than such breadth, so however that the light need not be placed at a greater height above the hull than ‹ 12 ›*«8»* meters; (ii) when two masthead lights are carried the after one shall be at least ‹ 4.5 ›*«2»* meters vertically higher than the forward one.

(286) (b) The vertical separation of the masthead lights of power-driven vessels shall be such that in all normal conditions of trim the after light will be seen over and separate from the forward light at a distance of 1000 meters from the stem when viewed from ‹ sea ›*«water»* level.

(287) (c) The masthead light of a power-driven vessel of 12 meters but less than 20 meters in length shall be placed at a height above the gunwale of not less than 2.5 meters.

(288)

Annex I (International)

(d) A power-driven vessel of less than 12 meters in length may carry the uppermost light at a height of less than 2.5 meters above the gunwale. When, however, a masthead light is carried in addition to sidelights and a sternlight or the all-round light prescribed in Rule 23(d)(i) is carried in addition to sidelights, then such masthead light or all-round light shall be carried at least 1 meter higher than the sidelights.

Annex I (Inland)

(d) The masthead light, or the all-round light described in Rule 23(d), of a power-driven vessel of less than 12 meters in length shall be carried at least 1 meter higher than the sidelights.

(289) (e) One of the two or three masthead lights prescribed for a power-driven vessel when engaged in towing or pushing another vessel shall be placed in the same position as either the forward masthead light or the after masthead light, provided that ‹ , if carried on the after mast, › the lowest after masthead light shall be at least ‹ 4.5 ›*«2»* meters vertically higher than the *«highest»* forward masthead light.

(290) (f)(i) The masthead lights or lights prescribed in Rule 23(a) shall be so placed as to be above and clear of all other lights and obstructions except as described in §(f)(ii).

(291) (ii) When it is impracticable to carry the all-round lights prescribed by Rule 27(b)(i) ‹ or Rule 28 › below the masthead lights, they may be carried above the after masthead light(s) or vertically in between the forward masthead light(s) and after masthead light(s), provided that in the latter case the requirement of §3(c) shall be complied with.

(292) (g) The sidelights of a power-driven vessel shall be placed at ‹ a height above the hull not greater than three quarters of that ›*«least 1 meter lower»* of ‹ the ›*«than»* forward masthead light. They shall not be so low as to be interfered with by deck lights.

(293)

Annex I (International)

(h) The sidelights, if in a combined lantern and carried on a power-driven vessel of less than 20 meters in length, shall be placed not less than 1 meter below the masthead light.

(294) (i) When the Rules prescribe two or three lights to be carried in a vertical line, they shall be spaced as follows: (i) On a vessel of 20 meters in length or more such lights shall be spaced not less than ‹ 2 ›*«1»* meter apart, and the lowest of these lights shall, except where a towing light is required, be placed at a height of not less than 4 meters above the hull. (ii) On a vessel of less than 20 meters in length such lights shall be spaced not less than 1 meter apart and the lowest of these lights shall, except where a towing light is required, be placed at a height of not less than 2 meters above the gunwale. (iii) When three lights are carried they shall be equally spaced.

(295) (j) The lower of the two all-round lights prescribed for a vessel when engaged in fishing shall be at a height above the sidelights not less than twice the distance between the two vertical lights.

(296) (k) The forward anchor light prescribed in Rule 30(a)(i), when two are carried, shall not be less than 4.5 meters above the after one. On a vessel of 50 meters or more in length this forward anchor light shall be placed at a height or not less than 6 meters above the hull.

(297)

Horizontal Positioning and Spacing of Lights

(298) (a)*«Except as specified in §1(e), »* when two masthead lights are prescribed for a power-driven vessel, the horizontal distance between them must not be less than one- ‹ quarter ›*«half»* of the length of the vessel but need not be more than ‹ 100 ›*«50»* meters. The forward light must be placed not more than one- ‹ quarter ›*«half»* of the length of the vessel from the stem.

(299) (b) On a power-driven vessel of 20 meters or more in length the sidelights shall not be placed in front of the forward masthead lights. They shall be placed at or near the side of the vessel.

(300) (c) When the lights prescribed in Rule 27(b)(i) ‹or Rule 28 › are placed vertically between the forward masthead light(s) and the after masthead light(s), these all-round lights shall be placed at a horizontal distance of not less than 2 meters from the fore and aft centerline of the vessel in the athwartship direction.

(301) (d) When only one masthead light is prescribed for a power-driven vessel, this light must be exhibited forward of amidships. For a vessel of less than 20 meters in length, the vessel shall exhibit one masthead light as far forward as is practicable.

(302)

Annex I (Inland)

(e) On power-driven vessels 50 meters but less than 60 meters in length operated on the Western Rivers, and those { waters specified by the Secretary }, the horizontal distance between masthead lights shall not be less than 10 meters.

(303)

Details of Location of Direction-Indicating Lights for Fishing Vessels, Dredgers and Vessels Engaged in Underwater Operations

(304) (a) The light indicating the direction of the outlying gear from a vessel engaged in fishing as prescribed in Rule 26(c)(ii) shall be placed at a horizontal distance of not less than 2 meters and not more than 6 meters away from the two all-round red and white lights. This light shall be placed not higher than the all-round white light prescribed in Rule 26(c)(i) and not lower than the sidelights.

(305) (b) The lights and shapes on a vessel engaged in dredging or underwater operations to indicate the obstructed side and/or the side on which it is safe to pass, as prescribed in Rule 27(d)(i) and (ii), shall be placed at the maximum practical horizontal distance, but in no case less than 2 meters, from the lights or shapes prescribed in Rule 27(b)(i) and (ii). In no case shall the upper of theselights or shapes be at a greater height than the lower of the three lights or shapes prescribed in Rule 27(b)(i) and (ii).

(306)

Screens ‹ For Sidelights ›

(307) (a) The sidelights of vessels of 20 meters or more in length shall be fitted with ‹ inboard screens painted › matt black,*«inboard screens»* and meet ‹ ing › the requirements of §‹ 9 ›*«15»*. On vessels of less than 20 meters in length, the sidelights, if necessary to meet the requirements of §‹ 9 ›*«15»*, shall be fitted with ‹ inboard › matt black *«inboard»* screens. With a combined lantern, using a single vertical filament and a very narrow division between the green and red sections, external screens need not be fitted.

(308)

Annex I (Inland)

(b) On power-driven vessels less than 12 meters in length constructed after July 31, 1983, the masthead light, or the all-round light described in Rule 23(d) shall be screened to prevent direct illumination of the vessel forward of the operator's position.

