UNITED STATES Coast Pilot®

7

Pacific Coast—California

2024 (56th) Edition

This edition cancels the 55th 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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126°
124°
122°
120°
118°
42°
40°
38°
36°
34°
32°
OREGON
NEVADA
CALIFORNIA
NORTH PACIFIC OCEAN
MONTEREY BAY
Point Mendocino
Point Arena
Sacramento
San Francisco
Oakland
Los Angeles
Channel Islands
San Diego
U.S.
MEX.
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6
4
5
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Chapter 4 – San Diego to Point Arguello, California
Chapter 5 – Channel Islands, California
Chapter 6 – Point Arguello to San Francisco Bay, California
Chapter 7 – San Francisco Bay, California
Chapter 8 – San Francisco Bay to Point St. George, California

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.

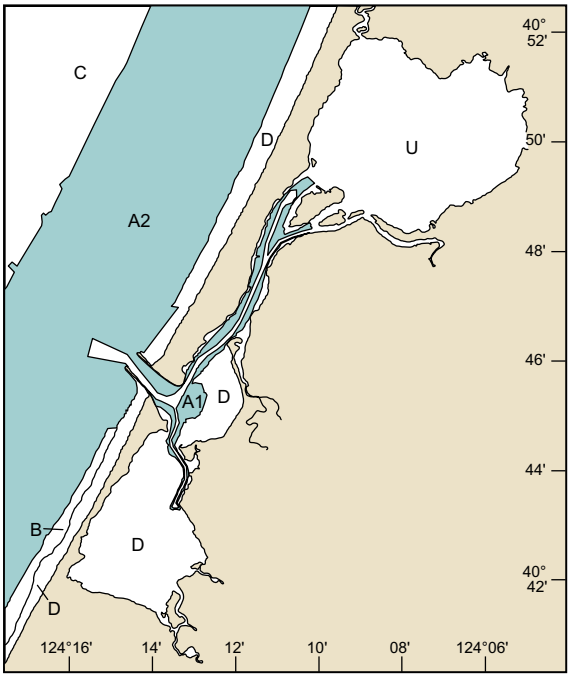
(103) Both types of diagrams consist of a graphic representation of the extents of hydrographic surveys within the chart and accompanying table of related survey quality categories. CATZOC information on an ENC, unlike the diagrams on a paper chart or RNC, is displayed over the ENC data using symbols 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

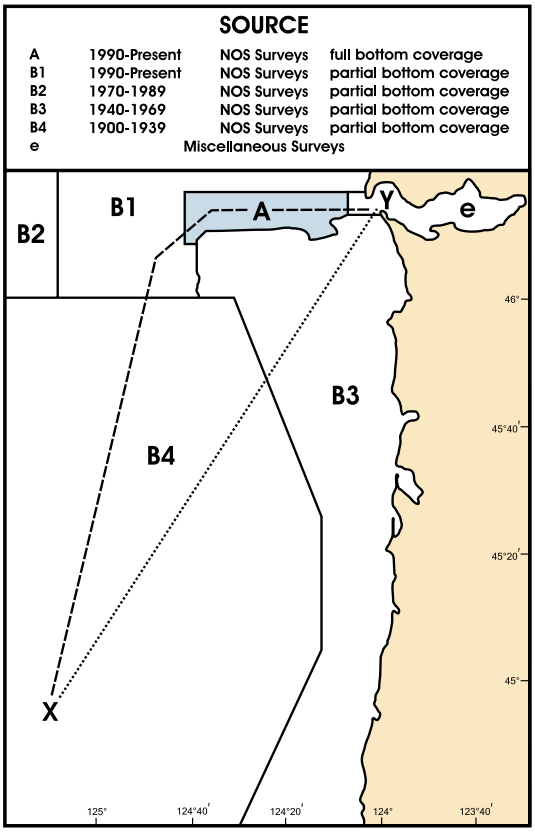
(116) For bascule bridges whose spans do not open to a full vertical position, unlimited overhead clearance is not available for the entire charted horizontal clearance when the bridge is open, due to the inclination of the drawspans over the channel.

(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)

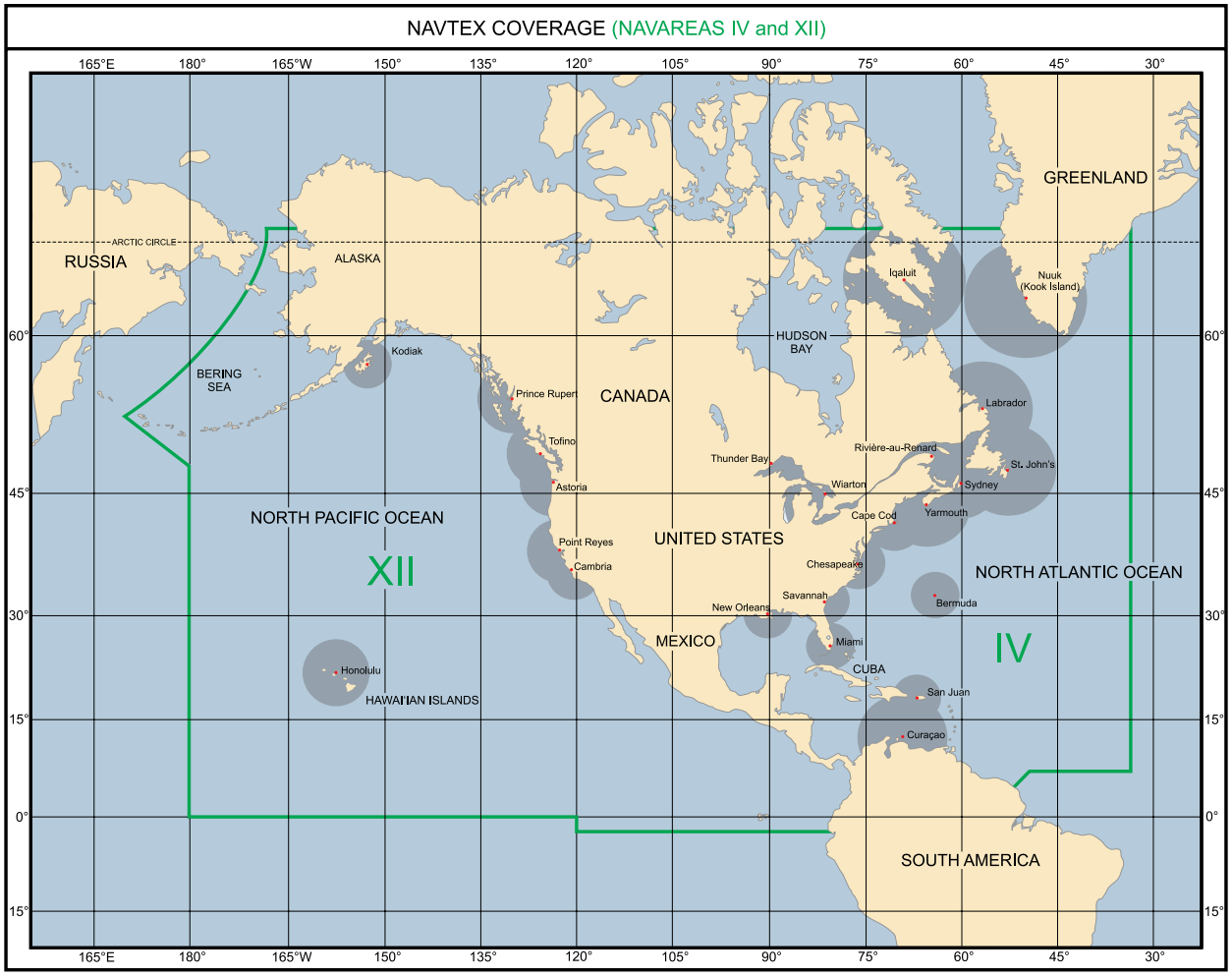
U.S. VHF Channels

	Ship Frequency (MHz)		
Channel	**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)

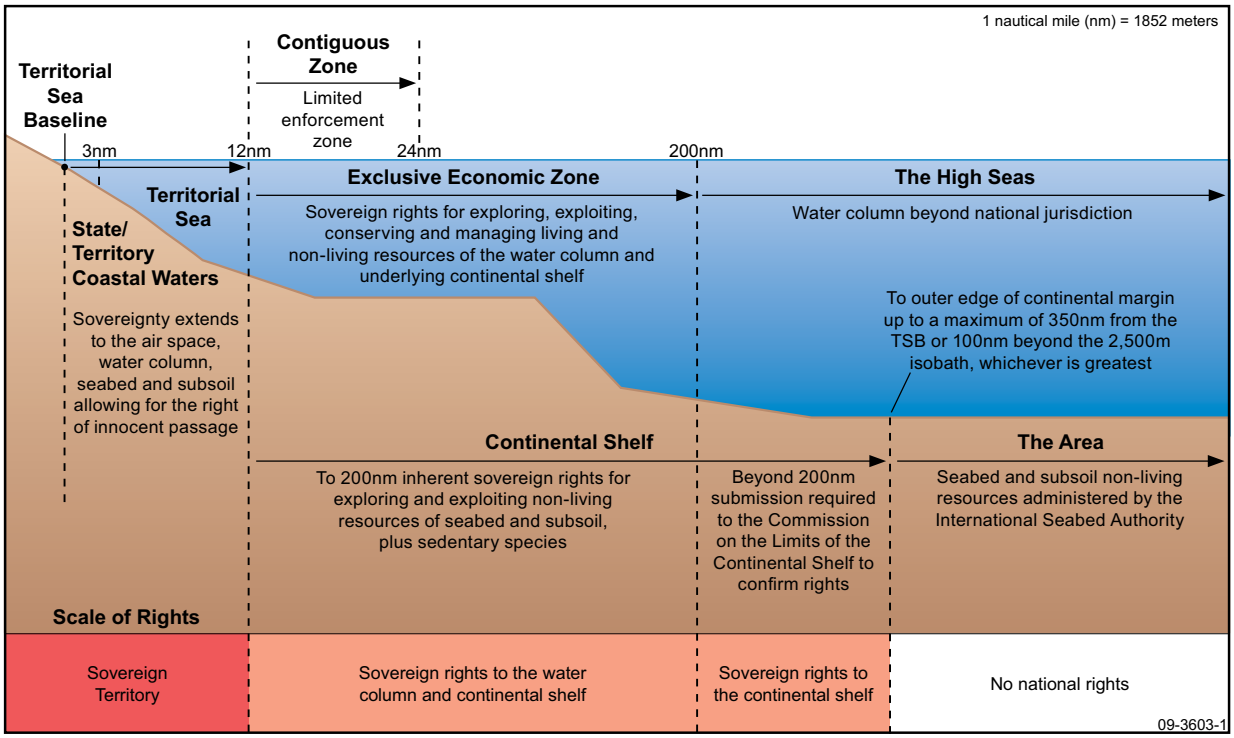


Figure 1: Offshore extent of the maritime zones recognized under international law

(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)

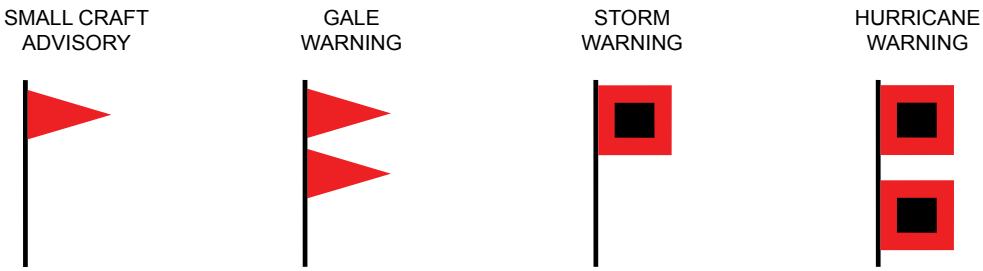
National Environmental Satellite, Data, and Information Service (NESDIS)

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

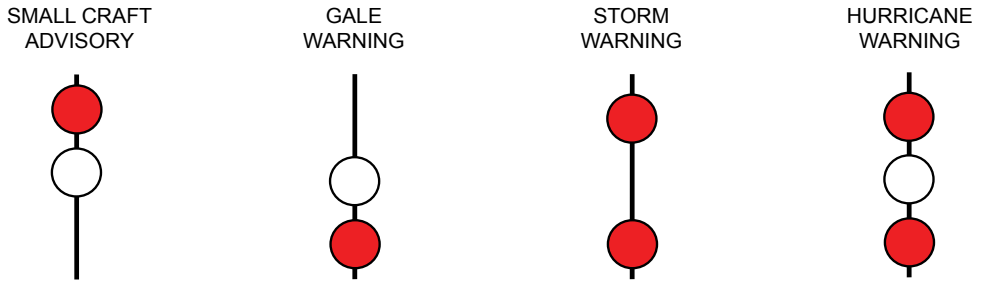
(373)

NATIONAL WEATHER SERVICE COASTAL WARNING DISPLAYS

DAYTIME SIGNALS



NIGHT (LIGHT) SIGNALS



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.

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.

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 157—Rules for the Protection of the Marine Environment Relating to Tank Vessels Carrying Oil in Bulk
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 168—Escort Requirements for Certain Tankers
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 46: Shipping
Part 15—Manning Requirements
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 and 50 CFR 224

(6) **United States Coast Guard**—33 CFR 26, 80, 81, 82, 88, 89, 90, 110, 117, 147, 157, 160, 161, 162, 164, 165, 166, 167, 168 and 169; 46 CFR 15

(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)

§922.4 Boundaries.

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

(30)

Subpart G–Channel Islands National Marine Sanctuary

(31)

§922.70 Boundary.

(32) The Channel Islands National Marine Sanctuary (Sanctuary) consists of an area of approximately 1,110 square nautical miles (nmi2) (1,470 sq. mi.) of coastal and ocean waters, and the submerged lands thereunder, off the southern coast of California. The Sanctuary boundary begins at the Mean High Water Line of and extends seaward to a distance of approximately six nmi from the following islands and offshore rocks: San Miguel Island, Santa Cruz Island, Santa Rosa Island, Anacapa Island, Santa Barbara Island, Richardson Rock, and Castle Rock (the Islands). The seaward boundary coordinates are listed in Appendix A to this subpart.

(33)

§922.71 Definitions.

(34) In addition to those definitions found at § 922.11, the following definitions apply to this subpart:

(35) *Motorized personal watercraft* means a vessel, usually less than 16 feet in length, which uses an inboard, internal combustion engine powering a water jet pump as its primary source of propulsion. The vessel is intended to be operated by a person or persons sitting, standing or kneeling on the vessel, rather than within the confines of the hull. The length is measured from end to end over the deck excluding sheer, meaning a straight line measurement of the overall length from the foremost part of the vessel to the aftermost part of the vessel, measured parallel to the centerline. Bow sprits, bumpkins, rudders, outboard motor brackets, and similar fittings or attachments, are not included in the measurement. Length is stated in feet and inches.

(36) *Oceangoing ship* means a private, commercial, government or military vessel of 300 gross registered tons or more, not including cruise ships.

(37) *Pelagic finfish* are defined as: Northern anchovy *(Engraulis mordax),* barracudas *(Sphyraena spp.),* billfishes (family*Istiophoridae),* dolphinfish *(Coryphaena hippurus),* Pacific herring *(Clupea pallasi),* jack mackerel *(Trachurus symmetricus),* Pacific mackerel *(Scomber japonicus),* salmon *(Oncorhynchus spp.),* Pacific sardine *(Sardinops sagax),* blue shark *(Prionace glauca),* salmon shark *(Lamna ditropis),* shortfin mako shark *(Isurus oxyrichus),* thresher sharks *(Alopias spp.),* swordfish *(Xiphias gladius),* tunas *(family Scombridae),* and yellowtail *(Seriola lalandi).*

(38) *Stowed and not available for immediate use* means not readily accessible for immediate use, *e.g.*, by being securely covered and lashed to a deck or bulkhead, tied down, unbaited, unloaded, or partially disassembled (such as spear shafts being kept separate from spear guns).

(39)

§922.72 Prohibited or otherwise regulated activities–Sanctuary-wide.

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

(41) (1) Exploring for, developing, or producing hydrocarbons within the Sanctuary, except pursuant to leases executed prior to March 30, 1981, and except the laying of pipeline pursuant to exploring for, developing, or producing hydrocarbons.

(42) (2) Exploring for, developing, or producing minerals within the Sanctuary, except producing byproducts incidental to hydrocarbon production allowed by paragraph (a) (1) of this section.

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

(44) (A) Fish, fish parts, or chumming materials (bait) used in or resulting from lawful fishing activity within the Sanctuary, provided that such discharge or deposit is during the conduct of lawful fishing activity within the Sanctuary;

(45) (B) For a vessel less than 300 gross registered tons (GRT), or an oceangoing ship without sufficient holding tank capacity to hold sewage while within the Sanctuary, biodegradable effluent generated incidental to vessel use by an operable Type I or 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. 1321 *et seq*. Vessel operators must lock all marine sanitation devices in a manner that prevents discharge or deposit of untreated sewage;

(46) (C) Biodegradable matter from:

(47) (1) Vessel deck wash down;

(48) (2) Vessel engine cooling water;

(49) (3) Graywater from a vessel less than 300 gross registered tons;

(50) (4) Graywater from an oceangoing ship without sufficient holding tank capacity to hold graywater while within the Sanctuary;

(51) (D) Vessel engine or generator exhaust;

(52) (E) Effluent routinely and necessarily discharged or deposited incidental to hydrocarbon exploration, development, or production allowed by paragraph (a) (1) of this section; or

(53) (F) Discharge allowed under section 312(n) of the FWPCA.

(54) (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 those listed in paragraphs (a)(3)(i)(B) through (F) of this section and fish, fish parts, or chumming materials (bait) used in or resulting from lawful fishing activity there.

(55) (4) Drilling into, dredging, or otherwise altering the submerged lands of the Sanctuary, or constructing or placing any structure, material, or other matter on or in the submerged lands of the Sanctuary, except as incidental to and necessary to:

(56) (i) Anchor a vessel;

(57) (ii) Install an authorized navigational aid;

(58) (iii) Conduct lawful fishing activity;

(59) (iv) Lay pipeline pursuant to exploring for, developing or producing hydrocarbons; or

(60) (v) Explore for, develop, or produce hydrocarbons as allowed by paragraph (a)(1) of this section.

(61) (5) Abandoning any structure, material, or other matter on or in the submerged lands of the Sanctuary.

(62) (6) Except to transport persons or supplies to or from any Island, operating within one nmi of any Island any vessel engaged in the trade of carrying cargo, including, but not limited to, tankers and other bulk carriers and barges, any vessel engaged in the trade of servicing offshore installations, or any vessel of three hundred

gross registered tons or more, except fishing or kelp harvesting vessels.

(63) (7) Disturbing marine mammals or seabirds by flying motorized aircraft at less than 1,000 feet over the waters within one nautical mile of any Island, except to engage in kelp bed surveys or to transport persons or supplies to or from an Island. Failure to maintain a minimum altitude of 1,000 feet above ground level over such waters is presumed to disturb marine mammals or seabirds.

(64) (8) Moving, removing, injuring, or possessing, or attempting to move, remove, injure, or possess a Sanctuary historical resource.

(65) (9) Taking any marine mammal, sea turtle, or sea bird within or above the Sanctuary, except as authorized by the Marine Mammal Protection Act, as amended, (MMPA), 16 U.S.C. 1361 *et seq*., Endangered Species Act, as amended, (ESA), 16 U.S.C. 1531 *et seq*., Migratory Bird Treaty Act, as amended, (MBTA), 16 U.S.C. 703 *et seq*., or any regulation, as amended, promulgated under the MMPA, ESA, or MBTA.

(66) (10) Possessing within the Sanctuary (regardless of where taken from, moved, or removed from) any marine mammal, sea turtle, or seabird, except as authorized by the MMPA, ESA, MBTA, or any regulation, as amended, promulgated under the MMPA, ESA, or MBTA.

(67) (11) Marking, defacing, damaging, moving, removing, or tampering with any sign, notice, or placard, whether temporary or permanent, or any monument, stake, post, or other boundary marker related to the Sanctuary.

(68) (12) Introducing or otherwise releasing from within or into the Sanctuary an introduced species, except striped bass (*Marone saxatilis*) released during catch and release fishing activity.

(69) (13) Operating a motorized personal watercraft within waters of the Sanctuary that are coextensive with the Channel Islands National Park, established by 16 U.S.C. 410(ff).

(70) (b)(1) The prohibitions in paragraphs (a)(3) through (13) of this section and in §922.73 do not apply to military activities carried out by DOD as of the effective date of these regulations and specifically identified in section 3.5.9 (Department of Defense Activities) of the Final Channel Islands Marine Sanctuary Management Plan/ Final Environmental Impact Statement (FMP/ FEIS), Volume II: Environmental Impact Statement, 2008, authored and published by NOAA ("pre-existing activities"). Copies of the document are available from the Channel Islands National Marine Sanctuary, 113 Harbor Way, Santa Barbara, CA 93109. Other military activities carried out by DOD may be exempted by the Director after consultation between the Director and DOD.

(71) (2) A military activity carried out by DOD as of the effective date of these regulations and specifically identified in the section entitled "Department of Defense Activities" of the FMP/FEIS is not considered a pre-existing activity if:

(72) (i) It is modified in such a way that requires the preparation of an environmental assessment or environmental impact statement under the National Environmental Policy Act, 42 U.S.C. 4321 et seq., relevant to a Sanctuary resource or quality;

(73) (ii) It is modified, including but not limited to changes in location or frequency, in such a way that its possible adverse effects on Sanctuary resources or qualities are significantly greater than previously considered for the unmodified activity;

(74) (iii) It is modified, including but not limited to changes in location or frequency, in such a way that its possible adverse effects on Sanctuary resources or qualities are significantly different in manner than previously considered for the unmodified activity; or

(75) (iv) There are new circumstances or information relevant to a Sanctuary resource or quality that was not addressed in the FMP/FEIS.

(76) (3) In the event of destruction of, loss of, or injury to a Sanctuary resource or quality resulting from an incident, including, but not limited to, discharges, deposits, and groundings caused by a DOD activity, DOD, in coordination with the Director, must promptly prevent and mitigate further damage and must restore or replace the Sanctuary resource or quality in a manner approved by the Director.

(77) (4) All DOD activities must be carried out in a manner that avoids to the maximum extent practicable any adverse impacts on Sanctuary resources and qualities.

(78) (c) The prohibitions in paragraphs (a)(3) through (10) and (12) and (13) of this section and in § 922.73 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 issued pursuant to subpart D of this part and § 922.74.

(79) (d) The prohibitions in paragraphs (a)(3) through (11) and (a)(13) of this section and in §922.73 do not apply to any activity necessary to respond to an emergency threatening life, property, or the environment.

(80) (e) The prohibitions in paragraphs (a)(3) through (11) and (a)(13) of this section and in § 922.73 do not apply to any activity necessary for valid law enforcement purposes in the Sanctuary.

(81)

§922.73 Additional prohibited or otherwise regulated activities–marine reserves and marine conservation area.

(82) (a) *Marine reserves*. Unless prohibited by 50 CFR part 660 (Fisheries off West Coast States), the following activities are prohibited and thus unlawful for any person to conduct or cause to be conducted within a marine reserve described in appendix B to this subpart, except as specified in paragraphs (b) through (e) of §922.72:

(83) (1) Harvesting, removing, taking, injuring, destroying, collecting, moving, or causing the loss of any Sanctuary resource, or attempting any of these activities.

(84) (2) Possessing fishing gear on board a vessel unless such gear is stowed and not available for immediate use.

(85) (3) Possessing any Sanctuary resource, except legally harvested fish on board a vessel at anchor or in transit.

(86) (b) *Marine conservation area*. Unless prohibited by 50 CFR part 660 (Fisheries off West Coast States), the following activities are prohibited and thus unlawful for any person to conduct or cause to be conducted within the marine conservation area described in appendix C to this subpart, except as specified in paragraphs (b) through (e) of §922.72.

(87) (1) Harvesting, removing, taking, injuring, destroying, collecting, moving, or causing the loss of any Sanctuary resource, or attempting any of these activities, except:

(88) (i) Recreational fishing of pelagic finfish; or

(89) (ii) Commercial and recreational fishing for lobster.

(90) (2) Possessing fishing gear on board a vessel, except legal fishing gear used to fish for lobster or pelagic finfish unless such gear is stowed and not available for immediate use.

(91) (3) Possessing any Sanctuary resource except for legally harvested fish.

(92)

§922.74 Permit procedures.

(93) (a) A person may conduct an activity otherwise prohibited by § 922.72 or § 922.73 if the 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.

(94) (b) Permit applications should be addressed to the Director, Office of National Marine Sanctuaries; ATTN: Superintendent, Channel Islands National Marine Sanctuary, University of California Santa Barbara, Ocean Science Education Building 514, MC 6155, Santa Barbara, CA 93106–6155.

(95)

Appendix A to Subpart G of Part 922 – Channel Islands National Marine Sanctuary Boundary Coordinates

(96)

[Coordinates listed in this Appendix are unprojected (Geographic) and based on the North American Datum of 1983.]

Point	Latitude	Longitude
1	33.94138	−119.27422
2	33.96776	−119.25010
3	34.02607	−119.23642
4	34.07339	−119.25686
5	34.10185	−119.29178
6	34.11523	−119.33040
7	34.11611	−119.39120.

[Coordinates listed in this Appendix are unprojected (Geographic) and based on the North American Datum of 1983.]

Point	Latitude	Longitude
8	34.11434	−119.40212
9	34.11712	−119.42896
10	34.11664	−119.44844.
11	34.13389	−119.48081.
12	34.13825	−119.49198
13	34.14784	−119.51194.
14	34.15086	−119.54670
15	34.15450	−119.54670
16	34.15450	−119.59170
17	34.15142	−119.61254
18	34.13411	−119.66024
19	34.14635	−119.69780
20	34.15988	−119.76688
21	34.15906	−119.77800
22	34.15928	−119.79327
23	34.16213	−119.80347
24	34.16962	−119.83643
25	34.17266	−119.85240
26	34.17588	−119.88903
27	34.17682	−119.93357
28	34.17258	−119.95830
29	34.13535	−120.01964
30	34.13698	−120.04206
31	34.12994	−120.08582
32	34.12481	−120.11104
33	34.12519	−120.16076
34	34.11008	−120.21190
35	34.11128	−120.22707
36	34.13632	−120.25292
37	34.15341	−120.28627.
38	34.16408	−120.29310
39	34.17704	−120.30670
40	34.20492	−120.30670
41	34.20492	−120.38830
42	34.20707	−120.41801
43	34.20520	−120.42859
44	34.19254	−120.46041
45	34.20540	−120.50728
46	34.20486	−120.53987
47	34.18182	−120.60041
48	34.10208	−120.64208
49	34.08151	−120.63894.
50	34.05848	−120.62862
51	34.01940	−120.58567
52	34.01349	−120.57464
53	33.98698	−120.56582
54	33.95039	−120.53282
55	33.92694	−120.46132

[Coordinates listed in this Appendix are unprojected (Geographic) and based on the North American Datum of 1983.]

Point	Latitude	Longitude
56	33.92501	−120.42170
57	33.91403	−120.37585
58	33.91712	−120.32506
59	33.90956	−120.30857
60	33.88976	−120.29540
61	33.84444	−120.25482
62	33.83146	−120.22927
63	33.81763	−120.20284
64	33.81003	−120.18731
65	33.79425	−120.13422
66	33.79379	−120.10207
67	33.79983	−120.06995
68	33.81076	−120.04351
69	33.81450	−120.03158
70	33.84125	−119.96508
71	33.84865	−119.92316
72	33.86993	−119.88330
73	33.86195	−119.88330
74	33.86195	−119.80000
75	33.86110	−119.79017
76	33.86351	−119.77130
77	33.85995	−119.74390
78	33.86233	−119.68783
79	33.87330	−119.65504
80	33.88594	−119.62617
81	33.88688	−119.59423
82	33.88809	−119.58278
83	33.89414	−119.54861
84	33.90064	−119.51936
85	33.90198	−119.51609
86	33.90198	−119.43311
87	33.90584	−119.43311
88	33.90424	−119.42422
89	33.90219	−119.40730
90	33.90131	−119.38373
91	33.90398	−119.36333
92	33.90635	−119.35345
93	33.91304	−119.33280
94	33.91829	−119.32206.
95	33.48250	−119.16874
96	33.44235	−119.16797
97	33.40555	−119.14878
98	33.39059	−119.13283
99	33.36804	−119.08891
100	33.36375	−119.06803
101	33.36241	−119.04812

[Coordinates listed in this Appendix are unprojected (Geographic) and based on the North American Datum of 1983.]

Point	Latitude	Longitude
102	33.36320	−119.03670
103	33.36320	−118.90879
104	33.47500	−118.90879
105	33.48414	−118.90712
106	33.52444	−118.91492
107	33.53834	−118.92271
108	33.58616	−118.99540
109	33.59018	−119.02374
110	33.58516	−119.06745
111	33.58011	−119.08521
112	33.54367	−119.14460
113	33.51161	−119.16367

(97)

Subpart H–Greater Farallones National Marine Sanctuary

(98)

§922.80 Boundary.

(99) (a) Greater Farallones National Marine Sanctuary (Sanctuary) encompasses an area of approximately 2,488 square nautical miles (nmi2) (3,295 sq. mi.) of coastal and ocean waters, and submerged lands thereunder, surrounding the Farallon Islands and Noonday Rock along the northern coast of California. The precise boundary coordinates are listed in appendix A to this subpart.

(100)

§922.81 Definitions.

(101) In addition to those definitions found at §922.11, the following definitions apply to this subpart:

(102) *Cruise ship* means a vessel with 250 or more passenger berths for hire.

(103) *Motorized personal watercraft* means a vessel which uses an inboard motor powering a water jet pump as its primary source of motive power and which is designed to be operated by a person sitting, standing, or kneeling on the vessel, rather than the conventional manner of sitting or standing inside the vessel.

(104) *Routine maintenance* means customary and standard procedures for maintaining docks or piers.

(105) *Special Wildlife Protection Zones* are areas surrounding or adjacent to high abundance of white sharks, breeding pinnipeds (seals and sea lions) or high abundance and high biological diversity of breeding birds that are susceptible to human caused disturbance, including federally listed and specially protected species. Coordinates for Special Wildlife Protection Zones are found in appendix C of this Subpart.

(106)

§922.82 Prohibited or otherwise regulated activities.

(107) (a) The following activities are prohibited and thus are unlawful for any person to conduct or to cause to be conducted within the Sanctuary:

(108) (1) Exploring for, developing, or producing oil, gas or minerals.

(109) (2) Discharging or depositing from within or into the Sanctuary, other than from a cruise ship, any material or other matter except:

(110) (i) Fish, fish parts, or chumming materials (bait) used in or resulting from lawful fishing activity within the Sanctuary, provided that such discharge or deposit is during the conduct of lawful fishing activity within the Sanctuary;

(111) (ii) For a vessel less than 300 gross registered tons (GRT), or a vessel 300 GRT or greater without sufficient holding tank capacity to hold sewage while within the Sanctuary, clean effluent generated incidental to vessel use by an operable Type I or II marine sanitation device (U.S. Coast Guard classification) that is 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 all marine sanitation devices in a manner that prevents discharge or deposit of untreated sewage;

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

(113) (iv) For a vessel less than 300 GRT or a vessel 300 GRT or greater without sufficient holding capacity to hold graywater while within the Sanctuary, clean graywater as defined by section 312 of the FWPCA;

(114) (v) Vessel engine or generator exhaust; or

(115) (vi) For a United States Coast Guard vessel without sufficient holding tank capacity and without a Type I or II marine sanitation device, and operating within the designated area [2015 expansion area] defined in appendix G of this subpart, sewage and non-clean graywater as defined by section 312 of the FWPCA generated incidental to vessel use, and ammunition, pyrotechnics or other materials directly related to search and rescue and live ammunition training activities conducted by United States Coast Guard vessels and aircraft in the designated areas defined in appendix G of this subpart.

(116) (3) Discharging or depositing from within or into the Sanctuary any material or other matter from a cruise ship except clean vessel engine cooling water, clean vessel generator cooling water, vessel engine or generator exhaust, clean bilge water, or anchor wash.

(117) (4) 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 for the material or other matter excepted in paragraphs (a)(2)(i) through (vi) and (a)(3) of this section.

(118) (5) Constructing any structure other than a navigation aid on or in the submerged lands of the Sanctuary; placing or abandoning any structure on or in the submerged lands of the Sanctuary; or drilling into, dredging, or otherwise altering the submerged lands of the Sanctuary in any way, except:

(119) (i) By anchoring vessels (in a manner not otherwise prohibited by this part (see paragraph (a)(16) of this section);

(120) (ii) While conducting lawful fishing activities;

(121) (iii) Routine maintenance and construction of docks and piers on Tomales Bay; or

(122) (iv) Aquaculture activities conducted pursuant to a valid lease, permit, license or other authorization issued by the State of California.

(123) (6) Operating motorized personal watercraft (MPWC) anywhere in Bodega Bay and anywhere in the Sanctuary south of 38.29800 degrees North Latitude (the southernmost tip of Bodega Head), except for emergency search and rescue missions or law enforcement operations (other than routine training activities) carried out by the National Park Service, U.S. Coast Guard, Fire or Police Departments or other Federal, State or local jurisdictions.

(124) (7) Taking any marine mammal, sea turtle, or bird within or above the Sanctuary, except as authorized by the Marine Mammal Protection Act, as amended, (MMPA), 16 U.S.C. 1361 *et seq*., Endangered Species Act (ESA), as amended, 16 U.S.C. 1531 *et seq*., Migratory Bird Treaty Act, as amended, (MBTA), 16 U.S.C. 703 *et seq*., or any regulation, as amended, promulgated under the MMPA, ESA, or MBTA.

(125) (8) Possessing within the Sanctuary (regardless of where taken, moved or removed from), any marine mammal, sea turtle, or bird taken, except as authorized by the MMPA, ESA, MBTA, by any regulation, as amended, promulgated under the MMPA, ESA, or MBTA, or as necessary for valid law enforcement purposes.

(126) (9) Possessing, moving, removing, or injuring, or attempting to possess, move, remove or injure, a Sanctuary historical resource.

(127) (10) Introducing or otherwise releasing from within or into the Sanctuary an introduced species, except:

(128) (i) Striped bass (*Morone saxatilis*) released during catch and release fishing activity; or

(129) (ii) Species cultivated by commercial shellfish aquaculture activities in Tomales Bay pursuant to a valid lease, permit, license or other authorization issued by the State of California. Tomales Bay is defined in §922.80. The coordinates for the northern terminus of Tomales Bay are listed in appendix C to this subpart.

(130) (11) Disturbing marine mammals or seabirds by flying motorized aircraft at less than 1,000 feet over the waters within any of the seven designated Special Wildlife Protection Zones described in appendix D to this subpart, except transiting Zone 6 to transport persons or supplies to or from Southeast Farallon Island authorized by the U.S. Fish and Wildlife Service, Farallon National Wildlife Refuge, or for enforcement purposes. Failure to

maintain a minimum altitude of 1,000 feet above ground level over such waters is presumed to disturb marine mammals or seabirds.

(131) (12) Operating any vessel engaged in the trade of carrying cargo within any area designated Special Wildlife Protection Zone or within one nautical mile from these zones. The coordinates are listed in appendix E to this subpart. This includes but is not limited to tankers and other bulk carriers and barges, or any vessel engaged in the trade of servicing offshore installations, except to transport persons or supplies to or from the Farallon Islands. In no event shall this section be construed to limit access for fishing, recreational or research vessels.

(132) (13) Attracting a white shark anywhere in the Sanctuary; or approaching within 50 meters of any white shark within Special Wildlife Protection Zone 6 and 7 or within one nautical mile from these zones The coordinates are listed in appendix F to this subpart.

(133) (14) Deserting a vessel aground, at anchor, or adrift in the Sanctuary.

(134) (15) Leaving harmful matter aboard a grounded or deserted vessel in the Sanctuary.

(135) (16) Anchoring a vessel in a designated seagrass protection zone in Tomales Bay, except as necessary for aquaculture operations conducted pursuant to a valid lease, permit or license. The coordinates for the noanchoring seagrass protection zones are listed in Appendix B to this subpart.

(136) (17) 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.

(137) (b) All activities currently carried out by the Department of Defense within the Sanctuary are essential for the national defense and, therefore, not subject to the prohibitions in this section. The exemption of additional activities shall be determined in consultation between the Director and the Department of Defense.

(138) (c) The prohibitions in paragraph (a) of this section do not apply to activities necessary to respond to an emergency threatening life, property or the environment, or except as may be permitted by the Director in accordance with subpart D of this part.

(139) (d) The prohibitions in paragraphs (a)(2) through (9) and (11) through (16) of this section do not apply to any activity executed in accordance with the scope, purpose, terms, and conditions of a National Marine Sanctuary permit issued in accordance with subpart D of this part and § 922.83, or a special use permit issued pursuant to subpart D of this part.

(140)

§922.83 Permit procedures.

(141) (a) A person may conduct an activity otherwise prohibited by § 922.82(a)(2) through (9) and (11) through (16) 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.

(142) (b) Applications for permits should be addressed to the Director, Office of National Marine Sanctuaries; ATTN: Superintendent, Greater Farallones National Marine Sanctuary, 991 Marine Dr., The Presidio, San Francisco, CA 94129.

(143)

§922.84 Certification of preexisting leases, licenses, permits, approvals, other authorizations, or rights to conduct a prohibited activity.

(144) (a) A person may conduct an activity prohibited by §922.82(a)(1) through (17) if such activity is specifically authorized by a valid Federal, State, or local lease, permit, license, approval, or other authorization in existence prior to the effective date of sanctuary expansion and within the sanctuary expansion area and complies with §922.47 and provided that the holder of the lease, permit, license, approval, or other authorization complies with the requirements of paragraph (e) of this section.

(145) (b) In considering whether to make the certifications called for in this section, the Director may seek and consider the views of any other person or entity, within or outside the Federal government, and may hold a public hearing as deemed appropriate.

(146) (c) The Director may amend, suspend, or revoke any certification made under this section whenever continued operation would otherwise be inconsistent with any terms or conditions of the certification. Any such action shall be forwarded in writing to both the holder of the certified permit, license, or other authorization and the issuing agency and shall set forth reason(s) for the action taken.

(147) (d) Requests for findings or certifications should be addressed to the Director, Office of National Marine Sanctuaries; ATTN: Sanctuary Superintendent, Greater Farallones National Marine Sanctuary, 991 Marine Drive, The Presidio, San Francisco, CA 94129. A copy of the lease, permit, license, approval, or other authorization must accompany the request.

(148) (e) For an activity described in paragraph (a) of this section, the holder of the authorization or right may conduct the activity prohibited by §922.82 (a)(1) through (17) provided that:

(149) (1) The holder of such authorization or right notifies the Director, in writing, within 90 days of the effective date of Sanctuary designation, of the existence of such authorization or right and requests certification of such authorization or right;

(150) (2) The holder complies with the other provisions of this section; and

(151) (3) The holder complies with any terms and conditions on the exercise of such authorization or right imposed as a condition of certification, by the Director, to achieve the purposes for which the Sanctuary was designated.

(152) (f) The holder of an authorization or right described in paragraph (a) of this section authorizing an activity

prohibited by §922.82 may conduct the activity without being in violation of applicable provisions of §922.82, pending final agency action on his or her certification request, provided the holder is otherwise in compliance with this section.

(153) (g) The Director may request additional information from the certification requester as he or she deems reasonably necessary to condition appropriately the exercise of the certified authorization or right to achieve the purposes for which the Sanctuary was designated. The Director must receive the information requested within 45 days of the postmark date of the request. The Director may seek the views of any persons on the certification request.

(154) (h) The Director may amend any certification made under this section whenever additional information becomes available that he determines justifies such an amendment.

(155) (i) Upon completion of review of the authorization or right and information received with respect thereto, the Director shall communicate, in writing, any decision on a certification request or any action taken with respect to any certification made under this section, in writing, to both the holder of the certified lease, permit, license, approval, other authorization, or right, and the issuing agency, and shall set forth the reason(s) for the decision or action taken.

(156) (j) The holder may appeal any action conditioning, amending, suspending, or revoking any certification in accordance with the procedures set forth in §922.50.

(157) (k) Any time limit prescribed in or established under this section may be extended by the Director for good cause.

(158)

§922.85 Review of State permits and leases for certain aquaculture projects.

(159) NOAA has described in a Memorandum of Agreement (MOA) with the State of California how the State will consult and coordinate with NOAA to review any new, amended or expanded lease or permit application for aquaculture projects in Tomales Bay involving introduced species.

(160)

Appendix A to Subpart H of Part 922 – Greater Farallones National Marine Sanctuary Boundary Coordinates

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

(162)

Point	Latitude	Longitude
1	39.00000	-124.33350
2	38.29989	-123.99988
3	38.29989	-123.20005
4	38.26390	-123.18138
5	38.21001	-123.11913
6	38.16576	-123.09207
7	38.14072	-123.08237
8	38.12829	-123.08742
9	38.10215	-123.09804
10	38.09069	-123.10387
11	38.07898	-123.10924
12	38.06505	-123.11711
13	38.05202	-123.12827
14	37.99227	-123.14137
15	37.98947	-123.23615
16	37.95880	-123.32312
17	37.90464	-123.38958
18	37.83480	-123.42579
19	37.76687	-123.42694
20	37.75932	-123.42686
21	37.68892	-123.39274
22	37.63356	-123.32819
23	37.60123	-123.24292
24	37.59165	-123.22641
25	37.56305	-123.19859
26	37.52001	-123.12879
27	37.50819	-123.09617
28	37.49418	-123.00770
29	37.50948	-122.90614
30	37.52988	-122.85988
31	37.57147	-122.80399
32	37.61622	-122.76937
33	37.66641	-122.75105
34*	37.88225	-122.62753
35*	38.35045	-123.06711
36*	38.35665	-123.06724
37*	38.44575	-123.12602
38*	38.45531	-123.13469
39*	38.76231	-123.52957
40*	38.76941	-123.53541
41*	38.91136	-123.71061
42*	38.91766	-123.72568
43*	38.95404	-123.73405
44*	38.95944	-123.71820
45*	39.00000	-123.69710
46*	39.00000	-124.33350

Note: The coordinates in the table above marked with an asterisk (*) are not a part of the sanctuary boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.

(163)

Appendix B to Subpart H of Part 922 – No Anchoring Seagrass Protection Zones in Tomales Bay

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

(165) (1) No-Anchoring Seagrass Protection Zone 1 encompasses an area of approximately .11 square nautical miles (.15 square miles) offshore south of Millerton Point. The precise boundary coordinates are listed in the table following this description. The eastern boundary is a straight line arc that connects points 1 and 2 listed in the coordinate table below. The southern boundary is a straight line arc that connects points 2 and 3, the western boundary is a straight line arc that connects points 3 and 4 and the northern boundary is a straight line arc that connects point 4 to point 5.

(166)

Zone 1 Point ID	Latitude	Longitude
1	38.10571	-122.84565
2	38.09888	-122.83603
3	38.09878	-122.84431
4	38.10514	-122.84904
5	38.10571	-122.84565

(167) (2) No-Anchoring Seagrass Protection Zone 2 encompasses an area of approximately .15 square nautical miles (.19 square miles) that begins just south of Marconi and extends approximately 1.6 nautical miles (1.9 miles) south along the eastern shore of Tomales Bay. The precise boundary coordinates are listed in the table following this description. The western boundary is a series of straight line arcs that sequentially connect point 1 to point 5 listed in the coordinate table below. The southern boundary is a straight line arc that extends from point 5 towards point 6 until it intersects the Mean High Water Line. From this intersection the eastern boundary follows the Mean High Water Line north until it intersects the straight line arc that connects point 7 to point 8. From this intersection the northern boundary extends to point 8.

(168)

Zone 2 Point ID	Latitude	Longitude
1	38.13326	-122.87178
2	38.12724	-122.86488
3	38.12563	-122.86480
4	38.11899	-122.86731
5	38.11386	-122.85851
6*	38.11608	-122.85813
7*	38.14078	-122.87433
8	38.13326	-122.87178

Note: The coordinates in the table above marked with an asterisk (*) are not a part of the zone boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.

(169) (3) No-Anchoring Seagrass Protection Zone 3 encompasses an area of approximately .01 square nautical miles (.02 square miles) that begins just south of Marshall and extends approximately .5 nautical miles (.6 miles) south along the eastern shore of Tomales Bay. The precise boundary coordinates are listed in the table following this description. The western boundary is a straight line arc that connects point 1 to point 2 listed in the coordinate table below. The southern boundary is a straight line arc that extends from point 2 towards point 3 until it intersects the Mean High Water Line. From this intersection the eastern boundary follows the Mean High Water Line northward until it intersects the straight line arc that connects point 4 to point 5. From this intersection the northern boundary extends westward along the straight line arc that connects point 4 to point 5.

(170)

Zone 3 Point ID	Latitude	Longitude
1	38.15956	-122.89573
2	38.15250	-122.89042
3*	38.15292	-122.88984
4*	38.16031	-122.89442
5	38.15956	-122.89573

Note: The coordinates in the table above marked with an asterisk (*) are not a part of the zone boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.

(171) (4) No-Anchoring Seagrass Protection Zone 4 is an area of approximately .18 square nautical miles (.21 square miles) that begins just north of Nicks Cove and extends approximately 2.7 nautical miles (3.1 miles) south along the eastern shore of Tomales Bay to just south of Cypress Grove. The precise boundary coordinates are listed in the table following this description. The western boundary is a series of straight line arcs that sequentially connect point 1 to point 8 listed in the coordinate table below. The southern boundary is a straight line arc that extends from point 8 towards point 9 until it intersects the Mean High Water Line. From this intersection the eastern boundary follows the Mean High Water Line north until it intersects the straight line arc that connects point 10 to point 11. From this intersection the northern boundary extends westward along the straight line arc that connects point 10 to point 11.

(172)

Zone 4 Point ID	Latitude	Longitude
1	38.20004	-122.92315
2	38.18881	-122.91740
3	38.18651	-122.91404
4	38.17919	-122.91021
5	38.17450	-122.90545
6	38.16869	-122.90475
7	38.16535	-122.90308
8	38.16227	-122.89650
9*	38.16266	-122.89620
10*	38.20080	-122.92174
11	38.20004	-122.92315

Note: The coordinates in the table above marked with an asterisk (*) are not a part of the zone boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.

(173) (5) No-Anchoring Seagrass Protection Zone 5 encompasses an area of approximately 1.3 square nautical

miles (1.6 square miles) that begins east of Lawson's Landing and extends approximately 2.7 nautical miles (3.1 miles) east and south along the eastern shore of Tomales Bay but excludes areas adjacent (approximately .32 nautical miles or .37 miles) to the mouth of Walker Creek. The precise boundary coordinates are listed in the table following this description. The western boundary is a series of straight line arcs that sequentially connect point 1 to point 3 listed in the coordinate table below. From point 3 the southern boundary trends eastward along the straight line arc that connects point 3 to point 4 until it intersects the Mean High Water Line. From this intersection the boundary follows the Mean High Water Line northward until it intersects the straight line arc that connects point 5 to point 6. From this intersection the boundary extends westward along the straight line arc that connects point 5 to point 6. From point 6 the boundary follows the straight line arc that connects point 6 to point 7, and then extends along the straight line arc that connects point 7 to point 8 until it again intersects the Mean High Water Line. From this intersection the boundary follows the Mean High Water Line until it intersects the straight line arc that connects point 9 to point 10. From this intersection the boundary extends to point 10 along the straight line arc that connects point 9 to point 10.