(309)

Shapes

(310) (a) Shapes shall be black and of the following sizes: (i) A ball shall have a diameter of not less than 0.6 meter; (ii) a cone shall have a base diameter of not less than 0.6 meter‹s› and a height equal to its diameter; ‹ (iii) a cylinder shall have a diameter of at least 0.6 meter and a height of twice its diameter; › (iv)□(iii) a diamond shape shall consist of two cones as defined in §(a)(ii) having a common base.

(311) (b) The vertical distance between shapes shall be at least 1.5 meter ‹ s ›.

(312) (c) In a vessel of less than 20 meters in length shapes of lesser dimensions but commensurate with the size of the vessel may be used and the distance apart may be correspondingly reduced.

(313)

Color Specification of Lights

(314) (a) The chromaticity of all navigation lights shall conform to the following standards, which lie within the boundaries of the area of the diagram specified for each color by the International Commission on Illumination (CIE). ‹ , in the "Colors of Light Signals", which is incorporated by reference. It is Publication CIE No. 2.2. (TC-1.6), 1975, and is available from the Illumination Engineering Society, 345 East 47th Street, New York, NY 10017 and is available for inspection at the Coast Guard, Shore Infrastructure Logistics Center, Aids to Navigation and Marine Environmental Response Product Line (CGSILC-ATON/MER), 2703 Martin Luther King, Jr. Ave SE, Mailstop 7714, Washington, DC 20593-7714. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*. This incorporation by reference was approved by the Director of the Federal Register. ›

(315) (b) The boundaries of the area for each color are given by indicating the corner coordinates, which are as follows:

(316)

(i) White						
x	0.525	0.525	0.452	0.310	0.310	0.443
y	0.382	0.440	0.440	0.348	0.283	0.382
(ii) Green						
x	0.028	0.009	0.300	0.203		
y	0.385	0.723	0.511	0.356		
(iii) Red						
x	0.680	0.660	0.735	0.721		
y	0.320	0.320	0.265	0.259		
(iv) Yellow						
x	0.612	0.618	0.575	0.575		
y	0.382	0.382	0.425	0.406		

(317)

Intensity of Lights

(318) (a) The minimum luminous intensity of lights shall be calculated by using the formula:

(319)

$I = 3.43 \times 10^6 \times T \times D^2 \times K^{-D}$

I is luminous intensity in candelas under service conditions.

T is threshold factor 2 x 10^{-7} lux.
D is range of visibility (luminous range) of the light in nautical miles.
K is atmospheric transmissivity. For prescribed lights the value of K shall be 0.8, corresponding to a meteorological visibility of approximately 13 miles.

(320) (b) A selection of figures derived from the formula is given in the following table:

(321)

Range of visibility (luminous range) of light in nautical miles D	Minimum luminous intensity of light in candelas for K = 0.8 I
1	0.9
2	4.3
3	12
4	27
5	52
6	94

(322) ‹ Note: The maximum luminous intensity of navigation lights should be limited to avoid undue glare. This shall not be achieved by a variable control of the luminous intensity. ›

(323)

Horizontal Sectors

(324) (a)(i) In the forward direction, sidelights as fitted on the vessel shall show the minimum required intensities. The intensities shall decrease to reach practical cut-off between 1 and one degrees outside the prescribed sectors.

(325) (ii) For sternlights and masthead lights and at 22.5 degrees abaft the beam for sidelights, the minimum required intensities shall be maintained over the arc of the horizon up to 5 degrees within the limits of the sectors prescribed in Rule 21. From 5 degrees within the prescribed sectors the intensity may decrease by 50 percent up to the prescribed limits; it shall decrease steadily to reach practical cut-off at not more than 5 degrees outside the prescribed sectors.

(326) (b)(i) All-round lights shall be so located as not to be obscured by masts, topmasts or structures within angular sectors of more than 6 degrees, except anchor lights prescribed in Rule 30, which need not be placed at an impracticable height above the hull *« , and the allround white light described in Rule 23(e), which may not be obscured at all»*.

(327) (ii) If it is impracticable to comply with §(b)(i) by exhibiting only one all-round light, two all-round lights shall be used suitably positioned or screened so that they*«to»* appear, as far as practicable, as one light at a *«minimum»* distance of 1 *«nautical»* mile.

(328) *«Note: Two unscreened all-round lights that are 1.28 meters apart or less will appear as one light to the naked eye at a distance of 1 nautical mile.»*

(329)

Vertical Sectors

(330) (a) The vertical sectors of electric lights as fitted, with the exception of lights on sailing vessels underway *«and on unmanned barges»*, shall ensure that: (i) At least the required minimum intensity is maintained at all angles from 5 degrees above to 5 degrees below the horizontal; (ii) at least 60 percent of the required minimum intensity is maintained from 7.5 degrees above to 7.5 degrees below the horizontal.

(331) (b) In the case of sailing vessels underway the vertical sectors of electric lights as fitted shall ensure that: (i) At least the required minimum intensity is maintained at all angles from 5 degrees above to 5 degrees below the horizontal; (ii) at least 50 percent of the required minimum intensity is maintained from 25 degrees above to 25 degrees below the horizontal.

(332)

Annex I (Inland)
(c) In the case of unmanned barges the minimum required intensity of electric lights as fitted shall be maintained on the horizontal.

(333) (c)□(d) In the case of lights other than electric lights these specifications shall be met as closely as possible.

(334)

Intensity of Non-electric Lights

(335) Non-electric lights shall so far as practicable comply with the minimum intensities, as specified in the *«Intensity of Lights»* Table.

(336)

Maneuvering Light

(337) *«Notwithstanding the provisions of §2(f)»*, the maneuvering light described in Rule 34(b) shall be placed *«approximately»* in the same fore and aft vertical plane as the masthead light or lights and, where practicable, at a minimum height of ‹ 2 ›*«1.5»* meter vertically above the forward masthead light, provided that it shall be carried not less than ‹ 2 ›*«1.5»* meter vertically above or below the after masthead light. On a vessel where only one masthead light is carried, the maneuvering light, if fitted, shall be carried where it can best be seen, not less than ‹2 ›*«1.5»* meters vertically apart from the masthead light.

(338)

High-speed Craft

(339) (a) The masthead light of high-speed craft may be placed at a height related to the breadth *«of the craft»* lower than that prescribed in §2(a)(i), provided that the base angle of the isosceles triangle formed by the sidelights and masthead light when seen in end elevation is not less than 27 degrees.

(340) (b) On high-speed craft of 50 meters or more in length, the vertical separation between foremast and mainmast light of 4.5 meters required by §‹ 2(a)(ii) ›*«2(k)»* may be modified provided that such distance shall not be less than the value determined by the following formula:

(341)

$$y = \frac{y = (a+17\Psi)\ C}{1000} + 2$$

y the height of the mainmast light above the foremast light in meters.

a is the height of the foremast light above the water surface in service condition in meters

Y is the trim in service condition in degrees.

C is the horizontal separation of masthead lights in meters.

Note: Refer to the International Code of Safety for High-Speed Craft, 1994 and the International Code of Safety for High-Speed Craft, 2000.

(342)

Approval

(343) The construction of lights and shapes and the installation of lights on board the vessel ‹ shall be to the satisfaction of the appropriate authority of the State whose flag the vessel is entitled to fly ›*«must satisfy the Commandant, U. S. Coast Guard»*.

(344)

Annex II—Additional Signals for Fishing Vessels Fishing in Close Proximity

(345) See Rule 26(f).

(346)

Annex III—Technical Details of Sound Signal Appliances

(347) (a) Frequencies and range of audibility. The fundamental frequency of the signal shall lie within the range 70-700 Hz. The range of audibility of the signal from a whistle shall be determined by those frequencies, which may include the fundamental and/or one or more higher frequencies, which lie within the range 180-700 Hz (+/- 1 percent) for a vessel of 20 meters or more in length, or 180-2100 Hz (+/- 1 percent) for a vessel of less than 20 meters in length and which provide the sound pressure levels specified in §1(c).

(348) (b) Limits of fundamental frequencies. To ensure a wide variety of whistle characteristics, the fundamental frequency of a whistle shall be between the following limits: (i) 70-200 Hz, for a vessel 200 meters or more in length; (ii) 130-350 Hz, for a vessel 75 meters but less than 200 meters in length; (iii) 250-700 Hz, for a vessel less than 75 meters in length.

(349) (c) Sound signal intensity and range of audibility. A whistle fitted in a vessel shall provide, in the direction of maximum intensity of the whistle and at a distance of 1 meter from it, a sound pressure level in at least one onethird octave band within the range of frequencies 180-700 Hz (+/- 1 percent) for a vessel of 20 meters ‹ or more in length, or 180-2100 Hz (+/- 1 percent) for a vessel of less than 20 meters in length ›, of not less than the appropriate figure given in the table below.

(350)

Length of vessel in meters	One-third octave band level at 1 meter in dB referred to 2 x 10^{-5}N/m^2	Audible range in nautical miles
200 or more	143	2
75 but less than 200	138	1.5
20 but less than 75	130	1
Less than 20	120* 115** 111***	0.5

* When the measured frequencies lie within the range 180-450 Hz
** When the measured frequencies lie within the range 450-800 Hz
*** When the measured frequencies lie within the range 800-2100 Hz

(351) The range of audibility in the table is for information and is approximately the range at which a whistle may be heard on its forward axis with 90 percent probability in conditions of still air on board a vessel having average background noise level at the listening posts (taken to be 68 dB in the octave band centered on 250 Hz and 63 dB in the octave band centered on 500 Hz). *«It is shown for informational purposes only.»* In practice, the range at which a whistle may be heard is extremely variable and depends critically on weather conditions; the values given can be regarded as typical but under conditions of strong wind or high ambient noise level at the listening post the range may be reduced.

(352) (d) Directional properties. The sound pressure level of a directional whistle shall be not more than 4 dB below the ‹ prescribed › sound pressure level ‹ on the axis at ›, *«specified in §(c)»* any direction in the horizontal plane within +/- 45 degrees of the axis. The sound pressure level at *«of the whistle in»* any other direction in the horizontal plane shall be not more than 10 dB ‹ below the prescribed ›*«less than the»* sound pressure level ‹ on the ›*«specified for the forward»* axis, so that the range *«audibility»* in any direction will be at least half the range *«required»* on the forward axis. The sound pressure level shall be measured in that one-third octave band which determines the audibility range.

(353) (e) Positioning of whistles.

(354) (i) When a directional whistle is to be used as the only whistle on ‹ a vessel, it shall be installed with its maximum intensity directed straight ahead ›*«the vessel and is permanently installed, it shall be installed with its forward axis directed forward»*.

(355) (ii) A whistle shall be placed as high as practicable on a vessel, in order to reduce interception of the emitted sound by obstructions and also to minimize hearing damage risk to personnel. The sound pressure level of the vessel's own signal at listening posts shall not exceed 110 dB(A) and so far as practicable should not exceed 100 dB(A).

(356) (f) Fitting of more than one whistle. If whistles are fitted at a distance apart of more than 100 meters, ‹ it shall be so arranged that they are ›*«they shall»* not *«be»* sounded simultaneously.

(357)

Annex IIIg (International)
(g) Combined whistle systems. If due to the presence of obstructions the sound field of a single whistle or of one of the whistles referred to in §(f) is likely to have a zone of greatly reduced signal level, it is recommended that a combined whistle system be fitted so as to overcome this reduction. The whistles of a combined system shall be located at a distance apart of not more than 100 meters and arranged to be sounded simultaneously. The frequency of any one whistle shall differ from those of the others by at least 10 Hz.
Annex IIIg (Inland)
(g) Combined whistle systems. *(i) A combined whistle system is a number of whistles (sound emitting sources) operated together. For the purposes of the Rules a combined whistle system is to be regarded as a single whistle.*
(ii) The whistles of a combined system shall:
(1) Be located at a distance apart of not more than 100 meters;
(2) Be sounded simultaneously;
(3) Each have a fundamental frequency different from those of the others by at least 10 Hz; and
(4) Have a tonal characteristic appropriate for the length of vessel which shall be evidenced by at least 2-thirds of the whistles in the combined system having fundamental frequencies falling within the limits prescribed in §(b) of this section, or if there are only two whistles in the combined system, by the higher fundamental frequency falling within the limits prescribed in paragraph (b) of this section.
Note: If, due to the presence of obstructions, the sound field of a single whistle or of one of the whistles referred to in §(f) of this section is likely to have a zone of greatly reduced signal level, a combined whistle system should be fitted so as to overcome this reduction.

(358) For the purposes of the Rules a combined whistle system is to be regarded as a single whistle. ‹ (ii) › The whistles of a combined system shall:

(359) (1) Be located at a distance apart of not more than 100 meters;

(360)

Annex III(h) (Inland)
(h) Towing vessel whistles *A power-driven vessel normally engaged in pushing ahead or towing alongside may, at all times, use a whistle whose characteristic falls within the limits prescribed by §1(b) for the longest customary composite length of the vessel and its tow.*

(361)

Bell or Gong

(362) (a) Intensity of signal. A bell or gong, or other device having similar sound characteristics shall produce a sound pressure level of not less than 110 dB at ‹ a distance of › 1 meter ‹ from it ›.

(363) (b) Construction. Bells and gongs shall be made of corrosion-resistant material and designed to give clear tone. The diameter of the mouth of the bell shall be not less than 300 mm for vessels of 20 meters or more in length. Where practicable, a power-driven bell striker is recommended to ensure constant force but manual operation shall be possible. The mass of the striker shall be not less than 3 percent of the mass of the bell.