(174)

Zone 5 Point ID	Latitude	Longitude
1	38.21825	-122.96041
2	38.20666	-122.94397
3	38.19431	-122.93431
4*	38.20080	-122.92174
5*	38.20522	-122.92446
6	38.20366	-122.93246
7	38.20938	-122.94153
8*	38.21599	-122.93742
9*	38.23129	-122.96293
10	38.21825	-122.96041

Note: The coordinates in the table above marked with an asterisk (*) are not a part of the zone boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.

(175) (6) No-Anchoring Seagrass Protection Zone 6 encompasses an area of approximately .01 square nautical miles (.02 square miles) in the vicinity of Indian Beach along the western shore of Tomales Bay. The precise boundary coordinates are listed in the table following this description. The eastern boundary is a straight line arc that connects point 1 to point 2 listed in the coordinate table below. The southern boundary extends westward along the straight line arc that connects point 2 to point 3 until it intersects the Mean High Water Line. From this intersection the eastern boundary follows the Mean High Water Line northward until it intersects the straight line arc that connects point 3 to point 4. From this intersection the northern boundary extends eastward along the straight line arc that connects point 4 to point 5.

(176)

Zone 6 Point ID	Latitude	Longitude
1	38.14103	-122.89537
2	38.13919	-122.89391
3*	38.13804	-122.89610
4*	38.14033	-122.89683
5	38.14103	-122.89537

Note: The coordinates in the table above marked with an asterisk (*) are not a part of the zone boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.

(177) (7) No-Anchoring Seagrass Protection Zone 7 encompasses an area of approximately .09 square nautical miles (.12 square miles) that begins just south of Pebble Beach and extends approximately 1.6 nautical miles (1.9 miles) south along the western shore of Tomales Bay. The precise boundary coordinates are listed in the table following this description. The eastern boundary is a series of straight line arcs that sequentially connect point 1 to point 5 listed in the coordinate table below. The southern boundary extends along the straight line arc that connects point 5 to point 6 until it intersects the Mean High Water Line. From this intersection the western boundary extends north along the Mean High Water Line until it intersects the straight line arc that connects point 7 to point 8. From this intersection the northern boundary extends eastward along the straight line arc that connects point 7 to point 8.

(178)

Zone 7 Point ID	Latitude	Longitude
1	38.13067	-122.88620
2	38.12362	-122.87984
3	38.11916	-122.87491
4	38.11486	-122.86896
5	38.11096	-122.86468
6*	38.11027	-122.86551
7*	38.13001	-122.88749
8	38.13067	-122.88620

Note: The coordinates in the table above marked with an asterisk (*) are not a part of the zone boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.

(179)

Appendix C to Subpart H of Part 922 – Northern Extent of Tomales Bay

(180) For the purpose of §922.85(a)(10)(ii), NOAA is codifying the northern geographical extent of Tomales Bay via a line running from Avalis Beach (Point 1) east to Sand Point (Point 2). Coordinates listed in this Appendix are unprojected (geographic) and based on the North American Datum of 1983.

(181)

Point ID No. Tomales Bay Boundary	Latitude	Longitude
1	38.23165	-122.98148
2	38.23165	-122.96955

(182)

Appendix D to Subpart H of Part 922 – Special Wildlife Protection Zones Within the Sanctuary

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

(184) (1) Special Wildlife Protection Zone 1 (SWPZ 1) encompasses an area of approximately 7.9 square nautical miles (10.5 square miles). The precise boundary coordinates are listed in the table following this description. The western boundary of SWPZ 1 extends south from Point 1, west of Haven's Neck in Mendocino County, to Point 2, west of Del Mar Point. The boundary then extends east from Point 2 along a straight line arc connecting Point 2 and Point 3 until it intersects the Mean High Water Line at Del Mar Point. The SWPZ 1 boundary then turns north to follow the Mean High Water Line towards Haven's Neck and continues until it intersects a straight line arc connecting Point 4 and Point 5. From this intersection the Sanctuary boundary continues west along its northernmost extent to Point 5.

(185)

Zone 1 Point ID	Latitude	Longitude
1	38.80865	-123.63227
2	38.74096	-123.54306
3*	38.74096	-123.51051
4*	38.80865	-123.60195
5	38.80865	-123.63227

Note: The coordinates in the table above marked with an asterisk (*) are not a part of the zone boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.

(186) (2) Special Wildlife Protection Zone 2 (SWPZ 2) encompasses an area of approximately 16.2 square nautical miles (21.4 square miles). The precise boundary coordinates are listed in the table following this description. The western boundary of SWPZ 2 extends south and east from Point 1, south of Windermere Point in Sonoma County, to Point 2 and then to Point 3 in sequence. Point 3 is west of Duncans Point in Sonoma County. The boundary then extends east from Point 3 along a straight line arc connecting Point 3 and Point 4 until it intersects the Mean High Water Line at Duncans Point. The boundary then turns north to follow the Mean High Water Line towards Windermere Point until it intersects a straight line arc connecting Point 5 and Point 6. From this intersection the boundary continues due south along a straight line arc to Point 6.

(187)

Zone 2 Point ID	Latitude	Longitude
1	38.49854	-123.26804
2	38.45095	-123.18564
3	38.39311	-123.12068
4*	38.39311	-123.09527
5*	38.52487	-123.26804
6	38.49854	-123.26804

Note: The coordinates in the table above marked with an asterisk (*) are not a part of the zone boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.

(188) (3) Special Wildlife Protection Zone 3 (SWPZ 3) encompasses an area of approximately 7 square nautical miles (9.3 square miles). The precise boundary coordinates are listed in the table following this description. The western boundary of SWPZ 3 extends south and east from Point 1, southwest of the Estero de San Antonio in Sonoma County, to Point 2, south of Tomales Point in Marin County. The boundary then extends north and east from Point 2 along a straight line arc connecting Point 2 and Point 3 until it intersects the boundary of the Point Reyes National Seashore. From this intersection the SWPZ 3 boundary follows the Point Reyes National Seashore boundary around Tomales Point into Tomales Bay and continues until it again intersects the straight line arc that connects Point 2 and Point 3. From this intersection the SWPZ 3 boundary follows the straight line arc north and east toward Point 3 until it intersects the Mean High Water Line at Toms Point in Tomales Bay. The SWPZ 3 boundary then follows the Mean High Water Line northward towards the Estero de San Antonio until it intersects the straight line arc that connects Point 4 and Point 5. From this intersection the Sanctuary boundary continues south and west to Point 5.

(189)

Zone 3 Point ID	Latitude	Longitude
1	38.24001	-123.02963
2	38.19249	-122.99523
3*	38.21544	-122.95286
4*	38.27011	-122.97840
5	38.24001	-123.02963

Note: The coordinates in the table above marked with an asterisk (*) are not a part of the zone boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.

(190) (4) Special Wildlife Protection Zone 4 (SWPZ 4) encompasses an area of approximately 10.2 square nautical miles (13.5 square miles). The precise boundary coordinates are listed in the table following this description. The western boundary of SWPZ 4 extends south and west from Point 1, west of Point Reyes in Marin County, to Point 2, south and west of Point Reyes Lighthouse. The boundary then follows a straight line arc east and south from Point 2 to Point 3. From Point 3 the boundary follows a straight line arc north to Point

4. From Point 4 the SWPZ 4 boundary proceeds west along the straight line arc that connects Point 4 and Point 5 until it intersects the Point Reyes National Seashore boundary north of Chimney Rock. The SWPZ 4 boundary then follows the Point Reyes National Seashore boundary around Point Reyes until it again intersects the straight line arc that connects Point 4 and Point 5 north of the Point Reyes Lighthouse. From this intersection the SWPZ 4 boundary turns seaward and continues west to Point 5.

(191)

Zone 4 Point ID	Latitude	Longitude
1	38.01475	-123.05013
2	37.97536	-123.05482
3	37.96521	-122.93771
4	38.00555	-122.93504
5	38.01475	-123.05013

(192) (5) Special Wildlife Protection Zone 5 (SWPZ 5) encompasses an area of approximately 14.8 square nautical miles (19.6 square miles). The precise boundary coordinates are listed in the table following this description. The western boundary of SWPZ 5 extends south and east from Point 1, near Millers Point in Marin County, to Point 2, which is south and west of Bolinas Point. The SWPZ 5 boundary then follows a straight line arc east from Point 2 towards Point 3 until it intersects the Mean High Water Line at Rocky Point. From this intersection, the SWPZ 5 boundary follows the Sanctuary boundary north to Bolinas Point and Millers Point, respectively, including Bolinas Lagoon but not including Seadrift Lagoon, until it intersects the straight line arc that connects Point 4 and Point 5. From this intersection the SWPZ 5 boundary turns seaward and continues west and south along the straight line arc to Point 5.

(193)

Zone 5 Point ID	Latitude	Longitude
1	37.96579	-122.83284
2	37.88195	-122.73989
3*	37.88195	-122.62873
4*	37.98234	-122.81513
5	37.96579	-122.83284

Note: The coordinates in the table above marked with an asterisk (*) are not a part of the zone boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.

(194) (6) Special Wildlife Protection Zone 6 (SWPZ 6) encompasses an area of approximately 6.8 square nautical miles (9 square miles) and extends from the Mean High Water Line seaward to the SWPZ 6 boundary. The precise boundary coordinates are listed in the table following this description. The boundary of SWPZ 6 extends south and west from Point 1, north of Southeast Farallon Island, along a straight line arc to Point 2, then south and east along a straight line arc to Point 3, then north and east along a straight line arc to Point 4, then north and west along a straight line arc to Point 5.

(195)

Zone 6 Point ID	Latitude	Longitude
1	37.72976	-123.00961
2	37.69697	-123.04374
3	37.66944	-123.00176
4	37.70246	-122.96608
5	37.72976	-123.00961

(196) (7) Special Wildlife Protection Zone 7 (SWPZ 7) encompasses an area of approximately 6 square nautical miles (7.9 square miles) and extends from the Mean High Water Line seaward to the SWPZ 7 boundary. The precise boundary coordinates are listed in the table following this description. The boundary of SWPZ 7 extends south and west from Point 1, north of North Farallon Island, along a straight line arc to Point 2, then south and east along a straight line arc to Point 3, then north and east along a straight line arc to Point 4, then north and west along a straight line arc to Point 5.

(197)

Zone 7 Point ID	Latitude	Longitude
1	37.79568	-123.10845
2	37.76746	-123.13869
3	37.73947	-123.09341
4	37.76687	-123.06330
5	37.79568	-123.10845

(198)

Appendix E to Subpart H of Part 922 – Cargo Vessel Prohibition Zones in the Sanctuary

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

(200) (1) Cargo Vessel Prohibition Zone 1 (CVPZ 1) is an area of approximately 20 square nautical miles (26 square miles) immediately offshore of Anchor Bay. The precise boundary coordinates are listed in the table following this description. The western boundary of extends south and east from Point 1, north and west of Haven's Neck, to Point 2, west and south of Del Mar Point. The CVPZ 1 boundary then extends east from Point 2 along a straight line arc connecting Point 2 and Point 3 until it intersects the Sanctuary boundary. The CVPZ 1 boundary then turns north to follow the Sanctuary boundary past Haven's Neck and continues until it intersects the straight line arc connecting Point 4 and Point 5. From this intersection the CVPZ 1 boundary continues west along its northernmost extent to Point 5.

(201)

Zone 1 Point ID	Latitude	Longitude
1	38.82485	-123.68420
2	38.72330	-123.55145
3*	38.72330	-123.47658
4*	38.82485	-123.60953
5	38.82485	-123.68420

Zone 1 Point ID	Latitude	Longitude
Note: The coordinates in the table above marked with an asterisk (*) are not a part of the zone boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.		

(202) (2) Cargo Vessel Prohibition Zone 2 (CVPZ 2) encompasses an area of approximately 30 square nautical miles (40 square miles). The precise boundary coordinates are listed in the table following this description. The western CVPZ 2 boundary extends south and east from Point 1, west of Windermere Point in Sonoma County, to Point 2 and then to Point 3 in sequence. Point 3 is west of Duncans Point in Sonoma County. The CVPZ 2 boundary then extends east from Point 3 along a straight line arc connecting Point 3 and Point 4 until it intersects the Sanctuary boundary south of Duncans Point. The CVPZ 2 boundary then turns north to follow the Sanctuary boundary past Windermere Point until it intersects the straight line arc connecting Point 5 and Point 6. From this intersection the CVPZ 2 boundary continues due south along this straight line arc to Point 6.

(203)

Zone 2 Point ID	Latitude	Longitude
1	38.48995	-123.28994
2	38.43749	-123.19789
3	38.37614	-123.13153
4*	38.37614	-123.07843
5*	38.54099	-123.28994
6	38.48995	-123.28994
Note: The coordinates in the table above marked with an asterisk (*) are not a part of the zone boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.		

(204) (3) Cargo Vessel Prohibition Zone 3 (CVPZ 3) encompasses an area of approximately 17 square nautical miles (22 square miles). The precise boundary coordinates are listed in the table following this description. The western CVPZ 3 boundary extends south and east from Point 1, west of the Estero de San Antonio in Sonoma County, to Point 2, south of Tomales Point in Marin County. The CVPZ 3 boundary then extends north and east from Point 2 along a straight line arc connecting Point 2 and Point 3 until it intersects the Sanctuary boundary. From this intersection the CVPZ 3 boundary follows the Sanctuary boundary around Tomales Point into Tomales Bay and continues until it again intersects the straight line arc that connects Point 2 and Point 3. From this intersection the CVPZ 3 boundary follows the straight line arc north and east across Tomales Bay until it intersects the Sanctuary boundary south of Toms Point in Tomales Bay. The CVPZ 3 boundary then follows the Sanctuary boundary northward past the Estero de San Antonio until it intersects the straight line arc that connects Point 4 and Point 5. From this intersection the boundary continues south and west to Point 5.

(205)

Zone 3 Point ID	Latitude	Longitude
1	38.24496	-123.05698
2	38.16758	-123.00179
3*	38.21170	-122.92566
4*	38.28215	-122.99278
5	38.24496	-123.05698
Note: The coordinates in the table above marked with an asterisk (*) are not a part of the zone boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.		

(206) (4) Cargo Vessel Prohibition Zone 4 (CVPZ 4) encompasses an area of approximately 28 square nautical miles (37 square miles). The precise boundary coordinates are listed in the table following this description. The western CVPZ 4 boundary extends south and west from Point 1, west and north of Point Reyes in Marin County, to Point 2, south and west of Point Reyes Lighthouse. The CVPZ 4 boundary then follows a straight line arc east and south from Point 2 to Point 3. From Point 3 the CVPZ 4 boundary follows a straight line arc north to Point 4. From Point 4 the CVPZ 4 boundary proceeds west along the straight line arc that connects Point 4 and Point 5 until it intersects the Sanctuary boundary at Drakes Beach. The CVPZ 4 boundary then follows the Sanctuary boundary around Point Reyes until it again intersects the straight line arc that connects Point 4 and Point 5, north of the Point Reyes Lighthouse. From this intersection the CVPZ 4 boundary turns seaward and continues west to Point 5 along this arc.

(207)

Zone 4 Point ID	Latitude	Longitude
1	38.03311	-123.06923
2	37.96053	-123.07801
3	37.94655	-122.91781
4	38.02026	-122.91261
5	38.03311	-123.06923

(208) (5) Cargo Vessel Prohibition Zone 5 (CVPZ 5) encompasses an area of approximately 29 square nautical miles (39 square miles). The precise boundary coordinates are listed in the table following this description. The western CVPZ 5 boundary extends south and east from Point 1, west of Millers Point in Marin County, to Point 2, south and west of Bolinas Point. The CVPZ 5 boundary then follows a straight line arc east from Point 2 towards Point 3 until it intersects the Sanctuary boundary. From this intersection, the CVPZ 5 boundary follows the Sanctuary boundary north towards Rocky Point and continues along the Sanctuary boundary past Bolinas Point and Millers Point, respectively, including Bolinas Lagoon but not including Seadrift Lagoon, until it intersects the straight line arc that connects Point 4 and Point 5. From this intersection the CVPZ 5 boundary turns seaward and continues west and south along the straight line arc to Point 5.

(209)

Zone 5 Point ID	Latitude	Longitude
1	37.96598	-122.85997
2	37.86532	-122.74797
3*	37.86532	-122.63720
4*	37.99449	-122.82841
5	37.96598	-122.85997

Note: The coordinates in the table above marked with an asterisk (*) are not a part of the zone boundary. These coordinates are landward reference points used to draw a line segment that intersects with the shoreline.

(210) (6) Cargo Vessel Prohibition Zone 6 (CVPZ 6) encompasses an area of approximately 21 square nautical miles (28 square miles) surrounding Southeast Farallon Island and extends from the Mean High Water Line to the CVPZ 6 boundary. The precise boundary coordinates are listed in the table following this description. The boundary extends south and west from Point 1, north of Southeast Farallon Island, along a straight line arc to Point 2, then south and east along a straight line arc to Point 3, then north and east along a straight line arc to Point 4, then north and west along a straight line arc to Point 5.

(211)

Zone 6 Point ID	Latitude	Longitude
1	37.75264	-123.01175
2	37.69461	-123.07333
3	37.64621	-122.99867
4	37.70538	-122.93567
5	37.75264	-123.01175

(212) (7) Cargo Vessel Prohibition Zone 7 (CVPZ 7) encompasses an area of approximately 20 square nautical miles (26 square miles) surrounding the North Farallon Islands and extends from the Mean High Water Line to the CVPZ 7 boundary. The precise boundary coordinates are listed in the table following this description. The boundary extends south and west from Point 1, north of North Farallon Island, along a straight line arc to Point 2, then south and east along a straight line arc to Point 3, then north and east along a straight line arc to Point 4, then north and west along a straight line arc to Point 5.

(213)

Zone 7 Point ID	Latitude	Longitude
1	37.81914	-123.11155
2	37.76497	-123.16939
3	37.71623	-123.09089
4	37.76872	-123.03359
5	37.81914	-123.11155

(214)

Appendix F to Subpart H of Part 922 – White Shark Approach Prohibition Zones in the Sanctuary

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

(216) (1) White Shark Approach Prohibition Zone 1 (WSAPZ 1) encompasses an area of approximately 21 square nautical miles (28 square miles) surrounding Southeast Farallon Island and extends from the Mean High Water Line to the WSAPZ 1 boundary. The precise boundary coordinates are listed in the table following this description. The boundary extends south and west from Point 1, north of Southeast Farallon Island, along a straight line arc to Point 2, then south and east along a straight line arc to Point 3, then north and east along a straight line arc to Point 4, then north and west along a straight line arc to Point 5.

(217)

Zone 1 Point ID	Latitude	Longitude
1	37.75264	-123.01175
2	37.69461	-123.07333
3	37.64621	-122.99867
4	37.70538	-122.93567
5	37.75264	-123.01175

(218) (2) White Shark Approach Prohibition Zone 2 (WSAPZ 2) encompasses an area of approximately 20 square nautical miles (26 square miles) surrounding the North Farallon Islands and extends from the Mean High Water Line to the WSAPZ 2 boundary. The precise boundary coordinates are listed in the table following this description. The boundary extends south and west from Point 1, north of North Farallon Island, along a straight line arc to Point 2, then south and east along a straight line arc to Point 3, then north and east along a straight line arc to Point 4, then north and west along a straight line arc to Point 5.

(219)

Zone 2 Point ID	Latitude	Longitude
1	37.81914	-123.11155
2	37.76497	-123.16939
3	37.71623	-123.09089
4	37.76872	-123.03359
5	37.81914	-123.11155

(220)

Appendix G to Subpart H of Part 922 — Designated Area for Certain United States Coast Guard Discharges

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

(222) The portion of the Greater Farallones National Marine Sanctuary area [2015 expansion area] where the exception for discharges from United States Coast Guard

activities applies is defined as follows. Beginning with Point 1 identified in the coordinate table in this appendix, the boundary extends from Point 1 to Point 2 in a straight line arc, and continues from Point 2 to Point 3 in a straight line arc, and from Point 3 to Point 4 in a straight line arc. From Point 4 the boundary extends east and north along a straight line arc towards Point 5 until it intersects the fixed offshore boundary between the United States and California (approximately 3 NM seaward of the coast as defined in United States vs. California, 135 S. Ct. 563 (2014)). The boundary then extends northward following the fixed offshore boundary between the United States and California until it intersects the line segment formed between Point 6 and Point 7. From this intersection, the boundary extends west along the northern boundary of Greater Farallones National Marine Sanctuary to Point 7 where it ends.

(223)

Point No.	Latitude	Longitude
1	39.00000	-124.33350
2	38.29989	-123.99988
3	38.29989	-123.20005
4	38.26390	-123.18138
5[1]	38.29896	-123.05989
6[1]	39.00000	-123.75777
7	39.00000	-124.33350

[1]These coordinates are not a part of the boundary for the Designated Area for Certain United States Coast Guard Discharges. These coordinates are reference points used to draw line segments that intersect with the fixed offshore boundary between the United States and California.

(224)

Subpart K–Cordell Bank National Marine Sanctuary

(225)

§922.110 Boundary.

(226) The Cordell Bank National Marine Sanctuary (Sanctuary) boundary encompasses a total area of approximately 971 square nautical miles (nmi2) (1,286 sq. mi.) of offshore ocean waters, and submerged lands thereunder, surrounding the submarine plateau known as Cordell Bank along the northern coast of California, approximately 45 nautical miles west-northwest of San Francisco, California. The precise boundary coordinates are listed in appendix A to this subpart. The northern boundary of the Sanctuary is a rhumb line that begins approximately 6 nautical miles (7 miles) west of Bodega Head in Sonoma County, California at Point 1 and extends west approximately 38 nautical miles (44 miles) to Point 2. This line is part of a shared boundary between the Sanctuary and Greater Farallones National Marine Sanctuary (GFNMS). The western boundary of the Sanctuary extends south from Point 2 approximately 34 nautical miles (39 miles) to Point 3. From Point 3 the Sanctuary boundary continues east 15 nautical miles (17 miles) to Point 4 where it intersects the GFNMS boundary again. The line from Point 3 to Point 4 forms the southernmost boundary of the Sanctuary. The eastern boundary of the Sanctuary is a series of straight lines connecting Points 4 through 20 in numerical sequence. The Sanctuary is coterminous with GFNMS along both its (the Sanctuary's) eastern and northern boundaries.

(227)

§922.111 [Removed and Reserved].

(228)

§922.112 Prohibited or otherwise regulated activities.

(229) (a) The following activities are prohibited and thus are unlawful for any person to conduct or to cause to be conducted within the Sanctuary:

(230) (1) Exploring for, developing, or producing oil, gas, or minerals.

(231) (2)(i) Discharging or depositing from within or into the Sanctuary, other than from a cruise ship, any material or other matter except:

(232) (A) Fish, fish parts, chumming materials, or bait used in or resulting from lawful fishing activities within the Sanctuary, provided that such discharge or deposit is during the conduct of lawful fishing activity within the Sanctuary;

(233) (B) For a vessel less than 300 gross registered tons (GRT), or a vessel 300 GRT or greater without sufficient holding tank capacity to hold sewage while within the Sanctuary, clean effluent generated incidental to vessel use and generated by an operable Type I or 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 all marine sanitation devices in a manner that prevents discharge or deposit of untreated sewage;

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

(235) (D) For a vessel less than 300 GRT or a vessel 300 GRT or greater without sufficient holding capacity to hold graywater while within the Sanctuary, clean graywater as defined by section 312 of the FWPCA;

(236) (E) Vessel engine or generator exhaust; or

(237) (F) For a United States Coast Guard vessel without sufficient holding tank capacity and without a Type I or II marine sanitation device, and operating within the designated area [2015 expansion area] defined in appendix C of this subpart, sewage and non-clean graywater as defined by section 312 of the FWPCA generated incidental to vessel use, and ammunition, pyrotechnics or other materials directly related to search and rescue and live ammunition training activities conducted by United States Coast Guard vessels and aircraft in the designated areas defined in appendix C of this subpart.

(238) (ii) Discharging or depositing from within or into the Sanctuary any material or other matter from a cruise

ship except clean vessel engine cooling water, clean vessel generator cooling water, vessel engine or generator exhaust, clean bilge water, or anchor wash.

(239) (iii) 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 as listed in paragraphs (a)(2)(i) and (ii) of this section.

(240) (3) On or within the line representing the 50-fathom isobath surrounding Cordell Bank, removing, taking, or injuring or attempting to remove, take, or injure benthic invertebrates or algae located on Cordell Bank. This prohibition does not apply to use of bottom contact gear used during fishing activities, which is prohibited pursuant to 50 CFR part 660 (Fisheries off West Coast States). The coordinates for the line representing the 50-fathom isobath are listed in appendix B to this subpart, and the 50-fathom isobath is approximated by connecting these coordinates with straight line arcs in numerical sequence from Point 1 to Point 15. There is a rebuttable presumption that any such resource found in the possession of a person within the Sanctuary was taken or removed by that person.

(241) (4)(i) On or within the line representing the 50-fathom isobath surrounding Cordell Bank, drilling into, dredging, or otherwise altering the submerged lands; or constructing, placing, or abandoning any structure, material or other matter on or in the submerged lands. This prohibition does not apply to use of bottom contact gear used during fishing activities, which is prohibited pursuant to 50 CFR part 660 (Fisheries off West Coast States). The coordinates for the line representing the 50-fathom isobath are listed in appendix B to this subpart, and the 50-fathom isobath is approximated by connecting these coordinates with straight line arcs in numerical sequence from Point 1 to Point 15.

(242) (ii) In the Sanctuary beyond the line representing the 50-fathom isobath surrounding Cordell Bank, drilling into, dredging, or otherwise altering the submerged lands; or constructing, placing, or abandoning any structure, material or matter on the submerged lands except as incidental and necessary for anchoring any vessel or lawful use of any fishing gear during normal fishing activities. The coordinates for the line representing the 50-fathom isobath are listed in Appendix B to this subpart, and the 50-fathom isobath is approximated by connecting these coordinates with straight line arcs in numerical sequence from Point 1 to Point 15.

(243) (5) Taking any marine mammal, sea turtle, or bird within or above the Sanctuary, except as authorized by the Marine Mammal Protection Act, as amended, (MMPA), 16 U.S.C. 1361 *et seq*., Endangered Species Act, as amended, (ESA), 16 U.S.C. 1531 *et seq*., Migratory Bird Treaty Act, as amended, (MBTA), 16 U.S.C. 703 *et seq*., or any regulation, as amended, promulgated under the MMPA, ESA, or MBTA.

(244) (6) Possessing within the Sanctuary (regardless of where taken, moved or removed from), any marine mammal, sea turtle or bird taken, except as authorized by the MMPA, ESA, MBTA, by any regulation, as amended, promulgated under the MMPA, ESA, or MBTA, or as necessary for valid law enforcement purposes.

(245) (7) Possessing, moving, removing, or injuring, or attempting to possess, move, remove or injure, a Sanctuary historical resource.

(246) (8) Introducing or otherwise releasing from within or into the Sanctuary an introduced species, except striped bass (*Morone saxatilis*) released during catch and release fishing activity.

(247) (9) 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.

(248) (b) The prohibitions in paragraph (a) of this section do not apply to activities necessary to respond to an emergency threatening life, property or the environment, or except as may be permitted by the Director in accordance with subpart D of this part and § 922.113.

(249) (c) All activities being carried out by the Department of Defense (DOD) within the Sanctuary on the effective date of designation or expansion of the Sanctuary that are necessary for national defense are exempt from the prohibitions contained in the regulations in this subpart. Additional DOD activities initiated after the effective date of designation or expansion that are necessary for national defense will be exempted by the Director after consultation between the Department of Commerce and DOD. DOD activities not necessary for national defense, such as routine exercises and vessel operations, are subject to all prohibitions contained in the regulations in this subpart.

(250) (d) The prohibitions in paragraphs (a)(2) through (7) of this section do not apply to any activity executed in accordance with the scope, purpose, terms, and conditions of a National Marine Sanctuary permit issued pursuant to subpart D of this part and § 922.113, or a special use permit issued pursuant to subpart D of this part.

(251) (e) Where necessary to prevent immediate, serious, and irreversible damage to a Sanctuary resource, any activity may be regulated within the limits of the Act on an emergency basis for no more than 120 days.

(252)

§922.113 Permit procedures.

(253) (a) A person may conduct an activity prohibited by §922.112(a)(2) through (7) 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..

(254) (b) Applications for permits should be addressed to the Director, Office of National Marine Sanctuaries; ATTN: Superintendent, Cordell Bank National Marine Sanctuary, P.O. Box 159, Olema, CA 94950.

(255)

Appendix A to Subpart K of Part 922–Cordell Bank National Marine Sanctuary Boundary Coordinates

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

(257)

Sanctuary Boundary Coordinates		
Point ID	Latitude	Longitude
1	38.29989	-123.20005
2	38.29989	-123.99988
3	37.76687	-123.75143
4	37.76687	-123.42694
5	37.83480	-123.42579
6	37.90464	-123.38958
7	37.95880	-123.32312
8	37.98947	-123.23615
9	37.99227	-123.14137
10	38.05202	-123.12827
11	38.06505	-123.11711
12	38.07898	-123.10924
13	38.09069	-123.10387
14	38.10215	-123.09804
15	38.12829	-123.08742
16	38.14072	-123.08237
17	38.16576	-123.09207
18	38.21001	-123.11913
19	38.26390	-123.18138
20	38.29989	-123.20005

(258)

Appendix B to Subpart K of Part 922–Line Representing the 50-Fathom Isobath Surrounding Cordell Bank

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

(260)

Cordell Bank Fifty Fathom Line		
Point ID	Latitude	Longitude
1	37.96034	-123.40371
2	37.96172	-123.42081
3	37.9911	-123.44379
4	38.00406	-123.46443
5	38.01637	-123.46076
6	38.04684	-123.47920
7	38.07106	-123.48754
8	38.07588	-123.47195
9	38.06451	-123.46146
10	38.07123	-123.44467
11	38.04446	-123.40286
12	38.01442	-123.38588
13	37.98859	-123.37533
14	37.97071	-123.38605
15	37.96034	-123.40371

(261)

Appendix C to Subpart K of Part 922 — Designated Area for Certain United States Coast Guard Discharges

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

(263) The portion of the Cordell Bank National Marine Sanctuary area [2015 expansion area] where the exception for discharges from United States Coast Guard activities applies is defined as follows. Beginning with Point 1, identified in the coordinate table in this appendix, the boundary extends from Point 1 to Point 2 in a straight line arc and continues in numerical order through each subsequent point to Point 38. From Point 38 the boundary extends west along the northern boundary of Cordell Bank National Marine Sanctuary to Point 39 where it ends.

(264)

Point No.	Latitude	Longitude
1	38.29989	-123.99988
2	37.76687	-123.75143
3	37.76716	-123.42758
4	37.77033	-123.43466
5	37.78109	-123.44694
6	37.78383	-123.45466
7	37.79487	-123.46721
8	37.80094	-123.47313
9	37.81026	-123.46897
10	37.81365	-123.47906
11	37.82296	-123.49280
12	37.84988	-123.51749
13	37.86189	-123.52197
14	37.87637	-123.52192
15	37.88541	-123.52967
16	37.90725	-123.53937
17	37.92288	-123.54360
18	37.93858	-123.54701
19	37.94901	-123.54777
20	37.95528	-123.56199
21	37.96683	-123.57859
22	37.97761	-123.58746
23	37.98678	-123.59988
24	37.99847	-123.61331
25	38.01366	-123.62494
26	38.01987	-123.62450
27	38.02286	-123.61531
28	38.02419	-123.59864

Point No.	Latitude	Longitude
29	38.03409	-123.59904
30	38.04614	-123.60611
31	38.05308	-123.60549
32	38.06188	-123.61546
33	38.07451	-123.62162
34	38.08289	-123.62065
35	38.11256	-123.63344
36	38.13219	-123.64265
37	38.26390	-123.18138
38	38.29989	-123.20005
39	38.29989	-123.99988

(265)

Subpart M–Monterey Bay National Marine Sanctuary

(266)

§922.130 Boundary.

(267) The Monterey Bay National Marine Sanctuary (Sanctuary) consists of two separate areas. The combined area of both parts is approximately 4,601 square nautical miles (nmi2) (6,093 sq. mi.).

(268) (a) The first area consists of an area of approximately 4,016 square nautical miles (nmi2) (5,318 sq. mi.) of coastal and ocean waters, and submerged lands thereunder, in and surrounding Monterey Bay off the central coast of California. The northern terminus of the Sanctuary boundary is located along the southern boundary of the Greater Farallones National Marine Sanctuary (GFNMS) beginning at Rocky Point just south of Stinson Beach in Marin County. The Sanctuary boundary follows the GFNMS boundary westward to a point approximately 29 nmi offshore from Moss Beach in San Mateo County. The Sanctuary boundary then extends southward in a series of arcs, which generally follow the 500 fathom isobath, to a point approximately 27 nmi offshore of Cambria, in San Luis Obispo County. The Sanctuary boundary then extends eastward towards shore until it intersects the Mean High Water Line (MHWL) along the coast near Cambria. The Sanctuary boundary then follows the MHWL northward to the northern terminus at Rocky Point. The shoreward Sanctuary boundary excludes a small area between Point Bonita and Point San Pedro. Pillar Point Harbor, Santa Cruz Harbor, Monterey Harbor, and Moss Landing Harbor are all excluded from the Sanctuary shoreward from the points listed in appendix A except for Moss Landing Harbor, where all of Elkhorn Slough east of the Highway One bridge, and west of the tide gate at Elkhorn Road and toward the center channel from the MHWL is included within the Sanctuary, excluding areas within the Elkhorn Slough National Estuarine Research Reserve. Exact coordinates for the seaward boundary and harbor exclusions are provided in appendix A to this subpart.

(269) (b) The Davidson Seamount Management Zone is also part of the Sanctuary. This area, bounded by geodetic lines connecting a rectangle centered on the top of the Davidson Seamount, consists of approximately 585 square nmi (nmi2) (774 sq. mi.) of ocean waters and the submerged lands thereunder.

(270)

§922.131 Definitions.

(271) In addition to those definitions found at § 922.11, the following definitions apply to this subpart:

(272) *Beneficial use of dredged material* means the use of dredged material removed from any of the four public harbors adjacent to the sanctuary (Pillar Point, Santa Cruz, Moss Landing, and Monterey) that has been determined by the Director to be suitable as a resource for habitat protection or restoration purposes only. Beneficial use of dredged material is disposal of dredged material.

(273) *Davidson Seamount Management Zone* means the area bounded by geodetic lines connecting a rectangle centered on the top of the Davidson Seamount, and consists of approximately 585 square nmi of ocean waters and the submerged lands thereunder. The shoreward boundary of this portion of the Sanctuary is located approximately 65 nmi off the coast of San Simeon in San Luis Obispo County. Exact coordinates for the Davidson Seamount Management Zone boundary are provided in Appendix F to this subpart.

(274) *Federal Project* means any water resources development project conducted by the U.S. Army Corps of Engineers or operating under a permit or other authorization issued by the U.S. Army Corps of Engineers and authorized by Federal law.

(275) *Hand tool* means a hand-held implement, utilized for the collection of jade pursuant to 15 CFR 922.132(a)(1), that is no greater than 36 inches in length and has no moving parts (*e.g.*, dive knife, pry bar, or abalone iron). Pneumatic, mechanical, electrical, hydraulic, or explosive tools are, therefore, examples of what does not meet this definition.

(276) *Motorized personal watercraft (MPWC)* means any vessel, propelled by machinery, that is designed to be operated by standing, sitting, or kneeling on, astride, or behind the vessel, in contrast to the conventional manner, where the operator stands or sits inside the vessel; any vessel less than 20 feet in length overall as manufactured and propelled by machinery and that has been exempted from compliance with the U.S. Coast Guard's Maximum Capacities Marking for Load Capacity regulation found at 33 CFR Parts 181 and 183, except submarines; or any other vessel that is less than 20 feet in length overall as manufactured, and is propelled by a water jet pump or drive.

(277)

§922.132 Prohibited or otherwise regulated activities.

(278) (a) Except as specified in paragraphs (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:

(279) (1) Exploring for, developing, or producing oil, gas, or minerals within the Sanctuary, except: Jade may be collected (meaning removed) from the area bounded by the 35.92222 N latitude parallel (coastal reference point: Beach access stairway at south Sand Dollar Beach), the 35.88889 N latitude parallel (coastal reference point: Westernmost tip of Cape San Martin), and from the mean high tide line seaward to the 90-foot isobath (depth line) (the "authorized area") provided that:

(280) (i) Only jade already loose from the submerged lands of the Sanctuary may be collected;

(281) (ii) No tool may be used to collect jade except:

(282) (A) A hand tool (as defined at 15 CFR 922.131) to maneuver or lift the jade or scratch the surface of a stone as necessary to determine if it is jade;

(283) (B) A lift bag or multiple lift bags with a combined lift capacity of no more than two hundred pounds; or

(284) (C) A vessel (except for motorized personal watercraft) (see paragraph (a)(7) of this section) to provide access to the authorized area;

(285) (iii) Each person may collect only what that person individually carries; and

(286) (iv) For any loose piece of jade that cannot be collected under paragraphs (a)(1) (ii) and (iii) of this section, any person may apply for a permit to collect such a loose piece by following the procedures in 15 CFR 922.133.

(287) (2)(i) Discharging or depositing from within or into the Sanctuary, other than from a cruise ship, any material or other matter, except:

(288) (A) Fish, fish parts, chumming materials, or bait used in or resulting from lawful fishing activities within the Sanctuary, provided that such discharge or deposit is during the conduct of lawful fishing activities within the Sanctuary;

(289) (B) For a vessel less than 300 gross registered tons (GRT), or a vessel 300 GRT or greater without sufficient holding tank capacity to hold sewage while within the Sanctuary, clean effluent generated incidental to vessel use by an operable Type I or 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 all marine sanitation devices in a manner that prevents discharge or deposit of untreated sewage;

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

(291) (D) For a vessel less than 300 gross registered tons (GRT), or a vessel 300 GRT or greater without sufficient holding capacity to hold graywater while within the Sanctuary, clean graywater as defined by section 312 of the FWPCA;

(292) (E) Vessel engine or generator exhaust; or

(293) (F) Dredged material deposited at disposal sites authorized by the U.S. Environmental Protection Agency (EPA) (in consultation with the U.S. Army Corps of Engineers (COE)) prior to the effective date of Sanctuary designation (January 1, 1993), provided that the activity is pursuant to, and complies with the terms and conditions of, a valid Federal permit or approval existing on January 1, 1993. Authorized disposal sites within the Sanctuary are described in Appendix C to this subpart.

(294) (ii) Discharging or depositing from within or into the Sanctuary any material or other matter from a cruise ship except clean vessel engine cooling water, clean vessel generator cooling water, vessel engine or generator exhaust, clean bilge water, or anchor wash.

(295) (iii) 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 those listed in paragraphs (a)(2)(i)(A) through (E) and (a)(2)(ii) of this section and dredged material deposited at the authorized disposal sites, described in Appendix D to this subpart, provided that the dredged material disposal is pursuant to, and complies with the terms and conditions of, a valid Federal permit or approval.

(296) (3) Possessing, moving, removing, or injuring, or attempting to possess, move, remove, or injure, a Sanctuary historical resource. This prohibition does not apply to, moving, removing, or injury resulting incidentally from kelp harvesting, aquaculture, or lawful fishing activities.

(297) (4) Drilling into, dredging, or otherwise altering the submerged lands of the Sanctuary; or constructing, placing, or abandoning any structure, material, or other matter on or in the submerged lands of the Sanctuary, except as incidental and necessary to:

(298) (i) Conduct lawful fishing activities;

(299) (ii) Anchor a vessel;

(300) (iii) Conduct aquaculture or kelp harvesting;

(301) (iv) Install an authorized navigational aid;

(302) (v) Conduct harbor maintenance in an area necessarily associated with a Federal Project in existence on January 1, 1993, including dredging of entrance channels and repair, replacement, or rehabilitation of breakwaters and jetties;

(303) (vi) Construct, repair, replace, or rehabilitate a dock or pier; or

(304) (vii) Collect jade pursuant to paragraph (a)(1) of this section, provided that there is no constructing, placing, or abandoning any structure, material, or other matter on or in the submerged lands of the Sanctuary, other than temporary placement of an authorized hand tool as provided in paragraph (a)(1) of this section. The exceptions listed in paragraphs (a)(4)(ii) through (a)(4)(vii) of this section do not apply within the Davidson Seamount Management Zone.

(305) (5) Taking any marine mammal, sea turtle, or bird within or above the Sanctuary, except as authorized by the Marine Mammal Protection Act, as amended, (MMPA),

16 U.S.C. 1361 *et seq.*, Endangered Species Act, as amended, (ESA), 16 U.S.C. 1531 *et seq.*, Migratory Bird Treaty Act, as amended, (MBTA), 16 U.S.C. 703 *et seq.*, or any regulation, as amended, promulgated under the MMPA, ESA, or MBTA.

(306) (6) Disturbing marine mammals or seabirds by flying motorized aircraft, except as necessary for valid law enforcement purposes, at less than 1,000 feet above any of the four zones within the Sanctuary described in Appendix B to this subpart. Failure to maintain a minimum altitude of 1,000 feet above ground level above any such zone is presumed to disturb marine mammals or seabirds.

(307) (7) Operating motorized personal watercraft within the Sanctuary except within the four designated zones and access routes within the Sanctuary described in appendix E to this subpart. Zone Five (at Pillar Point) exists only when a High Surf Advisory has been issued by the National Weather Service and is in effect for San Mateo County, and only during December, January, and February.

(308) (8) Possessing within the Sanctuary (regardless of where taken, moved, or removed from), any marine mammal, sea turtle, or bird, except as authorized by the MMPA, ESA, MBTA, by any regulation, as amended, promulgated under the MMPA, ESA, or MBTA, or as necessary for valid law enforcement purposes.

(309) (9) Deserting a vessel aground, at anchor, or adrift in the Sanctuary.

(310) (10) Leaving harmful matter aboard a grounded or deserted vessel in the Sanctuary.

(311) (11)(i) Moving, removing, taking, collecting, catching, harvesting, disturbing, breaking, cutting, or otherwise injuring, or attempting to move, remove, take, collect, catch, harvest, disturb, break, cut, or otherwise injure, any Sanctuary resource located more than 3,000 feet below the sea surface within the Davidson Seamount Management Zone. This prohibition does not apply to fishing below 3,000 feet within the Davidson Seamount Management Zone, which is prohibited pursuant to 50 CFR part 660 (Fisheries off West Coast States).

(312) (ii) Possessing any Sanctuary resource the source of which is more than 3,000 feet below the sea surface within the Davidson Seamount Management Zone. This prohibition does not apply to possession of fish resulting from fishing below 3,000 feet within the Davidson Seamount Management Zone, which is prohibited pursuant to 50 CFR part 660 (Fisheries off West Coast States).

(313) (12) Introducing or otherwise releasing from within or into the Sanctuary an introduced species, except striped bass (*Morone saxatilis*) released during catch and release fishing activity.

(314) (13) Attracting any white shark within the Sanctuary.

(315) (14) 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.

(316) (b) The prohibitions in paragraphs (a)(2) through (11) of this section do not apply to an activity necessary to respond to an emergency threatening life, property, or the environment.

(317) (c)(1) All Department of Defense activities must be carried out in a manner that avoids to the maximum extent practicable any adverse impacts on Sanctuary resources and qualities. The prohibitions in paragraphs (a)(2) through (11) and (13) of this section do not apply to existing military activities carried out by the Department of Defense, as specifically identified in the Final Environmental Impact Statement and Management Plan for the Proposed Monterey Bay National Marine Sanctuary (NOAA, 1992). (Copies of the FEIS/MP are available from the Monterey Bay National Marine Sanctuary, 99 Pacific Street, Bldg. 455A, Monterey, California 93940.) For purposes of the Davidson Seamount Management Zone, these activities are listed in the 2008 Final Environmental Impact Statement. New activities may be exempted from the prohibitions in paragraphs (a)(2) through (11) and (13) of this section by the Director after consultation between the Director and the Department of Defense.

(318) (2) In the event of destruction of, loss of, or injury to a Sanctuary resource or quality resulting from an incident, including but not limited to discharges, deposits, and groundings, caused by a Department of Defense activity, the Department of Defense, in coordination with the Director, must promptly prevent and mitigate further damage and must restore or replace the Sanctuary resource or quality in a manner approved by the Director.

(319) (d) The prohibitions in paragraph (a)(1) of this section as it pertains to jade collection in the Sanctuary, and paragraphs (a)(2) through (11) and (13) 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 issued pursuant to subpart D of this part and § 922.133 or a special use permit issued pursuant to subpart D of this part.

(320) (e) The prohibitions in paragraphs (a)(2) through (13) of this section do not apply to any activity authorized by any lease, permit, license, approval, or other authorization issued after the effective date of Sanctuary designation (January 1, 1993) and issued by any Federal, State, or local authority of competent jurisdiction, 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 necessary to protect Sanctuary resources and qualities. Amendments and extensions of authorizations in existence on the effective date of designation constitute authorizations issued after the effective date of Sanctuary designation.

(321) (f) Notwithstanding paragraphs (d) and (e) of this section, in no event may the Director issue a National Marine Sanctuary permit or ONMS authorization under

subpart D of this part authorizing, or otherwise approve, the exploration for, development, or production of oil, gas, or minerals within the Sanctuary, except for the collection of jade pursuant to paragraph (a)(1) of this section; the discharge of primary-treated sewage within the Sanctuary (except by certification, pursuant to § 922.10, of valid authorizations in existence on January 1, 1993 and issued by other authorities of competent jurisdiction); or the disposal of dredged material within the Sanctuary other than at sites authorized by EPA (in consultation with COE) before January 1, 1993. Any purported authorizations issued by other authorities within the Sanctuary shall be invalid.

(322)

§922.133 Permit procedures and criteria.

(323) (a) A person may conduct an activity otherwise prohibited by § 922.132(a)(1) as it pertains to jade collection in the Sanctuary, § 922.132(a)(2) through (11) and (13) if conducted under and in accordance with the scope, purpose, terms and conditions of a permit issued under this section and subpart D of this part

(324) (b) Applications for permits should be addressed to the Director, Office of National Marine Sanctuaries; ATTN: Superintendent, Monterey Bay National Marine Sanctuary, 99 Pacific Street, Bldg. 455A, Monterey, California 93940.

(325)

§922.134 Review of certain State permits and leases.