(364)

Approval

(365)

Annex III (International)
The construction of sound signal appliances, their performance and their installation on board the vessel shall be to the satisfaction of the appropriate authority of the State whose flag the vessel is entitled to fly.

(366)

Annex IV—Distress Signals

(367)

«Need of Assistance»

(368) The following signals, used or exhibited either together or separately, indicate distress and need of assistance:

(369) (a) a gun or other explosive signal fired at intervals of about a minute;

(370) (b) a continuous sounding with any fog-signaling apparatus;

(371) (c) rockets or shells, throwing red stars fired one at a time at short intervals;

(372) (d) a signal made by any signaling method consisting of the group . . . - - - . . . (SOS) in the Morse Code;

(373) (e) a signal sent by radiotelephony consisting of the spoken word “Mayday”;

(374) (f) the International Code Signal of distress indicated by N.C.;

(375) (g) a signal consisting of a square flag having above or below it a ball or anything resembling a ball;

(376) (h) flames on the vessel (as from a burning tar barrel, oil barrel, etc.);

(377) (i) a rocket parachute flare or a hand flare showing a red light;

(378) (j) a smoke signal giving off orange-colored smoke;

(379) (k) slowly and repeatedly raising and lowering arms outstretched to each side;

(380) (l) a distress alert by means of digital selective calling (DSC) transmitted on: (i) VHF channel 70, or (ii) MF/HF on the frequencies 2187.5 kHz, 8414.5 kHz, 4207.5 kHz, 6312 kHz, 12577 kHz or 16804.5 kHz;

(381) (m) a ship-to-shore distress alert transmitted by the ship’s Inmarsat or other mobile satellite service provider ship earth station;

(382) (n) signals transmitted by emergency position-indicating radio beacons;

(383) (o) approved signals transmitted by radiocommunication systems, including survival craft radar transponders *«meeting the requirements of 47 CFR 80.109»*.

(384) *«(p) A high intensity white light flashing at regular intervals from 50 to 70 times per minute.»*

(385)

«Exclusive Use»

(386) The use or exhibition of any of the foregoing signals except for the purpose of indicating distress and need of assistance and the use of other signals which may be confused with any of the above signals is prohibited.

(387)

«Supplemental Signals»

(388) Attention is drawn to the relevant sections of the International Code of Signals, the International Aeronautical and Maritime Search and Rescue Manual, Volume III, ‹ the International Telecommunication Union Radio Regulations, › and the following signals:

(389) (a) A piece of orange-colored canvas with either a black square and circle or other appropriate symbol (for identification from the air);

(390) (b) A dye marker.

(391)

Annex V—Pilot Rules

(392)

§88.01 Purpose and applicability.

(393) This part applies to all vessels operating on United States inland waters and to United States vessels operating on the Canadian waters of the Great Lakes to the extent there is no conflict with Canadian law.

(394)

§88.03 Definitions.

(395) The terms used in this part have the same meaning as the terms defined in part 83 of this subchapter.

(396)

§88.05 Law enforcement vessels.

(397) (a) Law enforcement vessels may display a flashing blue light when engaged in direct law enforcement or public safety activities. This light must be located so that it does not interfere with the visibility of the vessel's navigation lights.

(398) (b) The blue light described in this section may be displayed by law enforcement vessels of the United States and the States and their political subdivisions.

(399)

§88.07 Public safety activities.

(400) (a) Vessels engaged in government sanctioned public safety activities, and commercial vessels performing similar functions, may display an alternately flashing red and yellow light signal. This identification light signal must be located so that it does not interfere with the visibility of the vessel's navigation lights. The identification light signal may be used only as an identification signal and conveys no special privilege. Vessels using the identification light signal during public safety activities must abide by the Inland Navigation Rules, and must not presume that the light or the exigency gives them precedence or right of way.

(401) (b) Public safety activities include but are not limited to patrolling marine parades, regattas, or special water celebrations; traffic control; salvage; firefighting; medical assistance; assisting disabled vessels; and search and rescue.

(402)

Implementing Rules

(403) **Alternative Compliance**—see **33 CFR 81** and **33 CFR 89**, chapter 2, for regulations.

(404) **Vessel Bridge-to-Bridge Radiotelephone Regulations**—see **33 CFR 26**, chapter 2, for regulations.

Appendix A

(1)

Sales Information

(2) NOAA publications, nautical charts and unclassified National Geospatial-Intelligence Agency (NGA) nautical charts are sold by authorized sales agents in many U.S. ports and in some foreign ports. A listing of authorized chart agents and their sales outlets can be found at *www.nauticalcharts.noaa.gov*.

(3)

Products and services–NOAA

(4)

Reporting corrections to Nautical Charts and Coast Pilots

(5) Users are requested to report all significant discrepancies or additions to NOAA navigational products, including depth information in privately maintained channels and basins; obstructions, wrecks and other dangers; new, relocated or demolished landmarks; uncharted fixed private aids to navigation; deletions or additions of small-craft facilities and any other information pertinent to safe navigation. This information may be submitted using the NOAA Office of Coast Survey site:https://www.nauticalcharts.noaa.gov/customer-service/assist/

(6)

Department of Commerce, NOAA
Nautical Data Branch
N/CS26, Station 7505
1315 East-West Highway
Silver Spring, Maryland 20910
ocs.ndb@noaa.gov

(7)

Nautical charts

(8) NOAA maintains the nautical charts and publications for the coast of the United States and the Great Lakes. Over a thousand charts cover 95,000 miles of shoreline and 3.4 million square nautical miles of water. Access to charts, publications and chart catalogs is available through *www.nauticalcharts.noaa.gov*.

(9)

Dates of latest editions

(10) Information concerning the dates of latest editions of the full suite of NOAA's nautical charts and U.S. Coast Pilot volumes can be found at *nauticalcharts.noaa.gov/mcd/dole.htm*.

(11)

Coast Pilots

(12)

U.S. Coast Pilot 1—Atlantic Coast: Eastport to Cape Cod
U.S. Coast Pilot 2—Atlantic Coast: Cape Cod to Sandy Hook
U.S. Coast Pilot 3—Atlantic Coast: Sandy Hook to Cape Henry
U.S. Coast Pilot 4—Atlantic Coast: Cape Henry to Key West
U.S. Coast Pilot 5—Gulf of Mexico: Puerto Rico and Virgin Islands
U.S. Coast Pilot 6—Great Lakes: Lakes Ontario, Erie, Huron, Michigan, Superior and St. Lawrence River
U.S. Coast Pilot 7—Pacific Coast: California
U.S. Coast Pilot 8—Alaska: Dixon Entrance to Cape Spencer
U.S. Coast Pilot 9—Alaska: Cape Spencer to Beaufort Sea
U.S. Coast Pilot 10—Pacific Coast: Oregon, Washington, Hawaii, and Pacific Islands

(13)

Distance tables

(14) Distances Between United States Ports is available at *https://nauticalcharts.noaa.gov/publications/docs/distances.pdf*

(15)

Center for Operational Oceanographic Products and Services

(16)

1305 East-West Highway
Silver Spring, Maryland 20910
301–713–2815 (phone)
301–713–4500 (fax)
www.tidesandcurrents.noaa.gov

(17)

National Weather Service Offices

(18) The following offices provide forecasts, current conditions, local information and climatological data. This data can be accessed through the websites listed after each office below.

(19)

Florida
NWS Forecast Office Key West – *www.weather.gov/key* 1315 White Street, Key West, FL 33040
Louisiana
NWS Forecast Office Lake Charles – *www.weather.gov/lch* 500 Airport Boulevard, Lake Charles, LA 70607
NWS Forecast Office New Orleans/Baton Rouge *www.weather.gov/lix* 62300 Airport Road, Slidell, LA 70460
Texas

NWS Forecast Office Houston/Galveston *www.weather.gov/hgx* 1353 FM 646 Suite 202, Dickinson, TX 77539
NWS Forecast Office Brownsville – *www.weather.gov/bro* 20 South Vermillion Road, Brownsville TX 78521
Puerto Rico
NWS Forecast Office San Juan – *www.weather.gov/sju* 4000 Carreterra 190, Carolina, PR 00979

(20)

NOAA Weather Radio

(21) National Weather Service VHF-FM radio stations provide mariners with continuous FM broadcasts of weather warnings, forecasts, radar reports and selected weather observations. Reception range is up to 40 miles from the antenna site, depending on terrain, type of receiver and antenna used. The following VHF-FM radio stations with location of antenna are in or near the area covered by this Coast Pilot.

(22)

Call Sign	Station	Location	Frequency (MHz)
WXJ-95	Upper Sugarloaf Key, FL	24°39'N., 81°32'W.	162.40
WXK-83	Fort Myers, FL	26°37'N., 81°48'W.	162.457
WWG-92	Naples, FL	26°09'N., 81°48'W.	162.525
WWG-59	Sarasota, FL	27°20'N., 82°32'W.	162.40
KHB-32	Tampa, FL	27°50'N., 82°15'W.	162.55
KIH-24	Tallahassee, FL	30°25'N., 84°16'W.	162.40
WWF-86	Eastpoint, FL	29°45'N., 84°51'W.	162.50
KGG-67	Panama City, FL	30°08'N., 85°42'W.	162.55
KEC-86	Pensacola, FL	30°26'N., 87°14'W.	162.40
KEC-61	Mobile, AL	30°36'N., 88°11'W.	162.55
KIH-21	Gulfport, MS	30°22'N., 89°05'W.	162.40
WXL-41	Buras, LA	29°21'N., 89°31'W.	162.475
KHB-43	New Orleans, LA	29°56'N., 90°04'W.	162.55
KHB-46*	Baton Rouge, LA	30°36'N., 91°10'W.	162.40
KIH-23	Morgan City, LA	29°42'N., 91°12'W.	162.475
WXK-80	Lafayette, LA	30°18'N., 92°00'W.	162.55
KHB-42	Lake Charles, LA	30°18'N., 93°20'W.	162.40
WXK-28	Beaumont, TX	30°04'N., 94°07'W.	162.475
KHB-40	Galveston, TX	29°18'N., 94°49'W.	162.55
KGG-68	Houston, TX	29°45'N., 95°22'W.	162.40
WWG-40	Bay City, TX	28°59'N., 95°58'W.	162.425
WXL-26	Port O'Connor, TX	28°29'N., 96°29'W.	162.475
KHB-41	Corpus Christi, TX	27°47'N., 97°23'W.	162.55
WNG-609	Riviera, TX	27°15'N., 97°40'W.	162.525
WWG-34	Brownsville, TX	27°54'N., 97°30'W.	162.55
WXJ-69	San Juan, PR	18°16'N., 66°05'W.	162.40
WXJ-68	Maricao, PR	18°09'N., 66°59'W.	162.55

*On the hour and at 10 minute intervals thereafter, 24 hours a day.

(23) The National Weather Service provides **Radio Facsimile Weather Information** for Gulf coast waters through Coast Guard Communications Station New Orleans (NMG). Broadcasts are made on the following frequencies: 4317.9, 8503.9, 12789.9, 17146.4 (12z, 18z) kHz. For carrier frequency, subtract 1.9 kHz. Fax schedules are transmitted at 2025 GMT, and provide area coverage and description of services. For further information on Marine Radiofax Charts, visit: *https://www.weather.gov/marine/radiofax_charts*

(24)

Marine weather forecasts

(25) **Coastal Marine Forecasts** are issued four times daily by National Weather Service Offices. For further information on coastal marine forecasts as well as additional types of forecasts, visit: *https://weather.gov/marine/forecast* -and- *https://nowcoast.noaa.gov/*

(26)

Space Weather Prediction Center (SWPC)

(27) The Space Weather Prediction Center provides real-time monitoring and forecasting of solar and geophysical events that impact satellites, power grids, communications, navigation and many other technological systems.

(28)

NOAA, National Weather Service
National Centers for Environmental Predictions
Space Weather Prediction Center, W/NP9
325 Broadway
Boulder, Colorado 80305
www.swpc.noaa.gov

(29)

National Weather Service Port Meteorological Officers (PMOs)

(30) **Port Meteorological Officers** provide assistance on matters of weather chart interpretation, instruments, marine weather communications and requirements affecting ship operations. (See **National Weather Service**, chapter 1, for further details.) PMO offices in the area covered by this Coast Pilot are as follows:

(31) **Houston**–National Weather Service, 1353 FM 646, Suite 202, Dickinson, TX 77539. email: *pmohou@noaa.gov*.

(32) **New Orleans**–National Weather Service, 62300 Airport Road, Slidell, LA 70460. phone: 985–649–0429.

(33)

Products and services–other U.S. Government agencies

(34) A partial list of publications and charts considered of navigational value is included for the ready reference of the mariner. In addition to the agents located in the principal seaports handling publication sales, certain libraries have been designated by the Congress of the United States to receive the publications as issued for public review.

(35)

Government Publishing Office

(36)

U.S. Government Publishing Office
710 North Capitol Street, NW
Washington, DC 20401-0001
202-512-1800
866-512-1800
www.gpo.gov/
ContactCenter@gpo.gov

(37)

Hydrographic surveys

(38) U.S. Army Corps of Engineers hydrographic survey activity is available at: *https://www.mvr.usace.army.mil/Missions/Navigation/Hydrographic-Surveys/HydrographicSurveysMap/*

(39)

Nautical charts

(40) **Apalachicola, Chattahoochee and Flint Rivers Navigation Charts, Alabama River Charts** and **Black Warrior-Tombigbee Rivers River Charts**—available from the U.S. Army Corps of Engineers Mobile District for purchase in bound hard copy or as a free download in PDF at *www.sam.usace.army.mil*.