(326) (a)(1) NOAA has described in a Memorandum of Agreement (MOA) with the State of California how NOAA will coordinate review of any introduction of non-invasive introduced species from a proposed shellfish aquaculture project when considering an authorization under §922.132(e).

(327) (2) The MOA specifies how the process of 15 CFR 922.49 will be administered within State waters within the sanctuary in coordination with State permit and lease programs as administered by the California Fish and Game Commission, the Department of Fish and Wildlife and the California Coastal Commission.

(328) (b)(1) NOAA has entered into a Memorandum of Agreement (MOA) with the State of California, EPA, and the Association of Monterey Bay Area Governments regarding the Sanctuary regulations relating to water quality within State waters within the Sanctuary.

(329) With regard to permits, the MOA encompasses:

(330) (i) National Pollutant Discharge Elimination System (NPDES) permits issued by the State of California under section 13377 of the California Water Code; and

(331) (ii) Waste Discharge Requirements issued by the State of California under section 13263 of the California Water Code.

(332) (2) The MOA specifies how the process of 15 CFR 922.49 will be administered within State waters within the Sanctuary in coordination with the State permit program.

(333)

Appendix A to Subpart M of Part 922–Monterey Bay National Marine Sanctuary Boundary Coordinates

(334) Coordinates listed in this Appendix are unprojected (Geographic) and based on the North American Datum of 1983.

(335)

Seaward Boundary		
Point ID	**Latitude**	**Longitude**
1	37.88225	−122.62753
2	37.66641	−122.75105
3	37.61622	−122.76937
4	37.57147	−122.80399
5	37.52988	−122.85988
6	37.50948	−122.90614
7	37.49418	−123.00770
8	37.50819	−123.09617
9	37.52001	−123.12879
10	37.45304	−123.14009
11	37.34316	−123.13170
12	37.23062	−123.10431
13	37.13021	−123.02864
14	37.06295	−122.91261
15	37.03509	−122.77639
16	36.92155	−122.80595
17	36.80632	−122.81564
18	36.69192	−122.80539
19	36.57938	−122.77416
20	36.47338	−122.72568
21	36.37242	−122.65789
22	36.27887	−122.57410
23	36.19571	−122.47699
24	36.12414	−122.36527
25	36.06864	−122.24438
26	36.02451	−122.11672
27	35.99596	−121.98232
28	35.98309	−121.84069
29	35.98157	−121.75634
30	35.92933	−121.71119
31	35.83773	−121.71922.
32	35.72063	−121.71216
33	35.59497	−121.69030
34	35.55327	−121.63048
35	35.55483	−121.10399
36	37.59421	−122.52001.
37	37.61367	−122.61673
38	37.76694	−122.65011
39	37.81777	−122.53008
Harbor Exclusions		
40	37.49414	−122.48483
41	37.49540	−122.48576
42	36.96082	−122.00175

Seaward Boundary		
Point ID	**Latitude**	**Longitude**
43	36.96143	−122.00112
44	36.80684	−121.79145
45	36.80133	−121.79047
46	36.60837	−121.88970
47	36.60580	−121.88965

(336)

Appendix B to Subpart M of Part 922–Zones Within the Sanctuary Where Overflights Below 1,000 Feet are Prohibited

(337) The four zones are:

(338) (1) From mean high water to 3 nautical miles (nmi) between a line extending from Point Santa Cruz on a southwesterly bearing of 220° true and a line extending from 2.0 nmi north of Pescadero Point on a southwesterly bearing of 240° true;

(339) (2) From mean high water to 3 nmi offshore between a line extending from the Carmel River mouth on a westerly bearing of 270° true and a line extending due west along latitude parallel 35°33'17.6"N off of Cambria;

(340) (3) From mean high water and within a 5 nmi seaward arc drawn from a center point of 36°48'04.6"N., 121°47'25.2"W. (the end of the Moss Landing ocean pier as it appeared on the most current NOAA nautical charts as of January 1, 1993); and

(341) (4) Over the Sanctuary's jurisdictional waters of Elkhorn Slough east of the Highway One bridge to Elkhorn Road.

(342)

Appendix C to Subpart M of Part 922–Dredged Material Disposal Sites within the Sanctuary

(343) [Coordinates in this appendix are unprojected (Geographic Coordinate System) and are calculated using the North American Datum of 1983]

(344)

Point ID	Latitude	Longitude
Santa Cruz Harbor/Twin Lakes Dredge Disposal Site		
1	36.9625	−122.00056
2	36.9625	−121.99861
3	36.96139	−121.99833
4	36.96139	−122.00083
SF-12 Dredge Disposal Site		
1	36.80207	−121.79207
2	36.80157	−121.79218
3	36.80172	−121.79325
4	36.80243	−121.79295
SF-14 Dredge Disposal Site (circle with 500 yard radius)		
1	36.79799	−121.81907
Monterey Harbor/Wharf II Dredge Disposal Site		
1	36.60297	−121.88942
2	36.60283	−121.88787
3	36.60092	−121.88827
4	36.60120	−121.88978

(345)

Appendix D to Subpart M of Part 922–Dredged Material Disposal Sites Adjacent to the Monterey Bay National Marine Sanctuary

(346) [Coordinates in this appendix are unprojected (Geographic Coordinate System) and are calculated using the North American Datum of 1983]

(347) As of January 1, 1993, the U.S. Army Corps of Engineers operates the following dredged material disposal site adjacent to the Sanctuary off of the Golden Gate:

(348)

Point ID	Latitude	Longitude
1	37°45'52.4"N.	122°34'08.4"W.
2	37°44'58.6"N.	122°37'22.1"W.
3	37°44'29.4"N.	122°37'09.5"W.
4	37°45'24.3"N.	122°33'53.3"W.
5	37°45'52.4"N.	122°34'08.4"W.

(349)

Appendix E to Subpart M of Part 922–Motorized Personal Watercraft Zones and Access Routes within the Sanctuary

(350) [Coordinates in this appendix are unprojected (Geographic Coordinate System) and are calculated using the North American Datum of 1983]

(351) The five zones and access routes are:

(352) (1) The 0.96 mi2 area off Pillar Point Harbor from harbor launch ramps, through the harbor entrance to the northern boundary of Zone One. The boundary for Zone 1 begins at Point 1 in the coordinate table listed below and continues to each subsequent point in numerical order ending at Point 6.

(353)

Point ID		Latitude	Longitude
1	(flashing 5-second breakwater entrance light and horn located at the seaward end of the outer west breakwater − mounted on 50-ft. high white cylindrical structure).	37.49402	−122.48471
2	(triangular red dayboard with a red reflective border and flashing red 6-second light at the seaward end of the outer east breakwater—mounted on 30-ft high skeleton tower).	37.49534	−122.48568

Point ID		Latitude	Longitude
3	(bend in middle of outer east breakwater, 660 yards west of the harbor entrance).	37.49707	−122.47941
4	(Southeast Reef—southern end green gong buoy "1S" with flashing green 6-second light).	37.46469	−122.46971
5	(red entrance buoy "2" with flashing red 4-second light).	37.47284	−122.48411
6	(Fl W 5s bkwater entr LT and horn at seaward end of the outer w bkwater-mounted on 50-ft high white cyl structure)	37.49402	−122.48471

(354) (2) The 2.63 mi2 area off of Santa Cruz Small Craft Harbor from harbor launch ramps, through the harbor entrance, and then along a 100-yard wide access route to the south-southwest along a bearing of approximately 196° true (183° magnetic) toward the red and white whistle buoy at 36.93899 N, 122.009612 W, until crossing between the two yellow can buoys marking, respectively, the northeast and northwest corners of the zone. The boundary for Zone 2 begins at Point 1 in the coordinate table listed below and continues to each subsequent point in numerical order ending at Point 5.

(355)

Point ID		Latitude	Longitude
1	(red/white striped whistle buoy "SC" with flashing white Morse code "A" light)	36.93899	−122.00961
2	(yellow can buoy)	36.95500	−122.00967
3	(yellow can buoy)	36.94167	−121.96667
4	(yellow can buoy)	36.92564	−121.96668
5	(red/white striped whistle buoy "SC" with flashing white Morse code "A" light)	36.93899	−122.00961

(356) (3) The 2.29 mi2 area off of Moss Landing Harbor from harbor launch ramps, through harbor entrance, and then along a 100-yard wide access route southwest along a bearing of approximately 230° true (217° magnetic) to the red and white bell buoy at 36.79893 N, 121.80157 W. The boundary for Zone 3 begins at Point 1 in the coordinate table listed below and continues to each subsequent point in numerical order ending at Point 5.

(357)

Point ID		Latitude	Longitude
1	(red/white striped bell buoy "MLA" with flashing white Morse code "A" light)	36.79893	−121.80157
2	(yellow can buoy)	36.77833	−121.81667
3	(yellow can buoy)	36.83333	−121.82167
4	(yellow can buoy)	36.81500	−121.80333
5	(red/white striped bell buoy "MLA" with flashing white Morse code "A" light)	36.79893	−121.80157

(358) (4) The 3.10 mi2 area off of Monterey Harbor from harbor launch ramps to a point midway between the seaward end of the U.S. Coast Guard Pier and the seaward end of Wharf 2, and then along a 100-yard wide access route to the northeast along a bearing of approximately 67° true (54° magnetic) to the yellow can buoy marking the southeast corner of the zone. The boundary for Zone 4 begins at Point 1 in the coordinate table listed below and continues to each subsequent point in numerical order ending at Point 6.

(359)

Point ID		Latitude	Longitude
1	(yellow can buoy)	36.61146	−121.87696

Point ID		Latitude	Longitude
2	(red bell buoy "4" with flashing red 4-second light)	36.62459	−121.89594
3	(yellow can buoy)	36.65168	−121.87416
4	(yellow can buoy)	36.63833	−121.85500
5	(yellow can buoy)	36.61146	−121.87696

(360) (5) The .13 mi2 area near Pillar Point from the Pillar Point Harbor entrance along a 100- yard wide access route to the south along a bearing of approximately 174° true (161° magnetic) to the green bell buoy (identified as "Buoy 3") at 37.48154 N, 122.48156 W and then along a 100-yard wide access route northwest along a bearing of approximately 284° true (271° magnetic) to the green gong buoy (identified as "Buoy 1") at 37.48625 N, 122.50603 W, the southwest boundary of Zone Five. Zone Five exists only when a High Surf Advisory has been issued by the National Weather Service and is in effect for San Mateo County and only during December, January, and February. The boundary for Zone 5 begins at Point 1 in the coordinate table listed below and continues to each subsequent point in numerical order ending at Point 5.

(361)

Point ID		Latitude	Longitude
1	(green gong buoy "1" with flashing green 2.5-second light)	37.48625	−122.50603
2	(intersection of sight lines due north of green gong buoy "1" and due west of Sail Rock)	37.49305	−122.50603
3	(Sail Rock)	37.49305	−122.50105
4	(intersection of sight lines due east of green gong buoy "1" and due south of Sail Rock)	37.48625	−122.50105
5	(green gong buoy "1" with flashing green 2.5-second light)	37.48625	−122.50603

(362)

Appendix F to Subpart M of Part 922–Davidson Seamount Management Zone

(363) [Coordinates in this appendix are unprojected (Geographic Coordinate System) and are calculated using the North American Datum of 1983]

(364)

Point ID	Latitude	Longitude
1	35.90000	−123.00000
2	35.90000	−123.50000
3	35.50000	−123.50000
4	35.50000	−123.00000

(365)

TITLE 33–NAVIGATION AND NAVIGABLE WATERS

(366)

Part 26–Vessel Bridge-to-Bridge Radiotelephone Regulations

(367)

§26.01 Purpose

(368) (a) The purpose of this part is to implement the provisions of the Vessel Bridge-to-Bridge Radiotelephone Act. This part:

(369) (1) Requires the use of the vessel bridge-to-bridge radiotelephone;

(370) (2) Provides the Coast Guard's interpretation of the meaning of important terms in the Act;

(371) (3) Prescribes the procedures for applying for an exemption from the Act and the regulations issued under the Act and a listing of exemptions.

(372) (b) Nothing in this part relieves any person from the obligation of complying with the rules of the road and the applicable pilot rules.

(373)

§26.02 Definitions.

(374) For the purpose of this part and interpreting the Act:

(375) *Act* means the "Vessel Bridge-to-Bridge Radiotelephone Act", 33 U.S.C. sections 1201–1208;

(376) *Length* is measured from end to end over the deck excluding sheer;

(377) *Power-driven vessel* means any vessel propelled by machinery; and

(378) *Secretary* means the Secretary of the Department in which the Coast Guard is operating;

(379) Territorial sea means all waters as defined in §2.22(a)(1) of this chapter.

(380) *Towing vessel* means any commercial vessel engaged in towing another vessel astern, alongside, or by pushing ahead.

(381) *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.

(382) *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.

(383) **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.

(384)

§26.03 Radiotelephone required.

(385) (a) Unless an exemption is granted under §26.09 and except as provided in paragraph (a)(4) of this section, this part applies to:

(386) (1) Every power-driven vessel of 20 meters or over in length while navigating;

(387) (2) Every vessel of 100 gross tons and upward carrying one or more passengers for hire while navigating;

(388) (3) Every towing vessels of 26 feet or over in length while navigating; and

(389) (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.

(390) (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.

(391) (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.

(392) (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).

(393) (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):

(394) (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;

(395) (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

(396) (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.

(397) (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).

(398) **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.

(399)

§26.04 Use of the designated frequency.

(400) (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.

(401) (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.

(402) (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.

(403) (d) On the navigable waters of the United States, channel 13 (156.65 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.

(404) (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.

(405)

§26.05 Use of radiotelephone.

(406) 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.

(407)

§26.06 Maintenance of radiotelephone; failure of radiotelephone.

(408) Section 6 of the Act states – (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.

(409)

§26.07 Communications.

(410) No person may use the service 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.

(411)

§26.08 Exemption procedures.

(412) (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.

(413) (b) Any person may petition for an exemption from any provision of the Act or this part;

(414) (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:

(415) (1) The provisions of the Act or this part from which an exemption is requested; and

(416) (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.

(417)

§26.09 List of exemptions.

(418) (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.

(419) (b) Each vessel navigating on the Great Lakes as defined in the Inland Navigation 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."

(420)

Part 80–COLREGS Demarcation Lines

(421)

§80.01 General basis and purpose of demarcation lines.

(422) (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.

(423) (b) The waters inside of the lines are Inland Rules waters. The waters outside the lines are COLREGS waters.

(424) (c) 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.

(425)

§80.1102 Santa Catalina Island, CA.

(426) The 72 COLREGS shall apply to the harbors on Santa Catalina Island.

(427)

§80.1104 San Diego Harbor, CA.

(428) A line drawn from Zuniga Jetty Light "V" to Zuniga Jetty Light "Z"; thence to Point Loma Light.

(429)

§80.1106 Mission Bay, CA.

(430) A line drawn from Mission Bay South Jetty Light 2 to Mission Bay North Jetty Light 1.

(431)

§80.1108 Oceanside Harbor, CA.

(432) A line drawn from Oceanside South Jetty Light 4 to Oceanside Breakwater Light 3.

(433)

§80.1110 Dana Point Harbor, CA.

(434) A line drawn from Dana Point Jetty Light 4 to Dana Point Breakwater Light 3.

(435)

§80.1112 Newport Bay, CA.

(436) A line drawn from Newport Bay East Jetty Light 4 to Newport Bay West Jetty Light 3.

(437)

§80.1114 San Pedro Bay-Anaheim Bay, CA.

(438) (a) A line drawn across the seaward extremities of the Anaheim Bay Entrance Jetties; thence to Long Beach Breakwater East End Light 1.

(439) (b) A line drawn from Long Beach Channel Entrance Light 2 to Long Beach Light.

(440) (c) A line drawn from Los Angeles Main Entrance Channel Light 2 to Los Angeles Light.

(441)

§80.1116 Redondo Harbor, CA.

(442) A line drawn from Redondo Beach East Jetty Light 2 to Redondo Beach West Jetty Light 3.

(443)

§80.1118 Marina Del Rey, CA.

(444) (a) A line drawn from Marina Del Rey Breakwater South Light 1 to Marina Del Rey Light 4.

(445) (b) A line drawn from Marina Del Rey Breakwater North Light 2 to Marina Del Rey Light 3.

(446) (c) A line drawn from Marina Del Rey Light 4 to the seaward extremity of the Ballona Creek South Jetty.

(447)

§80.1120 Port Hueneme, CA.

(448) A line drawn from Port Hueneme East Jetty Light 4 to Port Hueneme West Jetty Light 3.

(449)

§80.1122 Channel Islands Harbor, CA.

(450) (a) A line drawn from Channel Islands Harbor South Jetty Light 2 to Channel Islands Harbor Breakwater South Light 1.

(451) (b) A line drawn from Channel Islands Harbor Breakwater North Light to Channel Islands Harbor North Jetty Light 5.

(452)

§80.1124 Ventura Marina, CA.

(453) A line drawn from Ventura Marina South Jetty Light 6 to Ventura Marina Breakwater South Light 3; thence to Ventura Marina North Jetty Light 7.

(454)

§80.1126 Santa Barbara Harbor, CA.

(455) A line drawn from Santa Barbara Harbor Light 4 to Santa Barbara Harbor Breakwater Light.

(456)

§80.1130 San Luis Obispo Bay, CA.

(457) A line drawn from the southernmost extremity of Fossil Point to the seaward extremity of Whaler Island Breakwater.

(458)

§80.1132 Estero-Morro Bay, CA.

(459) A line drawn from the seaward extremity of the Morro Bay East Breakwater to the Morro Bay West Breakwater Light.

(460)

§80.1134 Monterey Harbor, CA.

(461) A line drawn from Monterey Harbor Light 6 to the northern extremity of Monterey Municipal Wharf 2.

(462)

§80.1136 Moss Landing Harbor, CA.

(463) A line drawn from the seaward extremity of the pier located 0.3 mile south of Moss Landing Harbor Entrance to the seaward extremity of the Moss Landing Harbor North Breakwater.

(464)

§80.1138 Santa Cruz Harbor, CA.

(465) A line drawn from the seaward extremity of the Santa Cruz Harbor East Breakwater to Santa Cruz Harbor West Breakwater Light; thence to Santa Cruz Light.

(466)

§80.1140 Pillar Point Harbor, CA.

(467) A line drawn from Pillar Point Harbor Light 6 to Pillar Point Harbor Entrance Light.

(468)

§80.1142 San Francisco Harbor, CA.

(469) A straight line drawn from Point Bonita Light through Mile Rocks Light to the shore.

(470)

§80.1144 Bodega and Tomales Bay, CA.

(471) (a) An east-west line drawn from Sand Point to Avalis Beach.

(472) (b) A line drawn from the seaward extremity of Bodega Harbor North Breakwater to Bodega Harbor Entrance Light 1.

(473)

§80.1146 Albion River, CA.

(474) A line drawn on an axis of 030° true through Albion River Light 1 across Albion Cove.

(475)

§80.1148 Noyo River, CA.

(476) A line drawn from Noyo River Entrance Daybeacon 4 to Noyo River Entrance Light 5.

(477)

§80.1150 Arcata-Humboldt Bay, CA.

(478) A line drawn from Humboldt Bay Entrance Light 4 to Humboldt Bay Entrance Light 3.

(479)

§80.1152 Crescent City Harbor, CA.

(480) A line drawn from Crescent City Entrance Light to the southeasternmost extremity of Whaler Island.

(481)

Part 81–72 COLREGS: IMPLEMENTING RULES

(482)

§81.1 Definitions.

(483) As used in this part:

(484) *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.

(485) *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.

(486) *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.

(487)

§81.3 General.

(488) 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.

(489)

Alternative Compliance

(490)

§81.5 Application for a Certificate of Alternative Compliance.

(491) (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:

(492) (1) The name, address, and telephone number of the applicant.

(493) (2) The identification of the vessel by its:

(494) (i) Official number;

(495) (ii) Shipyard hull number;

(496) (iii) Hull identification number; or

(497) (iv) State number, if the vessel does not have an official number or hull identification number.

(498) (3) Vessel name and home port, if known.

(499) (4) A description of the vessel's area of operation.

(500) (5) A description of the provision for which the Certificate of Alternative Compliance is sought, including:

(501) (i) The 72 COLREGS Rule or Annex section number for which the Certificate of Alternative Compliance is sought;

(502) (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

(503) (iii) A statement of how full compliance would interfere with the special function of the vessel.

(504) (6) A description of the alternative installation that is in closest possible compliance with the applicable 72 COLREGS Rule or Annex section.

(505) (7) A copy of the vessel's plans or an accurate scale drawing that clearly shows:

(506) (i) The required installation of the equipment under the 72 COLREGS,

(507) (ii) The proposed installation of the equipment for which certification is being sought, and

(508) (iii) Any obstructions that may interfere with the equipment when installed in:

(509) (A) The required location; and

(510) (B) The proposed location.

(511) (b) The Coast Guard may request from the applicant additional information concerning the application.

(512)

§81.9 Certificate of Alternative Compliance: Contents.

(513) 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—

(514) (a) Identification of the vessel as supplied in the application under §81.5(a)(2);

(515) (b) The provision of the 72 COLREGS for which the Certificate authorizes alternative compliance;

(516) (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;

(517) (d) A statement of why full compliance would interfere with the special function of the vessel;

(518) (e) The required alternative installation;

(519) (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;

(520) (g) The date of issuance;

(521) (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.

(522)

§81.17 Certificate of Alternative Compliance: Termination.

(523) 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.

(524)

§81.18 Notice and record of certification of vessels of special construction or purpose.

(525) (a) In accordance with 33 U.S.C. 1605(c), a notice is published in the Federal Register of the following:

(526) (1) Each Certificate of Alternative Compliance issued under §81.9; and

(527) (2) Each Coast Guard vessel determined by the Commandant to be a vessel of special construction or purpose.

(528) (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.

(529) (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.

(530)

Exemptions

(531)

§81.20 Lights and sound signal appliances.

(532) 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:

(533) (a) Her keel is laid or is at a corresponding stage of construction before July 15, 1977; and

(534) (b) She meets the International Regulations for Preventing Collisions at Sea, 1960 (77 Stat. 194, 33 U.S.C. 1051-1094).

(535)

Part 82—72 COLREGS: INTERPRETATIVE RULES

(536)

§82.1 Purpose.

(537) This part contains the interpretative rules concerning the 72 COLREGS that are adopted by the Coast Guard for the guidance of the public.

(538)

§82.3 Pushing vessel and vessel being pushed: Composite unit.

(539) 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:

(540) (a) Lines.

(541) (b) Hawsers.

(542) (c) Wires.

(543) (d) Chains.

(544)

§82.5 Lights for moored vessels.

(545) 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).

(546)

§82.7 Sidelights for unmanned barges.

(547) An unmanned barge being towed may use the exception of COLREGS Rule 24(h). However, this exception only applies to the vertical sector requirements.

(548)

Part 88—ANNEX V: PILOT RULES

(549)

§88.01 Purpose and applicability.

(550) 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.

(551)

§88.03 Definitions.

(552) The terms used in this part have the same meaning as the terms defined in part 83 of this subchapter.

(553)

§88.05 Law enforcement vessels.

(554) (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.

(555) (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.

(556)

§88.07 Public safety activities.

(557) (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.

(558) (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.

(559)

Part 89—INLAND NAVIGATION RULES: IMPLEMENTING RULES

(560)

Subpart A—Certificate of Alternative Compliance

(561)

§89.1 Definitions.

(562) As used in this subpart:

(563) *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.

(564) *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.

(565) *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.

(566)

§89.3 General.

(567) 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.

(568)

§89.5 Application for a Certificate of Alternative Compliance.

(569) (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:

(570) (1) The name, address, and telephone number of the applicant.

(571) (2) The identification of the vessel by its:

(572) (i) Official number;

(573) (ii) Shipyard hull number;

(574) (iii) Hull identification number; or

(575) (iv) State number, if the vessel does not have an official number or hull identification number.

(576) (3) Vessel name and home port, if known.

(577) (4) A description of the vessel's area of operation.

(578) (5) A description of the provision for which the Certificate of Alternative Compliance is sought, including:

(579) (i) The Inland Rules Rule or Annex section number for which the Certificate of Alternative Compliance is sought;

(580) (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

(581) (iii) A statement of how full compliance would interfere with the special function of the vessel.

(582) (6) A description of the alternative installation that is in closest possible compliance with the applicable Inland Navigation Rules Rule or Annex section.

(583) (7) A copy of the vessel's plans or an accurate scale drawing that clearly shows:

(584) (i) The required installation of the equipment under the Inland Rules,

(585) (ii) The proposed installation of the equipment for which certification is being sought, and

(586) (iii) Any obstructions that may interfere with the equipment when installed in:

(587) (A) The required location; and

(588) (B) The proposed location.

(589) (b) The Coast Guard may request from the applicant additional information concerning the application.

(590)

§89.9 Certificate of Alternative Compliance: Contents.

(591) 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:

(592) (a) Identification of the vessel as supplied in the application under §89.5(a)(2);

(593) (b) The provision of the Inland Rules for which the Certificate authorizes alternative compliance;

(594) (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;

(595) (d) A statement of why full compliance would interfere with the special function of the vessel;

(596) (e) The required alternative installation;

(597) (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;

(598) (g) The date of issuance;

(599) (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.

(600)

§89.17 Certificate of Alternative Compliance: Termination.

(601) 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.

(602)

§89.18 Record of certification of vessels of special construction or purpose.

(603) (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.

(604) (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.

(605)

Subpart B—Waters Upon Which Certain Inland Navigation Rules Apply

(606)

§89.21 Purpose.

(607) 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.

(608)

§89.23 Definitions.

(609) As used in this subpart:

(610) *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.

(611)

Part 90—INLAND RULES: INTERPRETATIVE RULES

(612)

§90.1 Purpose.

(613) 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.

(614)

§90.3 Pushing vessel and vessel being pushed: Composite unit.

(615) 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.

(616)

§90.5 Lights for moored vessels.

(617) 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).

(618)

§90.7 Sidelights for unmanned barges.

(619) 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.

(620)

Part 110–Anchorage Regulations

(621)

§110.1 General.

(622) (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.

(623) (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).

(624) (c) All bearings in the part are referred to true meridian.

(625) (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.

(626)

Subpart A–Special Anchorage Areas

(627)

§110.90 San Diego Harbor, CA.

(628) (a) *Area A–1*. In North San Diego Bay, the Shelter Island Yacht Basin Anchorage, the water area enclosed by a line beginning at 32°42'56.7"N., 117°13'47.1"W.; thence southwesterly to 32°42'53.6"N., 117°13'51.3"W.; thence northwesterly to 32°43'01.3"N., 117°13'59.1"W.; thence northeasterly to 32°43'02.6"N., 117°13'55.5"W.; thence southeasterly to 32°42'59.8"N., 117°13'50.4"W.; thence southeasterly to the point of beginning.

(629) (b) *Area A–1a*. In North San Diego Bay, the Shelter Island Roadstead Anchorage east of Shelter Island, the water area 55 feet either side of a line beginning at 32°42'33.6"N., 117°13'48.3"W.; thence northeasterly to 32°42'36.0"N., 117°13'45.1"W.

(630) (c) *Area A–1b*. The water area off Shelter Island's eastern shore, 210 feet shoreward of a line beginning at 32°42'43.9"N., 117°13'34.3"W.; thence northeasterly to 32°42'52.8"N., 117°13'22.4"W.

(631) (d) *Area A–1c*. The water area off Shelter Island's eastern shore, 210 feet shoreward of a line beginning at 32°42'55.0"N., 117°13'19.4"W.; thence northeasterly to 32°43'03.5"N., 117°13'07.6"W.

(632) (e) *Area A–2*. In North San Diego Bay, the America's Cup Harbor Anchorage, the water area enclosed by a line beginning at 32°43'13.7"N., 117°13'23.8"W; thence northeasterly to 32°43'16.7"N., 117°13'16.4"W.; thence northeasterly to 32°43'22.6"N., 117°13'25.8"W.; thence westerly to 32°43'22.5"N., 117°13'29.6"W.; thence southwesterly to 32°43'19.0"N., 117°13'32.6"W.; thence southeasterly to the point of beginning.

(633) (f) *Area A–3*. In North San Diego Bay, the Laurel Street Roadstead Anchorage, the water area enclosed by a line beginning at 32°43'30.5"N., 117°10'28.5"W.; thence southwesterly to 32°43'29.8"N., 117°10'34.2"W.; thence southwesterly to 32°43'25.8"N., 117°10'36.1"W.; thence southerly to 32°43'20.2"N., 117°10'36.1"W.; thence westerly to 32°43'20.2"N., 117°10'52.9"W.; thence northeasterly to 32°43'29.8"N., 117°10'48.0"W., thence northeasterly following a line parallel to, and 200 feet bayward of, the shoreline of San Diego Bay adjoining Harbor Drive to the point of beginning.

(634) (g) *Area A–4*. In Central San Diego Bay, the Bay Bridge Roadstead Anchorage, the water area enclosed by a line beginning at 32°41'32.1"N., 117°09'43.1"W.; thence southwesterly to 32°41'19.1"N., 117°09'46.1"W.; thence southeasterly to 32°41'17.8"N., 117°09'44.3"W.; thence southeasterly to 32°41'14.9"N., 117°09'37.9"W.; thence northeasterly to 32°41'26.9"N., 117°09'35.1"W., thence southwesterly to the point of beginning.

(635) (h) *Area A–5*. In Central San Diego Bay, the Glorietta Bay Anchorage, the water area enclosed by a line beginning at 32°40'42.2"N., 117°10'03.1"W.; thence southwesterly to 32°40'41.2"N., 117°10'06.6"W.; thence northwesterly to 32°40'46.2"N., 117°10'15.6"W.; thence northeasterly to 32°40'46.7"N., 117°10'14.1"W.; thence southeasterly the point of beginning.

(636) (i) *Area A–6*. In Fiddler's Cove, the water enclosed by a line beginning at 32°39'10.4"N., 117°08'49.4"W.; thence northwesterly to 32°39'14.9"N., 117°08'51.8"W.; thence northeasterly to 32°39'17.6"N., 117°08'47.5"W.; thence northwesterly to 32°39'19.8"N., 117°08'48.8"W.; thence northeasterly to 32°39'24.4"N., 117°08'41.4"W.; thence southeasterly to 32°39'15.7"N., 117°08'36.0"W.; thence southwesterly to the point of beginning.

(637) **Note:** This area is located on Federal property owned by the United States Navy, and it is reserved for active duty military, their dependents, retirees and DOD employees only.

(638) (j) *Area A–8*. In South San Diego Bay, the Sweetwater Anchorage, the water enclosed by a line beginning at 32°39'12.2"N., 117°07'45.1"W.; thence easterly to 32°39'12.2"N., 117°07'30.1"W.; thence southerly to 32°38'45.2"N., 117°07'30.1"W.; thence westerly to 32°38'45.2"N., 117°07'45.1"W.; thence northerly to the point of beginning.

(639) (k) *Area A–9*. In North San Diego Bay, the Cruiser Anchorage, the water enclosed by a line beginning at 32°43'35.9"N., 117°11'06.2"W.; thence southwesterly to

32°43'31.5"N., 117°11'13.2"W.; thence southeasterly to 32°43'28.9"N., 117°11'11.0"W.; thence southeasterly to 32°43'25.9"N., 117°11'07.7"W.; thence northeasterly to 32°43'34.8"N., 117°11'03.2"W.; thence northwesterly to the point of beginning. All coordinates in this section use Datum: NAD 83.

(640) **Note:** Mariners anchoring in these anchorages, excluding Anchorage A–6, should consult applicable local ordinances of the San Diego Unified Port District. Temporary floats or buoys for marking anchors are allowed. Fixed moorings, piles or stakes are prohibited. All moorings shall be positioned so that no vessel, when anchored, shall at any time extend beyond the limits of the area. See Captain of the Port Notice 6–97, a copy of which can be obtained by calling (619) 683–6495.

(641)

§110.91 Mission Bay, CA.

(642) (a) *Area M–1*. In San Juan Cove, the entire water area west of a line drawn from 32°46'53.6"N., 117°14'52.5"W.; to El Carmel Point North Light; 32°46'48.0"N., 117°14'50.1"W.

(643) **NOTE:** Control over the anchoring of vessels and the placing of temporary moorings in this area is exercised by the City of San Diego Park and Recreation Department pursuant to local ordinances.

(644) (b) *Area M–2*. In Santa Barbara Cove, the entire water area west of a line drawn from 32°46'40.0"N., 117°14'47.0"W.; to 32°46'33.5"N., 117°14'45.5"W.

(645) **NOTE:** Control over the anchoring of vessels and the placing of temporary mooring in this area is exercised by the City of San Diego Park and Recreation Department pursuant to local ordinances.

(646) (c) *Area M–3*. In Mariners Basin, the entire water area west of a line drawn from latitude 32°45'49.2"N., longitude 117°14'42.9"W.; to Mission Point Light; latitude 32°45'43.7"N., longitude 117°14'41.9"W.

(647) **NOTE:** Control over the anchoring of vessels and the placing of temporary moorings in this area is exercised by the City of San Diego Park and Recreation Department pursuant to local ordinances.

(648) (d) *Area M–4*. In Quivira Basin, the water area enclosed by that portion of a circle of 45 yard radius from 32°45'42.8"N., 117°14'25.6"W.; through the arc from 354°T to 088°T.

(649) **NOTE:** Control over the anchoring of vessels and the placing of temporary moorings in this area is exercised by the City of San Diego Park and Recreation Department pursuant to local ordinances.

(650)

§110.93 Dana Point Harbor, CA.

(651) The area in Dana Point Harbor, Calif. commencing at a point at latitude 33°27′36.2″N., longitude 117°42′20.4″W.; thence 016°20′ True for 612 feet to a point at latitude 33°27′42.1″N., longitude 117°42′18.4″W.; thence 106°20′ True for 85 feet to a point at latitude 33°27′41.8″N., longitude 117°42′17.7″W.; thence 196°20′ True for 222 feet to a point at latitude 33°27′39.7″N., longitude 117°42′18.2″W.; thence 182°20′ True 234 feet to a point at latitude 33°27′37.4″N., longitude 117°42′18.2″W.; thence 166°20′ True for 499 feet to a point at latitude 33°27′32.6″N., longitude 117°42′16.8″W.; thence 320° True for 470 feet to the point of origin.

(652)

§110.95 Newport Bay Harbor, CA.

(653) (a) *Area A–1*. The entire water area within beginning at latitude 33°36′09.3″ N., longitude 117°53′52.6″ W.; thence to latitude 33°36′11.4″ N., longitude 117°53′51.2″ W.; thence to latitude 33°36′04.0″ N., longitude 117°53′33.4″ W.; thence to latitude 33°36′03.9″ N., longitude 117°53′20.4″ W.; thence to 33°36′01.1″ N., longitude 117°53′09.9″ W.; thence to 33°36′01.1″ N., longitude 117°53′32.7″ W.; thence to 33°36′03.9″ N., longitude 117°53′41.9″ W.; returning to latitude 33°36′09.3″ N., longitude 117°53′52.6″ W.

(654) (b) *Area A–2*. The entire water area within beginning at latitude 33°36′12.9″ N., longitude 117°53′44.2″ W; thence to latitude 33°36′14.2″ N., longitude 117°53′44.3″ W.; thence to latitude 33°36′14.2″ N., longitude 117°53′20.6″ W.; thence to latitude 33°36′10.8″ N., longitude 117°53′20.5″ W.; thence to latitude 33°36′12.7″ N., longitude 117°53′29.9″ W.; thence to latitude 33°36′12.7″ N., longitude 117°53′35.4″ W.; thence to latitude 33°36′12.9″ N., longitude 117°53′37.0″ W.; returning to latitude 33°36′12.9″ N., longitude 117°53′44.2″ W.

(655) (c) *Area A–3*. The entire water area within beginning at latitude 33°36′22.7″N., longitude 117 54′12.6″W.; thence to latitude 33°36′24.9″N., longitude 117°54′12.6″W.; thence to latitude 33°36′26.2″N., longitude 117°54′11.3″W.; thence to latitude 33°36′18.7″N., longitude 117°54′00.5″W.; thence to latitude 33°36′16.2″N., longitude 117°54′02.9″W.; returning to latitude 33°36′22.7″N., longitude 117°54′12.6″W.

(656) (d) *Area A–4*. The entire water area within beginning at latitude 33°36′32.7″ N., longitude 117°53′56.6″ W.; thence to latitude 33°36′33.6″ N., longitude 117°53′56.6″ W.; thence to latitude 33°36′33.5″ N., longitude 117°53′26.2″ W.; thence to latitude 33°36′32.9″ N., longitude 117°53′26.2″ W.; thence to latitude 33°36′32.6″ N., longitude 117°53′33.8″ W.; thence to latitude 33°36′32.4″ N., longitude 117°53′36.7″ W.; thence to latitude 33°36′31.7″ N., longitude 117°53′40.9″ W.; thence to 33°36′31.7″ N., longitude 117°53′46.3″ W.; thence to latitude 33°36′32.6″ N., longitude 117°53′50.9″ W.; returning to latitude 33°36′32.7″ N., longitude 117°53′56.6″ W.

(657) (e) *Area A–5*. The entire water area within beginning at latitude 33°36′29.1″ N., longitude 117°54′55.3″ W.; thence to latitude 33°36′27.8″ N., longitude 117°54′55.8″ W.; thence to latitude 33°36′24.1″ N., longitude 117°54′41.8″ W.; thence to latitude 33°36′26.7″ N., longitude 117°54′40.8″ W.; thence to latitude 33°36′26.7″

N., longitude 117°54′46.3″ W.; returning to latitude 33°36′29.1″ N., longitude 117°54′55.3″ W.

(658) (f) *Area A–6*. The entire water area within beginning at latitude 33°36′43.3″ N., longitude 117°54′26.4″ W.; thence to latitude 33°36′51.7″ N., longitude 117°54′22.8″ W.; thence to latitude 33°36′51.4″ N., longitude 117°54′21.5″ W.; thence to latitude 33°36′42.9″ N., longitude 117°54′25.2″ W.; returning to latitude 33°36′43.3″ N., longitude 117°54′26.4″ W.

(659) (g) *Area A–7*. The entire water area within beginning at latitude 33°36′32.1″ N., longitude 117°55′12.5″ W.; thence to latitude 33°36′37.7″ N., longitude 117°55′11.0″ W.; thence to latitude 33°36′35.1″ N., longitude 117°55′01.3″ W.; thence to latitude 33°36′30.4″ N., longitude 117°55′02.6″ W.; thence to latitude 33°36′31.2″ N., longitude 117°55′06.7″ W.; returning to latitude 33°36′32.1″ N., longitude 117°55′12.5″ W.

(660) (h) *Area A–8*. The entire water area within beginning at latitude 33°36′34.2″ N., longitude 117°55′27.3″ W.; thence to latitude 33°36′36.2″ N., longitude 117°55′26.7″ W.; thence to latitude 33°36′39.5″ N., longitude 117°55′20.9″ W.; thence to latitude 33°36′38.9″ N., longitude 117°55′15.4″ W.; thence to latitude 33°36′37.9″ N., longitude 117°55′11.7″ W.; thence to latitude 33°36′32.1″ N., longitude 117°55′13.3″ W.; returning to latitude 33°36′34.2″ N., longitude 117°55′27.3″ W.

(661) (i) *Area A–9*. The entire water area within beginning at latitude 33°36′53.5″ N., longitude 117°55′28.2″ W.; thence to latitude 33°36′54.0″ N., longitude 117°55′27.0″ W.; thence to latitude 33°36′43.4″ N., longitude 117°55′20.4″ W.; thence to latitude 33°36′42.9″ N., longitude 117°55′21.6″ W.; returning to latitude 33°36′53.5″ N., longitude 117°55′28.2″ W.

(662) (j) *Area A–10*. The entire water area within beginning at latitude 33°36′07.4″ N., longitude 117°53′19.2″ W.; thence to latitude 33°36′14.2″ N., longitude 117°53′19.4″ W.; thence to latitude 33°36′14.2″ N., longitude 117°53′06.9″ W.; thence to latitude 33°36′08.1″ N., longitude 117°53′04.9″ W.; thence to latitude 33°36′06.5″ N., longitude 117°53′08.9″ W.; thence to latitude 33°36′06.5″ N., longitude 117°53′16.3″ W.; returning to latitude 33°36′07.4″ N., longitude 117°53′19.2″ W.

(663) (k) *Area A–11*. The entire water area within beginning at latitude 33°36′04.7″ N., longitude 117°53′01.9″ W.; thence to latitude 33°36′06.1″ N., longitude 117°53′00.5″ W.; thence to latitude 33°36′06.2″ N., longitude 117°52′59.0″ W.; thence to latitude 33°35′59.4″ N., longitude 117°52′51.1″ W.; thence to latitude 33°35′57.5″ N., longitude 117°52′50.9″ W.; thence to latitude 33°36′01.9″ N., longitude 117°52′57.3″ W.; thence to latitude 33°36′03.0″ N., longitude 117°53′00.4″ W.; returning to latitude 33°36′04.7″ N., longitude 117°53′01.9″ W.

(664) (l) *Area A–12*. The entire water area within beginning at latitude 33°36′27.9″ N., longitude 117°54′40.4″ W.; thence to latitude 33°36′23.9″ N., longitude 117°54′41.8″ W.; thence to latitude 33°36′20.8″ N., longitude 117°54′29.9″ W.; thence to latitude 33°36′28.5″ N., longitude 117°54′20.2″ W.; returning to latitude 33°36′27.9″ N., longitude 117°54′40.4″ W.

(665) (m) *Area B–1*. The entire water area within beginning at latitude 33°36′35.1″ N., longitude 117°54′28.8″ W.; thence to latitude 33°36′32.1″ N., longitude 117°54′22.1″ W.; thence to latitude 33°36′30.6″ N., longitude 117°54′22.8″ W; thence to latitude 33°36′30.5″ N., longitude 117°54′30.9″ W.; returning to latitude 33°36′35.1″ N., longitude 117°54′28.8″ W.

(666) **Note to § 110.95:** These anchorage areas are reserved for recreational and other small craft. Local law, including the City of Newport Beach Municipal Code 17.25.020, may provide for fore and aft moorings for recreational and small craft of such size and alignment as permitted by the harbor master.

(667)

§110.100 Los Angeles and Long Beach Harbors, CA.

(668) (a) (Reserved)

(669) (b) *Area A–2*. Consisting of two parts in the outer basin of Fish Harbor on the east and west sides of Fish Harbor Entrance Channel described as follows:

(670) (1) *Part 1*. Beginning at a point at the intersection of westerly side of Fish Harbor Entrance Channel and the outer jetty; thence southwesterly along the jetty about 900 feet to the shore; thence northerly about 500 feet; thence northeasterly about 650 feet, on a line parallel to jetty; thence southeasterly about 500 feet, along the westerly side of Fish Harbor Entrance Channel to the point of beginning.

(671) (2) *Part 2*. Beginning at a point at the intersection of the east side of Fish Harbor Entrance Channel and Fish Harbor mole (outer Fish Harbor); thence northwesterly along the channel line about 850 feet to the southerly side of the Fairway; thence northeasterly and easterly along the southerly side of the Fairway, about 478 and 565 feet respectively to its intersection with Fish Harbor mole; thence southerly and southwesterly along the mole to the point of beginning.

(672) (c) *Area B–1*. Long Beach outer harbor along east side of Pier 400 beginning at 33°44'22.8"N., 118°13'51.0"W.; thence south to 33°43'54.5"N., 118°13'50.0"W.; thence southwesterly to 33°43'46.0"N., 118°14'13.6"W.; thence northwesterly to 33°44'15.3"N., 118°14'26.6"W.; thence northeasterly to 33°44'25.1"N., 118°14'15.6"W.; thence easterly to the beginning point.

(673) (d) *Area C–1*. Long Beach outer harbor between Island Freeman and Island Chaffee beginning at 33°44'20.0"N., 118°08'26.2"W.; thence west to 33°44'23.5"N., 118°09'32.6"W.; thence north to 33°44'52.8"N., 118°09'33.2"W.; thence southeast to 33°44'25.5"N., 118°08'26.2"W.; thence south to the beginning point.

(674) (e) *Area E–1*. Long Beach outer harbor northwest of Island Freeman beginning at 33°44'55.0"N., 118°09'40.0"W.; thence southwesterly to 33°44'37.0"N., 118°09'48.5"W.; thence northwesterly to 33°44'52.0"N.,

118°10'32.0"W.; thence north to 33°45'11.0"N., 118°10'32.0"W.

(675) (f) *Restrictions*. Special anchorage areas B–1, C–1, and E–1 are reserved for barges on mooring balls, unless otherwise authorized by the Captain of the Port Los Angeles-Long Beach

(676)

§110.111 Marina del Rey Harbor, CA.

(677) An area in the main channel encompassed within the following described boundaries: Beginning at the northeasterly corner in position latitude 33°58′41.6″ N., longitude 118°26′50.8″ W.; thence southerly to latitude 33°58′30.2″ N., longitude 118°26′50.8″ W.; thence westerly to latitude 33°58′30.2″ N., longitude 118°26′55.1″ W.; thence northerly to latitude 33°58′41.6″ N., longitude 118°26′55.1″ W.; thence easterly to the point of origin. All coordinates referenced North American Datum 1983.

(678) **Note to 110.111**: The Marina del Rey Harbor Master, Los Angeles County, prescribes local regulations for mooring and boating activities in this area.

(679)

§110.115 Santa Barbara Harbor, CA.

(680) North of the Santa Barbara breakwater; seaward of the line of mean high water; and southwest of a line bearing 46°30' from the north corner of Bath Street and Cabrillo Boulevard to the end of the Santa Barbara breakwater; excluding a fairway 225 feet wide, 100 feet from each side of and parallel to the Navy pier.

(681) **NOTE:** Fore and aft moorings will be allowed in this area conforming to the City of Santa Barbara Harbor Ordinance No. 2106 for yachts and small craft of such size and alignment as permitted by the harbor master.

(682)

§110.120 San Luis Obispo Bay, CA.

(683) (a) *Area A–1*. Area A–1 is the water area bounded by the San Luis Obispo County wharf, the shoreline, a line drawn from the southernmost point of Fossil Point to latitude 35°10'18.5"N., longitude 120°43'38.5"W.; thence to the southeast corner of the San Luis Obispo County wharf.

(684) (b) *Area A–2*. Area A–2 is the water area enclosed by a line drawn from the outer end of Whaler Island breakwater at latitude 35°09'22"N., longitude 120°44'56"W., to the Marre Chimney at latitude 35°10'56"N., longitude 120°44'31"W.

(685) **NOTE:** The Port San Luis Harbor District prescribes local regulations for mooring and boating activities in these areas.

(686)

§110.125 Morro Bay Harbor, CA.

(687) (a) *Area A–1*. Opposite the City of Morro Bay, beginning 50 feet west of the intersection of the west channel line and the prolongation of the center line of Seventh Street; thence in a generally southeasterly direction and parallel to the channel line for a distance of 450 yards; thence 166° and parallel to the revetment for a distance of 1,025 yards; thence 270° for a distance of 200 yards; thence 346° for a distance of about 1,425 yards to meet the prolongation of the center line of Seventh Street; and thence to the point of beginning.