(41) **Flood Control and Navigation Maps of the Mississippi River, Cairo, Illinois to the Gulf of Mexico**—available from the U.S. Army Corps of Engineers Memphis District as a free download in PDF at *www.mvm.usace.army.mil*.

(42) **Upper Mississippi River Navigation Charts (Mississippi River, Cairo, Illinois to Minneapolis, Minnesota)** and **Charts of the Illinois Waterway, from Mississippi River at Grafton, Illinois to Lake Michigan at Chicago and Calumet Harbors**—available from the U.S. Army Corps of Engineers Rock Island District for purchase in hard copy format or as a free download in PDF at *www.mvr.usace.army.mil*.

(43)

Publications and services

(44) **Local Notices to Mariners** are posted weekly by the U.S. Coast Guard Navigation Center at *www.navcen.uscg.gov*. The National Geospatial-Intelligence Agency, **U.S. Notice to Mariners** are available at *msi.nga.mil/NGAPortal/MSI.portal*.

(45) **Special Notice to Mariners** are issued annually in National Geospatial-Intelligence Agency Notice to Mariners 1. These notices contain important information of considerable interest to all mariners. Interested parties are advised to read these notices.

(46) **Light List**—published by United States Coast Guard and available online at *www.navcen.uscg.gov*. Also see *Light List*, chapter 1, for additional information.

(47) **List of Lights**, **Sailing Directions**, **Radio Navigational Aids (Pub. 117)**, **American Practical Navigator (Pub. 9)** and **International Code of Signals (Pub. 102)**—issued by the National Geospatial-Intelligence Agency and available at *msi.nga.mil/NGAPortal/MSI.portal*.

(48) The **Nautical Almanac**, the **Air Almanac** and **Astronomical Almanac**—available through the United States Naval Observatory —*https://www.public.navy.mil/fltfor/cnmoc/Pages/usno_test_page.aspx* -and- *https://bookstore.gpo.gov/agency/united-states-naval-observatory-usno*

(49) **Dissemination of Marine Weather Information**, maintained by National Weather Service on the internet at *https://www.weather.gov/marine/nws_dissemination* -and- **NWS Marine Weather Services** at *https://www.weather.gov/marine/*

(50) **Navigation Rules and Regulations Handbook**—publication produced by the United States Coast Guard Navigation Standards Branch, which contains International and Inland Rules of the Road and Navigation Regulations. Available for download or viewing at *www.navcen.uscg.gov*. Navigation Rules are also found near the end of each individual Coast Pilot volume.

(51)

Offices and Services–Other U.S. Government Agencies

(52)

U.S. Army Corps of Engineers Offices

(53)

District/Division Office	Contact Information
Jacksonville District Office Federal Building 400 West Street Jacksonville, FL 32232	*www.saj.usace.army.mil* 904–232–2568
Mobile District Office P.O. Box 2288 Mobile, AL 36628	*www.sam.usace.army.mil* 251–690–2505
Vicksburg District Office 4155 Clay Street Vicksburg, MS 39183	*www.mvk.usace.army.mil* 1–800–522–5672
New Orleans District Office 7400 Leake Avenue New Orleans, LA 70118	*www.mvn.usace.army.mil* 504–862–2201
Galveston District Office P.O. Box 1229 Galveston, TX 77553	*www.swg.usace.army.mil* 409–766–3004

(54)

Environmental Protection Agency (EPA) Offices

(55)

Regional Areas, States and Information
Region 1 New Hampshire, Vermont, Maine, Massachusetts, Connecticut, Rhode Island *www.epa.gov/aboutepa/epa-region-1-new-england*
Region 2 New Jersey, New York, Puerto Rico, Virgin Islands *www.epa.gov/aboutepa/epa-region-2*
Region 3 Delaware, Maryland, Virginia, District of Columbia, Pennsylvania *www.epa.gov/aboutepa/epa-region-3-mid-atlantic*
Region 4 Alabama, Florida, Georgia, Mississippi, South Carolina, North Carolina *https://www.epa.gov/aboutepa/about-epa-region-4-southeast*

Regional Areas, States and Information
Region 5 Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin *www.epa.gov/aboutepa/epa-region-5*
Region 6 Louisiana, Texas *www.epa.gov/aboutepa/epa-region-6-south-central*
Region 9 California, Hawaii, Guam *www.epa.gov/aboutepa/epa-region-9-pacific-southwest*
Region 10 Alaska, Oregon, Washington *www.epa.gov/aboutepa/epa-region-10-pacific-northwest*

(56)

U.S. Coast Guard Navigation Center (NAVCEN)

(57) The Coast Guard Navigation Center provides cutting-edge services for safe, secure and efficient maritime transportation. The center operates the Navigation Information Service (NIS), the Maritime Differential GPS (DGPS) and the developing Nationwide Differential Global Positioning System (NDGPS). In addition, NAVCEN serves as the civilian interface for the Global Positioning System and manages other navigation-related projects.

(58) For further information and/or operational questions regarding GPS and DGPS, visit *www.navcen.uscg.gov*, or contact:

(59)

Commanding Officer
U.S. Coast Guard Navigation Center
NAVCEN MS 7310
7323 Telegraph Road
Alexandria, VA 20598-7310

(60)

Coast Guard District Offices

(61)

Districts, Boundary Description and Contact Information
Seventh Coast Guard District South Carolina, Florida, and Georgia, except west of a line from the intersection of the Florida coast with longitude 83°50'W due north to a position 30°15'N, 83°50'W; thence due west to the position 30°15'N, 84°45'W; thence due north to the intersection with the south shore of Jim Woodruff Reservoir; thence along the east bank of the Jim Woodruff Reservoir and the east bank of the Flint River upstream to Montezuma, Georgia; thence to West Point, Georgia; the Panama Canal Zone; Puerto Rico and the Virgin Islands; the U.S. naval reservations in the islands of the West Indies and on the north coast of South America; and the ocean areas that are encompassed by a line bearing 122° True from coastal end of the Fifth and Seventh Coast Guard District land boundary of the National Maritime Search and Rescue Region; thence along the eastern and the offshore boundary between the Seventh and Eighth Coast Guard Districts that is defined as a line that extends 199° True from the coastal end of the Seventh and Eighth Coast Guard District land boundary; thence along this line to the coast. 909 SE 1st Avenue Miami, FL. 33131-3050 305–415–6752

Districts, Boundary Description and Contact Information
Eighth Coast Guard District North Dakota, South Dakota, Wyoming, Nebraska, Iowa, Colorado, Kansas, Missouri, Kentucky, West Virginia, Tennessee, Arkansas, Oklahoma, New Mexico, Texas, Louisiana, Mississippi, and Alabama; that part of Pennsylvania south of 41°N latitude and west of 79°W longitude; those parts of Ohio and Indiana south of 41°N latitude; Illinois, except that part north of 41°N latitude and east of 90°W longitude; that part of Wisconsin south of 46°20'N latitude and west of 90°W. longitude; that part of Minnesota south of 46°20'N latitude; those parts of Florida and Georgia west of a line starting at the Florida coast at 83°50'W longitude; thence northerly to 30°15'N latitude, 83°50'W longitude; thence due west to 30°15'N latitude, 84°45'W longitude; thence due north to the southern bank of the Jim Woodruff Reservoir at 84°45'W longitude; thence northeasterly along the eastern bank of the Jim Woodruff Reservoir and northerly along the eastern bank of the Flint River to Montezuma, GA.; thence northwesterly to West Point, GA.; and the Gulf of Mexico area west of a line bearing 199° True from the intersection of the Florida coast at 83°50'W longitude (the coastal end of the Seventh and Eighth Coast Guard District land boundary.) 500 Pydras Street New Orleans, LA 70130-3310 504–589–6277

(62)

Coast Guard Sector Offices

(63) Note: A Sector Office combines the functions of the Captain of the Port and a Marine Inspection Office.

(64)

Sectors	Contact Information
Sector Corpus Christi	249 Glasson Drive, Corpus Christi, TX 78406 1–800–874–2143
Sector Houston/Galveston	13411 Hillard Street Houston, TX 77034 281-464-4800
Sector New Orleans	200 Hendee Street New Orleans, LA 70114 504–365–2200
Sector Mobile	1500 15th Street Mobile, AL 36615 251-441-5720
Sector St. Petersburg	600 8th Avenue, SE St. Petersburg, FL 33701 727–824–7534
Sector Key West	100 Trumbo Road Key West, FL 33040 305–292–8713
Sector San Juan	#5 Calle La Puntilla Final San Juan, PR 00901 787–729–6800

(65)

Coast Guard Stations

(66) The stations listed are in the area covered by this Coast Pilot. They have search and rescue capabilities and may provide lookout, communication, and/or patrol functions to assist vessels in distress. The National VHF-FM Distress System provides continuous coastal radio coverage outwards to 20 miles on channel 16. After contact on channel 16, communications with the Coast Guard should be on channel 22A. If channel 22 is not available to the mariner, communications may be made on channel 12. Selected stations guard the International Radiotelephone Distress, Safety and Calling Frequencies.

(67)

Puerto Rico	
Station San Juan	North side of San Juan Harbor at La Punitilla. (18°27'42"N., 66°07'00"W.)

Florida	
Station Key West	Northwest side of Key West. (24°33'54"N., 81°48'00"W.)
Station Fort Myers Beach	Southwest side of San Carlos Island. (26°27'42"N., 81°56'48"W.)
Station Cortez	Near east end of the highway bridge at Cortez. (27°28'06"N., 81°41'18"W.)
Station St. Petersburg	West side of Tampa Bay. (27°45'42"N., 82°37'42"W.)
Station Clearwater	East side of Sand Key, about 1 mile south of Clearwater Pass. (27°56'54"N., 82°50'00"W.)
Station Yankeetown	About 4 miles above the mouth of Withlacoochee River. (29°01'54"N., 82°42'06"W.)
Station Panama City	Southeast side of Alligator Bayou. (30°10'12"N., 85°45'10"W.)
Station Destin	About 0.5 mile west of the east end of Santa Rosa Island. (30°23'30"N., 86°31'36"W.)
Station Pensacola	About 1 mile east of Pensacola Light. (30°20'42"N., 87°17'24"W.)
Alabama	
Station Mobile	At the west end of Arlington Channel. (30°39'00"N., 88°03'36"W.)
Mississippi	
Station Pascagoula	East side of Singing River Island. (30°20'03"N., 88°34'06"W.)
Louisiana	
Station Venice	West side of Tiger Pass. (29°15'06"N., 89°21'30"W.)
Station Grand Isle	Just inside Barataria Pass at the northeast end of Grand Isle. (29°15'54"N., 89°57'24"W.)
Station New Orleans	Close west of the Municipal Yacht Harbor, on Lake Ponchartrain. (30°01'12"N., 90°07'18"W.)
Texas	
Station Sabine	West side of Sabine Pass, about 5.6 miles north-northwest of Sabine Pass East Jetty Light. (29°43'42"N., 93°52'18"W.)
Station Galveston	East side of Galveston Channel. (29°20'00"N., 94°46'12"W.)
Station Freeport	Northeast side of Freeport Harbor entrance. (28°56'30"N., 95°18'12"W.)
Station Port O'Connor	North bank of Intracoastal Waterway about a mile west of Port O'Connor. (28°26'00"N., 96°25'36"W.)
Station Port Aransas	Northeast end of Mustang Island in the basin at Port Aransas. (27°50'12"N., 97°03'30"W.)
Station South Padre Island	South end of Padre Island. (26°04'18"N., 97°09'48"W.)

(68)

Coast Guard Radio broadcast

(69) Urgent, safety and scheduled marine information broadcasts are made by Coast Guard stations. In general, these broadcasts provide information vital to vessels operating in the approaches and coastal waters of the United States including the Great Lakes, Puerto Rico and U.S. Virgin Islands. Types of broadcasts are as follows:

(70) **Scheduled broadcasts**—U.S. Coast Guard stations make scheduled broadcasts on a prepublished schedule of intervals of 12 hours. After the preliminary announcements on VHF-FM channel 16, the station advises shifting to working frequency VHF-FM channel 22.

(71) **Safety broadcasts**—U.S. Coast Guard stations that make scheduled broadcasts issue safety broadcasts upon receipt and on the next scheduled broadcast. Safety broadcasts are preceded by the safety signal SECURITY. After the preliminary signal on VHF-FM channel 16, the station may announce shifting to working frequency VHF-FM channel 22A.

(72) **Urgent broadcasts**—U.S. Coast Guard stations that make scheduled broadcasts issue urgent broadcasts upon receipt and on schedule until canceled. Urgent broadcasts are preceded by the urgent signal, PAN-PAN. Both the urgent signal and message may be transmitted on VHF-FM channel 16.