(688) (b) *Area A–2*. Beginning at a point 322° and 150 feet from the high water line on the most westerly part of Fairbanks Point; thence continuing on this bearing for a distance of 1,346 feet; thence 052° for a distance of 450 feet and thence generally southeasterly parallel to and 150 feet from the mean high water line to the point of beginning.

(689) **NOTE:** Moorings and boating activities will be allowed in these areas conforming to applicable City of Morro Bay ordinances and regulations adopted pursuant thereto.

(690)

§110.126 Monterey Harbor, CA.

(691) The waters of Monterey Harbor between the shoreline and the following coordinates: Beginning at a point on the shoreline at 36°36'27.5"N., 121°53'35.0"W.; thence to 36°36'32.4"N., 121°53'31.0"W., in an easterly direction to 36°36'28.8"N., 121°53'19.0"W.; thence south to 36°36'23.1"N., 121°53'19.0"W.; thence to the north end of Municipal Wharf No. 1 at 36°36'20.0"N., 121°53'28.0"W.

(692)

§110.126a San Francisco Bay, CA.

(693) *Richardson Bay Anchorage*. That portion of Richardson Bay, north of a line bearing 257° from Peninsula Point to the shore at Sausalito, except for federally-maintained channels, and all channels approved for private use therein.

(694) **NOTE:** Mariners anchoring in the special anchorage area should consult applicable ordinances of the Richardson Bay Regional Agency and the County of Marin. These ordinances establish requirements on matters including the anchoring of vessels, placement of moorings, and use of anchored and moored vessels within the special anchorage area. Information on these local agency requirements may be obtained from the Richardson Bay Harbor Administrator.

(695)

§110.127 Lake Mohave and Lake Mead, Nevada and Arizona.

(696) (a) *Willow Beach, Ariz*. That portion of Lake Mohave enclosed by the shore and a line connecting the following points, excluding a 100-foot-wide fairway, extending westerly from the launching ramp, as established by the Superintendent, Lake Mead Recreation Area:

(697) "a" 35°52'30"N., 114°39'35"W.

(698) "b" 35°52'10"N., 114°39'35"W.

(699) (b) *Katherine, Ariz*. That portion of Lake Mohave enclosed by the shore and a line connecting the following points, excluding a 100-foot-wide fairway, extending westerly from the launching ramp, as established by the Superintendent, Lake Mead Recreation Area:

(700) "a" 35°13'33"N., 114°34'38"W.

(701) "b" 35°13'05"N., 114°34'40"W.

(702) (c) *El Dorado Canyon, Nev*. That portion of Lake Mohave enclosed by the shore and a line connecting the following points, excluding a 50-foot-wide fairway, extending easterly from the launching ramp, as established by the Superintendent, Lake Mead Recreation Area:

(703) "a" 35°42'37"N., 114°42'21"W.

(704) "b" 35°42'08"N., 114°42'10"W.

(705) (d) *Cottonwood Cove, Nev*. That portion of Lake Mohave enclosed by the shore and a line connecting the following points, excluding a 200-foot-wide fairway extending northeasterly from the launching ramp, as established by the Superintendent, Lake Mead Recreation Area:

(706) "a" 35°29'46"N., 114°40'55"W.

(707) "b" 35°29'33"N., 114°40'45"W.

(708) (e) *Overton Beach, Nev*.–(1) *Area "A"*. That portion of Lake Mead enclosed by the shore and lines connecting the following points, excluding two 300-foot-wide fairways, extending northwesterly and southwesterly from the launching ramps, as established by the Superintendent, Lake Mead Recreation Area:

(709) "a" 36°27'05"N., 114°21'48"W.

(710) "b" 36°27'15"N., 114°21'20"W.

(711) "c" 36°26'32"N., 114°20'45"W.

(712) "d" 36°25'49"N., 114°20'50"W.

(713) "e" 36°25'00"N., 114°21'27"W.

(714) "f" 36°25'19"N., 114°22'10"W.

(715) (f) *Echo Bay, Nev*. That portion of Lake Mead enclosed by the shore and lines connecting the following points, excluding a 100-foot-wide fairway, extending southwesterly from the launching ramp, as established by the Superintendent, Lake Mead Recreation Area:

(716) "a" 36°18'30"N., 114°25'10"W.

(717) "b" 36°18'20"N., 114°24'00"W.

(718) "c" 36°17'35"N., 114°24'05"W.

(719) "d" 36°17'40"N., 114°24'27"W.

(720) (g) *Callville Bay, Nev*. That portion of Lake Mead enclosed by the shore and lines connecting the following points, excluding a 200-foot-wide fairway, extending southeasterly from the launching ramp, as established by the Superintendent, Lake Mead Recreation Area:

(721) "a" 36°09'00"N., 114°42'40"W.

(722) "b" 36°08'10"N., 114°42'03"W.

(723) "c" 36°08'06"N., 114°42'40"W.

(724) (h) *Las Vegas Wash, Nev*. That portion of Lake Mead enclosed by the shore and a line connecting the following points, excluding a 200-foot-wide fairway, extending easterly from the launching ramp, as established by the Superintendent, Lake Mead Recreation Area:

(725) "a" 36°07'23"N., 114°49'45"W.

(726) "b" 36°06'29"N., 114°49'45"W.

(727) (i) *Hemenway Harbor, Nev*. That portion of Lake Mead enclosed by the shore and lines connecting the following points, excluding a 100-foot-wide fairway, extending easterly from the launching ramp at Boulder Beach and a 600-foot-wide fairway, extending northeasterly from the launching ramp at Hemenway Harbor, both as established by the Superintendent, Lake Mead Recreation Area:

(728) "a" 36°04'05"N., 114°48'15"W.

(729) "b" 36°03'25"N., 114°48'10"W.

(730) "c" 36°01'20"N., 114°45'15"W.

(731) (j) *Kingman Wash, Ariz*. That portion of Lake Mead enclosed by the shore and a line connecting the following points, excluding a 100-foot-wide fairway, extending westerly from the launching ramp, as established by the Superintendent, Lake Mead Recreation Area:

(732) "a" 36°02'34"N., 114°42'50"W.

(733) "b" 36°02'05"N., 114°43'05"W.

(734) (k) *Temple Bar, Ariz*. That portion of Lake Mead enclosed by the shore and lines connecting the following points, excluding a 200-foot-wide fairway, extending southwesterly from the launching ramp, as established by the Superintendent, Lake Mead Recreation Area:

(735) "a" 36°02'21"N., 114°19'29"W.

(736) "b" 36°02'34"N., 114°18'46"W.

(737) "c" 36°02'03"N., 114°18'13"W.

(738) (l) *Greggs, Ariz*. That portion of Lake Mead enclosed by the shore and a line connecting the following points, excluding a 100-foot-wide fairway, extending northerly from the launching ramp, as established by the Superintendent, Lake Mead Recreation Area:

(739) "a" 36°00'35"N., 114°13'49"W.

(740) "b" 36°00'35"N., 114°14'10"W.

(741) (m) *Pierce Ferry, Ariz*. That portion of Lake Mead enclosed by the shore and a line connecting the following points, excluding a 100-foot-wide fairway, extending easterly from the launching ramp, as established by the Superintendent, Lake Mead Recreation Area:

(742) "a" 36°08'42"N., 113°59'24"W.

(743) "b" 36°07'18"N., 113°58'32"W.

(744) (n) *South Bay, Ariz*. That portion of Lake Mead enclosed by the shore and a line connecting the following points, excluding one 100-foot wide fairway, extending westerly from the launching ramp, as established by the Superintendent, Lake Mead Recreation Area:

(745) "a" 36°06'26"N., 114°06'13"W.

(746) "b" 36°05'00"N., 114°06'50"W.

(747) "c" 36°05'00"N., 114°06'13"W.

(748) **NOTE:** Fixed moorings, piles, or stakes are prohibited. Single and fore and aft temporary moorings will be allowed. The anchoring of vessels and the placing of temporary moorings will be under the jurisdiction and at the discretion of the Superintendent, Lake Mead Recreation Area, National Park Service.

(749)

§110.127c Trinidad Bay, CA.

(750) The waters of Trinidad Bay beginning at the southernmost point of Trinidad Head at 41°03'04"N., 124°08'56"W.; thence east to Prisoner Rock at 41°03'09"N., 124°08'37"W.; thence east to 41°03'09"N., 124°08'19"W.; thence north to 41°03'26"N., 124°08'21"W.; thence following the shoreline to Trinidad Bay in a westerly and southerly direction to the point of beginning.

(751) **NOTE:** The area will be principally for use by sport and commercial fishing vessels. Temporary floats and buoys for anchoring will be allowed in the area. Fixed moorings, piles or stakes are prohibited. All moorings shall be placed so that no vessel when anchored or moored shall at any time extend beyond the limits of the area. The anchoring of all vessels and placing of all moorings will be under the supervision of the City of Trinidad or such other authority as may be designated by the City Council of the City of Trinidad, California.

(752)

Subpart B–Anchorage Grounds

(753)

§110.210 San Diego Harbor, CA.

(754) (a) The anchorage grounds. (1) Special anchorage for U.S. Government vessels (NAD 83). The waters bounded by a line connecting the following points:

(755) 32°42'13.2"N., 117°14'11.0"W.

(756) 32°41'12.0"N., 117°14'00.3"W. and thence along the shoreline to the point of beginning.

(757) (2) Special anchorage for U.S. Government vessels (NAD 83). The waters bounded by a line connecting the following points:

(758) 32°43'25.6"N., 117°12'46.1"W.

(759) 32°43'25.3"N., 117°12'52.0"W.

(760) 32°43'08.2"N., 117°12'58.0"W.

(761) 32°42'57.9"N., 117°12'54.0"W. and thence easterly along the northern boundary of the channel to:

(762) 32°43'05.0"N., 117°11'30.5"W.

(763) 32°43'27.2"N., 117°11'14.0"W. and thence along the shoreline of Harbor Island to the point of beginning.

(764) (3) "B" Street Merchant Vessel Anchorage (NAD 83). The waters bounded by a line connecting the following points:

(765) 32°43'00.8"N., 117°10'36.3"W.

(766) 32°43'00.8"N., 117°11'23.0"W.

(767) 32°43'05.0"N., 117°11'30.5"W.

(768) 32°43'27.2"N., 117°11'14.0"W.

(769) 32°43'20.2"N., 117°10'53.0"W. and thence due east to the shoreline, and thence along the shoreline and pier to the point of beginning.

(770) (b) The regulations. (1) The anchorages described in paragraphs (a)(1) and (a)(2) of this section are reserved exclusively for the anchorage of vessels of the United States Government and of authorized harbor pilot boats. No other vessels shall anchor in this area except by special permission obtained in advance from the Commander, Naval Base, San Diego, CA. The administration of these anchorages is exercised by the Commander, Naval Base, San Diego, CA.

(771) (2) The area described in paragraph (a)(3) of this section is reserved for the use of merchant vessels calling at the Port of San Diego while awaiting a berth. The administration of this anchorage is exercised by the Port Director, San Diego Unified Port District.

(772) (3) Vessels anchoring in San Diego Harbor shall leave a free passage for other craft and shall not obstruct the approaches to the wharves in the harbor.

(773)

§110.214 Los Angeles and Long Beach harbors, CA.

(774) (a) *General Regulations*.

(775) (1) *Anchorage Assignment*. (i) Unless otherwise directed by the Captain of the Port Los Angeles-Long Beach, the pilot stations for the Port of Long Beach and the Port of Los Angeles will assign the use of commercial anchorages within their jurisdictions (Long Beach and Los Angeles Harbors respectively). All anchorages outside (seaward) of the federal breakwater will be assigned by the Los Angeles-Long Beach Vessel Traffic Information Service (VTIS). The master, pilot, or person in charge of a vessel must notify the appropriate pilot station (for anchorages inside the federal breakwater) or the VTIS (for anchorages outside the federal breakwater) of their intention to anchor, upon anchoring, and at least fifteen minutes prior to departing an anchorage. All anchorage assignments will be made as described in this part unless modified by the Captain of the Port.

(776) (ii) Radio communications for port entities governing anchorages are as follows: Los Angeles-Long Beach Vessel Traffic Information Service, call sign "LA-Long Beach Traffic", Channel 14 VHF–FM; Los Angeles Port Pilots, Channel 73 VHF–FM; Long Beach Port Pilots, Channel 74 VHF-FM.

(777) (iii) The exact boundary separating the Port of Long Beach from the Port of Los Angeles is published in local Port Tariffs. For purposes of this rule, Long Beach waters are those east, and Los Angeles waters are those west, of the following locations:

(778) (A) Inner Harbor: The Henry Ford (Badger Avenue) Bridge.

(779) (B) Middle Harbor: The Pier 400 Transportation Corridor.

(780) (C) Outer Harbor: The western boundary of Commercial Anchorage B.

(781) (2) *Required approvals, permits and notifications*.

(782) (i)(A) No vessel may anchor in deep draft sub-anchorages B–7, B–9, B–11, D–5, D–6 or D–7 within Los Angeles or Long Beach harbors for more than 48 consecutive hours unless extended anchorage permission is obtained from the Captain of the Port. These sub-anchorages are defined by the following coordinates and dimensions:

(783)

Anchorage	Latitude	Longitude	Radius (yards)
B-7	33°43'52.0"N	118°12'47.9"W	450
B-9	33°43'28.5"N	118°13'10.5"W	500
B-11	33°43'44.5"N	118°12'17"W	450
D-5	33°43'40.5"N	118°10'30"W	450

Anchorage	Latitude	Longitude	Radius (yards)
D-6	33°43'40.5"N	118°9'57.5"W	450
D-7	33°43'40.5"N	118°9'25"W	450

(784) (B) No vessel may anchor anywhere else within Los Angeles or Long Beach harbors for more than 10 consecutive days unless extended anchorage permission is obtained from the Captain of the Port. In determining whether extended anchorage permission will be granted, consideration will be given, but not necessarily limited to: The current and anticipated demands for anchorage space within the harbor, the requested duration, the condition of the vessel, and the reason for the request.

(785) (ii) No vessel while carrying, loading, or unloading division 1.1 or 1.2 materials as defined in 49 CFR 173.50, or Cargoes of Particular Hazard (COPH) as defined in 33 CFR 126.10, or Certain Dangerous Cargoes (CDC) as defined in 33 CFR 160.202, may anchor without first obtaining a permit issued by the Captain of the Port.

(786) (iii) Vessels requiring use of an explosives anchorage should contact the Captain of the Port at least 24 hours prior to the anticipated need for the explosives anchorage to allow for proper activation of that anchorage.

(787) (iv) Except with the prior approval of the Captain of the Port, or, in the case of an emergency, with approval of the Captain of the Port immediately subsequent to anchoring, no commercial vessel greater than 1600 gross tons may anchor in Los Angeles-Long Beach Harbor unless it maintains the capability to get underway within 30 minutes. Any vessel unable to meet this requirement must immediately notify the Captain of the Port and make arrangements for an adequate number of tugs to respond to the vessel within 30 minutes notice.

(788) (v) In anchorages where lightering is authorized, the Captain of the Port must be notified at least 4 hours in advance of a vessel conducting lightering operations (see 33 CFR 156.118).

(789) (3) *Other General Requirements*.

(790) (i) When at anchor, all commercial vessels greater than 1600 gross tons shall, at all times, have a licensed or credentialed deck officer on watch and maintain a continuous radio listening watch unless subject to one of the exemptions in this paragraph. The radio watch must be on CH–13 VHF-FM when anchored inside the federal breakwater, and on CH–14 VHF–FM or on CH–16 VHF–FM when anchored outside the federal breakwater, except for unmanned barges; vessels which have less than 100 gallons of oil or fuel onboard regardless of how the fuel is carried; and other vessels receiving advance approval from the Captain of the Port.

(791) (ii) When sustained wind speeds exceed 40 knots, all anchored commercial vessels greater than 1600 gross tons shall ensure their propulsion plant is placed in immediate standby and a second anchor is made ready to let go. Vessels unable to comply with this requirement must immediately notify the Captain of the Port. In such case, the Captain of the Port may require the vessel to have one or more tugs standing by to render immediate assistance.

(792) (4) *Prohibitions*. Within Los Angeles Harbor, Long Beach Harbor, and the Los Angeles-Long Beach Precautionary Area, except for emergency reasons, or with the prior approval of the Captain of the Port, vessels are prohibited from anchoring outside of designated anchorage areas. In the event a vessel anchors outside a designated anchorage area for emergency reasons, the master, pilot, or person in charge of the vessel shall:

(793) (i) Position the vessel so as to minimize the danger to other vessels and facilities;

(794) (ii) Immediately notify the Captain of the Port by the most expeditious means of the vessel's location and the reason(s) for the emergency anchoring; and

(795) (iii) Move the vessel as soon as the emergency condition prompting anchoring outside a designated area abates, or as soon as ordered to move by the Captain of the Port, whichever occurs sooner.

(796) (5) *Exemption from rules*. The Captain of the Port may, upon request, or whenever he/she deems appropriate, authorize a deviation from any rule in this section.

(797) (b) *The anchorage grounds*. Locations of anchorage grounds are as described in this section. Specific requirements for individual anchorages are contained paragraphs (c) and (d) of this section. All coordinates referenced use datum: NAD 83.

(798) [Reserved]

(799) (2) *Commercial Anchorage B (Long Beach Harbor)*. An area enclosed by a line joining the following coordinates: 33°44'37.0"N., 118°13'00.0"W.; thence south/southeast to 33°44'12.0"N., 118°12'36.2"W.; thence southeast to 33°43'38.2"N., 118°11'36.9"W.; thence southwest to 33°43'26.1"N., 118°11'47.2"W.; thence west to 33°43'26.1"N., 118°12'22.7"W.; thence west/southwest to 33°42'58.9"N., 118°13'53.0"W.; thence north/northwest to 33°43'46.0"N., 118°14'13.6"W.; thence east/northeast to 33°43'54.5"N., 118°13'50.0"W.; thence north to 33°44'22.8"N., 118°13'51.0"W.; thence east/northeast to the beginning point.

(800) (3) *Commercial Anchorage C (Long Beach Harbor)*. An area enclosed by a line joining the following coordinates: 33°44'20.0"N., 118°08'26.2"W.; thence west to 33°44'23.5"N., 118°09'32.6"W.; thence north to 33°44'52.8"N., 118°09'32.2"W.; thence southeast to 33°44'25.2"N., 118°08'26.2"W.; thence south to the beginning point.

(801) (4) *Commercial Anchorage D (Long Beach Harbor)*. An area enclosed by a line beginning near the east end of the Long Beach Breakwater and joining the following coordinates: 33°43'27.2"N.; 118°08'12.6"W.; thence west to 33°43'27.2"N.; 118°10'46.5"W.; thence north to 33°43'51.0"N.; 118°10'46.5"W.; thence northeast to 33°44'18.5"N.; 118°10'27.2"W.; thence east to 33°44'18.5"N.; 118°08'12.6"W.; thence south to the beginning point.

(802) (5) *Commercial Anchorage E (Long Beach Harbor).* An area enclosed by a line joining the following coordinates: 33°44'37.0"N., 118°09'48.5"W.; thence southwest to 33°44'18.5"N., 118°09'56.8"W.; thence west to 33°44'18.5"N., 118°10'27.2"W.; thence northwest to 33°44'27.6"N., 118°10'41.0"W.; thence west/northwest to 33°44'29.0"N., 118°10'57.4"W.; thence north/northwest to 33°45'06.4"N., 118°11'09.5"W.; thence northeast to 33°45'15.2"N., 118°10'46.1"W.; thence southeast to 33°45'11.0"N., 118°10'32.0"W.; thence south to 33°44'52.0"N., 118°10'32.0"W.; thence southeast to the beginning point.

(803) (6) *Commercial Anchorage F (outside of Long Beach Breakwater).* The waters southeast of the Long Beach Breakwater bounded by a line connecting the following coordinates: 33°43'05.1"N., 118°07'59.0"W.; thence west to 33°43'05.1"N., 118°10'36.5"W.; thence south/southeast to 33°38'17.5"N., 118°07'00.0"W.; thence north/northeast to 33°40'23.0"N., 118°06'03.0"W.; and thence north/ northwest to the beginning point.

(804) (7) *Commercial Anchorage G (outside of the Middle Breakwater).* The waters south of the Middle Breakwater bounded by a line connecting the following coordinates: 33°43'05.4"N., 118°11'18.0"W.; thence west to 33°43'05.4"N., 118°12'18.7"W.; thence west/southwest to 33°42'25.9"N., 118°14'19.2"W.; thence southeast to 33°41'40.3"N., 118°13'05.2"W.; thence east/northeast to 33°42'08.8"N., 118°11'36.8"W.; and thence north/northeast to the beginning point.

(805) (8) *General Anchorage N (Los Angeles Harbor).* The waters near Cabrillo Beach shoreward of a line connecting the following coordinates:

(806) 33°42'55.9"N., 118°16'44.4"W.

(807) 33°42'26.8"N., 118°16'33.9"W.

(808) (9) *General Anchorage P (Long Beach Harbor).* The waters within an area beginning at Alamitos Bay West Jetty Light "1" and connecting the following coordinates 33°44'14.5"N., 118°07'19.2"W.; thence northwest to 33°44'20.6"N., 118°07'31.7"W.; thence northwest 33°45'06.5"N., 118°09'34.0"W.; thence along the eastern shoreline of Island White to the lighted marker at 33°45'13.5"N., 118°09'34.0"W.; thence northwest to 33°45'37.1"N., 118°10'38.5"W.; thence north/northwest to 33°45'49.4"N., 118°10'38.8"W.; and thence east/southeast along the Long Beach shoreline and the Alamitos Bay West Jetty to the beginning point.

(809) (10) *General Anchorage Q (Long Beach Harbor/Alamitos Bay/Anaheim Bay).* The waters within an area described as follows: 33°44'36.0"N., 118°08'13.0"W.; thence east/southeast to 33°44'20.6"N., 118°07'31.7"W.; thence along a line described as an arc, radius of 460 meters (approximately 1509 feet) centered on 33°44'12.5"N., 118°07'16.5"W.; to 33°44'04.8"N., 118°07'01.0"W.; thence northwest to 33°44'11.1"N., 118°07'13.0"W.; thence north/northeast to 33°44'24.0"N., 118°07'04.1"W.; thence east/southeast to 33°44'22.5"N., 118°06'57.0"W.; thence along the shoreline of Seal Beach and Anaheim Bay W. Jetty to 33°43'39.1"N., 118°06'06.8"W.; thence west/southwest to 33°43'27.8"N., 118°07'39.9"W.; thence northwest to 33°43'38.4"N., 118°07'48.2"W.; thence west to 33°43'38.4"N., 118°08'12.9"W.; and thence north to the beginning point.

(810) (11) *Explosives Anchorage (Long Beach Harbor).* A circular area with a radius of 1,909 yards (1,745 meters), centered in position 33°43'37.0"N., 118°09' 05.3"W.

(811) (c) *Individual anchorage requirements*:

(812) (1) Table 110.214(c) lists anchorage grounds, identifies the purpose of each anchorage, and contains specific regulations applicable to certain anchorages. Requirements for the explosives anchorage are contained in paragraph (d) of this section.

(813)

TABLE 110.214(c)

Anchorage	General Location	Purpose	Specific Regulations
A	Los Angeles	Commercial	Note a
B	Long Beach	do	Do.
C	do	do	Notes a, g
D	do	Commercial & Naval	Notes a, b, g
E	do	Commercial	Note c
F	Outside	do	Notes c, g
G	do	do	Notes c, d
N	Los Angeles	Small Craft	Note e
P	Long Beach	do	Note f
Q	do	do	Notes c, g

Notes

a. Bunkering and lightering are permitted.

b. West of 118°09′48″ W priority for use of the anchorage will be given to commercial vessels over 244 meters (approximately 800 feet). East of 118°09′48″ W priority for use of the anchorage will be given to Naval and Public vessels, vessels under Department of Defense charter, and vessels requiring use of the explosives anchorage.

c. Bunkering and lightering are prohibited.

d. This anchorage is within a Regulated Navigation Area and additional requirements apply as set forth in 33 CFR 165.1109(e).

e. This anchorage is controlled by the Los Angeles Port Police. Anchoring, mooring and recreational boating activities conforming to applicable City of Los Angeles ordinances and regulations are allowed in this anchorage.

f. This anchorage is controlled by the Long Beach Harbor Master. Anchoring, mooring and recreational boating activities conforming to applicable City of Long Beach ordinances and regulations are allowed in this anchorage.

g. When the explosives anchorage is activated portions of this anchorage lie within the explosives anchorage and the requirements of paragraph (d) of this section apply.

(814) (d) *Explosives Anchorage (Long Beach Harbor).*

(815) (1) Priority for use of this anchorage shall be given to vessels carrying, loading, or unloading division 1.1, 1.2, 1.3 or 1.4 (explosive) materials as defined in 49 CFR 173.50, or Cargoes of Particular Hazard (COPH) as defined in 33 CFR 126.10, or Certain Dangerous Cargoes (CDC) as defined in 33 CFR 160.202.

(816) (2) Vessels requiring the use of this anchorage shall notify the Captain of the Port at least 24 hours in advance of their intentions including the estimated times of arrival, departure, net explosive weight, and whether

the vessel will be loading or unloading. Vessels may not use this anchorage without first obtaining a permit issued by the Captain of the Port.

(817) (3) No vessel containing more than 680 metric tons (approximately 749 tons) of net explosive weight (NEW) may anchor in this anchorage;

(818) (4) Bunkering and lightering operations are permitted in the explosives anchorage, except that vessels engaged in the loading or unloading of explosives shall not simultaneously conduct bunkering or lightering operations.

(819) (5) Each anchored vessels loading, unloading or laden with explosives, must display a red flag of a least 1.2 square meters (approximately 16 square feet) in size by day, and at night the flag must be illuminated by spotlight;

(820) (6) When a vessel displaying the red flag occupies the explosive anchorage, no other vessel may anchor within the Explosives Anchorage.

(821) **Note:** When the explosives anchorage is activated, portions of Anchorage "C", "D", "F" and "Q" are encompassed by the explosives anchorage.

(822)

§110.215 Anaheim Bay Harbor, CA; U.S. Naval Weapons Station, Seal Beach, CA; Naval Explosives Anchorage.

(823) (a) *The anchorage ground*. The waters of Anaheim Bay Harbor between the east side of the Entrance Channel and the East Jetty, and the west side of the Entrance Channel and the West Jetty as outlined in the following two sections:

(824) (1) East Side:

(825) 33°44'03.0"N., 118°05'35.0"W.

(826) 33°43'53.0"N., 118°05'15.0"W.

(827) 33°43'49.0"N., 118°05'18.0"W.

(828) 33°43'36.5"N., 118°05'56.0"W.

(829) 33°43'37.0"N., 118°05'57.0"W.

(830) 33°44'03.0"N., 118°05'35.0"W.

(831) (2) West Side:

(832) 33°44'05.0"N., 118°05'40.0"W.

(833) 33°44'06.0"N., 118°05'56.5"W.

(834) 33°44'01.0"N., 118°06'01.0"W.

(835) 33°43'40.5"N., 118°06'03.0"W.

(836) 33°43'39.5"N., 118°06'02.0"W.

(837) 33°44'05.0"N., 118°05'40.0"W.

(838) (b) *The regulations*. (1) This area is reserved for use of naval vessels carrying or transferring ammunition or explosives under standard military restrictions as established by the Safety Manual, Armed Service Explosives Board.

(839) (2) No pleasure or commercial craft shall navigate or anchor within this area at any time without first obtaining permission from the Commanding Officer, Naval Weapons Station, Seal Beach, California. This officer will extend full cooperation relating to public use of the area and will fully consider every reasonable request for the passage of small craft in light of requirements for national security and safety of persons and property.

(840) (3) Nothing in this section shall be construed as relieving the owner or operator of any vessel from the regulations contained in §334.930 of Title 33, covering navigation in Anaheim Bay Harbor.

(841) (4) The regulations in this section shall be administered by the Commanding Officer U.S. Naval Weapons Station, Seal Beach, California and by such agencies as he may designate, and enforced by the Captain of the Port, Los Angeles-Long Beach, California.

(842)

§110.216 Pacific Ocean at Santa Catalina Island, CA.

(843) (a) *The anchorage grounds*–(1) *Descanso Bay*. Shoreward of a line connecting the promontories known as White Rock and Casino Point.

(844) (2) *Isthmus Cove*. All the waters bounded by a line connecting the following coordinates, beginning at 33°27'12"N., 118°30'05"W. (the promontory known as Lion Head); thence southeast to 33°26'55.5"N., 118°28'44"W.; thence west-southwest to 33°26'50"N., 118°29'08"W.; thence southwest to 33°26'39"N., 118°29'19"W.; thence along the shoreline returning to the point of origin, excluding the following-described non-anchorage area: an area 300 feet wide (170 feet west and 130 feet east of the centerline of the Catalina Island Steamship Line pier), extending 1600 feet from the foot of the pier, and an area 150 feet seaward of the shoreline extending approximately 1500 feet east and 1500 feet northwest of the centerline of said pier.

(845) (3) *Avalon Bay*. (i) *Anchorage A*. The waters within an area described as follows: A circle of 1350 feet radius centered at 33°20'59.0"N., 118°18'56.2"W.

(846) (ii) *Anchorage B*. The waters within an area described as follows: A circle of 1350 feet radius centered at 33°20'38.3"N., 118°18'35.8"W.

(847) (iii) *Anchorage C*. The waters within an area described as follows: A circle of 1350 feet radius centered at 33°21'21.0"N., 118°19'16.7"W. Datum: NAD 83

(848) (b) *The regulations*. (1) The Descanso Bay anchorage is reserved for yachts and other small craft. Floats or buoys for marking anchors or moorings in place will be allowed in this area. Fixed mooring piles or stakes are prohibited.

(849) (2) The Isthmus Cove anchorage shall be available for anchorage of all types of craft. Temporary floats or buoys for marking anchors or moorings in place will be allowed in this area. Fixed mooring piles or stakes are prohibited.

(850) (3) The non-anchorage area described in paragraph (a)(2) of this section shall be used only by commercial vessels. Commercial vessels of 15 feet draft or over may anchor in this area seaward of the Catalina Island Steamship Line pier during hours between sunrise and sunset. The use of this area for anchorage is forbidden to all other craft at all times. Fixed mooring piles or stakes

and floats or buoys for marking anchors or moorings in place are prohibited.

(851) (4) The instructions of the Captain of the Port requiring vessels to anchor bow and stern, or with two bow anchors, or requiring shifting the anchorage of any vessel within the anchorage grounds for the common safety or convenience, or for otherwise enforcing the regulations in this section, shall be promptly complied with by owners, masters, and persons in charge of vessels.

(852) (5) Nothing in this section shall be construed as relieving the owner or person in charge of any vessels or plant from the penalties of law for obstructing navigation or for obstructing or interfering with range lights, or for not complying with the navigation laws in regard to lights, fog signals, or for otherwise violating law.

(853) (6) The Avalon Bay anchorage is reserved for large passenger vessels of over 1600 gross tons, unless otherwise authorized by the Captain of the Port Los Angeles-Long Beach.

(854)

§110.218 Pacific Ocean at San Clemente Island, CA; in vicinity of Wilson Cove.

(855) (a) *The anchorage grounds*. Shoreward of a line beginning at a point on the beach bearing 153° true, 1,400 yards, from Wilson Cove Light; thence 062° true, 0.67 nautical mile, thence 332° true, 1.63 nautical miles; thence 241°31' true to the shore line.

(856) (b) *The regulations*. (1) This area is reserved exclusively for anchorage of United State Government vessels or vessels temporarily operating under Government direction, and no vessel, except in an emergency, shall anchor in the area without first obtaining permission from the Commandant, Eleventh Naval District, or the Senior Naval Officer present who shall in turn notify the Commandant promptly.

(857) (2) No vessel shall anchor in such a manner as to unreasonably obstruct the approach to the wharf.

(858)

§110.220 Pacific Ocean at San Nicolas Island, CA; restricted anchorage areas.

(859) (a) *The restricted area*. All waters within one-quarter nautical mile from the shoreline or manmade structures including mooring buoys, piers and jetties on the easterly end of San Nicolas Island between a point on the northeast shore at latitude 33°14'32"N, longitude 119°26'41"W and a point on the southeast shore at latitude 33°13'08"N, longitude 119°27'06"W.

(860) (b) *The regulations*. (1) Except in an emergency, no vessel shall enter into or anchor in this restricted area without permission from the Commanding Officer, Naval Base Ventura County. Cargo and supply vessels or barges destined for San Nicolas Island may anchor in the area for unloading or loading. (2) Each person in a restricted anchorage shall obey the order or direction of the Commanding Officer, Naval Base Ventura County, Coast Guard Eleventh District Commander, or Coast Guard Captain of the Port, Los Angeles-Long Beach, when issued to carry out this section.

(861) (c) *Enforcement*. The Coast Guard may be assisted in enforcing this rule by other Federal, state, or local agencies.

(862)

§110.222 Pacific Ocean at Santa Barbara Island, CA.

(863) (a) *The anchorage grounds*. Shoreward of a line beginning at the Santa Barbara Island Light on the northeast end of the island and bearing 23° true a distance of 1.515 nautical miles seaward from the beach; thence 140°30' true, 2.54 nautical miles; thence 212°30' true, 2.30 nautical miles; thence 296°30' true, 0.96 nautical mile; and thence 325° true to the beach.

(864) (b) *The regulations*. The anchorage shall be available for anchorage of all types of craft. Temporary floats or buoys for marking anchors in place will be permitted in this area.

(865)

§110.224 San Francisco Bay, San Pablo Bay, Carquinez Strait, Suisun Bay, Sacramento River, San Joaquin River, and connecting waters, CA.

(866) (a) *General Regulations*.

(867) (1) Within the navigable waters of San Francisco Bay, San Pablo Bay, Carquinez Strait, Suisun Bay, New York Slough, San Joaquin River Deep Water Channel, the Stockton Turning Basin, the Sacramento River Deep Water Ship Channel between Suisun Bay and the east end of the West Sacramento Turning Basin, and connecting waters, anchoring is prohibited outside of designated anchorages except when required for safety or with the written permission of the Captain of the Port. Each vessel anchoring outside an established anchorage area shall immediately notify the Captain of the Port of her position and reason for anchoring.

(868) (2) No vessel may permanently moor in areas adjacent to the San Joaquin River Deep Water Channel except with the written permission of the Captain of the Port.

(869) (3) Each vessel anchoring for safety reasons in the San Joaquin River Deep Water Channel, the Sacramento River Deep Water Ship Channel, or the Stockton or West Sacramento Turning Basins shall be positioned as near to the edge of the channel or turning basin as possible so as not to interfere with navigation, or obstruct the approach to any pier, wharf, slip, or boat harbor and shall move as soon as the reason for anchoring no longer exists or when notified to move by the Captain of the Port.

(870) (4) No vessel may anchor within a tunnel, cable, or pipeline area shown on a Government chart.

(871) (5) No vessel may moor, anchor, or tie up to any pier, wharf, or other vessel in such a manner as to extend into an adjacent channel or fairway.

(872) (6) No vessel in such a condition that it is likely to sink or otherwise become a menace or obstruction to navigation or anchorage of other vessels may occupy an anchorage, except when unforeseen circumstances create

conditions of imminent peril to personnel and then only for such period as may be authorized by the Captain of the Port.

(873) (7) Each vessel carrying explosives shall only anchor in an explosives anchorage except as authorized by paragraph (a)(1) or (a)(17) of this section.

(874) (8) No vessel other than a vessel under Federal supervision may go alongside or in any manner moor to any Government-owned vessel, mooring buoy, or pontoon boom, their anchor cables, or any of their appendages. No vessel other than a vessel under Federal supervision may obstruct or interfere in any manner with the mooring, unmooring, or servicing of vessels owned by the United States.

(875) (9) The Captain of the Port may require any vessel in a designated anchorage area to moor with two or more anchors.

(876) (10) Each vessel that will not have sufficient personnel on board to weigh anchor at any time shall anchor with two anchors with mooring swivel, unless otherwise authorized by the Captain of the Port.

(877) (11) Deep-draft vessels shall take precedence over vessels of lighter draft in the deeper portions of all anchorages. Light-draft barges and vessels shall anchor away from the deeper portions of the anchorage so as not to interfere with the anchoring of deep-draft vessels. Should circumstances warrant, the Captain of the Port may require lighter draft vessels to move to provide safe anchorage, particularly in Anchorages 7 and 9, for deep-draft vessels.

(878) (12) Barges towed in tandem to any anchorage shall nest together when anchoring.

(879) (13) Each vessel that is notified by the Captain of the Port or his authorized representative to shift her position shall promptly shift her position.

(880) (14) No person may use these anchorages for any purpose other than the purpose stated in these anchorage regulations.

(881) (15) Where these regulations require that a vessel notify the Captain of the Port, the operator of the vessel shall transmit such report to the San Francisco Vessel Traffic Service.

(882) **NOTE:** Vessel Traffic Service guards VHF-FM Channel 13 (156.65 MHz) and Channel 14 (156.70 MHz).

(883) (16) Nothing in this section may be construed as relieving any vessel or the owner or person in charge of any vessel from the penalties of law for obstructing or interfering with range lights or for not complying with the laws relating to lights, day signals, and fog signals and other navigation laws and regulations.

(884) (17) The District Engineer, Corps of Engineers, may issue written permission for anchoring a single barge carrying explosives in quantities considered by the District Engineer as safe and necessary in the vicinity of work being done directly under the District Engineer supervision or under a Department of the Army permit. When issuing such a permit, the District Engineer shall prescribe the conditions under which the explosives must be stored and handled and shall furnish a copy of the permit and a copy of the rules and regulations for storing and handling to the Captain of the Port.

(885) (18) No vessel may anchor in a "dead ship" status (propulsion or control unavailable for normal operations) at any anchorage other than in Anchorage 9 as specified in Table 110.224(d)(1) without prior approval of the Captain of the Port.

(886) (b) *Naval anchorages*. In addition to the general regulations in paragraph (a) of this section, the following regulations apply to each naval anchorage described in this section.

(887) (1) Naval anchorages are intended for public vessels of the United States, but may be used by other vessels when not required for use by public vessels.

(888) (2) Other vessels using a naval anchorage shall promptly notify the Captain of the Port upon anchoring and upon departure and shall be prepared to move within one hour upon notice should the anchorage be required for public vessels.

(889) (c) *Explosive anchorages*. In addition to the general regulations in paragraph (a) of this section, the following regulations apply to each explosives anchorage described in this section.

(890) (1) Explosives anchorages and, where established, surrounding forbidden anchorage zones, are temporarily activated as needed by the Captain of the Port. When not activated, explosives anchorages and surrounding forbidden anchorage zones become part of the general anchorage which encompasses them or, if not located within the boundaries of a general anchorage, become available for general navigation.

(891) (2) Notice of activation and deactivation of explosives anchorages will be disseminated by Coast Guard Broadcast Notice to Mariners.

(892) (3) Each vessel which anchors in an explosives anchorage or surrounding forbidden anchorage zone while such anchorage is not activated shall be prepared to move within one hour if the anchorage is activated.

(893) (4) Unless otherwise authorized by the Captain of the Port:

(894) (i) No vessel may anchor in an activated explosives anchorage except vessels loaded with, loading, or unloading explosives.

(895) (ii) No vessel may enter or remain in an activated explosives anchorage except (A) vessels loaded with, loading or unloading explosives, (B) lighters or barges delivering cargo to or from such vessels, or (c) a tug authorized by paragraph (c)(7)(iii) of this section.

(896) (iii) No vessel carrying explosives or on which explosives are to be loaded may enter or remain in an activated explosives anchorage without written permission from the Captain of the Port. Such a permit must be obtained before entering the anchorage and may be revoked at any time.

(897) (iv) No vessel may anchor in the forbidden anchorage zone surrounding an activated explosives anchorage.

(898) (5) Each vessel loaded with, loading, or unloading explosives, while within an explosives anchorage, shall display by day at her masthead, or at least 10 feet above the upper deck if the vessel has no mast, a red flag at least 16 square feet in area.

(899) (6) Each passing vessel shall reduce speed as necessary so as to insure that its wake does not interfere with cargo transfer operations aboard any vessel displaying a red flag in an explosives anchorage.

(900) (7) The Captain of the Port may:

(901) (i) Issue permission to any vessel carrying flammable solids, oxidizing materials, corrosive liquids, flammable liquids, compressed gases, or poisonous substances to occupy a berth in an activated explosives anchorage. Such a permit must be obtained before entering the anchorage and may be revoked at any time.

(902) (ii) Require any person having business on board a vessel which is loaded with, loading, or unloading explosives to have a document that is acceptable to the Coast Guard for identification purposes and to show that document to the Captain of the Port.

(903) (iii) Require a non-self-propelled vessel, or a self-propelled vessel that is unable to maneuver under its own power, that occupies an activated explosives anchorage to be attended by a tug.

(904) (d) *Anchorage Grounds*.

(905) (1) Table 110.224(d)(1) lists anchorage grounds, identifies the purpose of each anchorage, and contains specific regulations applicable to certain anchorages.

(906)

TABLE 110.224(d)(1)

Anchorage Number	General Location	Purpose	Specific Regulations
4	San Francisco Bay	General	Notes a, b.
5	.....do	.....do	Do.
6	.....do	.....do	Note a.
7	.....do	.....do	Notes a, b, c, d, e.
8	.....do	.....do	Notes a, b, c.
8A	.....do	.....do	Notes a, b, c, d, e, j, n.
9	.....do	.....do	Notes a, b, m.
10	.....do	Naval	Note a.
12	.....do	Explosives	Notes a, f.
13	.....do	.....do	Notes a, e, g.
14	.....do	.....do	Notes a, f, h.
18	San Pablo Bay	General	
19	.....do	.....do	Note b.
20	.....do	.....do	
21	.....do	Naval	
22	Carquinez Strait	General	
23	Benicia	General	Notes c, d, e, l.
24	Carquinez Strait	General	Note j.
26	Suisun Bay	.....do	Note k.
27	.....do	.....do	
28	San Joaquin River	.....do	
30	.....do	Explosives	

Notes

a. When sustained winds are in excess of 25 knots each vessel greater than 300 gross tons using this anchorage shall maintain a continuous radio watch on VHF channel 13 (156.65 MHz) and VHF channel 14 (156.70 MHz). This radio watch must be maintained by a person who fluently speaks the English language.

b. Each vessel using this anchorage may not project into adjacent channels or fairways.

c. This anchorage is primarily for use by vessels requiring a temporary anchorage waiting to proceed to pier facilities or other anchorage grounds. This anchorage may not be used by vessels for the purpose of loading any dangerous cargoes or combustible liquids unless authorized by the Captain of the Port.

d. Each vessel using this anchorage may not remain for more than 12 hours unless authorized by the Captain of the Port.

e. Each vessel using this anchorage shall be prepared to move within 1 hour upon notification by the Captain of the Port.

f. The maximum total quantity of explosives that may be on board a vessel using this anchorage shall be limited to 3,000 tons unless otherwise authorized with the written permission of the Captain of the Port.

g. The maximum total quantity of explosives that may be on board a vessel using this anchorage shall be limited to 50 tons except that, with the written permission of the Captain of the Port, each vessel in transit, loaded with explosives in excess of 50 tons, may anchor temporarily in this anchorage provided that the hatches to the holds containing explosives are not opened.

h. Each vessel using this anchorage will be assigned a berth by the Captain of the Port on the basis of the maximum quantity of explosives that will be on board the vessel.

i. [Reserved]

j. Each vessel using this anchorage shall promptly notify the Captain of the Port, upon anchoring and upon departure.

k. See §162.270 of this title establishing restricted areas in the vicinity of the Maritime Administration Reserve Fleet.

l. Vessels using this anchorage must exceed 15 feet draft, have engines on standby, and have a pilot on board.

m. Any vessel anchoring in a "dead-ship" status shall have one assist tug of adequate bollard pull on standby and immediately available (maximum of 15 minute response time) to provide emergency maneuvering. When the sustained winds are 20 knots or greater, or when the wind gusts are 25 knots or greater, the tug must be alongside.

n. This temporary anchorage will be activated by VTS San Francisco when Anchorages 8 and 9 are at capacity and additional anchorage capacity in the vicinity of Alameda is required. VTS will notify a vessel that this temporary anchorage is activated and available for use when Anchorages 8 and 9 are full, and a vessel requests permission from VTS to anchor in Anchorage 8 or 9.

(907) (2) The geographic boundaries of each anchorage are contained in paragraph (e) of this section.

(908) (e) *Boundaries*—(1) *Anchorage No. 4.* Bounded by the west shore of San Francisco Bay and the following lines: Beginning on the shore southwest of Point San Quentin at 37°56'28"N., 122°28'54"W.; thence east-southeasterly to 37°55'55"N., 122°26'49"W.; thence southwesterly to 37°54'13"N., 122°27'24"W.; thence southeasterly to the shore of Tiburon Peninsula at Point Chauncey at 37°53'40.5"N., 122°26'55"W. When Explosives Anchorage No. 13 is activated by the Captain of the Port, it and the forbidden anchorage zone surrounding it are excluded from Anchorage No. 4.

(909) (2) *Anchorage No. 5, Southampton Shoal*. In San Francisco Bay at Southampton Shoal bounded by a line connecting the following coordinates:

(910) 37°55'48"N., 122°25'52"W; to

(911) 37°55'50"N., 122°26'32"W; to
(912) 37°54'49"N., 122°26'39"W; to
(913) 37°54'03"N., 122°26'06"W; to
(914) 37°53'25"N., 122°25'30"W; to
(915) 37°53'23"N., 122°25'09"W; to
(916) 37°55'19"N., 122°25'33"W; to
(917) 37°55'42"N., 122°25'45"W; thence back to
(918) 37°55'48"N., 122°25'52"W.

(919) (3) *Anchorage No. 6.* Bounded by the east shore of San Francisco Bay and the following lines: Beginning at the shore of the southernmost extremity of Point Isabel at 37°53'46"N., 122°19'19"W.; thence westerly along the north shore of Brooks Island to the jetty extending westerly therefrom; thence westerly along the jetty to its bayward end at 37°54'13"N., 122°23'27"W.; thence south-southeasterly to 37°49'53"N., 122°21'39"W.; thence southeasterly to 37°49'32.5"N., 122°21'20.5"W.; thence easterly to 37°49.34"N., 122°20'13"W.; thence east-southeasterly to 37°49'30"N., 122°19'45.5"W.; thence east-northeasterly to the shore at Emeryville at 37°50'04"N., 122°17'41"W.; excluding from this area, however, the channel to Berkeley Marina delineated by lines joining the following points:

(920) 37°52'08"N., 122°19'07"W.
(921) 37°52'03"N., 122°19'17.5"W.
(922) 37°52'00"N., 122°19'15.5"W.
(923) 37°51'01"N., 122°22'07"W.
(924) 37°50'43"N., 122°22'00"W.
(925) 37°50'53"N., 122°21'32"W.
(926) 37°51'47"N., 122°18'59"W.