(73)

Coast Guard Radio Station	Scheduled Broadcast Times (UTC)
Sector Key West	1200 and 2200
Sector San Juan	1210 and 2210
Sector St. Petersburg	1210 and 2210
Sector Mobile	1020, 1220, 1620 and 2220
Sector New Orleans	1035, 1235, 1635 and 2235
Sector Houston/Galveston	1050, 1250, 1650 and 2250
Sector Corpus Christi	1040, 1240, 1640 and 2240

(74)

U.S. NAVTEX Transmitting Stations

(75) NAVTEX is an international automated medium frequency direct-printing service informing mariners of navigational and meteorological warnings and forecasts, as well as urgent marine safety information. Coverage is reasonably continuous to 200 NM off the U.S. East, Gulf and West Coasts; Puerto Rico; Southwest Alaska; Hawaii; and 100 NM off Guam. U.S. Coast Guard NAVTEX broadcast stations and message content for the areas covered by this Coast Pilot are shown below.

(76)

Station	ID	WX Broadcast Schedule (UTC)
Boston (NMF)	F	0050, 0450, 0850, 1250, 1650, 2050
Chesapeake (NMN)	N	0210, 0610, 1010, 1410, 1810, 2210
Charleston (NMN)	E	0040, 0440, 0840, 1240, 1640, 2040
Miami (NMA)	A	0000, 0400, 0800, 1200, 1600, 2000
San Juan (NMR)	R	0250, 0650, 1050, 1450, 1850, 2250
New Orleans (NMG)	G	0100, 0500, 0900, 1300, 1700, 2100

(77)

Customs ports of entry

(78) Vessels arriving in the United States from a foreign port or place are required to report their arrival to Customs and Border Protection immediately. Field Operations Offices and contact information is listed below.

(79)

Field Operations Office	Contact Information
Tampa	1624 East Seventh Avenue Suite 300 Tampa, FL 33605 813–712–6100
San Juan	City View Plaza Suite 3000 #48 Road 165 Km 1.2 Guaynabo, PR 00968 787–729–6950

Field Operations Office	Contact Information
New Orleans	423 Canal Street Room 350 New Orleans, LA 70112 504–670–2404
Houston	2323 South Shepherd #1300 Houston, TX 77019 713–387–7200

(80)

Public Health Service quarantine stations

(81)

(82) At other ports, quarantine and/or medical examinations are usually performed by Public Health Service contract personnel or by quarantine inspectors from the nearest quarantine station. Inquiries concerning quarantine matters should be directed to the nearest quarantine station.

(83)

Food and Drug Administration (FDA) Regional Offices

(84)

Northeast Region	158-15 Liberty Avenue Jamaica, New York 11433 718–340–7000
Central Region	20 North Michigan Avenue Suite 510 Chicago, Illinois 60602 215–597–4390
Pacific Region	1301 Clay Street Room 1180N Oakland, California 94612 510–287–2700
Southeast Region	60 Eighth Street NE Atlanta, Georgia 30309 404–253–1171
Southwest Region	4040 North Central Expressway Suite 900 Dallas, Texas 75204 214–253–4901

(85)

Department of Agriculture, Animal and Plant Health Inspection Service (APHIS)

(86) Information on the importation of plants, animals and plant and animal products is available from APHIS, Department of Agriculture, 4700 River Road, Riverdale, MD 20737. Visit *aphis.usda.gov* for more information.

(87)

USDA Animal and Plant Inspection Service Animal Import Centers:
Los Angeles Animal Import Center (LAAIC) 222 Kansas Street El Segundo, CA 90245 310-955-3311
Miami Animal Import Center (MAIC) 6300 NW 36th Street Miami, FL 33122 305-876-2200
New York Animal Import Center (NYAIC) 474 Animal Import Center Newburg, NY 12550 845-838-5500

USDA Animal and Plant Inspection Service Animal Import Centers:
John F. Kennedy Airport Office 230-59 Rockaway Blvd. Suite 100, Room 101 Jamaica, NY 11413 718-553-3570
Agriculture Select Service Agents 4700 River Road, Unit 2 Riverdale, MD 20737 AgSAS@aphis.usda.gov 301-851-3300 (select option 3)

(88)

U.S. Citizenship and Immigration Service Offices

(89)

Florida	
Fort Myers Field Office	4220 Executive Circle Suite 1 Fort Myers, FL 33916
Tampa Field Office	5629 Hoover Boulevard Tampa, FL 33634
Louisiana	
New Orleans Field Office	1250 Poydras Street Suite 1800 New Orleans, LA 70113
Texas	
Houston Field Office	810 Gears Road Suite 100 Houston, TX 77067
Puerto Rico	
San Juan Field Office	273 Ponce De Leon Avenue Suite 1100 San Juan, PR 00917

(90)

Federal Communications Commission Offices

(91) **District Field Offices:**

(92) Tampa, FL: 2203 N. Lois Ave., Room 1215, Tampa, FL 33607-2356.

(93) New Orleans, LA: 2424 Edenborn Ave., Suite 460, Metairie, LA 70001.

(94) Dallas, TX: 9330 LBJ Freeway, Room 1170, Dallas, TX 75243-3429.

(95) Telephone toll-free: 1–888–225–5322; (1–888–CALL–FCC) to report radio communications interference issues.

(96)

Stations transmitting medical advice

(97) To obtain radio medical advice by reliable voice radio communications urgent calls for assistance may be broadcast using the normal Urgency prowords PAN PAN as follows:

(98)

Broadcast Language	Details
PAN-PAN	(3 times)
All Stations	(3 times or specific station if known)
This is ship name	(3 times)
Call sign	(call sign)
In Position	(give position)
I require medical advice	
Over	

(99)

Measured courses

(100) The positions of measured courses are shown on the chart and their description is included in the Coast Pilots when information is reported to the National Ocean Service. Courses are located in the following places covered by this Coast Pilot:

(101) Tampa Bay, FL 11412.

Weekly Record of Updates

Week of	Action	Chapter	Paragraph(s)	User notes
30 JAN 2024				U.S. Coast Pilot 5, 52nd Edition has been issued.
04 FEB 2024	**No Correction**			
11 FEB 2024	**No Correction**			
18 FEB 2024	**No Correction**			
25 FEB 2024	**No Correction**			
03 MAR 2024	**No Correction**			
10 MAR 2024	**Change**	2	3661	
17 MAR 2024	**No Correction**			
24 MAR 2024	**No Correction**			
31 MAR 2024	**No Correction**			
07 APR 2024	**Change**	2	3310	
14 APR 2024	**No Correction**			
21 APR 2024	**Change**	11	88	

This record is intended as a log for critical updates applied to this volume. For online versions or Print on Demand (POD) copies, all weekly critical updates issued and applied to this edition at time of download or purchase are listed.
Affected paragraphs within the chapters are indicated by a gray highlight for ease of identification; e.g. (215)

Updates are available from NOAA at http://nauticalcharts.noaa.gov/nsd/cpdownload.htm.

Week of	Action	Chapter	Paragraph(s)	User notes

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