(927) (4) *Anchorage No. 7,Treasure Island*. In San Francisco Bay at Treasure Island bounded a line connecting the following coordinates:

(928) 37°49'36"N., 122°22'40"W; to
(929) 37°50'00"N., 122°22'57"W; to
(930) 37°50'00"N., 122°23'44"W; to
(931) 37°49'22.5"N., 122°23'44"W; to
(932) 37°48'40.5"N., 122°22'38"W; to
(933) 37°49'00.0"N., 122°22'16"W; thence along the shore to
(934) 37°49'36"N., 122°22'40"W.

(935) (5) *Anchorage No. 8*. In San Francisco Bay bounded by the west shore of Alameda Island and the following lines: Beginning at 37°47'52.0"N., 122°19'58.0"W.; thence west-northwesterly to 37°48'02.5"N., 122°21'01.5"W.; thence west-southwesterly to 37°47'51.5"N., 122°21'40.0"W.; thence south-southwesterly to 37°47'35.5"N., 122°21'50.0"W.; thence south-southeasterly to 37°46'40.0"N., 122°21'23.0"W.; thence easterly to 37°46'36.5"N., 122°19'52.0"W.; thence northerly to shore at 37°46'53.0"N., 122°19'53.5"W. (NAD 83).

(936) (6) *Anchorage No. 8A*. In San Francisco Bay bounded by the following lines: Beginning at 37°47'35"N., 122°21'50"W.; thence south-southwesterly to 37°47'07"N., 122°22'09"W.; thence south-southeasterly to 37°46'30"N., 122°21'57"W.; thence easterly along the northern border of Anchorage 9 to 37°46'26"N., 122°20'42"W.; thence northerly to 37°46'38"N., 122°20'42"W.; thence westerly along the southern border of Anchorage 8 to 37°46'41"N., 122°21'23"W.; thence northwesterly along the southwestern border of Anchorage 8 back to the beginning point (NAD 83).

(937) (7) *Anchorage No. 9.* In San Francisco Bay bounded on the east by the eastern shore of San Francisco Bay and on the north by the southern shore of Alameda Island and a line beginning at 37°46'21.5"N., 122°19'07.0"W.; thence westerly to 37°46'30.0"N., 122°21'56.0"W.; thence south-south easterly to 37°41'45.0"N., 122°20'22.0"W. (San Bruno Channel Light 1); thence south-southeasterly to 37°38'38.5"N., 122°18'48.5 "W. (San Bruno Channel Light 5); thence southeasterly to 37°36'05.0"N., 122°14'18.0"W.; thence northeasterly to shore at 37°37'38.5"N., 122°09'06.5"W. (NAD 83).

(938) (8) *Anchorage No. 10.* In San Francisco Bay bounded by the east shore of Sausalito and the following lines: Beginning on the shore of Sausalito at 37°51'20"N., 122°28'38"W.; thence southeasterly to 37°50'57.5"N., 122°27'57"W.; thence southwesterly to the shore of Sausalito at 37°50'36"N., 122°28'34"W.

(939) (9) *Anchorage No. 12*. In San Francisco Bay east of the city of San Francisco Bay east of the city of San Francisco a circular area having a radius of 500 yards centered at 37°44'32.5"N., 122°20'27.5"W. A 667-yard-wide forbidden anchorage zone surrounds this anchorage.

(940) (10) *Anchorage No. 13*. In San Francisco Bay east of the Tiburon Peninsula a circular area having a radius of 333 yards centered at 37°55'26"N., 122°27'27"W. A 667-yard-wide forbidden anchorage zone surrounds this anchorage except where such zone would extend beyond the limits of Anchorage No. 4.

(941) **NOTE:** see §110.224(e)(2) for a description of Anchorage No. 4.

(942) (11) *Anchorage No. 14*. In San Francisco Bay east of Hunters Point an area 1,000 yards wide and 2,760 yards long, the end boundaries of which are semicircles, with a radii of 500 yards and center, respectively at 37°42'37"N., 122°19'48"W. and 37°43'29"N., 122°19'48"W. (NAD 83); and the side boundaries of which are parallel tangents joining the semicircles. A forbidden anchorage zone extends 667 yards out from the perimeter on each side.

(943) (12) *Anchorage No. 18*. In San Pablo Bay bounded by the west shore of San Pablo Bay and the following lines: Beginning at the shore at Point San Pedro at 37°59'16"N., 122°26'47"W.; thence easterly to 37°59'16"N., 122°26'26"W.; thence northerly to 38°03'46"N., 122°25'52.5"W.; thence northwesterly to the shore south of the entrance to Novato Creek at 38°05'13.5"N., 122°29'04"W.; excluding from this area, however, the channel to Hamilton Field and the extension of this channel easterly to the boundary of the anchorage, and the pipeline area therein.

(944) (13) *Anchorage No. 19*. In San Pablo Bay bounded by the northeast shore of San Pablo Bay and the following lines: Beginning at the shore of Tubbs

Island at 38°07'39"N., 122°25'18"W.; thence southerly to 38°00'36"N., 122°25'20"W.; thence northeasterly to 38°03'13"N., 122°19'46"W.; thence east-northeasterly to 38°03'37"N., 122°17'13"W.; thence northerly to the long dike extending southwesterly from Mare Island at 38°03'52.5"N., 122°17'10"W.; thence along the long dike to the shore at Mare Island.

(945) (14) *Anchorage No. 20*. In San Pablo Bay bounded by the southeast shore of San Pablo Bay and the following lines: Beginning at the northeast corner of Parr Terminal No. 4 at Point San Pablo at 37°57'59"N., 122°25'35"W.; thence northeasterly to 38°01'27.5"W., 122°21'33"W.; thence east-northeasterly to the Union Oil Co. pier at Oleum at 38°03'18"N., 122°15'37"W.; and thence along this pier to the shore.

(946) (15) *Anchorage No. 21*. In San Pablo Bay south of Mare Island a rectangular area beginning at 38°03'56"N., 122°15'56"W.; thence easterly to 38°04'02"N., 122°15'20"W.; thence southerly to 38°03'48"N., 122°15'16"W.; thence westerly to 38°03'42"N., 122°15'52"W.; thence northerly to the point of beginning.

(947) (16) *Anchorage No. 22,* Carquinez Strait. In Carquinez Strait an area bounded by a line connecting the following coordinates:

(948) 38°02'36.8"N., 122°09'59"W.; to

(949) 38°02'06.6"N., 122°09'46.7"W.; to

(950) 38°01'53.8"N., 122°09'00"W.; to

(951) 38°02'33.9"N., 122°09'00"W.; thence back to

(952) 38°02'36.8"N., 122°09'59"W.

(953) (17) *Anchorage No. 23, Benicia*. In Carquinez Strait an area bounded by a line connecting the following coordinates:

(954) 38°02'33.9"N., 122°09'00"W.; to

(955) 38°01'53.8"N., 122°09'00"W.; to

(956) 38°01'57.4"N., 122°08'19.3"W.; to

(957) 38°02'33.0"N., 122°08'18.6"W.; thence back to

(958) 38°02'33.9"N., 122°09'00"W.

(959) (18) *Anchorage No. 24*. Bounded by the north shore of Carquinez Strait and the following points:

(960) Beginning on the shore at Dillon Point at

(961) 38°03'44"N., 122°11'34"W.; thence southeasterly to

(962) 38°03'21"N., 122°10'43"W.; thence southeasterly to

(963) 38°02'36"N., 122°10'03"W. (Carquinez Strait Light 23); thence to the shore at the Benicia City Wharf at

(964) 38°02'40"N., 122°09'55"W. (NAD 83).

(965) (19) *Anchorage No. 26*. On the west side of Suisun Bay, adjacent to and northeast of the city of Benicia within the following boundaries: Beginning on the shore northeast of Army Point at 38°02'54"N., 122°07'37"W.; thence south-southeasterly along the Southern Pacific bridge to 38°02'38"N., 122°07'24"W.; thence easterly to 38°02'42"N., 122°07'07.5"W.; thence northeasterly to 38°05'42"N., 122°04'06"W.; thence northwesterly to the shore at 38°05'58"N., 122°04'28"W.; thence along the shore to the point of beginning.

(966) (20) *Anchorage No. 27*. In the northeast portion of Suisun Bay bounded by the north shore and the following lines: Beginning on the shore of Grizzly Island at 38°08'13"N., 122°02'42.5"W.; thence southerly to tripod at Preston Point on Roe Island at 38°04'16"N., 122°02'42"W.; thence along the south shore of Roe Island to 38°04'05"N., 122°01'35"W; thence east-southeasterly to 38°03'42.5"N., 121°58'54"W.; thence easterly to the shore of Chipps Island at 38°03'42.5"N., 121°55'05"W.

(967) (21) *Anchorage No. 28*. The area bounded on the east by the shore of Lower Sherman Island and the following lines: Beginning at Point Sacramento on Lower Sherman Island at 38°03'45"N., 121°50'17.5"W.; thence southwesterly to 38°03'37.5"N., 121°50'31"W.; thence south-southeasterly to 38°02'11"N., 121°49'58"W.; thence to the shore of Lower Sherman Island at 38°02'23"N., 121°49'49"W.

(968) (22) *Anchorage No. 30*. The portion of the Old San Joaquin River Channel bounded on the west by the shore of Mandeville Point and the following lines: Beginning on the shore of Mandeville Point at 38°04'01"N., 121°32'05"W.; thence northeasterly to 38°04'07.5"N., 121°31'58"W.; thence southeasterly to 38°03'47"N., 121°31'42.5"W.; thence westerly to the shore of Mandeville Point at 38°03'47.5"N., 121°31'56"W.

(969)

Part 117–Drawbridge Operation Regulations

(970)

Subpart A–General Requirements

(971)

§117.1 Purpose.

(972) (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.

(973) (b) Subpart A contains the general operation requirements that apply to all drawbridges.

(974) (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.

(975)

§117.4 Definitions.

(976) The following definitions apply to this part:

(977) *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.

(978) *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.

(979) *Deviation* means a District Commander's action authorizing a drawbridge owner to temporarily not comply with the drawbridge opening requirements in this part.

(980) *Drawbridge* means a bridge with an operational span that is intended to be opened for the passage of waterway traffic.

(981) *Drawspan* means the operational span of a drawbridge.

(982) *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.

(983) *Nonstructural* means that the item is not rigidly fixed to the vessel and can be relocated or altered.

(984) *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.

(985) *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.

(986) *Remotely operated drawbridge* means a drawbridge that is operated by remote control from a location away from the drawbridge.

(987) *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.

(988) *Untended* means that there is no drawtender at the drawbridge.

(989)

§117.5 When the drawbridge must open.

(990) 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.

(991)

§117.7 General requirements of drawbridge owners.

(992) 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:

(993) (a) Provide the necessary drawtender(s) for the safe and prompt opening of the drawbridge.

(994) (b) Maintain the working machinery of the drawbridge in good operating condition.

(995) (c) Cycle the drawspan(s) periodically to ensure operation of the drawbridge.

(996) (d) Ensure that the drawbridge operates in accordance with the requirements of this part.

(997) (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.

(998)

§117.8 Permanent changes to drawbridge operation.

(999) (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.

(1000) (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.

(1001) (c) If the District Commander decides that a change may be needed, he or she will begin a rulemaking to implement the change.

(1002)

§117.9 Delaying opening of a draw.

(1003) No person shall unreasonably delay the opening of a draw after the signals required by §117.15 have been given.

(1004) **NOTE:** 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.

(1005)

§117.11 Unnecessary opening of the draw.

(1006) No vessel owner or operator shall –

(1007) (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 safely pass under the drawbridge in the closed position; or

(1008) (b) Signal a drawbridge to open for any purpose other than to pass through the drawbridge opening.

(1009)

§117.15 Signals.

(1010) (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.

(1011) (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.

(1012) (3) Any of the means of signaling described in this subpart sufficient to alert the party being signaled may be used.

(1013) (b) *Sound signals*. (1) Sound signals shall be made by whistle, horn, megaphone, hailer, or other device capable of producing the described signals loud enough to be heard by the drawtender.

(1014) (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.

(1015) (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 authorized 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.

(1016) (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.

(1017) (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.

(1018) (c) *Visual signals*. (1) The visual signal to request the opening of a draw is–

(1019) (i) A white flag raised and lowered vertically; or

(1020) (ii) A white, amber, or green light raised and lowered vertically.

(1021) (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–

(1022) (i) A white flag raised and lowered vertically;

(1023) (ii) A white, amber, or green light raised and lowered vertically, or

(1024) (iii) A fixed or flashing white, amber, or green light or lights.

(1025) (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–

(1026) (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

(1027) (ii) A fixed or flashing red light or lights given not more than 30 seconds after the vessel's opening signal.

(1028) (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.

(1029) (d) Radiotelephone communications. (1) Radiotelephones may be used to communicate the same information provided by sound and visual signals.

(1030) (2) The vessel and the drawtender shall monitor the frequency used until the vessel has cleared the draw.

(1031) (3) When radiotelephone contact cannot be initiated or maintained, sound or visual signals under this section shall be used.

(1032)

§117.17 Signaling for contiguous drawbridges.

(1033) 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.

(1034)

§117.19 Signaling when two or more vessels are approaching a drawbridge.

(1035) 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.

(1036)

§117.21 Signaling for an opened drawbridge.

(1037) 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.

(1038)

§117.23 Installation of radiotelephones.

(1039) (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.

(1040) (b) The District Commander gives written notice of the proposed requirement to the bridge owner.

(1041) (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.

(1042) (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.

(1043)

§117.24 Radiotelephone installation identification.

(1044) (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.

(1045) (b) The sign shall give notice of the radiotelephone and its calling and working channels–

(1046) (1) In plain language; or

(1047) (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.

(1048)

§117.31 Drawbridge operations for emergency vehicles and emergency vessels.

(1049) (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.

(1050) (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:

(1051) (1) Federal, State, and local government vessels used for public safety;

(1052) (2) vessels in distress where a delay would endanger life or property;

(1053) (3) commercial vessels engaged in rescue or emergency salvage operations; and

(1054) (4) vessels seeking shelter from severe weather.

(1055)

§117.33 Closure of draw for natural disasters or civil disorders.

(1056) 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.

(1057)

§117.35 Temporary change to a drawbridge operating schedule.

(1058) (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**.

(1059) (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.

(1060) (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.

(1061) (2) The request must describe the reason for the deviation and the dates and times scheduled for the start and end of the change.

(1062) (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.

(1063) (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.

(1064) (e) The drawbridge must return to its regular operating schedule immediately at the end of the designated time period.

(1065) (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.

(1066) (g) The District Commander will also announce the change to the operating schedule in the Local Notice to Mariners and other appropriate local media.

(1067)

§117.36 Closure of drawbridge for emergency repair.

(1068) (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.

(1069) (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.

(1070) (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.

(1071)

§117.39 Authorized closure of drawbridge due to infrequent requests for openings.

(1072) (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.

(1073) (b) The District Commander may:

(1074) (1) Authorize the closure of the drawbridge;

(1075) (2) Set out any conditions in addition to the requirement in paragraph (d): and

(1076) (3) Revoke an authorization and order the drawbridge returned to operation when necessary.

(1077) (c) All drawbridges authorized to remain closed to navigation, under this section, must be maintained in operable condition.

(1078) (d) Authorization under this section does not:

(1079) (1) Authorize physical changes to the drawbridge structure, or

(1080) (2) Authorize removal of the operating machinery.

(1081) (e) Drawbridges authorized under this section to remain closed to navigation and to be untended are identified in subpart B of this part.

(1082)

§117.40 Advance notice for drawbridge opening.

(1083) (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.

(1084) (b) If the request is approved, a description of the advanced notice for the drawbridge will be added to subpart B of this part.

(1085)

§117.41 Maintaining drawbridges in the fully open position.

(1086) (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.

(1087) (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:

(1088) (1) Special operating requirements are established in subpart B of this part for that drawbridge; or

(1089) (2) The drawbridge is remotely operated or automated.

(1090)

§117.42 Remotely operated and automated drawbridges.

(1091) (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.

(1092) (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.

(1093)

§117.47 Clearance gauges.

(1094) (a) Clearance gauges 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.

(1095) (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).

(1096) **NOTE:** Clearance gauge requirements, if any, for drawbridges other than those referred to in this section are listed in Subpart B under the appropriate bridge.

(1097)

§117.49 Process of violations.

(1098) (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.

(1099) (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**).

(1100)

Subpart B–Specific Requirements

(1101)

§117.51 General.

(1102) 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.

(1103)

§117.55 Posting of requirements.

(1104) (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 of this part or §§117.51 through 117.59.

(1105) (b) The signs shall be of sufficient size and so located as to be easily read at any time from an approaching vessel.

(1106) (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.

(1107)

§117.59 Special requirements due to hazards.

(1108) 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.

(1109)

California

(1110)

§117.140 General.

(1111) In California, when fog prevails by day or night, the drawtender, after sounding the opening signal, shall toll a bell continuously during the approach and passage of a vessel.

(1112)

§117.143 Bishop Cut.

(1113) The draw of the San Joaquin County (Eight Mile Road) Highway Bridge, mile 1.0 between King Island and Bishop Tract, must open on signal if at least 12 hours notice is given to the San Joaquin County Department of Public Works at Stockton.

(1114)

§117.147 Cerritos Channel.

(1115) The draw of the Henry Ford Avenue railroad bridge, mile 4.8 at Long Beach, shall be maintained in the fully open position except when a train is crossing or for maintenance. If the draw is in the closed position, the opening signal is two short blasts followed by one prolonged blast. The acknowledging signal is two prolonged blasts followed by one short blast when the draw will open immediately and five short blasts when the draw will not open immediately. Channel 13 (156.65 MHz) or other assigned frequencies may be used.

(1116)

§117.149 China Basin, Mission Creek.

(1117) The draws of the Third Street bridge, mile 0.0, and the Fourth Street bridge, mile 0.2, both at San Francisco, shall open on signal if at least one hour notice is given.

(1118)

§117.150 Connection Slough.

(1119) The draw of the Reclamation District No. 2027 bridge between Mandeville and Bacon Islands, mile 2.5 near Stockton, from May 15 through September 15, shall open on signal between the hours of 9 a.m. and 5 p.m., and it shall open upon 12 hours advance notice between the hours of 5 p.m. and 9 a.m.; and from September 16 through May 14 the draw shall open upon 12 hours advance notice between the hours of 9 a.m. and 5 p.m., and it shall open upon 24 hours advance notice between the hours of 5 p.m. and 9 a.m. Advance notice shall be given to the drawbridge operator by telephone at (209) 464–2959 or (209) 464–7928 weekdays between 8 a.m. and 5 p.m., and (209) 993–8878 all other times.

(1120)

§117.151 Cordelia Slough (a tributary of Suisun Bay).

(1121) The draw of the Union Pacific railroad bridge, mile 1.5 at Suisun, shall open on signal if at least 24 hours notice is given.

(1122)

§117.153 Corte Madera Creek.

(1123) The draw of the Golden Gate Bridge, Highway and Transportation District bridge, mile 0.5 near Greenbrae, shall be maintained in the fully open position, except for the crossing of trains or for maintenance.

(1124)

§117.157 Georgiana Slough.

(1125) The draws of the Sacramento County highway bridges, mile 4.5 near Isleton, and mile 12.4 near Walnut Grove, shall open on signal from 6 a.m. to 10 p.m. from May 1 through October 31. The draws shall open on signal from November 1 through April 30 from 9 a.m. to 5 p.m. At all other times, the draws of these bridges shall open on signal if at least four hours notice is given to the drawtender at the Rio Vista bridge across the Sacramento River, mile 12.8.

(1126)

§117.159 Grant Line Canal.

(1127) The draw of the San Joaquin County highway bridge, mile 5.5 at Tracy, shall open on signal if at least 12 hours notice is given to the San Joaquin County Department of Public Works at Stockton.

(1128)

§117.161 Honker Cut.

(1129) The draw of the San Joaquin County (Eightmile Road) bridge, mile 0.3 between Empire Tract and King Island at Stockton, shall open on signal if at least 12 hours notice is given to the San Joaquin County Department of Public Works at Stockton.

(1130)

§117.163 Islais Creek (Channel).

(1131) (a) The draw of the Illinois Street drawbridge, mile 0.3 at San Francisco, shall open on signal if least 72 hours advance notice is given to the Port of San Francisco.

(1132) (b) The draw of the Third Street drawbridge, mile 0.4 at San Francisco, shall open on signal if at least 72 hours advance notice is given to the San Francisco Department of Public Works.

(1133)

§117.165 Lindsey Slough.

(1134) The center drawspan of the Hastings Farms Highway Bridge, mile 2.0 between Egbert and Lower Hastings Tracts, must be removed for the passage of vessels if at least 72 hours notice is given to the Hastings Island Land Company office at Rio Vista.

(1135)

§117.167 Little Potato Slough.

(1136) The draw of the California Department of Transportation highway bridge, mile 0.1 at Terminus, shall open on signal if at least 4 hours notice is given to the drawtender at the Rio Vista bridge across the Sacramento River, mile 12.8.

(1137)

§117.169 Mare Island Strait and the Napa River.

(1138) (a) The draw of the Mare Island Drawbridge, mile 2.8, at Vallejo shall open on signal between the hours of 9 a.m. and 7 p.m. daily, and upon two hours advance notice all other times. When the drawbridge operator is present, mariners may contact the drawbridge via marine radio or telephone at 707–648–4313 for drawspan operation. When the drawbridge operator is not present, mariners may contact the City of Vallejo via the same telephone number to schedule drawspan operation.

(1139) (b) The draw of the Northwestern Pacific railroad bridge, mile 10.6 at Brazos, shall be maintained in the fully open position, except for the crossing of trains or for maintenance. When the draw is closed and visibility at the drawtender's station is less than one mile, up or down the channel, the drawtender shall sound two prolonged blasts every minute. When the draw is opened, the drawtender shall sound three short blasts.

(1140)

§117.171 Middle River.

(1141) (a) The draw of the San Joaquin County (Bacon Island Road) highway bridge, mile 8.6 between Bacon Island and Lower Jones Tract, shall open on signal from May 15 through September 15 from 9 a.m. to 5 p.m. From September 16 through May 14, the draw shall open on signal from 9 a.m. to 5 p.m. from Thursday through Monday. At all other times, the draw shall open on signal if at least 12 hours notice is given to the San Joaquin County Department of Public Works at Stockton.

(1142) (b) The draw of the Burlington Northern Santa Fe railroad bridge, mile 9.8 near Middle River Station, shall open on signal if at least 12 hours notice is given to the Burlington Northern Santa Fe Railway Manager of Structures at San Bernardino.

(1143) (c) The removable span of the Woodward Island Bridge, mile 11.8 near Discovery Bay, shall be removed as soon as possible upon notification by the District Commander that an emergency exists which requires its removal.

(1144) (d) The California Route 4 Bridge, mile 15.1, between Victoria Island and Drexler Tract need not open for the passage of vessels.

(1145)

§117.173 Miner Slough.

(1146) The draw of the California Department of Transportation highway bridge, mile 5.5 between the northerly end of Ryer Island and Holland Tract, shall open on signal if at least 12 hours notice is given to the drawtender at the Rio Vista bridge across the Sacramento River, mile 12.8.

(1147)

§117.175 Mokelumne River.

(1148) (a) The draw of the California Department of Transportation highway bridge, the Mokelumne River Bridge, mile 3.0, at East Isleton shall open upon signal as follows:

(1149) (1) From November 1 through April 30 from 9 a.m. to 5 p.m.

(1150) (2) From May 1 through October 31 from 6 a.m. to 10 p.m., except that during the following periods the draw need only open for recreational vessels on the hour, 20 minutes past the hour, and 40 minutes past the hour:

(1151) Saturdays 10 a.m. until 2 p.m.

(1152) Sundays 11 a.m. until 6 p.m.

(1153) Memorial Day; 4th of July and

(1154) Labor Day 11 a.m. until 6 p.m.

(1155) (3) At all other times the draw shall open on signal if at least 4 hours notice is given to the drawtender at Rio Vista bridge over the Sacramento River, mile 12.8.

(1156) (4) Emergency vessels of the United States, state or commercial vessels engaged in rescue or emergency salvage operations, and vessels in distress shall be passed as soon as possible but no later than one hour after notice is given.

(1157) (b) The draw of the Sacramento and San Joaquin counties (Millers Ferry) highway bridge, mile 12.1 over the North Fork of the Mokelumne River near Walnut Grove, shall open on signal from May 1 through October 31 from 9 a.m. to 5 p.m. At all other times, the draw shall open on signal if at least 12 hours notice is given to the San Joaquin County Department of Public Works at Stockton.

(1158) (c) The removable span of the San Joaquin County highway bridge over the South Fork of the Mokelumne River, mile 18.0 at New Hope Landing, shall be removed as soon as possible upon notification by the District Commander that an emergency exists which requires the removal.

(1159) (d) The draws of the bridges above New Hope Landing need not be opened for the passage of vessels.

(1160)

§117.177 Mud Slough.

(1161) The draw of the Union Pacific railroad bridge, mile 0.7 near Alviso, shall open on signal if at least 24 hours notice is given.

(1162)

§117.179 Newark Slough.

(1163) The draw of the San Mateo County Transportation Department railroad bridge, mile 0.5 near Newark, shall open on signal if at least 24 hours notice is given to the San Mateo Transportation Department, at San Carlos.

(1164)

§117.181 Oakland Inner Harbor Tidal Canal.

(1165) The draws of the Alameda County highway drawbridges at Park Street, mile 5.2; Fruitvale Avenue, mile 5.6; and High Street, mile 6.0; and the U.S. Army Corps of Engineers railroad drawbridge, mile 5.6 at Fruitvale Avenue, shall open on signal; except that, from 8 a.m. to 9 a.m. and 4:30 p.m. to 6:30 p.m. Monday through Friday except Federal holidays, the draws need not be opened for the passage of vessels. However, the draws shall open during the above closed periods for

vessels which must, for reasons of safety, move on a tide or slack water, if at least two hours notice is given.

(1166)

§117.183 Old River.

(1167) The draw of the California Department of Transportation (Route 4) highway bridge, mile 14.8 between Victoria Island and Byron Tract, shall open on signal if at least four hours notice is given to the drawtender at the Rio Vista bridge across the Sacramento River, mile 12.8.

(1168)

§117.185 Pacheco Creek.

(1169) The draw of the Contra Costa County highway bridge, mile 1.0, and Union Pacific railroad bridge, mile 1.1, both near Martinez, shall open on signal if at least 24 hours notice is given.

(1170)

§117.187 Petaluma River.

(1171) (a) The draw of the SMART Blackpoint railroad bridge, mile 0.8 at Blackpoint, shall be maintained in the fully open position, except for the crossing of trains or for maintenance. When the draw is closed and visibility from the drawtender's station is less than one mile up or down the channel, the drawtender shall sound two long blasts every minute. When the draw is reopened, the drawtender shall sound three short blasts.

(1172) (b) The draw of the SMART Haystack Landing railroad bridge, mile 12.4 at Petaluma, shall open on signal from 3 a.m. to 11 p.m. if at least 30 minutes notice is given to the drawtender. At all other times, the draw shall be maintained in the fully open position, except for the crossing of trains or for maintenance. When the draw is closed and visibility from the drawtender's station is less than one mile up or down the channel, the drawtender shall sound two long blasts every minute. When the draw is reopened, the drawtender shall sound three short blasts.

(1173) (c) The draw of the Petaluma highway bridge at "D" Street, mile 13.7, at Petaluma, shall open on signal if at least four hours notice is given for openings from 6 a.m. to 6 p.m., and if at least 24 hours notice is given for openings from 6 p.m. to 6 a.m.

(1174)

§117.189 Sacramento River.

(1175) (a) The draws of each bridge from Isleton to the American River junction except for the Sacramento County highway bridge across the Sacramento River, mile 46.0 at Freeport, shall open on signal from May 1 through October 31 from 6 a.m. to 10 p.m. and from November 1 through April 30 from 9 a.m. to 5 p.m. At all other times, the draws shall open on signal if at least four hours notice is given to the drawtender at the Rio Vista bridge across the Sacramento River, mile 12.8.

(1176) (b) The draw of the Sacramento County highway bridge, mile 46.0 at Freeport, shall open on signal from May 1 through September 30 from 9 a.m. to 5 p.m. At all other times, the draw shall open on signal if at least four hours notice is given to the drawtender at the Rio Vista Bridge across the Sacramento River, mile 12.8.

(1177) (c) The draws of the California Department of Transportation bridges, mile 90.1 at Knights Landing, and mile 135.5 at Meridian, shall open on signal if at least 12 hours notice is given to the California Department of Transportation at Marysville.

(1178) (d) The draws of the bridges above Meridian need not be opened for the passage of vessels.

(1179)

§117.191 San Joaquin River.

(1180) (a) The draw of the Port of Stockton railroad bridge, mile 39.7 at Stockton, shall open on signal if at least 12 hours notice is given to the Port Director.

(1181) (b) The draws of the U.S. Navy drawbridge, mile 39.8, Burlington Northern Santa Fe railroad bridge, mile 40.6, and California Highway 4 bridge (Garwood Bridge), mile 41.6, need not be opened for the passage of vessels. The owners or agencies controlling the bridges shall restore the draws to full operation within six months of notification to take such action from the District Commander.

(1182) (c) Drawbridges above the Old River junction need not open for the passage of vessels.

(1183)

§117.193 San Leandro Bay.

(1184) The drawspans of the California Department of Transportation highway and bicycle drawbridges, mile 0.0 and mile 0.1, between Alameda and Bay Farm Island, must open on signal; except that, from 5 a.m. to 8 a.m. and 5 p.m. to 9 p.m, the drawspans must open on signal if at least 12 hours notice is given. Notice must be given to the drawtender of the Bay Farm Island drawbridges from 8 a.m. to 5 p.m. and to the drawtender of the Park Street Drawbridge at Alameda at all other times. The drawspans need not be opened for the passage of vessels from 9 p.m. to 5 a.m.

(1185)

§117.195 Snodgrass Slough.

(1186) The draw of the Sacramento County bridge, mile 4.4 at Walnut Grove, shall open on signal if at least 72 hours notice is given to Sacramento County Transportation Operations and Maintenance office at Sacramento.

(1187)

§117.197 Sonoma Creek.

(1188) The draw of the Northwestern Pacific railroad bridge, mile 5.4 at Wingo, shall open on signal if at least 24 hours notice is given.

(1189)

§117.199 Steamboat Slough.

(1190) The draw of the California Department of Transportation highway bridge, mile 11.2 at the head of Grand Island, shall open on signal from May 1 through October 31 from 6 a.m. to 10 p.m. At all other times, the draw shall open on signal if at least four hours notice is

given to the drawtender at the Rio Vista bridge across the Sacramento River, mile 12.8.

(1191)

§117.201 Sutter Slough.

(1192) The draw of the Sacramento County highway bridge, mile 6.4 near Courtland, need not be opened for the passage of vessels. However, the draw shall be returned to operable condition within six months after notification by the District Commander to do so.

(1193)

Part 147–Safety Zones

(1194)

§147.1 Purpose of safety zones.

(1195) 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.

(1196)

§147.5 Delegation of authority.

(1197) 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

(1198)

§147.10 Establishment of safety zones.

(1199) (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.

(1200) (b) For purposes of establishing safety zones under this part, OCS facility includes non-mineral energy resource permanent or temporary structures.

(1201) (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.

(1202) (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 of 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.

(1203) (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.

(1204)

§147.15 Extent of safety zones.

(1205) 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.

(1206)

§147.20 Definitions.

(1207) 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.

(1208)

§147.1102 Platform GRACE safety zone.

(1209) (a) *Description:* The area within a line 500 meters from each point on the structure's outer edge. The position of the center of the structure is 34°10'47"N., 119°28'05"W.

(1210) (b) *Regulations:* No vessel may enter or remain in this safety zone except the following: (1) An attending vessel, (2) a vessel under 100 feet in length overall not engaged in towing, or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1211)

§147.1103 Platform GINA safety zone.

(1212) (a) *Description:* The area within a line 500 meters from each point on the structure's outer edge. The position of the center of the structure is 34°07'02"N., 119°16'35"W.

(1213) (b) *Regulations:*No vessel may enter or remain in this safety zone except the following: (1) An attending vessel, (2) a vessel under 100 feet in length overall not engaged in towing, or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1214)

§147.1104 Platform ELLEN and ELLY safety zone.

(1215) (a) *Description:* The areas within a line 500 meters from each point on the outer edge of each structure. The structures are approximately 120 meters apart. The position of the center of each structure is: Platform Ellen, 33°34'57"N., 118°07'42"W.; and Platform Elly, 33°35'00"N., 118°07'40"W.

(1216) (b) *Regulations:* No vessel may enter or remain in this safety zone except the following: (1) An attending vessel serving either structure, (2) a vessel under 100 feet in length overall not engaged in towing, or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1217)

§147.1105 Platform HONDO safety zone.

(1218) (a) *Description:* The area within a line 500 meters from each point on the structure's outer edge. The position of the center of the structure is 34°23'27"N., 120°07'14"W.

(1219) (b) *Regulations:* No vessel may enter or remain in this safety zone except for the following: (1) An attending vessel, (2) a vessel under 100 feet in length overall not engaged in towing, or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1220)

§147.1106 Exxon Santa Ynez offshore storage and treatment vessel mooring safety zone.

(1221) (a) *Description:* The area within a line 1108 meters from the center of the mooring. The position of the center of the mooring is 34°24'19"N., 120°06'00"W.

(1222) (b) *Regulations:* No vessel may enter or remain in this safety zone except the following: (1) An attending vessel, (2) a vessel under 100 feet in length overall not engaged in towing, or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1223)

§147.1107 Platform GILDA safety zone.

(1224) (a) *Description:* The area within a line 500 meters from each point on the structure's outer edge. The position of the center of the structure is 34°10'56"N., 119°25'07"W.

(1225) (b) *Regulations:* No vessel may enter or remain in this safety zone except for the following: (1) An attending vessel, (2) a vessel under 100 feet in length overall not engaged in towing, or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1226)

§147.1108 Platform EDITH safety zone.

(1227) (a) *Description:* The area within a line 500 meters from each point on the structure's outer edge. The position of the center of the structure is 33°35'45"N., 118°08'27"W.

(1228) (b) *Regulations:* No vessel may enter or remain in this safety zone except for the following: (1) An attending vessel, (2) a vessel under 100 feet in length overall not engaged in towing, or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1229)

§147.1109 Platform HERMOSA Safety Zone.

(1230) (a) *Description:* The area within a line 500 meters from each point on the structure's outer edge. The position of the center of the structure is 34°27'19"N., 120°38'47"W.

(1231) (b) *Regulations:* No vessel may enter or remain in this safety zone except the following: (1) An attending vessel, (2) a vessel under 100 feet in length overall not engaged in towing or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1232)

§147.1110 Platform HARVEST Safety Zone.

(1233) (a) *Description:* The area within a line 500 meters from each point on the structure's outer edge. The position of the center of the structure is 34°28'09.5"N., 120°40'46.1"W.

(1234) (b) *Regulations:* No vessel may enter or remain in this safety zone except for the following: (1) An attending vessel, (2) a vessel under 100 feet in length overall not engaged in towing or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1235)

§147.1111 Platform EUREKA Safety Zone.

(1236) (a) *Description:* The area within a line 500 meters from each point on the structure's outer edge. The position of the center of the structure is 33°33'50"N., 118°07'00"W.

(1237) (b) *Regulations:* No vessel may enter or remain in this safety zone except the following: remain in this safety zone except the following: (1) An attending vessel, (2) a vessel under 100 feet in length overall not engaged in towing or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1238)

§147.1112 Platform HIDALGO Safety Zone.

(1239) (a) *Description:* The area within a line 500 meters from each point on the structure's outer edge. The position of the center of the structure is 34°29'42"N, 120°42'08"W.

(1240) (b) *Regulations:* No vessel may enter or remain in this safety zone except the following: (1) An attending vessel, (2) a vessel under 100 feet in length overall not engaged in towing or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1241)

§147.1113 Platform GAIL Safety Zone.

(1242) (a) *Description:* The area within a line 500 meters from each point on the structure's outer edge. The position of the center of the structure is 34°07'30"N., 119°24'01"W.

(1243) (b) *Regulations:* No vessel may enter or remain in this safety zone except the following (1) An attending vessel, (2) a vessel under 100 feet in length overall not engaged in towing, or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1244)

§147.1114 Platform HARMONY Safety Zone.

(1245) (a) *Description:* The area within a line 500 meters from each point on the structure's outer edge. The position of the center of the structure is 34°22'36"N., 120°10'03"W.

(1246) (b) *Regulation:* No vessel may enter or remain in this safety zone except the following: (1) an attending vessel; (2) a vessel under 100 feet in length overall not engaged in towing; or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1247)

§147.1115 Platform HERITAGE Safety Zone.

(1248) (a) *Description:* The area within a line 500 meters from each point on the structure's outer edge. The position of the center of the structure is 34°21'01"N., 120°16'45"W.

(1249) (b) *Regulation:* No vessel may enter or remain in this safety zone except the following: (1) An attending vessel; (2) a vessel under 100 feet in length overall not engaged in towing; or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1250)

§147.1116 Platform IRENE Safety Zone.

(1251) (a) *Description:* The area within a line 500 meters from each point on the structure's outer edge. The position of the center of the structure is 34°36'37.5"N., 120°43'46"W.

(1252) (b) *Regulation:* No vessel may enter or remain in this safety zone except the following: (1) An attending vessel; (2) a vessel under 100 feet in length overall not engaged in towing; or (3) a vessel authorized by the Commander, Eleventh Coast Guard District.

(1253)

Part 157–Rules for the Protection of the Marine Environment relating to Tank Vessels Carrying Oil in Bulk

(1254)

Subpart A–General

(1255)

§157.01 Applicability.

(1256) (a) Unless otherwise indicated, this part applies to each vessel that carries oil in bulk as cargo and that is:

(1257) (1) Documented under the laws of the United States (a U.S. vessel); or

(1258) (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).

(1259) (b) This part does not apply to a vessel exempted under 46 U.S.C. 2109 or 46 U.S.C. 3702.

(1260)

§157.02 Incorporation by reference: Where can I get a copy of the publications mentioned in this part?

(1261) (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.

(1262) (b) *International Maritime Organization (IMO)*—4 Albert Embankment, London SE1 7SR, United Kingdom.

(1263) (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.

(1264) (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.

(1265) (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.

(1266) (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.

(1267) (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.

(1268) (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.

(1269) (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.

(1270) (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.

(1271) (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.

(1272) (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.

(1273) (c) *Oil Companies International Marine Forum (OCIMF)* 27 Queen Anne's Gate, London, SW1H 9BU, England].

(1274) (1) International Safety Guide for Oil Tankers and Terminals, Fourth Edition, chapters 6, 7, and 10, 1996, incorporation by reference approved for §157.435.

(1275) (2) [Reserved]

(1276)

§157.03 Definitions.

(1277) Except as otherwise stated in a subpart:

(1278) *Amidships* means the middle of the length.

(1279) *Animal fat* means a non-petroleum oil, fat, or grease derived from animals and not specifically identified elsewhere in this part.

(1280) *Ballast voyage* means the voyage that a tank vessel engages in after it leaves the port of final cargo discharge.

(1281) *Breadth or B* means the maximum molded breadth of a vessel in meters.

(1282) *Cargo tank length* means the length from the forward bulkhead of the forwardmost cargo tanks, to the after bulkhead of the aftermost cargo tanks.

(1283) *Center tank* means any tank inboard of a longitudinal bulkhead.

(1284) *Clean ballast* means ballast which:

(1285) (1) If discharged from a vessel that is stationary into clean, calm water on a clear day, would not–

(1286) (i) Produce visible traces of oil on the surface of the water or on adjoining shore lines; or

(1287) (ii) Cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shore lines; or

(1288) (2) If verified by an approved oil discharge monitoring and control system, has an oil content that does not exceed 15 p.m.

(1289) *Combination carrier* means a vessel designed to carry oil or solid cargoes in bulk.

(1290) *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.

(1291) *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.

(1292) *Dedicated clean ballast tank* means a cargo tank that is allocated solely for the carriage of clean ballast.

(1293) *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.

(1294) *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.

(1295) *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.

(1296) *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.

(1297) *Existing vessel* means any vessel that is not a new vessel.

(1298) *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.

(1299) *Foreign trade* means any trade that is not domestic trade.

(1300) *From the nearest land* means from the baseline from which the territorial sea of the United States is established in accordance with international law.

(1301) *Fuel oil* means any oil used as fuel for machinery in the vessel in which it is carried.

(1302) *Inland vessel* means a vessel that is not oceangoing and that does not operate on the Great Lakes.

(1303) *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.

(1304) *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.

(1305) *Large primary structural member* includes any of the following:

(1306) (1) Web frames.

(1307) (2) Girders.

(1308) (3) Webs.

(1309) (4) Main brackets.

(1310) (5) Transverses.

(1311) (6) Stringers.

(1312) (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.

(1313) *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.

(1314) *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.

(1315) *Major conversion* means a conversion of an existing vessel that:

(1316) (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;

(1317) (2) Changes the type of vessel;

(1318) (3) Substantially prolongs the vessel's service life; or

(1319) (4) Otherwise so changes the vessel that it is essentially a new vessel, as determined by the Commandant (CG–CVC).

(1320) *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.

(1321) *New vessel* means:

(1322) (1) A U.S. vessel in domestic trade that:

(1323) (i) Is constructed under a contract awarded after December 31, 1974;

(1324) (ii) In the absence of a building contract, has the keel laid or is at a similar stage of construction after June 30, 1975;

(1325) (iii) Is delivered after December 31, 1977; or

(1326) (iv) Has undergone a major conversion for which:

(1327) (A) The contract is awarded after December 31, 1974;

(1328) (B) In the absence of a contract, conversion is begun after June 30, 1975; or

(1329) (C) Conversion is completed after December 31, 1977; and

(1330) (2) A foreign vessel or a U.S. vessel in foreign trade that;

(1331) (i) Is constructed under a contract awarded after December 31, 1975;

(1332) (ii) In the absence of a building contract, has the keel laid or is at a similar stage of construction after June 30, 1976;

(1333) (iii) Is delivered after December 31, 1979; or

(1334) (iv) Has undergone a major conversion for which:

(1335) (A) The contract is awarded after December 31, 1975;

(1336) (B) In the absence of a contract, conversion is begun after June 30, 1976; or

(1337) (C) Conversion is completed after December 31, 1979.

(1338) *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.

(1339) *Oceangoing* has the same meaning as defined in §151.05 of this chapter.

(1340) *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.

(1341) *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.

(1342) *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."

(1343) *Oil residue* means—

(1344) (1) Oil cargo residue; and

(1345) (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.

(1346) *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.

(1347) *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.

(1348) *Oily mixture* means a mixture, in any form, with any oil content. "Oily mixture" includes, but is not limited to–

(1349) (1) Slops from bilges;

(1350) (2) Slops from oil cargoes (such as cargo tank washings, oily waste, and oily refuse);

(1351) (3) Oil residue; and

(1352) (4) Oily ballast water from cargo or fuel oil tanks, including any oil cargo residue.

(1353) Oily mixture means a mixture with any oil content.

(1354) *Other non-petroleum oil* means an oil of any kind that is not petroleum oil, an animal fat, or a vegetable oil.

(1355) *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.

(1356) *Petroleum oil* means petroleum in any form, including but not limited to, crude oil, fuel oil, sludge, oil residue, and refined products.

(1357) *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.

(1358) *Product* means any liquid hydrocarbon mixture in any form, except crude oil, petrochemicals, and liquefied gases.

(1359) *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.

(1360) *Slop tank* means a tank specifically designated for the collection of cargo drainings, washings, and other oily mixtures.

(1361) *Tank* means an enclosed space that is formed by the permanent structure of a vessel, and designed for the carriage of liquid in bulk.

(1362) *Tank barge* means a tank vessel not equipped with a means of self-propulsion.

(1363) *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–

(1364) (1) Is a vessel of the United States;

(1365) (2) Operates on the navigable waters of the United States; or

(1366) (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.

(1367) *Tankship* means a tank vessel propelled by mechanical power or sail.

(1368) *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.

(1369) *Wing tank* means a tank that is located adjacent to the side shell plating.

(1370)

§157.04 Authorization of classification societies.

(1371) (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.

(1372) (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.

(1373) (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.

(1374) (d) Acceptance as an authorized CS terminates unless the following are met:

(1375) (1) The authorized CS must have each Coast Guard regulation that is applicable to foreign vessels on the navigable waters of the United States.

(1376) (2) Each issue concerning equivalents to the regulations in this part must be referred to the Coast Guard for determination.

(1377) (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.

(1378) (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.

(1379) (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.

(1380)

Subpart B–Design, Equipment, and Installation

(1381)

§157.08 Applicability of Subpart B.

(1382) **NOTE:** An "oil tanker" as defined in §157.03 includes barges as well as self-propelled vessels.

(1383) (a) Sections 157.10d and 157.11(g) apply to each vessel to which this part applies.

(1384) (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.

(1385) (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.

(1386) (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.

(1387) (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.

(1388) (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.

(1389) (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.

(1390) (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.

(1391) (i) Section 157.09(d) does not apply to any:

(1392) (1) U.S. vessel in domestic trade that is constructed under a contract awarded before January 8, 1976;

(1393) (2) U.S. vessel in foreign trade that is constructed under a contract awarded before April 1, 1977; or

(1394) (3) Foreign vessel that is constructed under a contract awarded before April 1, 1977.

(1395) (j) Sections 157.09 and 157.10a do not apply to a new vessel that:

(1396) (1) Is constructed under a building contract awarded after June 1, 1979;

(1397) (2) In the absence of a building contract, has the keel laid or is at a similar stage of construction after January 1, 1980;

(1398) (3) Is delivered after June 1, 1982; or

(1399) (4) Has undergone a major conversion for which:

(1400) (i) The contract is awarded after June 1, 1979;

(1401) (ii) In the absence of a contract, conversion is begun after January 1, 1980; or

(1402) (iii) Conversion is completed after June 1, 1982.

(1403) (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.

(1404) (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.

(1405) (m) Section 157.12 does not apply to a U.S. vessel that:

(1406) (1) Is granted an exemption under Subpart F of this part; or

(1407) (2) Is engaged solely in voyages that are:

(1408) (i) Between ports or places within the United States, its territories or possessions;

(1409) (ii) Of less than 72 hours in length; and

(1410) (iii) At all times within 50 nautical miles of the nearest land.

(1411) (n) Section 157.10d does not apply to:

(1412) (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);

(1413) (2) An oil spill response vessel;

(1414) (3) Before January 1, 2015–

(1415) (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

(1416) (ii) A delivering vessel that is offloading oil in bulk as cargo in lightering activities–

(1417) (A) Within a lightering zone established under 46 U.S.C. 3715(b)(5); and

(1418) (B) More than 60 miles from the territorial sea base line, as defined in 33 CFR 2.20.

(1419) (4) A vessel documented under 46 U.S.C., chapter 121, that was equipped with a double hull before August 12, 1992;

(1420) (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

(1421) (6) A vessel in the National Defense Reserve Fleet pursuant to 50 App. U.S.C. 1744.

(1422) (o) Section 157.11(h) applies to every oil tanker delivered on or after January 1, 2010, meaning an oil tanker—

(1423) (1) For which the building contract is placed on or after January 1, 2007;

(1424) (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 July 1, 2007;

(1425) (3) The delivery of which is on or after January 1, 2010; or

(1426) (4) That has undergone a major conversion—

(1427) (i) For which the contract is placed on or after January 1, 2007;

(1428) (ii) In the absence of a contract, the construction work of which is begun on or after July 1, 2007; or

(1429) (iii) That is completed on or after January 1, 2010.

(1430)

§157.10d Double hulls on tank vessels.

(1431) (a) With the exceptions stated in §157.08(n), this section applies to a tank vessel–

(1432) (1) For which the building contract is awarded after June 30, 1990; or

(1433) (2) That is delivered after December 31, 1993;

(1434) (3) That undergoes a major conversion for which;

(1435) (i) The contract is awarded after June 30, 1990; or

(1436) (ii) Conversion is completed after December 31, 1993; or

(1437) (4) That is otherwise required to have a double hull by 46 U.S.C. 3703a(c).

(1438) **NOTE:** 46 U.S.C. 3703a(c) is shown in appendix G to this part.

(1439) (b) Each vessel to which this section applies must be fitted with:

(1440) (1) A double hull in accordance with this section; and

(1441) (2) If §157.10 applies, segregated ballast tanks and a crude oil washing system in accordance with that section.

(1442) (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:

(1443) (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:

(1444) (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.).

(1445) (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.).

(1446) (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.

(1447) (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:

(1449) (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.).

(1450) (ii) For a vessel of less than 5,000 DWT: h=B/15, but in no case less than 0.76 meter (30 in.).

(1451) (iii) For a vessel to which paragraph (a)(4) of

(1448)

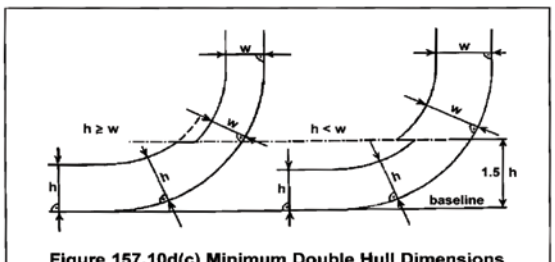


Figure 157.10d(c) Minimum Double Hull Dimensions

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.

(1452) (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–

(1453) (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.

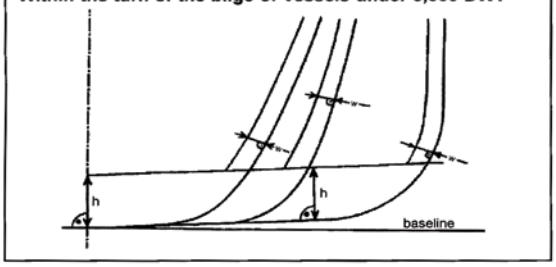
(1454) (ii) For a vessel of less than 5,000 DWT: Not less the distance h above the line of the mid-ship flat bottom, as shown in Figure 157.10d(c)(3)(ii) and specified in paragraph (c)(2) of this section. At levels greater than h above the line of the mid-ship flat bottom, not less than the distance w, as shown in Figure 157.10d(c)(3)(ii) and specified in paragraph (c)(1) of this section.

(1456) (4) For a vessel to which §157.10(b) applies that is built under a contract awarded after September 11, 1992.

(1457) (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.

(1455)

Figure 157.10d(c)(3)(ii) - Minimum Double Hull Dimensions Within the turn of the bilge of Vessels under 5,000 DWT



(1458) (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.

(1459) (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:

(1460) (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

(1461) (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.

(1462) (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.

(1463) (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.

(1464) (e) Except as provided in paragraph (e)(3) of this section, a vessel must not carry any oil in any tank extending forward of:

(1465) (1) The collision bulkhead; or

(1466) (2) In the absence of a collision bulkhead, the transverse plane perpendicular to the centerline through a point located:

(1467) (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;

(1468) (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

(1469) (iii) On each vessel which operates exclusively as a box or trail barge, 61 cm. (2 ft.) aft of the headlog.

(1470) (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.

(1471) (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).

(1472)

Subpart G–Interim Measures for Certain Tank Vessels Without Double Hulls Carrying Petroleum Oils

(1473)

§157.400 Purpose and applicability.

(1474) (a) The purpose of this subpart is to establish mandatory safety and operational requirements to reduce environmental damage resulting from petroleum oil spills.

(1475) (b) This subpart applies to each tank vessels specified in §157.01 of this part that–

(1476) (1) Is 5,000 gross tons or more;

(1477) (2) Carries petroleum oil in bulk as cargo or oil cargo residue; and

(1478) (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).

(1479)

§157.445 Maneuvering performance capability.

(1480) (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–

(1481) (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

(1482) (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.

(1483) (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.

(1484) (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.

(1485) (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.

(1486) (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.

(1487)

Part 160–Ports and Waterways Safety-General

(1488)

Subpart A–General

(1489)

§160.1 Purpose.

(1490) This subchapter contains regulations implementing 46 U.S.C. Chapter 700 "Ports and Waterways Safety" and related statutes.

(1491)

§160.3 Definitions.

(1492) For the purposes of this subchapter:

(1493) *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.

(1494) *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.

(1495) *Commandant* means the Commandant of the United States Coast Guard.

(1496) *Deviation* means any departure from any rule in this subchapter.

(1497) *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.

(1498) *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.

(1499) *ETA* means estimated time of arrival.

(1500) *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.

(1501) *Person* means an individual, firm, corporation, association, partnership, or governmental entity.

(1502) *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.

(1503) *Tanker* means a self-propelled tank vessel constructed or adapted primarily to carry oil or hazardous materials in bulk in the cargo spaces.

(1504) *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.

(1505) *Vehicle* means every type of conveyance capable of being used as a means of transportation on land.

(1506) *Vessel* means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water.

(1507) *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.

(1508) *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.

(1509) **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.

(1510) *VTS Special Area* means a waterway within a VTS area in which special operating requirements apply.

(1511)

§160.5 Delegations.

(1512) (a) District Commanders and Captains of the Ports are delegated the authority to establish safety zones.

(1513) (b) Under the provisions of §§6.04-1 and 6.04-6 of this chapter, District Commanders and Captains of the Ports have been delegated authority to establish security zones.

(1514) (c) Under the provisions of §1.05-1 of this chapter, District Commanders have been delegated authority to establish regulated navigation areas.

(1515) (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.

(1516)

§160.7 Appeals.

(1517) (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.

(1518) (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.

(1519) (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.

(1520) (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.

(1521) (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.

(1522)

Subpart B–Control of Vessel and Facility Operations

(1523)

§160.101 Purpose.

(1524) 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.

(1525)

§160.103 Applicability.

(1526) (a) This subpart applies to any–

(1527) (1) Vessel on the navigable waters of the United States, except as provided in paragraphs (b) and (c) of this section;

(1528) (2) Bridge or other structure on or in the navigable waters of the United States; and

(1529) (3) Land structure or shore area immediately adjacent to the navigable waters of the United States.

(1530) (b) This subpart does not apply to any vessel on the Saint Lawrence Seaway.

(1531) (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:

(1532) (1) Innocent passage through the territorial sea of the United States;

(1533) (2) Transit through the navigable waters of the United States which form a part of an international strait.

(1534)

§160.105 Compliance with orders.

(1535) Each person who has notice of the terms of an order issued under this subpart must comply with that order.

(1536)

§160.107 Denial of entry.

(1537) 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.

(1538)

§160.109 Waterfront facility safety.

(1539) (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–

(1540) (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

(1541) (2) Conduct examinations to assure compliance with the safety equipment requirements for structures.

(1542)

§160.111 Special orders applying to vessel operations.

(1543) Each District Commander or Captain of the Port may order a vessel to operate or anchor in the manner directed when–

(1544) (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;

(1545) (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

(1546) (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.

(1547)

§160.113 Prohibition of vessel operation and cargo transfers.

(1548) (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.

(1549) (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:

(1550) (1) Fails to comply with any applicable regulation;

(1551) (2) Discharges oil or hazardous material in violation of any law or treaty of the United States;

(1552) (3) Does not comply with applicable vessel traffic service requirements;

(1553) (4) While underway, does not have at least one deck officer on the navigation bridge who is capable of communicating in the English language.

(1554) (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.

(1555) (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.

(1556)

§160.115 Withholding of clearance.

(1557) 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. App. 91 of any vessel, the owner or operator of which is subject to any penalties under 46 U.S.C. 70036.

(1558)

Subpart C–Notification of Arrival, Hazardous Conditions, and Certain Dangerous Cargoes

(1559)

§160.201 General.

(1560) 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:

(1561) (a) Applicability and exemptions from requirements in this subpart;

(1562) (b) Required information in an NOA;

(1563) (c) Required updates to an NOA;

(1564) (d) Methods and times for submission of an NOA, and updates to an NOA;

(1565) (e) How to obtain a waiver; and

(1566) (f) Requirements for submission of the notice of hazardous condition.

(1567) **Note to §160.201.** For notice-of-arrival requirements for the U.S. Outer Continental Shelf, see 33 CFR part 146.

(1568)

§160.202 Definitions.

(1569) 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—

(1570) *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.

(1571) *Barge* means a non-self propelled vessel engaged in commerce.

(1572) *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.

(1573) *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.

(1574) *Certain dangerous cargo (CDC)* includes any of the following:

(1575) (1) Division 1.1 or 1.2 explosives as defined in 49 CFR 173.50.

(1576) (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.

(1577) (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.

(1578) (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.

(1579) (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.

(1580) (6) Class 7, "highway route controlled quantity" radioactive material or "fissile material, controlled shipment," as defined in 49 CFR 173.403.

(1581) (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).

(1582) (8) The following bulk liquids except when carried as CDC residue:

(1583) (i) Acetone cyanohydrin;

(1584) (ii) Allyl alcohol;

(1585) (iii) Chlorosulfonic acid;

(1586) (iv) Crotonaldehyde;

(1587) (v) Ethylene chlorohydrin;

(1588) (vi) Ethylene dibromide;

(1589) (vii) Methacrylonitrile;

(1590) (viii) Oleum (fuming sulfuric acid); and

(1591) (ix) Propylene oxide, alone or mixed with ethylene oxide.

(1592) (9) The following bulk solids:

(1593) (i) Ammonium nitrate listed as Division 5.1 (oxidizing) material in 49 CFR 172.101 except when carried as CDC residue; and

(1594) (ii) Ammonium nitrate based fertilizer listed as a Division 5.1 (oxidizing) material in 49 CFR 172.101 except when carried as CDC residue.

(1595) *Certain dangerous cargo residue (CDC residue)* includes any of the following:

(1596) (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.

(1597) (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:

(1598) (i) Ammonia, anhydrous;

(1599) (ii) Chlorine;

(1600) (iii) Ethane;

(1601) (iv) Ethylene oxide;

(1602) (v) Methane (LNG);

(1603) (vi) Methyl bromide;

(1604) (vii) Sulfur dioxide; and

(1605) (viii) Vinyl chloride.

(1606) *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."

(1607) *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.

(1608) *Embark* means when a crewmember or a person in addition to the crew joins the vessel.

(1609) *Ferry schedule* means a published document that:

(1610) (1) Identifies locations a ferry travels to and from;

(1611) (2) Lists the times of departures and arrivals; and

(1612) (3) Identifies the portion of the year in which the ferry maintains this schedule.

(1613) *Foreign vessel* means a vessel of foreign registry or operated under the authority of a country except the United States.

(1614) *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.

(1615) *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.

(1616) *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.

(1617) *Nationality* means the state (nation) in which a person is a citizen or to which a person owes permanent allegiance.

(1618) *Operating exclusively within 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.

(1619) *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.

(1620) *Persons in addition to crewmembers* mean any person onboard the vessel, including passengers, who are not included on the list of crewmembers.

(1621) *Port or place of departure* means any port or place in which a vessel is anchored or moored.

(1622) *Port or place of destination* means any port or place in which a vessel is bound to anchor or moor.

(1623) *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.

(1624) *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.

(1625) *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.

(1626)

§160.203 Applicability.

(1627) (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

(1663)

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.

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:

(1628) (1) U.S. vessels in commercial service, and

(1629) (2) All foreign vessels.

(1630) (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.

(1631) (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.

(1632)

§160.204 Exemptions and exceptions.

(1633) (a) Except for reporting notice of hazardous conditions, the following vessels are exempt from requirements in this subpart:

(1634) (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.

(1635) (2) An oil spill response vessel (OSRV) when engaged in actual spill response operations or during spill response exercises.

(1636) (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.

(1637) (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).

(1638) (5) The following vessels neither carrying certain dangerous cargo nor controlling another vessel carrying certain dangerous cargo:

(1639) (i) A foreign vessel 300 gross tons or less not engaged in commercial service.

(1640) (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.

(1641) (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.

(1642) (iv) A public vessel.

(1643) (v) Except for a tank vessel, a U.S. vessel operating solely between ports or places of the United States on the Great Lakes.

(1644) (vi) A U.S. vessel 300 gross tons or less, engaged in commercial service not coming from a foreign port or place.

(1645) (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:

(1646) (A) Name of the vessel;

(1647) (B) Country of registry of the vessel;

(1648) (C) Call sign of the vessel;

(1649) (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;

(1650) (E) Name of the registered owner of the vessel;

(1651) (F) Name of the operator of the vessel;

(1652) (G) Name of the vessel's classification society or recognized organization, if applicable;

(1653) (H) Each port or place of destination;

(1654) (I) Estimated dates and times of arrivals at and departures from these ports or places; and

(1655) (J) Name and telephone number of a 24-hour point of contact.

(1656) (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).

(1657) (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).

(1658)

§160.205 Notices of arrival.

(1659) The owner, agent, Master, operator, or person in charge of a vessel must submit notices of arrival consistent with the requirements in this subpart.

(1660)

§160.206 Information required in an NOA.

(1661) (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.

(1662) (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.

(1664)

§160.208 Updates to a submitted NOA.

(1665) (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.

(1666) (b) Changes in the following information need not be reported:

(1667) (1) Changes in arrival or departure times that are less than six (6) hours;

(1668) (2) Changes in vessel location or position of the vessel at the time of reporting (entry (2)(vi) to Table 160.206); and

(1669) (3) Changes to crewmembers' position or duties on the vessel (entry (4)(vii) to Table 160.206).

(1670) (c) When reporting updates, revise and resubmit the NOA.

(1671)

§160.210 Methods for submitting an NOA.

(1672) (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.

(1673) (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*.

(1674)

§160.212 When to submit an NOA.

(1675) (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.

(1676) (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.

(1677) (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.

(1678) (4) Times for submitting NOAs are as follows:

(1679)

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.

(1680) (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.

(1681) (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 changes to an NOA as soon as practicable but at least 6 hours before entering the port or place of destination.

(1682) (3) U.S. vessels 300 gross tons or less, arriving from a foreign port or place, whose voyage time is—

(1683) (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.

(1684) (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.

(1685) (4) Times for submitting updates to NOAs are as follows:

(1686)

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.

(1687)

§160.214 Waivers.

(1688) 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.

(1689)

§160.215 Force majeure.

(1690) 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:

(1691) (a) The vessel Master's intentions;

(1692) (b) Any hazardous conditions as defined in §160.202; and

(1693) (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.

(1694)

§160.216 Notice of hazardous conditions.

(1695) (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.

(1696) (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—

(1697) (1) What was lost, including a description of cargo, substances involved, and types of packages;

(1698) (2) How many were lost, including the number of packages and quantity of substances they represent;

(1699) (3) When the incident occurred, including the time of the incident or period of time over which the incident occurred;

(1700) (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

(1701) (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.

(1702)

Part 161–Vessel Traffic Management

(1703)

Subpart A–Vessel Traffic Services

(1704)

§161.1 Purpose and Intent.

(1705) (a) The purpose of this part is to promulgate regulations implementing and enforcing certain sections of the Ports and Waterways Safety Act (PWSA) 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.

(1706) (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.

(1707) (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.

(1708) (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.

(1709)

§161.2 Definitions.

(1710) For the purposes of this part:

(1711) *Center* means a Vessel Traffic Center or Vessel Movement Center.

(1712) *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.

(1713) *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:

(1714) (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.

(1715) (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.

(1716) (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.

(1717) *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.

(1718) *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.

(1719) *Towing Vessel* means any commercial vessel engaged in towing another vessel astern, alongside, or by pushing ahead.

(1720) Published means available in a widely-distributed and publicly available medium (e.g., VTS User's Manual, ferry schedule, Notice to Mariners).

(1721) *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).

(1722) *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).

(1723) *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.

(1724) *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.

(1725) *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.

(1726) *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.

(1727) **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.

(1728) *VTS Special Area* means a waterway within a VTS area in which special operating requirements apply.

(1729) *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:

(1730) (1) Subject to the Vessel Bridge-to-Bridge Radiotelephone Act;

(1731) (2) Required to participate in a VMRS; or

(1732) (3) Equipped with a required Coast Guard type-approved Automatic Identification System (AIS).

(1733) *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.

(1734)

§161.3 Applicability.

(1735) 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.

(1736)

§161.4 Requirement to carry the rules.

(1737) Each VTS User shall carry on board and maintain for ready reference a copy of these rules.

(1738) **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).

(1739)

§161.5 Deviations from the rules.

(1740) (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

(1785)

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.

(1786)

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.

(1741) (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.

(1742)

§161.6 Preemption.

(1743) 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 chapter 25 of the Ports and Waterways Safety Act (33 U.S.C. 1221 et seq.), Congress intended that Coast Guard regulations preempt State laws or regulations regarding vessel traffic services in United States ports and waterways.

(1744)

Services, VTS Measures, and Operating Requirements

(1745)

§161.10 Services.

(1746) 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:

(1747) (a) Hazardous conditions or circumstances;

(1748) (b) Vessel congestion;

(1749) (c) Traffic density;

(1750) (d) Environmental conditions;

(1751) (e) Aids to navigation status;

(1752) (f) Anticipated vessel encounters;

(1753) (g) Another vessel's name, type, position, hazardous vessel operating conditions, if applicable, and intended navigation movements, as reported;

(1754) (h) Temporary measures in effect;

(1755) (i) A description of local harbor operations and conditions, such as ferry routes, dredging, and so forth;

(1756) (j) Anchorage availability; or

(1757) (k) Other information or special circumstances.

(1758)

§161.11 VTS measures.

(1759) (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:

(1760) (1) Designating temporary reporting points and procedures;

(1761) (2) Imposing vessel operating requirements; or

(1762) (3) Establishing vessel traffic routing schemes.

(1763) (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.

(1764)

§161.12 Vessel operating requirements.

(1765) (a) Subject to the exigencies of safe navigation, a VTS User shall comply with all measures established or directions issued by a VTS.

(1766) (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.

(1767) (c) When not exchanging 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 communicate in the English language.

(1768) **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.

(1769) (d) As soon as practicable, a VTS User shall notify the VTS of any of the following:

(1770) (1) A marine casualty as defined in 46 CFR 4.05-1;

(1771) (2) Involvement in the ramming of a fixed or floating object;

(1772) (3) A pollution incident as defined in §151.15 of this chapter:

(1773) (4) A defect or discrepancy in an aid to navigation;

(1774) (5) A hazardous condition as defined in §160.202 of this chapter;

(1775) (6) Improper operation of vessel equipment required by Part 164 of this chapter;

(1776) (7) A situation involving hazardous materials for which a report is required by 49 CFR 176.48; and

(1777) (8) A hazardous vessel operating condition as defined in §161.2.

(1799)

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	NOVEMBER	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.].

(1778)

§161.13 VTS Special Area Operating Requirements.

(1779) The following operating requirements apply within a VTS Special Area:

(1780) (a) A VTS User shall, if towing astern, do so with as short a hawser as safety and good seamanship permits.

(1781) (b) A VMRS User shall: (1) Not enter or get underway in the area without prior approval of the VTS;

(1782) (2) Not enter a VTS Special Area if a hazardous vessel operating condition or circumstance exists;

(1783) (3) Not meet, cross, or overtake any other VMRS User in the area without prior approval of the VTS; and

(1784) (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.

(1787)

Subpart B–Vessel Movement Reporting System

(1788)

§161.15 Purpose and Intent.

(1789) (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.

(1790) (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).

(1791)

§161.16 Applicability.

(1792) Unless otherwise stated, the provisions of this subpart apply to the following vessels and VMRS Users:

(1793) (a) Every power-driven vessel of 40 meters (approximately 131 feet) or more in length, while navigating;

(1794) (b) Every towing vessel of 8 meters (approximately 26 feet) or more in length, while navigating; or

(1795) (c) Every vessel certificated to carry 50 or more passengers for hire, when engaged in trade.

(1796)

§161.17 [Removed and Reserved]

(1797)

§161.18 Reporting requirements.

(1798) (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);

(1800) (2) Establish other means of reporting for those vessels unable to report on the designated frequency; or

(1801) (3) Require reports from a vessel in sufficient time to allow advance vessel traffic planning.

(1802) (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).

(1803) (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.

(1804) **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.

(1805) (d) A vessel must report:

(1806) (1) Any significant deviation from its Sailing Plan, as defined in §161.19, or from previously reported information; or

(1807) (2) Any intention to deviate from a VTS issued measure or vessel traffic routing system.

(1808) (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.

(1809)

§161.19 Sailing Plan (SP).

(1810) Unless otherwise stated, at least 15 minutes before navigating a VTS area, a vessel must report the:

(1811) (a) Vessel name and type;

(1812) (b) Position;

(1813) (c) Destination and ETA;

(1814) (d) Intended route;

(1815) (e) Time and point of entry; and

(1816) (f) Dangerous cargo on board or in its tow, as defined in §160.202 of this subchapter.

(1817)

§161.20 Position Report (PR).

(1818) A vessel must report its name and position:

(1819) (a) Upon point of entry into a VMRS area;

(1820) (b) At designated reporting points as set forth in Subpart C; or

(1821) (c) When directed by the Center.

(1822)

§161.21 Automated reporting.

(1823) (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.

(1824) (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:

(1825) (1) Notify the Center;

(1826) (2) Make voice radio Position Reports at designated reporting points as required by §161.20(b) of this part; and

(1827) (3) Make any other reports as directed by the Center.

(1828)

§161.22 Final Report (FR).

(1829) A vessel must report its name and position:

(1830) (a) On arrival at its destination; or

(1831) (b) When leaving a VTS area.

(1832)

§161.23 Reporting exemptions.

(1833) (a) Unless otherwise directed, the following vessels are exempted from providing Position and Final Reports due to the nature of their operation:

(1834) (1) Vessels on a published schedule and route;

(1835) (2) Vessels operating within an area of a radius of three nautical miles or less; or

(1836) (3) Vessels escorting another vessel or assisting another vessel in maneuvering procedures.

(1837) (b) A vessel described in paragraph (a) of this section must:

(1838) (1) Provide a Sailing Plan at least 5 minutes but not more than 15 minutes before navigating within the VMRS area; and

(1839) (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.

(1840)

Subpart C–Vessel Traffic Service and Vessel

Movement Reporting System Areas and Reporting Points

(1841) **Note:** All geographic coordinates contained in part 161 (latitude and longitude) are expressed in North American Datum of 1983 (NAD 83).

(1842)

§161.50 Vessel Traffic Service San Francisco.

(1843) The VTS area consists of all the navigable waters of San Francisco Bay Region south of the Mare Island Causeway Bridge and the Petaluma River Entrance Channel Daybeacon 19 and Petaluma River Entrance Channel Light 20 and north of the Dunbarton Bridge; its seaward approaches within a 38 nautical mile radius of Mount Tamalpais (37°55.8'N., 122°34.6'W.); and its navigable tributaries 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.

(1844)

Part 162–Inland Waterways Navigation Regulations

(1845)

§162.1 General.

(1846) 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.

(1847)

§162.5 Definitions.

(1848) The following definitions apply to this part:

(1849) *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.

(1850)

§162.195 Santa Monica Bay, CA; restricted area.

(1851) (a) *The area*. The waters of the Pacific Ocean, Santa Monica Bay, in an area extending seaward from the shoreline a distance of about 5 nautical miles (normal to the shoreline) and basically outlined as follows:

(1852)

Station	Latitude North	Longitude West
A	33°54'59"	118°25'41"
B	33°54'59"	118°28'00"
C	33°53'59.5"	118°31'37"
D	33°56'19.5"	118°34'05"
E	33°56'25"	118°26'29"

(1853) (b) *The regulations*. (1) Vessels shall not anchor within the area at any time without permission.

(1854) (2) Dredging, dragging, seining, or other fishing operations which might foul underwater installations within the area are prohibited.

(1855) (3) All vessels entering the area, other than vessels operated by or for the United States, the State of California, the county of Los Angeles, or the city of Los Angeles, shall proceed across the area by the most direct route and without unnecessary delay. The area will be open and unrestricted to small recreational craft for recreational activities at all times.

(1856) (4) The placing of buoys, markers, or other devices requiring anchors will not be permitted.

(1857) (5) The city of Los Angeles will maintain a patrol of the area as needed.

(1858)

§162.200 Marina del Rey, CA; restricted area.

(1859) (a) *The area*. That portion of the Pacific Ocean lying shoreward of the offshore breakwater and the most seaward 1,000 feet of the entrance channel between the north and south jetties, and basically outlined as follows:

(1860)

Station	Latitude North	Longitude West
A	33°57'46.0"	118°27'39.5"
B	33°57'52.3"	118°27'43.6"
C	33°57'48.6"	118°27'48.8"
D	33°57'29.8"	118°27'34.7"
E	33°57'30.9"	118°27'29.1"
F	33°57'37.4"	118°27'33.8"
G	33°57'42.4"	118°27'23.0"
H	33°57'50.6"	118°27'28.3"

(1861) (b) *The regulations*. (1) Vessels shall not anchor within the area at any time without permission except in an emergency.

(1862) (2) Dredging, dragging, seining, or other fishing operations which might foul underwater installations within the area are prohibited.

(1863) NOTE: Corps of Engineers also has regulations dealing with this section in 33 CFR 207.

(1864)

§162.205 Suisun Bay, San Joaquin River, and connecting waters, CA.

(1865) (a) *San Joaquin River Deep Water Channel between Suisun Bay and the easterly end of the channel at Stockton; use, administration, and navigation–*

(1866) (1) *Maximum speed*. The maximum speed for all ocean-going craft shall not exceed 10 miles per hour

above the lower end of New York Slough, seven miles per hour above Criminal Point, or five miles per hour while passing any wharf, dock, or moored craft. As used in this paragraph, the speed of a vessel when navigating with the current shall be its rate of movement in excess of the velocity of the current.

(1867) (2) *Passing*. All craft passing other boats, barges, scows, etc., in motion, moored or anchored, shall slow down and take every necessary precaution to avoid damage.

(1868) (3) *Right of way*. (i) United States dredges, tugs, launches, derrick boats, and similar plant of contractors executing river and harbor improvement work for the United States, and displaying the signals prescribed by the regulations contained in part 83 of this chapter shall have the right of way and other craft shall exercise special caution to avoid interference with the work on which the plant is engaged. Dredges, whether Federal or contractors' plant, working the channel must however, take special care to give ocean-going vessels sufficient room for passing, and must lift both spuds and the ladder, and pull clear, if an adequate width of clear channelway cannot otherwise be provided. Ocean-going vessels may show at the masthead a black ball not more than 20 inches in diameter as a signal to the dredge, and may also blow five long blasts of the whistle when within reasonable hearing distance of the dredge, such signal to be followed at the proper time by the passing signal described in the local pilot rules. The dredge shall promptly acknowledge both signals in the usual manner.

(1869) (ii) Light-draft vessels when meeting or being overtaken by ocean-going vessels, shall give the right of way to such vessels by making use of the shallower portions of the waterway.

(1870) (iii) Rafts and tows must promptly give the channel side demanded upon proper signal by a vessel, and must be handled in such a manner as not to obstruct or interfere with the free use of the waterway by other craft.

(1871) (4) *Collisions*. (i) Ocean-going vessels in collision in the channel or turning basin must, if still afloat and in a condition making anchorage necessary, be immediately removed to an approved anchorage ground, or if in such condition that beaching is necessary, they shall be temporarily beached on the northwest side of Mandeville Island or in the Old River.

(1872) (ii) Light-draft vessels suffering collision shall be disposed of as directed by the District Commander or his authorized representative.

(1873) (5) *Wrecks*. In no case following accidents of fire or collision will a vessel be allowed to remain either anchored or grounded in the channel, or beached at any place where it endangers other vessels, while settlement is pending with the underwriters.

(1874) (6) *Other laws and regulations*. In all other respects, the existing Federal laws and rules and regulations affecting navigable waters of the United States will govern in this channel.

(1875) (b) *Sacramento Deep Water Ship Channel between Suisun Bay and easterly end of Turning Basin at West Sacramento; use, administration, and navigation*–(1) *Maximum speed for all ocean-going craft*–(i) *Between Tolands Landing (Mile 6.2) and Rio Vista Bridge*. When going against a current of two knots or more, the maximum speed over the bottom shall not exceed 8 knots. When going with the current, in slack water, or against a current of two knots or less, the maximum speed through the water shall not exceed 10 knots.

(1876) (ii) *Between Rio Vista Bridge and Port of Sacramento*. When going against a current of two knots or more, the maximum speed over the bottom shall not exceed 5 knots. When going with the current, in slack water, or against a current of two knots or less, the maximum speed through the water shall not exceed 7 knots.

(1877) (iii) *Speed past docks or moored craft*. Within 550 feet of the centerline of the channel the speed shall be the minimum required to maintain steerageway; wind, tide, current, etc., being taken into consideration.

(1878) (iv) *Passing*. All craft passing other boats, barges, scows, etc., underway, moored or anchored, shall take every necessary precaution to avoid damage.

(1879) (v) *Speed, high-water precautions*. When passing another vessel (underway, anchored, or tied up); a wharf or other structure; work under construction; plant engaged in river and harbor improvement; levees withstanding flood waters; buildings 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 damage to the vessel or structure being passed. As deemed necessary for public safety during high river stages, floods, or other emergencies, the District Commander may prescribe, by navigation bulletins or other means, the limiting speed in knots or temporarily close the waterway or any reach of it to traffic. 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 herewith.

(1880) (2) *Right of way*. (i) Dredges, tugs, launches, derrick boats and other similar equipment, executing river and harbor improvement work for the United States, and displaying the signals prescribed by the regulations contained in part 83 of this chapter shall have the right-of-way and other craft shall exercise special caution to avoid interference with the work on which the plant is engaged. Dredges, whether Federal or contractor's plant, working the channel must however, take special care to give ocean-going vessels sufficient room for passing, and must lift both spuds and the ladder, and pull clear, if an adequate width of clear channelway cannot otherwise be provided.

(1881) (ii) Vessels intending to pass dredges or other types of floating plant working in navigable channels, when within a reasonable distance therefrom and not in any case over a mile, shall indicate such intention by one long

blast of the whistle, and shall be directed to the proper side for passage by the sounding, by the dredge or other floating plant, of the signal prescribed in the inland pilot rules for vessels underway and approaching each other from opposite directions, which shall be answered in the usual manner by the approaching vessel. If the channel is not clear, the floating plant shall sound the alarm or danger signal and the approaching vessel shall slow down or stop and await further signal from the plant.

(1882) (iii) When the pipeline from a dredge crosses the channel in such a way that an approaching vessel cannot pass safely around the pipeline or dredge, there shall be sounded immediately from the dredge the alarm or danger signal and the approaching vessel shall slow down or stop and await further signal from the dredge. The pipeline shall then be opened and the channel cleared as soon as practicable; when the channel is clear for passage the dredge shall so indicate by sounding the usual passing signal as prescribed in paragraph (c)(2)(ii) of this section. The approaching vessel shall answer with a corresponding signal and pass promptly.

(1883) (iv) When any pipeline or swinging dredge shall have given an approaching vessel or tow the signal that the channel is clear, the dredge shall straighten out within the cut for the passage of the vessel or tow.

(1884) (v) Shallow draft vessels when meeting or being overtaken by ocean-going vessels, shall give the right-of-way to such vessels by making use of the shallower portions of the waterway, wherever possible.

(1885) (vi) Tows should promptly give the channel side requested by proper signal from a vessel, and should be handled in such a manner as not to obstruct or interfere with the free use of the waterway by other craft.

(1886) (3) *Obstruction of traffic*. (i) Except as provided in paragraph (c)(2) of this section no person shall willfully or carelessly obstruct the free navigation of the waterway, or delay any vessel having the right to use the waterway.

(1887) (ii) No vessel shall anchor within the channel except in distress or under stress of weather. Any vessel so anchored shall be moved as quickly as possible to such anchorage as will leave the channel clear for the passage of vessels.

(1888) (iii) Motorboats, sailboats, rowboats, and other small craft shall not anchor or drift in the regular ship channel except under stress of weather or in case of breakdown. Such craft shall be so operated that they will not interfere with or endanger the movement of commercial or public vessels.

(1889) (4) *Collisions.* (i) Ocean-going vessels in collision in the channel or turning basin, must if still afloat and in a condition making anchorage necessary, be immediately removed to an approved anchorage ground, or if in such condition that beaching is necessary, they shall be temporarily beached on the southwest side of Ryer Island from Mile 15.0 to Mile 16.3 or in the Harbor and Turning Basin at West Sacramento.

(1890) (ii) Light-draft vessels suffering collision shall be disposed of as directed by the District Commander or his authorized representative.

(1891) (5) *Marine accidents*. Masters, mates, pilots, owners, or other persons using the waterway to which this paragraph applies shall notify the District Commander, and in the case of undocumented vessels, the State Division of Small Craft Harbors also, 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 to mark the wreck properly.

(1892) (6) *Other laws and regulations*. In all other respects, existing Federal laws and rules and regulations affecting navigable waters of the United States will govern in this channel.

(1893) **NOTE:** The Corps of Engineers also has regulations dealing with this section in 33 CFR 207.

(1894)

§162.210 Lake Tahoe, CA; restricted areas along south shore.

(1895) (a) *The areas*—(1) *Baldwin Beach, under the control of the Forest Service, Department of Agriculture*. The waters of Lake Tahoe shoreward of a line described as follows: Beginning at the intersection of the high waterline with the west boundary line of Lot 2, Section 26, Township 13 North (Mount Diablo Base Line), Range 17 East (Mount Diablo Meridian); thence north 300 feet; thence southeasterly about 2,850 feet to the east line of Section 26 at a point 300 feet north of the high waterline; thence northeasterly 1,740 feet to a point 300 feet north of the high waterline; thence southeasterly about 1,810 feet to the projected east line of the former Baldwin property at a point 300 feet north of the high waterline; and thence south 300 feet to the high waterline.

(1896) (2) *Camp Richardson, under the control of the Forest Service, Department of Agriculture.* The waters of Lake Tahoe shoreward of a line described as follows: Beginning at the southeasterly corner of sec. 25, T. 13 N., R. 17 E., Mount Diablo Base and Meridan; thence north 410 feet along the east line of sec. 25; thence northwesterly 95 feet to the high waterline which is the true point of beginning; thence north 130 feet; thence southeasterly 565 feet; and thence south 130 feet to the high waterline.

(1897) (3) *Pope Beach, under the control of the Forest Service, Department of Agriculture*. The waters of Lake Tahoe shoreward of a line described as follows: Beginning at the intersection of the high waterline with the west line of the former Pope property, about 750 feet westerly of the west boundary line of Lot 2, Section 6, Township 12 North (Mount Diablo Base Line), Range 18 East (Mount Diablo Meridian); thence north 300 feet;

thence southeasterly 4,200 feet to a point 300 feet north of the high waterline; and thence south 300 feet to the high waterline.

(1898) (4) *El Dorado County Beach*. The waters of Lake Tahoe shoreward of a line described as follows: Beginning at the intersection of the high waterline with the west boundary line of Lot 1, Section 32, Township 13 North (Mount Diablo Base Line), Range 18 East (Mount Diablo Meridian); thence north 500 feet; thence northeasterly about 1,350 feet to the projected east line of Lot 1 at a point 500 feet north of the high waterline; and thence south 500 feet to the high waterline.

(1899) (b) *The regulations*. No sail or machine-propelled watercraft, except vessels owned or controlled by the U.S. Coast Guard, shall navigate or anchor in the restricted area.

(1900)

§162.215 Lake Tahoe, Nev.; restricted area adjacent to Nevada Beach.

(1901) (a) *The restricted area*. The waters of Lake Tahoe shoreward of a line described as follows: Beginning at the intersection of the high waterline with a line projected in a general southerly direction 200 feet from a point lying 310 feet west of section corner common to section 15, 16, 21, and 22, Township 13 North (Mt. Diablo Base Line), Range 18 East (Mt. Diablo Meridian); thence 300 feet lakeward at right angles to the high waterline; thence southeasterly approximately 2,170 feet to the projected south boundary line of the Forest Service property at a point 300 feet west of the high waterline; and thence east 300 feet to the high waterline.

(1902) (b) *The regulations*. No sail or motor propelled water craft, except vessels owned or controlled by the United States Government and vessels duly authorized by the United States Coast Guard shall navigate or anchor in the restricted area.

(1903)

§162.220 Hoover Dam, Lake Mead, and Lake Mohave (Colorado River), Ariz.-Nev.

(1904) (a) *Lake Mead and Lake Mohave; restricted areas*– (1) *The areas*. That portion of Lake Mead extending 700 feet upstream of the axis of Hoover Dam and that portion of Lake Mohave (Colorado River) extending 4,500 feet downstream of the axis of Hoover Dam.

(1905) (2) *The regulations*. The restricted areas shall be closed to navigation and other use by the general public. Only vessels owned by or controlled by the U.S. Government and the States of Arizona and Nevada shall navigate or anchor in the restricted areas: Provided, however, The Regional Director, Region 3, U.S. Bureau of Reclamation, Boulder City, Nev., may authorize, by written permit, individuals or groups to navigate or anchor in the restricted areas when it is deemed in the public interest. Copies of said permits shall be furnished to the enforcing agencies.

(1906) (b) *Lake Mead; speed regulation*. In that portion of Lake Mead extending 300 feet upstream of the restricted area described in paragraph (a) of this section, a maximum speed of 5 miles per hour shall not be exceeded.

(1907) (c) *Supervision*. The regulations in this section shall be supervised by the District Commander, Eleventh Coast Guard District.

(1908)

§162.270 Restricted areas in vicinity of Maritime Administration Reserve Fleets.

(1909) (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.

(1910) (1) James River Reserve Fleet, Fort Eustis, Virginia.

(1911) (2) Beaumont Reserve Fleet, Neches River near Beaumont, Texas.

(1912) (3) Suisun Bay Reserve Fleet near Benicia, California.

(1913) (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.

(1914) (c) The regulations in this section shall be enforced by the respective Fleet Superintendents and such agencies as they may designate.

(1915)

Part 164–Navigation Safety Regulations (in part)

(1916)

§164.01 Applicability.

(1917) (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.

(1918) (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–

(1919) (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;

(1920) (2) Used solely for assistance towing as defined by 46 CFR 10.103;

(1921) (3) Used solely for pollution response; or

(1922) (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.

(1923) (c) Provisions of §164.11(a)(2) and (c), 164.30, 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.

(1924) (d) Provisions of §164.46 apply to some self-propelled vessels of less 1600 gross tonnage.

(1925)

§164.02 Applicability exception for foreign vessels.

(1926) (a) Except for §164.46(c), none of the requirements of this part apply to foreign vessels that:

(1927) (1) Are not destined for, or departing from, a port or place subject to the jurisdiction of the United States; and

(1928) (2) Are in:

(1929) (i) Innocent passage through the territorial sea of the United States; or

(1930) (ii) Transit through navigable waters of the United States which form a part of an international strait.

(1931)

§164.03 Incorporation by reference.

(1932) (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.

(1933) (b) American Petroleum Institute (API), 1220 L Street NW., Washington, DC 20005-4070, 202–682–8000, *www.api.org*:

(1934) (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.

(1935) (2) [Reserved]

(1936) (c) ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, 610–832–9585, *www.astm.org*:

(1937) (1) ASTM D4268-93, Standard Test Method for Testing Fiber Rope, IBR approved for §164.74.

(1938) (2) [Reserved]

(1939) (d) Cordage Institute, 350 Lincoln Street, Hingham, MA 02043.

(1940) (1) CIA-3, Standard Test Methods for Fiber Rope Including Standard Terminations, Revised, June 1980, IBR approved for §164.74.

(1941) (2) [Reserved]

(1942) (e) International Maritime Organization (IMO), 4 Albert Embankment, London SE1 7SR, United Kingdom, *www.imo.org*:

(1943) (1) IMO Resolution A342(IX), Recommendation on Performance Standards for Automatic Pilots, November 12, 1975, IBR approved for §164.13.

(1944) (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.

(1945) (3) SN/Circ.227, Guidelines for the Installation of a Shipborne Automatic Identification System (AIS), January 6, 2003, IBR approved for §164.46.

(1946) (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.

(1947) (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.

(1948) (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.

(1949) (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.

(1950) (8) SN.1/Circ.289, Guidance on the Use of AIS Application-Specific Messages, June 2, 2010, IBR approved for §164.46.

(1951) (f) National Marine Electronics Association (NMEA), 7 Riggs Avenue, Severna Park, MD 21146, 800–808–6632, *www.nmea.org*:

(1952) (1) NMEA 0400, Installation Standard for Marine Electronic Equipment used on Moderate-Sized Vessels, Version 3.10, February 2012, IBR approved for §164.46.

(1953) (2) [Reserved]

(1954) (g) Radio Technical Commission for Maritime Services *(RTCM)*, 1611 N. Kent St., Suite 605, Arlington, VA 22209, 703–527–2000, *www.rtcm.org*:

(1955) (1) RTCM Paper 12-78/DO-100, Minimum Performance Standards, Loran C Receiving Equipment, 1977, IBR approved for §164.41.

(1956) (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.

(1957) (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**.

(1958) (h) International Electrotechnical Commission (IEC), 3, rue de Varembe, Geneva, Switzerland, +41 22 919 02 11, *http://www.iec.ch/*. Email: info@iec.ch.

(1959) (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)**.

(1960) (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)**.

(1961)

§164.11 Navigation underway: General.

(1962) The owner, master, or person in charge of each vessel underway shall ensure that:

(1963) (a) The wheelhouse is constantly manned by persons who:

(1964) (1) Direct and control the movement of the vessel; and

(1965) (2) Fix the vessel's position;

(1966) (b) Each person performing a duty described in paragraph (a) of this section is competent to perform that duty;

(1967) (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;

(1968) (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;

(1969) (e) Buoys alone are not used to fix the vessel's position;

(1970) **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.

(1971) (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;

(1972) (g) Rudder orders are executed as given;

(1973) (h) Engine speed and direction orders are executed as given;

(1974) (i) Magnetic variation and deviation and gyrocompass errors are known and correctly applied by the person directing the movement of the vessel;

(1975) (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 during low visibility);

(1976) (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.

(1977) (1) Current velocity and direction for the area to be transited are known by the person directing the movement of the vessel;

(1978) (m) Predicted set and drift are known by the person directing movement of the vessel;

(1979) (n) Tidal state for the area to be transited is known by the person directing movement of the vessel;

(1980) (o) The vessel's anchors are ready for letting go;

(1981) (p) The person directing the movement of the vessel sets the vessel's speed with consideration for–

(1982) (1) The prevailing visibility and weather conditions;

(1983) (2) The proximity of the vessel to fixed shore and marine structures;

(1984) (3) The tendency of the vessel underway to squat and suffer impairment of maneuverability when there is small underkeel clearance;

(1985) (4) The comparative proportions of the vessel and the channel;

(1986) (5) The density of marine traffic;

(1987) (6) The damage that might be caused by the vessel's wake;

(1988) (7) The strength and direction of the current; and

(1989) (8) Any local vessel speed limit;

(1990) (q) The tests required by §164.25 are made and recorded in the vessel's log; and

(1991) (r) The equipment required by this part is maintained in operable condition.

(1992) (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.

(1993) (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.

(1994) (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.

(1995)

§164.13 Navigation underway: tankers.

(1996) (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.

(1997) (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 an engineer with an appropriately endorsed license or merchant mariner credential.

(1998) (c) Each tanker must navigate with at least two deck officers with an appropriately endoresed license or merchant mariner 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.

(1999) (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:

(2000) (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**;

(2001) (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;

(2002) (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

(2003) (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**).

(2004)

§164.15 Navigation bridge visibility.

(2005) (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:

(2006) (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 (1640 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.

(2007) (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 each, nor total more than 20 degrees, including any blind sector within the arc of visibility described in paragraph (a)(1) of this section.

(2008) (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.

(2009) (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.

(2010) (b) Clear view must be provided through at least two front windows at all times regardless of weather condition.

(2011)

§164.19 Requirements for vessels at anchor.

(2012) The master or person in charge of each vessel that is anchored shall ensure that–

(2013) (a) A proper anchor watch is maintained;

(2014) (b) Procedures are followed to detect a dragging anchor; and

(2015) (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.

(2016)

§164.25 Tests before entering or getting underway.

(2017) (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:

(2018) (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:

(2019) (i) Each remote steering gear control system.

(2020) (ii) Each steering position located on the navigating bridge.

(2021) (iii) The main steering gear from the alternative power supply, if installed.

(2022) (iv) Each rudder angle indicator in relation to the actual position of the rudder.

(2023) (v) Each remote steering gear control system power failure alarm.

(2024) (vi) Each remote steering gear power unit failure alarm.

(2025) (vii) The full movement of the rudder to the required capabilities of the steering gear.

(2026) (2) All internal vessel control communications and vessel control alarms.

(2027) (3) Standby or emergency generator, for as long as necessary to show proper functioning, including steady state temperature and pressure readings.

(2028) (4) Storage batteries for emergency lighting and power systems in vessel control and propulsion machinery spaces.

(2029) (5) Main propulsion machinery, ahead and astern.

(2030) (b) Vessels navigating on the Great Lakes and their connecting and tributary waters, having once completed the test requirements of this subpart, are considered to remain in compliance until arriving at the next port of call on the Great Lakes.

(2031) (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.

(2032) (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:

(2033) (1) Operation of the main steering gear from within the steering gear compartment.

(2034) (2) Operation of the means of communications between the navigating bridge and the steering compartment.

(2035) (3) Operation of the alternative power supply for the steering gear if the vessel is so equipped.

(2036)

§164.30 Charts, publications, and equipment: General.

(2037) 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.

(2038)

§164.33 Charts and publications.

(2039) (a) Each vessel must have the following:

(2040) (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–

(2041) (i) Are of a large enough scale and have enough detail to make safe navigation of the area possible; and

(2042) (ii) Are currently corrected.

(2043) (2) For the area to be transited, a currently corrected copy of, or applicable currently corrected extract from, each of the following publications:

(2044) (i) U.S. Coast Pilot.

(2045) (ii) Coast Guard Light List.

(2046) (3) For the area to be transited, the current edition of, or applicable current extract from:

(2047) (i) Tide tables published by private entities using data provided by the National Ocean Service.

(2048) (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.

(2049) (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.

(2050) (c) As used in this section, "currently corrected" means corrected with changes contained in all Notices to Mariners published by the National Geospatial-Intelligence Agency, or an equivalent foreign government publication, reasonably available to the vessel, and that is applicable to the vessel's transit.

(2051)

§164.35 Equipment: All vessels.

(2052) Each vessel must have the following:

(2053) (a) A marine radar system for surface navigation.

(2054) (b) An illuminated magnetic steering compass, mounted in a binnacle, that can be read at the vessel's main steering stand.

(2055) (c) A current magnetic compass deviation table or graph or compass comparison record for the steering compass, in the wheelhouse.

(2056) (d) A gyrocompass.

(2057) (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.

(2058) (f) An illuminated rudder angle indicator in the wheelhouse.

(2059) (g) The following maneuvering information prominently displayed on a fact sheet in the wheelhouse:

(2060) (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 or 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.

(2061) (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.

(2062) (3) For each vessel with a fixed propeller, a table of shaft revolutions per minute for a representative range of speeds.

(2063) (4) For each vessel with a controllable pitch propeller, a table of control settings for a representative range of speeds.

(2064) (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.

(2065) (6) The maneuvering information for the normal load and normal ballast condition for–

(2066) (i) Calm weather-wind 10 knots or less, calm sea;

(2067) (ii) No current;

(2068) (iii) Deep water conditions-water depth twice the vessel's draft or greater; and

(2069) (iv) Clean hull.

(2070) (7) At the bottom of the fact sheet, the following statement:

(2071)

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.

(2072) (h) An echo depth sounding device.

(2073) (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.

(2074) (j) Equipment on the bridge for plotting relative motion.

(2075) (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.

(2076) (1) 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.

(2077) (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.

(2078) (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.

(2079) (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.

(2080)

§164.37 Equipment: Vessels of 10,000 gross tons or more.

(2081) (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.

(2082) **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.

(2083) (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.

(2084)

§164.38 Automatic radar plotting aids (ARPA). (See 33 CFR 164.)

(2085)

§164.39 Steering gear; Foreign tankers.

(2086) (a) This section applies to each foreign tanker of 10,000 gross tons or more, except a public vessel, that–

(2087) (1) Transfers oil at a port or place subject to the jurisdiction of the United States; or

(2088) (2) Otherwise enters or operates in the navigable waters of the United States, except a vessel described by §164.02 of this part.

(2089) (b) *Definitions*. The terms used in this section are as follows:

(2090) *Constructed* means the same as in Chapter II-1, Regulationsn1.1.2 and 1.1.3.1, of SOLAS 74.

(2091) *Existing tanker* means a tanker–

(2092) (1) For which the building contract is placed on or after June 1, 1979;

(2093) (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;

(2094) (3) The delivery of which occurs on or after June 1, 1982; or

(2095) (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.

(2096) *Public vessel, oil hazardous materials*, and *foreign vessel* mean the same as in 46 U.S.C. 2101.

(2097) *SOLAS 74* means the International Convention for the Safety of Life at Sea, 1974, as amended.

(2098) *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).

(2099) (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.

(2100) (d) Each tanker constructed before September 1, 1984, must meet the requirements of chapter II-1, Regulation 29.19, of SOLAS 74.

(2101) (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.

(2102) (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.

(2103)

§164.40 Devices to indicate speed and distance.

(2104) (a) Each vessel required to be fitted with an Automatic Radar Plotting Aid (ARPA) under §164.38 of this part must be fitted with a device to indicate speed and distance of the vessel either through the water or over the ground.

(2105) (b) The device must meet the following specifications:

(2106) (1) The display must be easily readable on the bridge by day or night.

(2107) (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.

(2108) (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.

(2109)

§164.41 Electronic position fixing devices.

(2110) (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—

(2111) (1) Automatic acquisition of satellite signals after initial operator settings have been entered; and

(2112) (2) Position updates derived from satellite information during each usable satellite pass.

(2113) (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. Note: The Federal Radionavigation Plan is available from the National Technical Information Service, Springfield, Va. 22161, with the following Government Accession Numbers:

(2114) Vol 1, ADA 116468

(2115) Vol 2, ADA 116469

(2116) Vol 3, ADA 116470

(2117) Vol 4, ADA 116471

(2118)

§164.42 Rate of turn indicator.

(2119) 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.

(2120)

§164.43 [Removed]

(2121)

§164.46 Automatic Identification System.

(2122) (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—

(2123) (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;

(2124) (2) Receives automatically such information from similarly fitted ships, monitors and tracks ships; and

(2125) (3) Exchanges data with shore-based facilities.

(2126) *Gross tonnage* means tonnage as defined under the International Convention on Tonnage Measurement of Ships, 1969.

(2127) *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.

(2128) *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).

(2129) (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:

(2130) (i) A self-propelled vessel of 65 feet or more in length, engaged in commercial service.

(2131) (ii) A towing vessel of 26 feet or more in length and more than 600 horsepower, engaged in commercial service.

(2132) (iii) A self-propelled vessel that is certificated to carry more than 150 passengers.

(2133) (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.

(2134) (v) A self-propelled vessel engaged in the movement of—

(2135) (A) Certain dangerous cargo as defined in subpart C of part 160 of this chapter, or

(2136) (B) Flammable or combustible liquid cargo in bulk that is listed in 46 CFR 30.25-1, Table 30.25-1.

(2137) (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:

(2138) (i) Fishing industry vessels;

(2139) (ii) Vessels identified in paragraph (b)(1)(i) of this section that are certificated to carry less than 150 passengers and that—

(2140) (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

(2141) (B) Do not operate at speeds in excess of 14 knots; and

(2142) (iii) Vessels identified in paragraph (b)(1)(iv) of this section engaged in dredging operations.

(2143) *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.

(2144) (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):

(2145) (1) A vessel of 300 gross tonnage or more, on an international voyage.

(2146) (2) A vessel of 150 gross tonnage or more, when carrying more than 12 passengers on an international voyage.

(2147) (d) *Operations*. The requirements in this paragraph are applicable to any vessel equipped with AIS.

(2148) (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.

(2149) (2) AIS must be maintained in effective operating condition, which includes—

(2150) (i) The ability to reinitialize the AIS, which requires access to and knowledge of the AIS power source and password;

(2151) (ii) The ability to access AIS information from the primary conning position of the vessel;

(2152) (iii) The accurate broadcast of a properly assigned Maritime Mobile Service Identity (MMSI) number;

(2153) (iv) The accurate input and upkeep of all AIS data fields and system updates; and

(2154) (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).

(2155) (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).

(2156) (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.

(2157) *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.

(2158) (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.

(2159) (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.

(2160) (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).

(2161) (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.

(2162) (1) Vessels that operate solely within a very confined area (*e.g.*, less than a 1 nautical-mile radius, shipyard, or barge fleeting facility);

(2163) (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);

(2164) (3) Vessels that are not likely to encounter other AIS-equipped vessels;

(2165) (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

(2166) (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.

(2167) (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.

(2168) (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.

(2169)

§164.51 Deviations from rules: Emergency.

(2170) 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.

(2171)

§164.53 Deviations from rules and reporting: Non-operating equipment.

(2172) (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.

(2173) (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.

(2174)

§164.55 Deviations from rules: Continuing operation or period of time.

(2175) 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.

(2176)

§164.61 Marine casualty reporting and record retention.

(2177) 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:

(2178) (a) Ensure compliance with 46 CFR 4.05, "Notice of Marine Casualty and Voyage Records," and

(2179) (b) Ensure that the voyage records required by 46 CFR 4.05-15 are retained for:

(2180) (1) 30 days after the casualty if the vessel remains in the navigable waters of the United States; or

(2181) (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.

(2182)

§164.70 Definitions.

(2183) For purposes of §§164.72 through 164.82, the term–

(2184) *Current edition* means the most recent published version of a publication, chart, or map required by §164.72.

(2185) *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.

(2186) *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.

(2187) *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.

(2188) *Swing-meter* means an electronic or electric device that indicates that rate of turn of the vessel on board which it is installed.

(2189) *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.

(2190) *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.

(2191)

§164.72 Navigational-safety equipment, charts or maps, and publications required on towing vessels.

(2192) (a) Except as provided by §164.01(b), each towing vessel must be equipped with the following navigational-safety equipment:

(2193) (1) *Marine Radar.* By August 2, 1997, a marine radar that meets the following applicable requirements:

(2194) (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–

(2195) (A) The requirements of the Federal Communications Commission (FCC) specified by 47 CFR part 80; and

(2196) (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.

(2197) (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–

(2198) (A) The requirements of the FCC specified by 47 CFR part 80; and

(2199) (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.

(2200) (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–

(2201) (A) The requirements of the Federal Communications Commission (FCC) specified by 47 CFR part 80; and

(2202) (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.

(2203) (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–

(2204) (A) The requirements of the FCC specified by 47 CFR Part 80; and

(2205) (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.

(2206) (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.

(2207) (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.

(2208) (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.)

(2209) (4) *Magnetic Compass*. Either–

(2233)

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.

(2210) (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

(2211) (ii) An illuminated card-type magnetic steering compass readable from the vessel's main steering station.

(2212) (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.

(2213) (6) *Electronic Position-Fixing Device*. An electronic position-fixing device, 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.

(2214) (b) Each towing vessel must carry on board and maintain the following:

(2215) (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.

(2216) (i) The charts or maps must be of a large enough scale and have enough detail to make safe navigation of the areas possible.

(2217) (ii) The charts or maps must be either–

(2218) (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

(2219) (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.

(2220) (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.

(2221) (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:

(2222) (i) If the vessel is engaged in towing exclusively on Western Rivers–

(2223) (A) U.S. Coast Guard Light List;

(2224) (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

(2225) (C) Tidal-current tables published by private entities using data provided by the NOS, or river-current tables published by a river authority;

(2226) (ii) if the vessel is engaged other than in towing exclusively on Western Rivers–

(2227) (A) Coast Guard Light List;

(2228) (B) Notices to Mariners published by the National Geospatial-Intelligence Agency, or LNMs published by the Coast Guard;

(2229) (C) Tidal-current tables published by private entities using data provided by the NOS, or river-current tables published by a river authority;

(2230) (D) Tide tables published by private entities using data provided by the NOS; and

(2231) (E) U.S. Coast Pilot.

(2232) (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 engaged in towing:

(2234)

§164.74 Towline and terminal gear for towing astern.

(2235) (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:

(2236) (1) The size and material of each towline must be–

(2237) (i) Appropriate for the horsepower or bollard pull of the vessel;

(2238) (ii) Appropriate for the static loads and dynamic loads expected during the intended service;

(2239) (iii) Appropriate for the sea conditions expected during the intended service;

(2240) (iv) Appropriate for exposure to the marine environment and to any chemicals used or carried on board the vessel;

(2241) (v) Appropriate for the temperatures of normal stowage and service on board the vessel;

(2242) (vi) Compatible with associated navigational-safety equipment; and

(2243) (vii) Appropriate for the likelihood of mechanical damage.

(2244) (2) Each towline as rigged must be–

(2245) (i) Free of knots;

(2246) (ii) Spliced with a thimble, or have a poured socket at its end; and

(2247) (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.

(2248) (3) The condition of each towline must be monitored through the–

(2249) (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 (incorporated by reference, see §164.03), Standard Test Method for Testing Fiber Ropes; or Cordage Institute CIA 3, Standard Test Methods for Fiber Rope Including Standard Terminations;

(2250) (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;

(2251) (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);

(2252) (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–

(2253) (A) Nautical miles on, or time in service of, the towline;

(2254) (B) Operating conditions experienced by the towline;

(2255) (C) History of loading of the towline;

(2256) (D) Surface condition, including corrosion and discoloration, of the towline;

(2257) (E) Amount of visible damage to the towline;

(2258) (F) Amount of material deterioration indicated by measurements of diameter and, if applicable, measurements of lay extension of the towline; and

(2259) (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

(2260) (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.

(2261) (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:

(2262) (1) The material and size of the terminal gear are appropriate for the strength and anticipated loading of the towline and for the environment;

(2263) (2) Each connection is secured by at least one nut with at least one cotter pin or other means of preventing its failure;

(2264) (3) The lead of the towline is appropriate to prevent sharp bends in the towline from fairlead blocks, chocks, or tackle;

(2265) (4) There is provided a method, whether mechanical or non-mechanical, that does not endanger operating personnel but that easily releases the towline;

(2266) (5) The towline is protected from abrasion or chafing by chafing gear, lagging, or other means;

(2267) (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

(2268) (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.

(2269)

§164.76 Towline and terminal gear for towing alongside and pushing ahead.

(2270) The owner, master, or operator of each vessel towing alongside or pushing ahead shall ensure the face wires, spring lines, and push gear used–

(2271) (a) Are appropriate for the vessel's horsepower;

(2272) (b) Are appropriate for the arrangement of the tow;

(2273) (c) Are frequently inspected; and

(2274) (d) Remain serviceable.

(2275)

§164.78 Navigation under way: Towing vessels.

(2276) (a) The owner, master, or operator of each vessel towing shall ensure that each person directing and controlling the movement of the vessel–

(2277) (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;

(2278) (2) Can fix the position of the vessel using installed navigational equipment, aids to navigation, geographic reference-points, and hydrographic contours;

(2279) (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.);

(2280) (4) Evaluates the danger of each closing visual or radar contact;

(2281) (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;

(2282) (6) Knows the speed and direction of the current, and the set, drift, and tidal state for the area to be transited;

(2283) (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

(2284) (8) Monitors the voyage plan required by §164.80.

(2285) (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.

(2286)

§164.80 Tests inspections, and voyage planning.

(2287) (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:

(2288) (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.

(2289) (2) *Navigational equipment*. A test of all installed navigational equipment.

(2290) (3) *Communications*. Operation of all internal vessel control communications and vessel-control alarms, if installed.

(2291) (4) *Lights*. Operation of all navigational lights and all searchlights.

(2292) (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.

(2293) (6) *Propulsion systems*. Visual inspection of the spaces for main propulsion machinery, of machinery, and of devices for monitoring machinery.

(2294) (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:

(2295) (1) *Navigational equipment*. Tests of onboard equipment as required by §164.25.

(2296) (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.

(2297) (c)(1) The voyage-planning requirements outlined in this section do not apply to you if your towing vessel is–

(2298) (i) Used solely for any of the following services or any combination of these services–

(2299) (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:

(2300) (B) For harbor assist;

(2301) (C) For assistance towing as defined by 46 CFR 10.103;

(2302) (D) For response to emergency or pollution;

(2303) (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;

(2304) (iii) A foreign vessel engaged in innocent passage; or

(2305) (iv) Exempted by the Captain of the Port (COTP).

(2306) (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.

(2307) (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):

(2308) (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;

(2309) (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);

(2310) (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;

(2311) (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;

(2312) (v) Pre-departure checklists;

(2313) (vi) Calculated speed and estimated time of arrival at proposed waypoints;

(2314) (vii) Communication contacts at any Vessel Traffic Services, bridges, and facilities, and any port specific requirements for VHF radio;

(2315) (viii) Any master's or operator's standings orders detailing closest points of approach, special conditions, and critical maneuvers; and

(2316) (ix) Whether the towing vessel has sufficient power to control the tow under all foreseeable circumstances.

(2317)

§164.82 Maintenance, failure, and reporting.

(2318) (a) *Maintenance*. The owner, master, or operator or each towing vessel shall maintain operative the navigational-safety equipment required by §164.72.

(2319) (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.

(2320) (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.

(2321) (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.

(2322) (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.

(2323) (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.

(2324)

Part 165–Regulated Navigation Areas and Limited Access Areas

(2325)

Subpart A–General

(2326)

§165.1 Purpose of part.

(2327) The purpose of this part is to–

(2328) (a) Prescribe procedures for establishing different types of limited or controlled access areas and regulated navigation areas;

(2329) (b) Prescribe general regulations for different types of limited or controlled access areas and regulated navigation areas;

(2330) (c) Prescribe specific requirements for established areas; and

(2331) (d) List specific areas and their boundaries.

(2332)

§165.3 Definitions.

(2333) The following definitions apply to this part:

(2334) *Credential* means any or all of the following:

(2335) (1) Merchant mariner's document.

(2336) (2) Merchant mariner's license.

(2337) (3) STCW endorsement.

(2338) (4) Certificate of registry.

(2339) (5) Merchant mariner credential.

(2340) *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.

(2341)

§165.5 Establishment procedures.

(2342) (a) A safety zone, security zone, or regulated navigation area may be established on the initiative of any authorized Coast Guard official.

(2343) (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:

(2344) (1) The name of the person submitting the request;

(2345) (2) The location and boundaries of the safety zone, security zone, or regulated navigation area;

(2346) (3) The date, time, and duration that the safety zone, security zone, or regulated navigation area should be established;

(2347) (4) A description of the activities planned for the safety zone, security zone, or regulated navigation area;

(2348) (5) The nature of the restrictions or conditions desired; and

(2349) (6) The reason why the safety zone, security zone, or regulated navigation area is necessary.

(2350) (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.

(2351) (Requests for safety zones, security zones, and regulated navigation areas are approved by the Office of Management and Budget under control number 1625-0020)

(2352)

§165.7 Notification.

(2353) (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.

(2354) (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.

(2355)

§165.8 Geographic coordinates.

(2356) 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.

(2357)

§165.9 Geographic application of limited and controlled access areas and regulated navigation areas.

(2358) (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.

(2359) (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.

(2360) (c) *Security zones*. These zones have two sources of authority–46 U.S.C. chapter 700, and the Act of June 15, 1917, as emended 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.

(2361) (d) *Naval vessel protection zones*. These zones are issued under the authority of 14 U.S.C. 91 and 633 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.

(2362)

Subpart B–Regulated Navigation Areas

(2363)

§165.10 Regulated navigation area.

(2364) 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.

(2365)

§165.11 Vessel operating requirements (regulations).

(2366) Each District Commander may control vessel traffic in an area which is determined to have hazardous conditions, by issuing regulations:

(2367) (a) Specifying times of vessel entry, movement, or departure to, from, within, or through ports, harbors, or other waters;

(2368) (b) Establishing vessel size, speed, draft limitations, and operating conditions; and

(2369) (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.

(2370)

§165.13 General regulations.

(2371) (a) The master of a vessel in a regulated navigation area shall operate the vessel in accordance with the regulations contained in Subpart F.

(2372) (b) No person may cause or authorize the operation of a vessel in a regulated navigation area contrary to the regulations in this part.

(2373)

Subpart C–Safety Zones

(2374)

§165.20 Safety zones.

(2375) 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.

(2376)

§165.23 General regulations.

(2377) Unless otherwise provided in this part:

(2378) (a) No person may enter a safety zone unless authorized by the COTP or the District Commander.

(2379) (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.

(2380) (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

(2381) (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.

(2382)

Subpart D–Security Zones

(2383)

§165.30 Security Zones.

(2384) (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.

(2385) (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:

(2386) (1) Vessels,

(2387) (2) Harbors,

(2388) (3) Ports and

(2389) (4) Waterfront facilities:

(2390) in the United States and all territory and water, continental or insular, that is subject to the jurisdiction of the United States.

(2391)

§165.33 General regulations.

(2392) Unless otherwise provided in the special regulations in Subpart F of this part:

(2393) (a) No person or vessel may enter or remain in a security zone without the permission of the Captain of the Port;

(2394) (b) Each person and vessel in a security zone shall obey any direction or order of the Captain of the Port;

(2395) (c) The Captain of the Port may take possession and control of any vessel in the security zone;

(2396) (d) The Captain of the Port may remove any person, vessel, article, or thing from a security zone;

(2397) (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

(2398) (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.

(2399)

Subpart E–Restricted Waterfront Areas

(2400)

§165.40 Restricted waterfront areas.

(2401) 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 §125.09 of this chapter when certain shipping activities are conducted that are outlined in §125.15 of this chapter.

(2402)

Subpart F–Specific Regulated Navigation Areas and Limited Access Areas

(2403)

§165.1101 Security Zone: San Diego Bay, CA.

(2404) (a) *Location*. The following area is a security zone: the water area within Naval Station, San Diego enclosed by the following points: Beginning at

(2405) 32°41'16.5"N., 117°08'01"W (Point A); thence running southwesterly to

(2406) 32°40'58.3"N., 117°08'11.0"W. (Point B); to

(2407) 32°40'36.0"N., 117°07'49.1"W. (Point C); to

(2408) 32°40'17.0"N., 117°07'34.6"W. (Point D); to

(2409) 32°39'36.4"N., 117°07'24.8"W. (Point E); to

(2410) 32°39'38.5"N., 117°07'06.5"W. (Point F); thence running generally northwesterly along the shoreline of the Naval Station to the place of the beginning. All coordinates referenced use datum: NAD 1983.

(2411) (b) *Regulations*. (1) In accordance with the general regulations in §165.33 of this part, entry into the area of this zone is prohibited unless authorized by the Captain of the Port San Diego; Commander, Naval Base San Diego; Commander, Navy Region Southwest; or the Commanding Officer, Naval Station, San Diego.

(2412) (2) Persons desiring to transit the area of the security zone may contact the Captain of the Port at telephone number 619–683–6495 or on VHF 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 his or her designated representative.

(2413) (c) *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.

(2414) (d) *Enforcement.* The U.S. Coast Guard may be assisted in the patrol and enforcement of this security zone by the U.S. Navy.

(2415)

§165.1102 Security Zone: Naval Base Point Loma; San Diego Bay, CA.

(2416) (a) *Location*. The following area is a security zone: The water adjacent to the Naval Base Point Loma, San Diego, CA, enclosed by the following coordinates:

(2417) 32°42'28.8"N, 117°14'13.2"W (Point A)

(2418) 32°42'28.8"N, 117°14'12.6"W (Point B)

(2419) 32°42'10.2""N, 117°14'03.0"W (Point C)

(2420) 32°42'06.2"N, 117°14'01.5"W (Point D)

(2421) 32°41'49.5"N, 117°14'07.0"W (Point E)

(2422) 32°41'47.4"N, 117°14'11.4"W (Point F)

(2423) 32°41'43.8"N, 117°14'12.6"W (Point G)

(2424) 32°41'31.8"N, 117°14'13.8"W (Point H)

(2425) 32°41'33.0"N, 117°14'01.2"W (Point I)

(2426) 32°41'10.2"N, 117°13'57.0"W (Point J)

(2427) 32°41'10.2"N, 117°13'58.2"W (Point K)

(2428) Thence running generally north along the shoreline to Point A.

(2429) (b) *Regulations*. (1) The general regulations governing security zones found in 33 CFR 165.33 apply to the security zone described in paragraph (a) of this section.

(2430) (2) Entry into, or remaining in, the areas of either zone is prohibited unless authorized by the Captain of the Port San Diego; Commanding Officer, Naval Base Point Loma; or Commander, Naval Region Southwest.

(2431) (3) Persons desiring to transit the area of the security zone may request permission from the Captain of the Port San Diego at telephone number 619–278–7033 or on VHF channel 16 (156.8 MHz) or from either the Commanding Officer, Naval Base Point Loma or the Commanding Officer Navy Region Southwest by calling the Navy Port Operation Dispatch at telephone number 619–556–1433 or on VHF–FM channels 16 or 12. If permission is granted, all persons and vessels must comply with the instructions of the Captain of the Port San Diego or his or her designated representative.

(2432) (c) *Definitions*. For purposes of this section: Captain of the Port San Diego, means the Commanding Officer of the Coast Guard Sector San Diego; Commander, Navy Region Southwest, means Navy Region Commander responsible for the Southwest Region; Commanding Officer, Naval Base Point Loma, means the Installation Commander of the naval base located on Point Loma, San Diego, California; Designated Representative, means any U.S. Coast Guard commissioned, warrant, or petty officer who has been designated by the Captain of the Port San Diego to assist in the enforcement of the security zone described in paragraph (a) of this section.

(2433) (d) *Enforcement*. The U.S. Coast Guard may be assisted in the patrol and enforcement of the security zone described in paragraph (a) of this section by the U.S. Navy and local law enforcement agencies.

(2434)

§165.1103 Security Zone; Naval Mine Anti

Submarine Warfare Command; San Diego Bay, San Diego, CA.

(2435) (a) *Location*. (1) The following area is a security zone: The water adjacent to the Naval Mine Anti Submarine Warfare Command, bound by the following coordinates:

(2436) 32°43'40.9"N, 117°12'54.9"W (A)

(2437) 32°43'40.6"N, 117°12'52.3"W (B)

(2438) 32°43'22.5"N, 117°12'57.8"W (C)

(2439) 32°43'23.4"N, 117°13'01.3"W (D)

(2440) Thence running generally northwest along the shoreline to Point A.

(2441) (2) The proposed security zone at the Naval Mine Anti Submarine Warfare Command would be established to provide for the 100 feet of standoff distance.

(2442) (b) *Regulations*. (1) The general regulations governing security zones found in 33 CFR 165.33 apply to the security zone described in paragraph (a) of this section.

(2443) (2) Entry into, or remaining in, the areas of either zone is prohibited unless authorized by the Captain of the Port San Diego; Commanding Officer, Naval Mine Anti Submarine Warfare Command; or Commander, Naval Region Southwest.

(2444) (3) Persons desiring to transit the area of the security zone may request permission from the Captain of the Port San Diego at telephone number 619–278–7033 or on VHF channel 16 (156.8 MHz) or from either the Commanding Officer, Naval Mine Anti Submarine Warfare Command or the Commander, Navy Region Southwest by calling the Navy Port Operation Dispatch at telephone number 619–556–1433 or on VHF–FM channels 16 or 12. If permission is granted, all persons and vessels must comply with the instructions of the Captain of the Port San Diego or his or her designated representative.

(2445) (c) *Definitions*. For purposes of this section: Captain of the Port San Diego, means the Commanding Officer of the Coast Guard Sector San Diego; Commander, Navy Region Southwest, means Navy Region Commander responsible for the Southwest Region; Commanding Officer, Naval Mine Anti Submarine Warfare Command, means the Installation Commander of the naval base located on Point Loma, San Diego, California; Designated Representative, means any U.S. Coast Guard commissioned, warrant, or petty officer who has been designated by the Captain of the Port San Diego to assist in the enforcement of the security zone described in paragraph (a) of this section.

(2446) (d) *Enforcement*. The U.S. Coast Guard may be assisted in the patrol and enforcement of the security zone described in paragraph (a) of this section by the U.S. Navy and local law enforcement agencies.

(2447)

§165.1104 Security Zone: San Diego Bay, CA.

(2448) (a) *Location*. The following area is a security zone: on the waters along the northern shoreline of Naval Base Coronado, the area enclosed by the following points: Beginning at

(2449) 32°42'53.0"N., 117°11'45.0 W. (Point A); thence running northerly to

(2450) 32°42'55.5"N., 117°11'45.0"W., (Point B); thence running easterly to

(2451) 32°42'57.0"N., 117°11'31.0"W., (Point C); thence southeasterly to

(2452) 32°42'42.0"N., 117°11'04.0"W. (Point D); thence southeasterly to

(2453) 32°42'21.0"N., 117°10'47.0"W. (Point E) thence running southerly to

(2454) 32°42'13.0"N., 117°10'51.0"W. (Point F); thence running generally northwesterly along the shoreline of Naval Base Coronado to the place of beginning. All coordinates referenced use datum: NAD 1983.

(2455) (b) *Regulations*. (1) In accordance with the general regulations in Sec. 165.33 of this part, entry into the area of this zone is prohibited unless authorized by the Captain of the Port San Diego; Commander, Naval Base Coronado, or Commander, Navy Region Southwest.

(2456) (2) Persons desiring to transit the area of the security zone may contact the Captain of the Port at telephone number 619–683–6495 or on VHF 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 his or her designated representative.

(2457) (c) *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.

(2458) (d) *Enforcement*. The U.S. Coast Guard may be assisted in the patrol and enforcement of this security zone by the U.S. Navy.

(2459)

§165.1105 Security Zone: San Diego Bay, CA.

(2460) (a) *Location:* (1) The following area is a security zone: The water area adjacent to Naval Air Station North Island, Coronado, California, and within 100 yards (91 meters) of Bravo Pier, and vessels moored thereto, bounded by the following points (when no vessel is moored at the pier):

(2461) (i) 32°41'53.0"N., 117°13'33.6"W.;

(2462) (ii) 32°41'53.0"N., 117°13'40.6"W.;

(2463) (iii) 32°41'34.0"N., 117°13'40.6"W.;

(2464) (iv) 32°41'34.0"N., 117°13'34.1"W.

(2465) (2) Because the area of this security zone is measured from the pier and from vessels moored thereto, the actual area of this security zone will be larger when a vessel is moored at Bravo Pier.

(2466) (b) *Regulations:* In accordance with the general regulations in §165.33 of this part, entry into the area of this zone is prohibited unless authorized by the Captain of the Port or the Commanding Officer, Naval Air Station North Island. Section 165.33 also contains other general requirements.

(2467)

§165.1106 San Diego Bay, CA–safety zone.

(2468) (a) The waters of San Diego Bay enclosed by the following boundaries are a safety zone:

(2469) From a point located on the boundary of Coast Guard Air Station San Diego, California at latitude 32°43'37.2"N., longitude 117°10'45.0"W. (point A), for a point of beginning; thence southeasterly to latitude 32°43'36.2"N., longitude 117°10'41.5"W. (point B); thence southwesterly to latitude 32°43'20.2"N., longitude 117°10'49.5"W. (point C); thence northwesterly to latitude 32°43'25.7"N., longitude 117°11'04.6"W. (point D); thence northeasterly to latitude 32°43'35.7"N., longitude 117°10'59.5"W. (point E); thence generally easterly along the air station boundary to the point of beginning (point A).

(2470) (b)(1) In accordance with the general regulations in §165.23 of this Part, entry into the area of this zone is prohibited unless authorized by the Captain of the Port, except as provided for below.

(2471) (2) Vessels may transit the area of this safety zone without permission, but may not anchor, stop, remain within the zone, or approach within 100 yards (92 meters) of the land area of Coast Guard Air Station San Diego or structures attached thereto.

(2472)

§165.1107 San Diego Bay, CA.

(2473) (a) *Location*. The area encompassed by the following geographic coordinates is a regulated navigation area:

(2474) 32°41'24.6"N., 117°14'21.9"W.

(2475) 32°41'34.2"N., 117°13'58.5"W.

(2476) 32°41'34.2"N., 117°13'37.2"W., thence south along the shoreline to

(2477) 32°41'11.2"N., 117°13'31.3"W.

(2478) 32°41'11.2"N., 117°13'58.5"W., thence north along the shoreline to the point of origin.

(2479) Datum: NAD 1983.

(2480) (b) *Regulations*. (1) During submarine docking/undocking operations at the U.S. Naval Submarine Base on Ballast Point, San Diego Bay, California, mariners transiting within the regulated navigation area shall proceed at a speed that generates no wake from their vessel.

(2481) (2) The Coast Guard will issue a Broadcast Notice to Mariners, and if time permits a Local Notice to Mariners, to inform the maritime community of the dates and times of the submarine docking/undocking operations covered by paragraph (b)(1).

(2482) (3) The master and/or operator of a vessel within the regulated navigation area shall comply with any other orders or directions issued by the Coast Guard as required for the safety of the submarine docking/undocking operations covered by paragraph (b)(1).

(2483)

§165.1108 Security Zones; Cruise Ships, Port of San Diego, CA.

(2484) (a) *Definition*. "Cruise Ship" as used in this section means a passenger vessel, except for a ferry, 100 gross tons or more, authorized to carry more than 12 passengers for hire; capable of making international voyages lasting more than 24 hours, any part of which is on the high seas; and for which passengers are embarked, disembarked or at a port of call in the San Diego port.

(2485) (b) *Location*. The following areas are security zones: All navigable water, extending from the surface to the sea floor, within a 100-yard radius around any cruise ship that is located within the San Diego port area landward of the sea buoys bounding the Port of San Diego.

(2486) (c) *Regulations.* Under regulations in 33 CFR part 165, subpart D, a person or vessel may not enter into or remain in the security zones created by this section unless authorized by the Coast Guard Captain of the Port, San Diego (COTP) or a COTP designated representative. Persons desiring to transit these security zones may contact the COTP at telephone number 619–278–7033 or on VHF-FM 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 his or her designated representative.

(2487) (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.

(2488) (e) *Enforcement*. The U.S. Coast Guard may be assisted in the patrol and enforcement of the security zones by the San Diego Harbor Police.

(2489)

§165.1110 Security Zone: Coronado Bay Bridge, San Diego, CA.

(2490) (a) *Location.* All navigable waters of San Diego Bay, from the surface to the sea floor, within 25 yards of all piers, abutments, fenders and pilings of the Coronado Bay Bridge. These security zones will not restrict the main navigational channel nor will it restrict vessels from transiting through the channel.

(2491) (b) *Regulations*. (1) Under §165.33, entry into, transit through, loitering, or anchoring within any of these security zones by all persons and vessels is prohibited, unless authorized by the Captain of the Port, or his designated representative. Mariners seeking permission to transit through a security zone may request authorization to do so from Captain of the Port or his designated representative. The Coast Guard can be contacted on San Diego Bay via VHF-FM channel 16.

(2492) (2) Vessels may enter a security zone if it is necessary for safe navigation and circumstances do not allow sufficient time to obtain permission from the Captain of the Port.

(2493)

§165.1120 Security Zone; Naval Amphibious Base, San Diego, CA.

(2494) (a) *Location*. The following area is a security zone: the waters of San Diego Bay, enclosed by lines connecting the following points: Beginning at

(2495) 32°40'30.0"N., 117°10'03.0"W. (Point A): thence running northeasterly to

(2496) 32°40'54.0"N., 117°09'35.5"W. (Point B); thence running northeasterly to

(2497) 32°40'55.0"N., 117°09'27.0"W. (Point C); thence running southeasterly to

(2498) 32°40'43.0"N., 117°09'09.0"W. (Point D); thence running southerly to

(2499) 32°40'39.0"N., 117°09'08.0"W. (Point E); thence running southwesterly to

(2500) 32°40'30.0"N., 117°09'12.9"W. (Point F); thence running a short distance to

(2501) 32°40'29.0"N., 117°09'14.0"W. (Point G); thence running southwesterly to

(2502) 32°40'26.0"N., 117°09'17.0"W. (Point H); thence running northwesterly to the shoreline to

(2503) 32°40'31.0"N., 117°09'22.5"W. (Point I), thence running along the shoreline to the beginning point.

(2504) (b) *Regulations*. In accordance with the general regulations in §165.33 of this part, entry into the area of this zone is prohibited unless authorized by the Captain of the Port or the Commander, Navy Region Southwest.

(2505) (c) *Enforcement*. The U.S. Coast Guard may be assisted in the patrol and enforcement of this security zone by the U.S. Navy.

(2506)

§165.1121 [Removed and Reserved]

(2507)

§165.1122 San Diego Bay, Mission Bay and their Approaches–Regulated navigation area.

(2508) (a) *Regulated navigation area*. The following area is a regulated navigation area (RNA): All waters of San Diego Bay, Mission Bay, and their approaches encompassed by a line commencing at Point La Jolla (32°51'06"N., 117°16'42"W.); thence proceeding seaward on a line bearing **255°**T to the outermost extent of the territorial seas; thence proceeding southerly along the outermost extent of the territorial seas to the intersection of the maritime boundary with Mexico; thence proceeding easterly, along the maritime boundary with Mexico to its intersection with the California coast; thence proceeding northerly, along the shoreline of the California coast–and including the inland waters of San Diego Bay and Mission Bay, California, shoreward of the COLREGS Demarcation Line–back to the point of origin. All coordinates reference 1983 North American Datum (NAD 83).

(2509) (b) *Definitions*. As used in this section–

(2510) *COLREGS Demarcation Line* means the line described at 33 CFR 80.1104 or 80.1106.

(2511) *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.

(2512) *Vessel* means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel.

(2513) (c) *Applicability.* This section applies to all vessels of 100 gross tons (GT) or more, including tug and barge combinations of 100 GT or more (combined), operating within the RNA, with the exception of public vessels, vessels not intending to cross the COLREGS Demarcation Line and enter San Diego Bay or Mission Bay, and any vessels exercising rights under principles of international law, including innocent passage or force majeure, within the area of the RNA. Vessels operating properly installed, operational, type approved automatic identification system (AIS) as denoted in 33 CFR 164.46 are exempted from making requests as required in this regulation.

(2514) (d) *Regulations* (1) No vessel to which this rule applies may enter, depart or move within San Diego Bay or Mission Bay unless it complies with the following requirements:

(2515) (i) Obtain permission to enter San Diego Bay or Mission Bay from the Captain of the Port or designated representative immediately upon entering the RNA. However, to avoid potential delays, we recommend seeking permission 30 minutes prior to entering the RNA.

(2516) (ii) Follow all instructions issued by the Captain of the Port or designated representative.

(2517) (iii) Obtain permission for any departure from or movement within the RNA from the Captain of the Port or designated representative prior to getting underway.

(2518) (iv) Follow all instructions issued by the Captain of the Port or designated representative.

(2519) (v) Requests may be made by telephone at 619–278–7033 (select option 2) or via VHF-FM radiotelephone on channel 16 (156.800 Mhz). The call sign for radiotelephone requests to the Captain of the Port or designated representative is "Coast Guard Sector San Diego."

(2520) (2) For purposes of the requirements in paragraph (d)(1) of this section, the Captain of the Port or designated representative means any official designated by the Captain of the Port, including but not limited to commissioned, warrant, and petty officers of the U.S. Coast Guard, and any U.S. Coast Guard patrol vessel. Upon being hailed by a U.S. Coast Guard vessel by siren, radio, flashing light, or other means, the operator of a vessel shall proceed as directed.

(2521) (e) *Waivers*. The Captain of the Port or designated representative may, upon request, waive any regulation in this section.

(2522)

§165.1131 Security Zone: Wilson Cove, San Clemente Island, CA.

(2523) (a) *Location*. The following area is a security zone: The water area adjacent to San Clemente Island, California within 1.5 nautical miles (1.73 statute miles, 2.8 kilometers) of the shoreline of San Clemente Island from Wilson Cove North End Light (LLNR 2565) to Spruce Pier, approximately 4.1 nautical miles (4.7 statute miles, 7.65 kilometers) southeast of Wilson Cove North End Light, described as follows: Starting at a point on the shoreline of San Clemente Island, California, in position

(2524) 33°01'25.0"N., 118°33'43.0"W. for a place of beginning (point A), thence northeasterly to

(2525) 33°02'11.0"N., 118°32'13.5"W. (point B), thence southeasterly to

(2526) 32°58'40.5"N., 118°29'15.5"W. (point C), thence southwesterly to

(2527) 32°57'54.0"N., 118°31'17.2"W. (point D), thence northwesterly along the shoreline of San Clemente Island to the place of beginning.

(2528) (b) *Regulations*. In accordance with the general regulations in §165.33 of this part, entry into the area of this zone is prohibited unless authorized by the Captain of the Port, San Diego, California. Section 165.33 also contains other general requirements.

(2529)

§165.1141 Safety Zone; San Clemente 3 NM Safety Zone, San Clemente Island, CA.

(2530) (a) *Location*. The following area is a safety zone: All waters of the Pacific Ocean surrounding San Clemente Island, from surface to bottom, extending from the high tide line on the island seaward 3 NM. The zone consists of the following sections (see Figure 1):

(2532) (1) *Section A*

(2533) Beginning at 33°02'03.0"N., 118°35'51.0"W.; thence to 33°04'55.8"N., 118°37'04.2"W.; thence running parallel to the shore at a distance of approximately 3 NM from the high tide line to 33°02'49.2"N., 118°30'39.0"W.;

(2531)

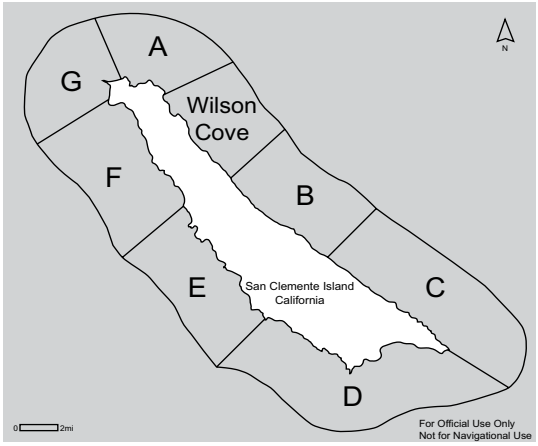


Figure 1. San Clemente Island Safety Zone Configuration

thence 33°01'17.4"N., 118°33'52.8"W.; thence along the shoreline returning to 33°02'03.0"N., 118°35'51.0"W.

(2534) (2) *Section B*

(2535) Beginning at 32°57'18.0"N., 118°30'52.8"W.; thence to 32°59'36.0"N., 118°28'19.8"W.; thence running parallel to the shore at a distance of approximately 3 NM from the high tide line to 32°55'49.8"N., 118°24'13.2"W.; thence to 32°53'31.8"N., 118°26'31.2"W.; thence along the shoreline returning to 32°57'18.0"N., 118°30'52.8"W.

(2536) (3) *Section C*

(2537) Beginning at 32°53'31.8"N., 118°26'31.2"W.; thence to 32°55'49.8"N., 118°24'13.2"W.; thence running parallel to the shore at a distance of approximately 3 NM from the high tide line to 32°47'16.2"N., 118°18'13.8"W.; thence to 32°49'06.0"N., 118°21'03.0"W.; thence along the shoreline returning to 32°53'31.8"N., 118°26'31.2"W.

(2538) (4) *Section D*

(2539) Beginning at 32°49'06.0"N., 118°21'03.0"W.; thence to 32°47'16.2"N., 118°18'13.8"W.; thence running parallel to the shore at a distance of approximately 3 NM from the high tide line to 32°48'22.8"N., 118°31'41.4"W.; thence to 32°50'42.0"N., 118°29'22.2"W.; thence along the shoreline returning to 32°49'06.0"N., 118°21'03.0"W.

(2540) (5) *Section E*

(2541) Beginning at 32°50'42.0"N., 118°29'22.2"W.; thence to 32°48'03.0"N., 118°31'40.8"W.; thence running parallel to the shore at a distance of approximately 3 NM from the high tide line to 32°53'37.2"N., 118°35'55.8"W.; thence to 32°56'07.8"N., 118°32'57.0"W.; thence along the shoreline returning to 32°50'42.0"N., 118°29'22.2"W.

(2542) (6) *Section F*

(2543) Beginning at 32°56'07.8"N., 118°32'57.0"W.; thence to 32°53'37.2"N., 118°35'55.8"W.; thence running parallel to the shore at a distance of approximately 3 NM from the high tide line to 32°59'57.0"N., 118°39'46.2"W.; thence to 33°01'04.8"N., 118°36'19.8"W.; thence along the shoreline returning to 32°56'07.8"N., 118°32'57.0"W.

(2544) (7) *Section G*

(2545) Beginning at 33°01'04.8"N., 118°36'20.0"W.; thence to 32°59'57.0"N., 118°39'46.2"W.; thence running parallel to the shore at a distance of approximately 3 NM from the high tide line to 33°04'55.8"N., 118°37'04.2"W.; thence to 33°02'03.0"N., 118°35'51.0"W.; along the shoreline returning to 33°01'04.8"N., 118°36'19.8"W.

(2546) (8) *Wilson Cove*

(2547) Beginning at 33°01'16.8"N., 118°33'52.8"W.; thence to 33°02'49.2"N., 118°30'39.0"W.; thence running parallel to the shore at a distance of approximately 3 NM from the high tide line to 32°59'36.0"N., 118°28'19.8"W.; thence to 32°57'18.0"N., 118°30'52.8"W.; thence along the shoreline returning to 33°01'16.8"N., 118°33'52.8"W.

(2548) (b) *Definitions*. The following definition applies to this section: designated representative, means any commissioned, warrant, and petty officers of the Coast Guard on board Coast Guard, Coast Guard Auxiliary, and local, state, and Federal law enforcement vessels who have been authorized to act on the behalf of the Captain of the Port (COTP).

(2549) (c) *Enforcement*. (1) This regulation will be enforced at all times in Section G and the Wilson Cove section of the safety zone described in paragraph (a) of this section. Mariners must obtain permission in accordance with the procedure described in paragraph (d)(2) of this section before entering either of those sections (paragraphs (a)(7) and (8)).

(2550) (2) This regulation will be enforced in Sections A through F of the safety zone described in paragraphs (a)(1) through (6) of this section except when the Coast Guard notifies the public that enforcement of the zone in specified sections is temporarily suspended. Mariners need not obtain permission in accordance with the procedure described in paragraph (d)(2) of this section to enter a zone section in which enforcement is temporarily suspended. At all other times, mariners must obtain permission in accordance with the procedure described in paragraph (d)(2) before entering any of those sections.

(2551) (3) The COTP will provide notice of suspended enforcement by means appropriate to affect the widest publicity, including broadcast notice to mariners, publication in the local notice to mariners, and posting the schedule of restricted access periods by date, location and duration at http://www.scisland.org.

(2552) (d) *Regulations*. (1) The general regulations governing safety zones found in 33 CFR 165.23 apply to the safety zone described in paragraph (a) of this section.

(2553) (2) Mariners requesting permission to transit through any section of the zone may request authorization to do so from the Fleet Area Control and Surveillance Facility (FACSFAC) San Diego by either calling 619–545–4742 or establishing a VHF bridge to bridge radio connection on Channel 16. Immediately upon completing transit, the vessel operator must promptly notify the FACSFAC of safe passage through the safety zone. Failure to expeditiously notify FACSFAC of passage through the safety zone will result in a determination by the Navy that the vessel is still in the safety zone, thereby restricting the use of the area for naval operations. If the Navy determines that facilitating safe transit through the zone negatively impacts range operations, the Navy will cease this practice and enforce the safety zones in these two areas without exception.

(2554) (3) All persons and vessels must comply with the instructions of the U.S. Navy, Coast Guard Captain of the Port or the designated representative.

(2555) (4) Upon being hailed by U.S. Navy or U.S. Coast Guard patrol personnel by siren, radio, flashing light, or other means, the operator of a vessel must proceed as directed.

(2556) (5) The U.S. Coast Guard may be assisted in the patrol and enforcement of the safety zone described in paragraph (a) of this section by the U.S. Navy and local law enforcement agencies.

(2557)

§165.1151 Security Zones; Liquefied Hazardous Gas Tank Vessels, San Pedro Bay, CA.

(2558) (a) *Definition.*"Liquefied Hazardous Gas" as used in this section means a liquid containing one or more of the products listed in Table 127.005 of this part that is carried in bulk on board a tank vessel as liquefied petroleum gas, liquefied natural gas, or similar liquefied gas products.

(2559) (b) *Location*. The following areas are security zones:

(2560) (1) All waters, extending from the surface of the sea floor, within a 500 yard radius around any liquefied hazardous gas (LHG) tank vessel that is anchored at a designated anchorage either inside the Federal breakwaters bounding San Pedro Bay or outside at designated anchorages within three nautical miles of the breakwater;

(2561) (2) The shore area and all waters, extending from the surface to the sea floor, within a 500 yard radius around any LHG tank vessel that is moored, or in the process of mooring, at any berth within the Los Angeles or Long Beach port areas inside the Federal breakwaters bounding San Pedro Bay;

(2562) (3) All waters, extending from the surface to the sea floor, within 1000 yards ahead and 500 yards on each side and astern of any LHG tank vessel that is underway either on the waters inside the Federal breakwaters bounding San Pedro Bay or on the waters within three nautical miles seaward of the Federal breakwaters.

(2563) (c) *Regulations*. (1) In accordance with the general regulations in §165.33 of this part, entry into or remaining in these zones is prohibited unless authorized by the Coast Guard Captain of the Port Los Angeles-Long Beach, or his or her designated representative.

(2564) (2) Persons desiring to transit the area of the security zone may contact the Captain of the Port at telephone number (800) 221-USCG (8724) or on VHF-FM channel 16 (156.8 MHz) to seek permission to transit the area. If permission is granted, all persons and vessels shall comply with the instructions of the Captain of the Port or his or her designated representative.

(2565) (3) When any LHG tank vessels approach within 500 yards of a vessel that is moored or anchored, the stationary vessel must stay moored or anchored while it remains within the LHG tank vessel's security zone unless it is either ordered by or given permission from the Captain of the Port Los Angeles-Long Beach to do otherwise.

(2566) (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.

(2567) (e) *Enforcement*. The U.S. Coast Guard may be assisted in the patrol and enforcement of these security zones by the Los Angeles Port Police and the Long Beach Police Department.

(2568)

§165.1152 San Pedro Bay, CA–Regulated navigation area.

(2569) (a) *Applicability*: This section applies to all vessels unless otherwise specified. (Note: All geographic coordinates are defined using North American Datum 1983 (NAD 83)).

(2570) (b) *Deviations*. The Captain of the Port of Los Angeles-Long Beach or his or her designated representative may authorize a deviation from the requirements of this regulation when it is deemed necessary in the interests of safety.

(2571) (c) *Location*. (1) The San Pedro Bay Regulated Navigation Area (RNA) consists of the water area enclosed by the Los Angeles-Long Beach breakwater and a line connecting Point Fermin Light at 33°42.30'N., 118°17.60'W., with the following geographical positions:

(2572) 33°35.50'N., 118°17.60'W.

(2573) 33°35.50'N., 118°09.00'W.

(2574) 33°37.70'N., 118°06.50'W.

(2575) 33°43.40'N., 118°10.80'W.

(2576) (2) The San Pedro Bay RNA consists of the following named sub-areas, defined by lines connecting their respective geographic coordinates:

(2577) (i) The Los Angeles Pilot Area:

(2578) 33°42.50'N., 118°15.10'W. (Los Angeles Light)

(2579) 33°42.62'N., 118°14.70'W.

(2580) 33°41.30'N., 118°13.50'W.

(2581) 33°40.85'N., 118°14.90'W.

(2582) 33°42.50'N., 118°15.10'W.

(2583) (ii) The Long Beach Pilot Area:

(2584) 33°43.40'N., 118°11.20'W. (Long Beach Light)

(2585) 33°43.40'N., 118°10.80'W.

(2586) 33°41.50'N., 118°10.22'W.

(2587) 33°40.52'N., 118°10.22'W.

(2588) 33°40.52'N., 118°11.82'W.

(2589) 33°41.50'N., 118°11.82'W.

(2590) 33°43.40'N., 118°11.20'W.

(2591) (iii) The Los Angeles Deep Water Traffic Lane:

(2592) 33°42.47'N., 118°14.95'W.

(2593) 33°42.56'N., 118°14.75'W.

(2594) 33°39.48'N., 118°13.32'W.

(2595) 33°39.42'N., 118°13.55'W.

(2596) 33°42.47'N., 118°14.95'W.

(2597) (iv) The Long Beach Deep Water Traffic Lane:

(2598) 33°43.43'N., 118°11.15'W.

(2599) 33°43.39'N., 118°10.90'W.

(2600) 33°41.51'N., 118°10.71'W.

(2601) 33°41.50'N., 118°10.95'W.

(2602) 33°43.43'N., 118°11.15'W.

(2603) (v) Los Angeles Deep Water Pilot Area: A 0.5 nm radius around 33°39.00'N., 118°13.19'W.

(2604) (d) *General Regulations*. The following regulations contained in paragraphs (d)(1) through (d)(3) of this section apply to power driven vessels of 1,600 or more gross tons, a towing vessel of 8 meters (approximately 26 feet) or over in length engaged in towing, or vessels of 100 gross tons and upward carrying one or more passengers for hire.

(2605) (1) A vessel shall not exceed a speed of 12 knots through the water within the RNA.

(2606) (2) A vessel navigating within the RNA, shall have its engine(s) ready for immediate maneuver and shall operate its engine(s) in a control mode and on fuel that will allow for an immediate response to any engine order, ahead or astern, including stopping its engine(s) for an extended period of time.

(2607) (3) A vessel navigating within the RNA shall maintain a minimum separation from other vessels of at least 0.25 nm.

(2608) (e) *Specific Regulations*–(1) *Los Angeles Pilot Area*. (i) No vessel may enter the Los Angeles Pilot Area unless it is entering or departing Los Angeles Harbor entrance (Angels Gate).

(2609) (ii) Vessels entering the Los Angeles Pilot Area shall pass directly through without stopping or loitering except as necessary to embark or disembark a pilot.

(2610) (2) *Long Beach Pilot Area*. (i) No vessel may enter the Long Beach Pilot Area unless it is entering or departing Long Beach Harbor entrance (Queens Gate).

(2611) (ii) Vessels entering the Long Beach Pilot Area shall pass directly through without stopping or loitering except as necessary to embark or disembark a pilot.

(2612) (iii) Every vessel shall leave Long Beach Approach Lighted Whistle Buoy "LB" to port when entering and departing Long Beach Channel and departing vessels shall pass across the southern boundary of the Long Beach Pilot Area.

(2613) (3) *Los Angeles and Long Beach Deep Water Traffic Lanes*. When a vessel of 50 foot draft or greater is using the Los Angeles or Long Beach Deep Water Traffic Lane no other vessel shall enter the Deep Water Traffic Lane if it will result in a meeting, crossing or overtaking situation.

(2614) (4) *Los Angeles Deep Water Pilot Area*. When a vessel of 50 foot draft or greater is embarking or disembarking a pilot in the Los Angeles Deep Water Pilot Area no other vessel shall enter the Deep Water Pilot Area.

(2615) (5) Vessels described in Paragraph (d) of this section may not enter the waters between Commercial Anchorage G and the Middle Breakwater as defined by an area enclosed by the line beginning at Los Angeles Main Channel Entrance Light 8 (33°42.70'N., 118°14.70'W.), thence east along the Middle Breakwater to Long Beach Light (33°43.40'N., 118°11.20'W.), thence south to (33°43.08'N., 118°11.26'W.), thence westerly to (33°43.08'N., 118°12.26'W.), thence southwesterly parallel to the breakwater to (33°42.43'N., 118°14.30'W.), thence to the point of origin, unless such vessel is:

(2616) (i) In an emergency;

(2617) (ii) Proceeding to anchor in or departing Commercial Anchorage G;

(2618) (iii) Standing by with confirmed pilot boarding arrangements; or,

(2619) (iv) Engaged in towing vessels to or from Commercial Anchorage G, or to or from the waters between Commercial Anchorage G and the Middle Breakwater.

(2620)

§165.1154 Security Zones; Moored Cruise Ships, San Pedro Bay, CA.

(2621) (a) *Definition*. "Cruise ship" as used in this section means a passenger vessel, except for a ferry, over 100 feet in length, authorized to carry more than 12 passengers for hire; making voyages lasting more than 24 hours, any part of which is on the high seas; and for which passengers are embarked or disembarked in the Port of Los Angeles or Port of Long Beach.

(2622) (b) *Location*. The following areas are security zones: All navigable waters, extending from the surface to the sea floor, within a 100-yard radius around any cruise ship that is located within the San Pedro Bay area landward of the sea buoys bounding the port of Los Angeles or Port of Long Beach or designated anchorages within 3 nautical miles seaward of the Federal Breakwaters.

(2623) (c) *Regulations*. Under regulations in 33 CFR part 165, subpart D, a person or vessel may not entry into or remain in the security zones created by this section unless authorized by the Coast Guard Captain of the Port, Los Angeles—Long Beach (COTP) or a COTP designated representative.

(2624) (1) Persons desiring to transit these security zones may contact the COTP at telephone number 310–521–3801 or on VHF–FM 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 his or her designated representative.

(2625) (2) When a cruise ship approaches within 100 yards of a vessel that is moored, or anchored, the stationary vessel must stay moored or anchored while it remains within the cruise ship's security zone unless it is either ordered by, or given permission from, the COTP Los Angeles-Long Beach to do otherwise.

(2626) (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.

(2627) (e) *Enforcement*. The U.S. Coast Guard may be assisted in the patrol and enforcement of the security zone by the Los Angeles Port Police and the Long Beach Police Department.

(2628)

§165.1155 Security Zone; Diablo Canyon Nuclear Power Plant, Avila Beach, CA.

(2629) (a) *Location*. The following area is a security zone: all waters of the Pacific Ocean, from surface to bottom, within a 2,000 yard radius of Diablo Canyon Nuclear Power Plant centered at position 35°12'23"N., 120°51'23"W. [Datum: NAD 83].

(2630) (b) *Regulations*. (1) In accordance with the general regulations in §165.33 of this part, entry into or remaining in this zone is prohibited unless authorized by the Coast Guard Captain of the Port, Los Angeles-Long Beach, or his or her designated representative.

(2631) (2) Persons desiring to transit the area of the security zone may contact the Captain of the Port at telephone number 1-800–221–8724 or on VHF-FM channel 16 (156.8 MHz). If permission is granted, all persons and vessels must comply with the instructions of the Captain of the Port or his or her designated representative.

(2632) (c) *Authority*. In addition to 46 U.S.C. 70034, the authority for this section includes 46 U.S.C. 70116.

(2633)

§165.1156 Safety Zone; Offshore Marine Terminal, El Segundo, CA.

(2634) (a) *Location.* The following area is a safety zone: All waters of Santa Monica Bay, from surface to bottom, enclosed by a line beginning at

(2635) 33°54'59"N., 118°26'50"W.; then to

(2636) 33°54'59"N., 118°27'34"W.; then to

(2637) 33°54'00"N., 118°27'34"W.; then to

(2638) 33°54'00"N., 118°26'50"W; then to the point of beginning (NAD 1983).

(2639) (b) *Regulations*. (1) In accordance with the general regulations in §165.23 of this part, entry into or movement within this zone is prohibited except for:

(2640) (i) Commercial vessels authorized to use the offshore marine terminal for loading or unloading;

(2641) (ii) Commercial tugs, lighters, barges, launches, or other vessels authorized to engage in servicing the offshore marine terminal or vessels therein;

(2642) (iii) Public vessels of the United States.

(2643) (2) Persons desiring to transit the area of the safety zone may contact the Captain of the Port at telephone number 1-800–221–8724 or on VHF-FM channel 16 (156.8 MHz). If permission is granted, all persons and vessels must comply with the instructions of the Captain of the Port or his or her designated representative.

(2644) (3) Nothing in this section shall be construed as relieving the owner or person in charge of any vessel from complying with the Navigation Rules (COLREGS and their associated Annexes and Inland Navigation Rules (33 CFR subchapter E)) and safe navigation practice.

(2645)

§165.1157 Security Zone; Cruise Ships, Santa Barbara, CA.

(2646) (a)*Location*. The following areas are security zones: All navigable waters, from the surface to the sea floor within a 100-yard radius of any cruise ship located within 3 nautical miles of the Santa Barbara Harbor Breakwater Light (Light List Number 3750; 34–24–17.364N, 119–41–16.260W).

(2647) (b) *Definition*. "Cruise ship" as used in this section means any vessel, except for a ferry, over 100 feet in length, authorized to carry more than 12 passengers for hire; making voyages lasting more than 24 hours, any part of which is on the high seas; and for which passengers are embarked or disembarked in the U.S. or its territories.

(2648) (c) *Regulations*. (1) Under general security zone regulations in subpart D, entry into or remaining in the zones described in paragraph (a) of this section is prohibited unless authorized by the Coast Guard Captain of the Port (COTP) Los Angeles—Long Beach (LA–LB), or a designated representative of COTP LA–LB.

(2649) (2) Persons desiring to transit the area of the security zone may contact the COTP LA–LB at telephone number 1–310–521–3801 or on VHF–FM channel 16 (156.800 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 his designated representative.

(2650)

§165.1181 San Francisco Bay Region, CA–Regulated navigation area.

(2651) (a) *Applicability*. This section applies to all vessels unless otherwise specified.

(2652) (b) *Deviations*. The Captain of the Port, San Francisco Bay, or the Commanding Officer, Vessel Traffic Service San Francisco, as a representative of the Captain of the Port, may authorize a deviation from the requirements of this regulation when it is deemed necessary in the interests of safety.

(2653) (c) *Regulated Navigation Areas*—(1) *San Francisco Bay RNA*. (i) The following is a regulated navigation area—The waters bounded by a line connecting the following coordinates, beginning at:

(2654) 37°47'18"N., 122°30'22"W.; thence to

(2655) 37°48'55"N., 122°31'41"W.; thence along the shoreline to

(2656) 37°50'38"N., 122°28'37"W.; thence to

(2657) 37°50'59"N., 122°28'00"W.; thence to

(2658) 37°51'45"N., 122°27'28"W.; thence to

(2659) 37°52'58"N., 122°26'06"W.; thence to

(2660) 37°51'53"N., 122°24'58"W.; thence to

(2661) 37°51'53"N., 122°24'00"W.; thence to

(2662) 37°51'40"N., 122°23'48"W.; thence to

(2663) 37°49'22"N., 122°23'48"W.; thence to

(2664) 37°48'20"N., 122°22'12"W.; thence to

(2665) 37°47'02"N., 122°21'33"W.; thence to

(2666) 37°47'02"N., 122°23'04"W.; thence along the shoreline to the point of beginning. Datum: NAD 83

(2667) (ii) The San Francisco Bay RNA consists of the following defined sub-areas:

(2668) (A) *Golden Gate Traffic Lanes*—(1) *Westbound traffic lane*: Bounded by the Golden Gate precautionary area and the COLREGS Demarcation Line (33 CFR 80.1142), between the separation zone and a line connecting the following coordinates:

(2669) 37°48'30"N., 122°31'22"W.; thence to

(2670) 37°49'03"N., 122°29'52"W. Datum: NAD 83

(2671) (2) *Eastbound traffic lane*. Bounded by the COLREGS Demarcation Line (33 CFR 80.1142) and the Golden Gate precautionary area, between the separation zone and a line connecting the following coordinates:

(2672) 37°47'50"N., 122°30'48"W.; thence to

(2673) 37°48'30"N., 122°29'29"W.; Datum: NAD 83

(2674) (3) Golden Gate Separation Zone: The area 75 yards each side of a line connecting the following coordinates:

(2675) 37°48'08"N., 122°31'05"W.; thence to

(2676) 37°48'46"N., 122°29'40"W. Datum: NAD 83

(2677) (B) *Golden Gate Precautionary Area*: An area bounded by a line connecting the following coordinates beginning at:

(2678) 37°48'30"N., 122°29'29"W.; thence to

(2679) 37°48'52"N., 122°28'41"W.; thence to

(2680) 37°48'52"N., 122°27'49"W.; thence to

(2681) 37°49'36"N., 122°27'46"W.; thence to

(2682) 37°49'55"N., 122°28'09"W.; thence to

(2683) 37°49'28"N., 122°28'45"W.; thence to

(2684) 37°49'03"N., 122°29'52"W.; thence returning to the point of beginning. Datum: NAD 83

(2685) (C) *Central Bay Traffic Lanes*—(1) *Westbound traffic lane:* Bounded by the Central Bay precautionary area and the Golden Gate precautionary area, between the Central Bay and the Deep Water Traffic Lane separation zones.

(2686) (2) *Eastbound traffic lane:* Bounded by the Golden Gate precautionary area and the Central Bay precautionary area, between the Central Bay Separation Zone and a line connecting the following coordinates, beginning at:

(2687) 37°48'41"N., 122°25'17"W.; thence to

(2688) 37°48'50"N., 122°26'14"W.; thence to

(2689) 37°48'52"N.; 122°27'49"W. Datum: NAD 83

(2690) (3) *Deep Water (two-way) Traffic Lane:* Bounded by the Central Bay precautionary area and the Golden Gate precautionary area, between the Deep Water Traffic Lane separation zone and a line connecting the following coordinates, beginning at:

(2691) 37°49'55"N., 122°28'9"W.; thence to

(2692) 37°50'36"N., 122°27'12"W.; thence to

(2693) 37°50'47"N., 122°26'26"W. Datum: NAD 83

(2694) (D) *Central Bay Separation Zone:* The area 75 yards each side of a line connecting the following coordinates, beginning at:

(2695) 37°49'17"N., 122°27'47"W.; thence to

(2696) 37°49'35"N., 122°25'25"W. Datum: NAD 83

(2697) (E) *Deep Water Traffic Lane Separation Zone:* The area 75 yards each side of a line connecting the following coordinates beginning at:

(2698) 37°49'36"N., 122°27'46"W.; thence to

(2699) 37°50'22"N., 122°26'49"W.; thence to

(2700) 37°50'25"N., 122°26'22"W.; Datum: NAD 83

(2701) (F) *Central Bay Precautionary Area:* An area bounded by a line connecting the following coordinates, beginning at:

(2702) 37°48'41"N., 122°25'17"W.; thence to

(2703) 37°49'32"N., 122°25'13"W.; thence to

(2704) 37°50'25"N., 122°26'22"W.; thence to

(2705) 37°50'47"N., 122°26'26"W.; thence to

(2706) 37°51'04"N., 122°24'58"W.; thence to

(2707) 37°51'53"N., 122°24'58"W.; thence to

(2708) 37°51'53"N., 122°24'00"W.; thence to

(2709) 37°51'40"N., 122°23'48"W.; thence to

(2710) 37°49'22"N., 122°23'48"W.; thence to
(2711) 37°48'20"N., 122°22'12"W.; thence to
(2712) 37°47'02"N., 122°21'33"W.; thence to
(2713) 37°47'02"N., 122°23'04"W.; thence returning along the shoreline to the point of beginning. Datum: NAD 83

(2714) (2) *North Ship Channel RNA*. The following is a regulated navigation area—The waters bounded by a line connecting the following coordinates, beginning at:
(2715) 37°51'53"N., 122°24'58"W.; thence to
(2716) 37°54'15"N., 122°27'27"W.; thence to
(2717) 37°56'06"N., 122°26'49"W.; thence to
(2718) 37°56'06"N., 122°26'34"W.; thence to
(2719) 37°54'48"N., 122°26'42"W.; thence to
(2720) 37°54'02"N., 122°26'10"W.; thence to
(2721) 37°51'53"N., 122°24'00"W.; thence returning to the point of beginning. Datum: NAD 83

(2722) (3) *San Pablo Strait Channel RNA*. The following is a regulated navigation area—The waters bounded by a line connecting the following coordinates, beginning at:
(2723) 37°56'06"N., 122°26'49"W.; thence to
(2724) 37°57'26"N., 122°27'21"W.; thence to
(2725) 38°00'48"N., 122°24'45"W.; thence to
(2726) 38°01'54"N., 122°22'24"W.; thence to
(2727) 38°01'44"N., 122°22'18"W.; thence to
(2728) 37°57'37"N., 122°26'23"W.; thence to
(2729) 37°56'06"N., 122°26'34"W.; thence returning to the point of beginning. Datum NAD 83

(2730) (4) *Pinole Shoal Channel RNA*. The following is a regulated navigation area—The waters bounded by a line connecting the following coordinates, beginning at:
(2731) 38°01'54"N., 122°22'25"W.; thence to
(2732) 38°03'13"N., 122°19'50"W.; thence to
(2733) 38°03'23"N., 122°18'31"W.; thence to
(2734) 38°03'13"N., 122°18'29"W.; thence to
(2735) 38°03'05"N., 122°19'28"W.; thence to
(2736) 38°01'44"N., 122°22'18"W.; thence returning to the point of beginning. Datum: NAD 83

(2737) (5) *Benicia-Martinez Railroad Drawbridge Regulated Navigation Area (RNA):* The following is a regulated navigation area—The waters bounded by the following longitude lines:
(2738) (i) 122°13'31"W. (coinciding with the charted location of the Carquinez Bridge)
(2739) (ii) 121°53'17"W. (coinciding with the charted location of New York Point) Datum: NAD 83

(2740) (6) *Southampton Shoal Channel/Richmond Harbor RNA:* The following, consisting of two distinct areas, is a regulated navigation area—
(2741) (i) The waters bounded by a line connecting the following coordinates, beginning at:
(2742) 37°54'17"N., 122°22'00"W.; thence to
(2743) 37°54'08"N., 122°22'00"W.; thence to
(2744) 37°54'15"N., 122°23'12"W.; thence to
(2745) 37°54'30"N., 122°23'09"W.; thence along the shoreline to the point of beginning. Datum: NAD 83

(2746) (ii) The waters bounded by a line connecting the following coordinates, beginning at:
(2747) 37°54'28"N., 122°23'36"W.; thence to
(2748) 37°54'20"N., 122°23'38"W.; thence to
(2749) 37°54'23"N., 122°24'02"W.; thence to
(2750) 37°54'57"N., 122°24'51"W.; thence to
(2751) 37°55'05"N., 122°25'02"W.; thence to
(2752) 37°54'57"N., 122°25'22"W.; thence to
(2753) 37°53'26"N., 122°25'03"W.; thence to
(2754) 37°53'24"N., 122°25'13"W.; thence to
(2755) 37°55'30"N., 122°25'35"W.; thence to
(2756) 37°55'40"N., 122°25'10"W.; thence to
(2757) 37°54'54"N., 122°24'30"W.; thence to
(2758) 37°54'30"N., 122°24'00"W.; thence returning to the point of beginning. Datum: NAD 83

(2759) (7) *Oakland Harbor RNA*. The following is a regulated navigation area—The waters bounded by a line connecting the following coordinates, beginning at:
(2760) 37°48'40"N., 122°19'58"W.; thence to
(2761) 37°48'50"N., 122°20'02"W.; thence to
(2762) 37°48'29"N., 122°20'39"W.; thence to
(2763) 37°48'13"N., 122°21'26"W.; thence to
(2764) 37°48'10"N., 122°21'39"W.; thence to
(2765) 37°48'20"N., 122°22'12"W.; thence to
(2766) 37°47'36"N., 122°21'50"W.; thence to
(2767) 37°47'52"N., 122°21'40"W.; thence to
(2768) 37°48'03"N., 122°21'00"W.; thence to
(2769) 37°47'48"N., 122°19'46"W.; thence to
(2770) 37°47'55"N., 122°19'43"W.; thence returning along the shoreline to the point of the beginning. Datum: NAD 83

(2771) (d) *General regulations*. (1) A power-driven vessel of 1600 or more gross tons, or a tug with a tow of 1600 or more gross tons, navigating within the RNAs defined in paragraph (c) of this section, shall not exceed a speed of 15 knots through the water.

(2772) (2) A power-driven vessel of 1600 or more gross tons, or a tug with a tow of 1600 or more gross tons, navigating within the RNAs defined in paragraph (c) of this section, shall have its engine(s) ready for immediate maneuver and shall operate its engine(s) in a control mode and on fuel that will allow for an immediate response to any engine order, ahead or astern, including stopping its engine(s) for an extended period of time.

(2773) (3) The master, pilot or person directing the movement of a vessel within the RNAs defined in paragraph (c) of this regulation shall comply with Rule 9 of the Inland Navigation Rules (INRs) (33 CFR subchapter E) in conjunction with the provisions of the associated INRs.

(2774) (e) *Specific Regulations*—(1) *San Francisco Bay RNA:* (i) A vessel shall navigate with particular caution in a precautionary area, or in areas near the terminations of traffic lanes or channels, as described in this regulation.

(2775) (ii) A power-driven vessel of 1600 or more gross tons, or a tug with a tow of 1600 or more gross tons, shall:
(2776) (A) Use the appropriate traffic lane and proceed in the general direction of traffic flow for that lane;
(2777) (B) Use the Central Bay Deep Water Traffic Lane if eastbound with a draft of 45 feet or greater or westbound with a draft of 28 feet or greater;

(2778) (C) Not enter the Central Bay Deep Water Traffic Lane when another power-driven vessel of 1600 or more gross tons or tug with a tow of 1600 or more gross tons is navigating therein when either vessel is:

(2779) (1) Carrying certain dangerous cargoes (as denoted in section 160.202 of this subchapter);

(2780) (2) Carrying bulk petroleum products; or

(2781) (3) A tank vessel in ballast if such entry would result in meeting, crossing, or overtaking the other vessel.

(2782) (D) 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;

(2783) (E) So far as practicable keep clear of the Central Bay Separation Zone and the Deep Water Traffic Lane Separation Zone;

(2784) (F) Not cross a traffic lane separation zone unless crossing, joining, or leaving a traffic lane.

(2785) (2) *Pinole Shoal Channel RNA:*

(2786) (i) A vessel less than 1600 gross tons or a tug with a tow of less than 1600 gross tons is not permitted within this RNA.

(2787) (ii) A power-driven vessel of 1600 or more gross tons or a tug with a tow of 1600 or more gross tons shall not enter Pinole Shoal Channel RNA when another power-driven vessel of 1600 or more gross tons or tug with a tow of 1600 or more gross tons is navigating therein if such entry would result in meeting, crossing, or overtaking the other vessel, when either vessel is:

(2788) (A) Carrying certain dangerous cargoes (as denoted in §160.203 of this subchapter);

(2789) (B) Carrying bulk petroleum products; or

(2790) (C) A tank vessel in ballast.

(2791) (iii) Vessels permitted to use this channel shall proceed at a reasonable speed so as not to endanger other vessels or interfere with any work which may become necessary in maintaining, surveying, or buoying the channel, and they shall not anchor in the channel except in case of a deviation authorized under paragraph (b) of this section.

(2792) (iv) This paragraph shall not be construed as prohibiting any necessary use of the channel by any public vessels while engaged in official duties, or in emergencies by pilot boats.

(2793) (3) *Benicia-Martinez Railroad Drawbridge Regulated Navigation Area (RNA)—*

(2794) (i) *Eastbound vessels:*

(2795) (A) The master, pilot, or person directing the movement of a power-driven vessel of 1600 or more gross tons or a tug with a tow of 1600 or more gross tons traveling eastbound and intending to transit under the lift span (centered at coordinates 38°02'18"N., 122°07'17"W.) of the railroad bridge across Carquinez Strait at mile 7.0 shall, immediately after entering, the RNA, determine whether the visibility around the lift span is ½ nautical mile or greater.

(2796) (B) If the visibility is less than ½ nautical mile, or subsequently becomes less than ½ nautical mile, the vessel shall not transit under the lift span.

(2797) (ii) *Westbound vessels:*

(2798) (A) The master, pilot, or person directing the movement of a power-driven vessel of 1600 or more gross tons or a tug with a tow of 1600 or more gross tons traveling westbound and intending to transit under the lift span (centered at coordinates 38°02'18"N., 122°07'17"W.) of the railroad bridge across Carquinez Strait at mile 7.0 shall, immediately after entering the RNA determine whether the visibility around the lift span is ½ nautical mile or greater.

(2799) (B) If the visibility is less than ½ nautical mile, the vessel shall not pass beyond longitude line 121°55'19"W. (coinciding with the charted position of the westernmost end of Mallard Island) until the visibility improves to greater than ½ nautical mile around the lift span.

(2800) (C) If after entering the RNA visibility around the lift span subsequently becomes less than ½ nautical mile, the master, pilot, or person directing the movement of the vessel either shall not transit under the lift span or shall request a deviation from the requirements of the RNA as prescribed in paragraph (b) of this section.

(2801) (D) Vessels that are moored or anchored within the RNA with the intent to transit under the lift span shall remain moored or anchored until visibility around the lift span becomes greater than ½ nautical mile.

(2802) (4) *Southampton Shoal/Richmond Harbor RNA:* A power-driven vessel of 1600 or more gross tons, or a tug with a tow of 1600 or more gross tons, shall not enter Southampton Shoal/Richmond Harbor RNA when another power-driven vessel of 1600 or more gross tons, or a tug with a tow of 1600 or more gross tons, is navigating therein, if such entry would result in meeting, crossing or overtaking the other vessel.

(2803) (5) Oakland Harbor RNA: A power-driven vessel of 1600 or more gross tons or a tug with a tow of 1600 or more gross tons shall not enter the Oakland Harbor RNA when another power-driven vessel of 1600 or more gross tons, or a tug with a tow of 1600 or more gross tons, is navigating therein, if such entry would result in meeting, crossing, or overtaking the other vessel.

(2804)

§165.1182 Safety/Security Zone: San Francisco Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay, CA.

(2805) (a) *Regulated area*. The following area is established as a moving safety/security zone:

(2806) (1) All waters 200 yards ahead and astern and 100 yards to each side of every vessel transporting nuclear materials on behalf of the United States Department of Energy while such vessels transit from a line drawn between San Francisco Main Ship Channel Lighted Bell Buoy 7 and San Francisco Main Ship Channel Lighted Whistle Buoy 8 (LLNR 4190 & 4195, positions 37°46.9'N, 122°35.4'W & 37°46.5'N, 122°35.2'W, respectively) until safely moored at the Weapons Support Facility

Seal Beach Detachment Concord on Suisun Bay (position 38°03.3'N, 122°02.5'W). All coordinates referenced use datum: NAD 1983.

(2807) (2) All waters within 100 yards of such vessels described in paragraph (a)(1) of this section while such vessels are conducting cargo operations at the Weapons Support Facility Seal Beach Detachment Concord.

(2808) (b) *Notification*. Commander, Eleventh Coast Guard District, will cause notice of the activation of this safety/security zone to be made by all appropriate means to effect the widest publicity among the affected segments of the public, including publication in the **Federal Register** as practicable, in accordance with the provisions of 33 CFR 165.7(a); such means of announcement may include, but are not limited to, Broadcast Notice to Mariners. The Coast Guard will issue a Broadcast Notice to Mariners notifying the public when nuclear materials cargo handling has been completed.

(2809) (c) *Effective Period*. The safety/security zone will be effective commencing at the time any vessel described in paragraph (a)(1) of this section enters the zone described in paragraph (a)(1) of this section and will remain in effect until all spent nuclear materials cargo handling operations have been completed at Weapons Support Facility Seal Beach Detachment Concord.

(2810) (d) *Regulations.* The general regulations governing safety and security zones contained in both 33 CFR 165.23 in 33 CFR 165.33 apply. Entry into, transit through, or anchoring within this moving safety/security zone is prohibited unless authorized by Commander, Eleventh Coast Guard District, or his designated representative.

(2811)

§165.1183 Security Zones; tankers, cruise ships, and High Value Assets, San Francisco Bay and Delta Ports, Monterey Bay and Humboldt Bay, CA

(2812) (a) *Definitions*. The following definitions apply to these sections–

(2813) (1) *Cruise ship* means any vessel over 100 gross register tons, carrying more than 500 passengers for hire which makes voyages lasting more than 24 hours, of which any part is on the high seas. Passengers from cruise ships are embarked or disembarked in the U.S. or its territories. Cruise ships do not include ferries that hold Coast Guard Certificates of Inspection endorsed for "Lakes, Bays and Sounds" that transit international waters for only short periods of time on frequent schedules.

(2814) (2) *High Value Asset* means any waterside asset of high value including military and commercial vessels, or commercial vessels carrying CDC as defined in 33 CFR 160.202, deemed by the Captain of Port, or higher authority, as requiring protection based upon risk assessment analysis and is therefore escorted by the Coast Guard or other law enforcement vessel with an embarked Coast Guard commissioned, warrant, or petty officer.

(2815) (3) *Tanker* means any self-propelled tank vessel constructed or adapted primarily to carry oil or hazardous materials in bulk in the cargo spaces.

(2816) (4) *Designated representative* means any commissioned, warrant, and petty officers of the Coast Guard on board Coast Guard, Coast Guard Auxiliary, and local, State and Federal law enforcement vessels who have been authorized to act on the behalf of the Captain of the Port.

(2817) (b) *Locations*. (1) *San Francisco Bay*. All waters, extending from the surface to the sea floor, within 500 yards (457 meters) ahead, astern and extending along either side of a tanker, cruise ship, or HVA underway (100 yards when anchored or moored) within the San Francisco Bay and areas shoreward of the line drawn between San Francisco Main Ship Channel Lighted Bell Buoy 7 and San Francisco Main Ship Channel Lighted Whistle Buoy 8 (LLNR 4190 & 4195) in positions 37°46.9'N., 122°35.4'W. and 37°46.5'N., 122°35.2'W., respectively.

(2818) (2) *Monterey Bay*. All waters, extending from the surface to the sea floor, within 500 yards (457 meters) ahead, astern and extending along either side of a tanker, cruise ship, or HVA underway (100 yards when anchored or moored) within the Monterey Bay area shoreward of a line drawn between Santa Cruz Light (LLNR 305) to the north in position 36°57.10'N., 122°01.60'W., and Cypress Point, Monterey to the south, in position 36°34.90'N., 121°58.70'W.

(2819) (3) *Humboldt Bay*. All waters, extending from the surface to the sea floor, within 500 yards (457 meters) ahead, astern and extending along either side of a tanker, cruise ship, or HVA underway (100 yards when anchored or moored) within the Humboldt Bay area shoreward of a 4 nautical mile radius line drawn to the west of the Humboldt Bay Entrance Lighted Whistle Buoy HB (LLNR 8130) in position 40°46.25'N., 124°16.13'W.

(2820) (c) *Regulations*. (1) In accordance with the general regulations in §165.33 of this part, entry into or remaining in this zone is prohibited unless authorized by the Coast Guard Captain of the Port, San Francisco Bay, or a designated representative.

(2821) (2) Mariners requesting permission to transit through the security zone may request authorization to do so from the Patrol Commander (PATCOM). The PATCOM may be contacted on VHF-FM Channel 16.

(2822) (3) All persons and vessels shall comply with the instructions of the Captain of the Port or the designated representative.

(2823) (4) Upon being hailed by U.S. Coast Guard patrol personnel by siren, radio, flashing light, or other means, the operator of a vessel shall proceed as directed.

(2824) (5) The Coast Guard may be assisted by other Federal, State, or local agencies.

(2825)

§165.1184 Safety Zone; Coast Guard Use of Force Training Exercises, San Pablo Bay, CA

(2826) (a) *Location*. This safety zone will apply to the navigable waters in the San Pablo Bay, and will encompass an area beginning at position

(2827) 38°01'44"N., 122°27'06"W.;
(2828) 38°04'36"N., 122°22'06"W.;
(2829) 38°00'35"N., 122°26'07"W.;
(2830) 38°03'00"N., 122°20'20"W. (NAD 83) and back to the starting point.

(2831) (b) *Enforcement*. The Coast Guard will notify the public via a Broadcast Notice to Mariners prior to the activation of this safety zone. The safety zone will be activated on average two times per month, but could be activated up to six times per month. It will be in effect for approximately three hours from 9 a.m. to 11:59 p.m. If the exercises conclude prior to the scheduled termination time, the Coast Guard will cease enforcement of this safety zone and will announce that fact via Broadcast Notice to Mariners. Persons and vessels may also contact the Coast Guard to determine the status of the safety zone on VHF-16 or the 24-hour Command Center via telephone at (415) 399–3547.

(2832) (c) *Definitions*. As used in this section, designated representative means a Coast Guard Patrol Commander, including a Coast Guard coxswain, petty officer, or other officer operating a Coast Guard vessel and a Federal, State, and local officer designated by or assisting the Captain of the Port San Francisco (COTP) in the enforcement of the safety zone.

(2833) (d) *Regulations*. (1) Under the general regulations in § 165.23, entry into, transiting, or anchoring within the safety zone is prohibited unless authorized by the COTP or the COTP's designated representative.

(2834) (2) The safety zone is closed to all vessel traffic, except as may be permitted by the COTP or the COTP's designated representative.

(2835) (3) Vessel operators desiring to enter or operate within the safety zone must contact the COTP or the COTP's representative to obtain permission to do so. Vessel operators given permission to enter or operate in the safety zone must comply with all directions given to them by the COTP or the COTP's designated representative. Persons and vessels may request permission to enter the safety zone on VHF-16 or the 24-hour Command Center via telephone at (415) 399–3547.

(2836)

§165.1185 Regulated Navigation Area; San Francisco Bay, San Pablo Bay, Carquinez Strait, Suisun Bay, Sacramento River, San Joaquin River, and connecting waters in CA.

(2837) (a) *Location*. All waters of San Francisco Bay, San Pablo Bay, Carquinez Strait, Suisun Bay, Sacramento River, San Joaquin River, and connecting waters in California are a Regulated Navigation Area.

(2838) (b) *Definitions*."Liquefied hazardous gas (LHG)" is a liquid containing one or more of the products listed in Table 127.005 of 33 CFR 127.005 that is carried in bulk on board a tank vessel as a liquefied gas product. The hazards normally associated with these products include toxic or flammable properties or a combination of both.

(2839) (c) *Regulations*. All vessels loaded with a cargo of liquefied hazardous gas (LHG) within this Regulated Navigation Area must proceed directly to their intended cargo reception facility to discharge their LHG cargo, unless:

(2840) (1) The vessel is otherwise directed or permitted by the Captain of the Port. The Captain of the Port can be reached at telephone number 415–399–3547 or on VHF-FM channel 16 (156.8 MHz). If permission is granted, all persons and vessels must comply with the instructions of the Captain of the Port or his or her designated representative.

(2841) (2) The vessel is in an emergency situation and unable to proceed as directed in paragraph (a) of this section without endangering the safety of persons, property, or the environment.

(2842)

§165.1187 Security Zones; Golden Gate Bridge and the San Francisco-Oakland Bay Bridge, San Francisco Bay, CA.

(2843) (a) *Location*. All waters extending from the surface to the sea floor, within 25 yards of all piers, abutments, fenders and pilings of the Golden Gate Bridge and the San Francisco-Oakland Bay Bridge, in San Francisco Bay, California.

(2844) (b) *Regulations*. (1) In accordance with the general regulations in §165.33 of this part, entry into these security zones is prohibited, unless doing so is necessary for safe navigation, to conduct official business such as scheduled maintenance or retrofit operations, or unless specifically authorized by the Captain of the Port San Francisco Bay or his designated representative.

(2845) (2) Persons desiring to transit the area of the security zone may contact the Captain of the Port at telephone number 415–399–3547 or on VHF-FM 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 his or her designated representative.

(2846) (c) *Enforcement.* All persons and vessels shall comply with the instructions of the Coast Guard Captain of the Port or the designated on-scene patrol personnel. Patrol personnel comprise commissioned, warrant, and petty officers of the Coast Guard onboard Coast Guard, Coast Guard Auxiliary, local, state, and federal law enforcement vessels. Upon being hailed by U.S. Coast Guard patrol personnel by siren, radio, flashing light, or other means, the operator of a vessel shall proceed as directed.

(2847) **§165.1189 Security Zone; San Francisco Bay, San Francisco, CA** .

(2848) (a) *Location*. The following area is a security zone: all navigable waters of the San Francisco Bay on the east side of Yerba Buena Island from a point along the southeastern shore of Yerba Buena Island at 37°48′27″N, 122°21′44″W; east to 37°48′27″N, 122°21′35″W; north to 37°48′49″N, 122°21′35″W, a point on the northeastern

side of Yerba Buena Island. These coordinates are based on North American Datum (NAD) 83.

(2849) (b) *Regulations*. (1) In accordance with the general security zone regulations in subpart D of this part, entry into the area of the security zone described in paragraph (a) of this section is prohibited unless authorized by the Captain of the Port (COTP) San Francisco.

(2850) (2) The security zone is closed to all vessel traffic, except as may be permitted by the COTP.

(2851) (3) To seek permission to enter, contact the COTP by VHF Marine Radio channel 16 or through the 24-hour Command Center at telephone (415) 399–3547. Those in the security zone must comply with all lawful orders or directions given to them by the COTP.

(2852) (c) *Enforcement*. The Captain of the Port will enforce the security zone described in paragraph (a) of this section and may be assisted in the patrol and enforcement of this security zone by any Federal, State, county, municipal, or private agency.

(2853)

§165.1190 Security Zone; San Francisco Bay, Oakland Estuary, Alameda, CA.

(2854) (a) *Locations*. The following areas are security zones:

(2855) (1) *Coast Guard Island*. All waters of the Oakland Estuary, from surface to bottom, encompassed by a line connecting the following points beginning at 37°46′42.5″ N, 122°14′51.4″ W; thence to 37°46′46.6″ N, 122°14′59.7″ W; thence to 37°46′51.8″ N, 122°15′7.4″ W; thence to 37°46′56.3″ N, 122°15′12.1″ W; thence to 37°47′2.2″ N, 122°15′16.4″ W; thence to 37°47′8″ N, 122°15′16.6″ W; thence to 37°47′10″ N, 122°15′12.8″ W; thence to 37°47′10.1″ N, 122°15′5.7″ W; thence to 37°47′7.8″ N, 122°15′0.1″ W; thence to 37°47′5.2″ N, 122°14′53.7″ W; thence to 37°47′2.1″ N, 122°14′49.5″ W; thence to 37°46′58.9″ N, 122°14′46.2″ W; thence to 37°46′57.1″ N, 122°14′44.6″ W; thence to 37°46′52.9″ N, 122°14′42.6″ W; thence to 37°46′50.2″ N, 122°14′42.9″ W; thence to 37°46′47.9″ N, 122°14′43.6″ W; thence to 37°46′42.3″ N, 122°14′44.1″ W; and back to the beginning point. These coordinates are based on North American Datum (NAD) 83.

(2856) (2) *Coast Guard Island Causeway*. All waters of the Oakland Estuary, from surface to bottom, 50 yards on either side of a line beginning at 37°46′48.1″ N, 122°14′45.8″ W; thence to 37°46′46.1″ N, 122°14′41.5″ W; thence to 37°46′45.4″ N, 122°14′36.6″ W. These coordinates are based on NAD 83.

(2857) (b) *Regulations.* (1) Under the general security zone regulations in subpart D of this part, you may not enter the security zone described in paragraph (a)(1) of this section unless authorized by the Captain of the Port (COTP). The security zone described in paragraph (a)(1) of this section is closed to all vessel traffic, except as may be permitted by the COTP. To seek permission to enter the security zone in paragraph (a)(1) of this section, contact the COTP by VHF Marine Radio channel 16 or through the 24-hour Command Center at telephone (415) 399–3547. Those in the security zone must comply with all lawful orders or directions given to them by the COTP.

(2858) (2) Under the general security zone regulations in subpart D of this part, you may not loiter in the security zone described in paragraph (a)(2) of this section unless authorized by the COTP. Vessels must make a direct passage through the security zone described in paragraph (a)(2) of this section.

(2859) (c) *Enforcement.* The Captain of the Port will enforce this security zone and may be assisted in the patrol and enforcement of this security zone by any Federal, State, county, municipal, or private agency.

(2860)

§165.1192 Security Zones; Waters surrounding San Francisco International Airport and Oakland International Airport, San Francisco Bay, CA.

(2861) (a) *Locations*. The following areas are security zones:

(2862) (1) *San Francisco International Airport Security Zone*. This security zone includes all waters extending from the surface to the sea floor within approximately 200 yards seaward from the shoreline of the San Francisco International Airport and encompasses all waters in San Francisco Bay within a line connecting the following geographical positions–

(2863) 37°36'19"N., 122°22'36"W.
(2864) 37°36'45"N., 122°22'18"W.
(2865) 37°36'26"N., 122°21'30"W.
(2866) 37°36'31"N., 122°21'21"W.
(2867) 37°36'17"N., 122°20'45"W.
(2868) 37°36'37"N., 122°20'40"W.
(2869) 37°36'50"N., 122°21'08"W.
(2870) 37°37'00"N., 122°21'12"W.
(2871) 37°37'21"N., 122°21'53"W.
(2872) 37°37'39"N., 122°21'44"W.
(2873) 37°37'56"N., 122°21'51"W.
(2874) 37°37'50"N., 122°22'20"W.
(2875) 37°38'25"N., 122°22'54"W.
(2876) 37°38'23"N., 122°23'01"W.
(2877) and along the shoreline back to the beginning point.

(2878) (2) *Oakland International Airport Security Zone*. This security zone includes all waters extending from the surface to the sea floor within approximately 200 yards seaward from the shoreline of the Oakland International Airport and encompasses all waters in San Francisco Bay within a line connecting the following geographical positions–

(2879) 37°43'35"N., 122°15'00"W.
(2880) 37°43'40"N., 122°15'05"W.
(2881) 37°43'34"N., 122°15'12"W.
(2882) 37°43'24"N., 122°15'11"W.
(2883) 37°41'54"N., 122°13'05"W.
(2884) 37°41'51"N., 122°12'48"W.
(2885) 37°41'53"N., 122°12'44"W.
(2886) 37°41'35"N., 122°12'18"W.
(2887) 37°41'46"N., 122°12'08"W.

(2888) 37°42'03"N., 122°12'34"W.
(2889) 37°42'08"N., 122°12'32"W.
(2890) 37°42'35"N., 122°12'30"W.
(2891) 37°42'40"N., 122°12'06"W.
(2892) and along the shoreline back to the beginning point.
(2893) (b) *Regulations*. (1) Under §165.33, entering, transiting through, or anchoring in this zone is prohibited unless authorized by the Coast Guard Captain of the Port, San Francisco Bay, or his designated representative.
(2894) (2) Persons desiring to transit the area of a security zone may contact the Captain of the Port at telephone number 415–399–3547 or on VHF-FM 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 his or her designated representative.
(2895) (c) *Enforcement*. All persons and vessels shall comply with the instructions of the Coast Guard Captain of the Port or the designated on-scene patrol personnel. Patrol personnel comprise commissioned, warrant, and petty officers of the Coast Guard onboard Coast Guard, Coast Guard Auxiliary, local, State, and Federal law enforcement vessels. Upon being hailed by U.S. Coast Guard patrol personnel by siren, radio, flashing light, or other means, the operator of a vessel shall proceed as directed.

(2896)

§165.1195 Regulated Navigation Area; Humboldt Bay Bar Channel and Humboldt Bay Entrance Channel, Humboldt Bay, CA.

(2897) (a) *Location*. The Regulated Navigation Area (RNA) includes all navigable waters of the Humboldt Bay Bar Channel and the Humboldt Bay Entrance Channel, Humboldt Bay, California.
(2898) (b) *Definitions*. As used in this section–
(2899) *COTP* means the Captain of the Port as defined in Title 33, Code of Federal Regulations, Section 1.01–30 and 3.55–20.
(2900) *Sector* means Coast Guard Sector/Air Station Humboldt Bay.
(2901) *Sector Commander* means the Commanding Officer of Coast Guard Sector/Air Station Humboldt Bay.
(2902) *Hazardous material* means any of the materials or substances listed in 46 CFR 153.40.
(2903) *Humboldt Bay Area* means the area described in the location section of this regulation.
(2904) *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.
(2905) *Station* means Coast Guard Station Humboldt Bay.
(2906) *Tank Vessel* means any vessel that is constructed or adapted to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue.
(2907) (c) *Applicability*. These regulations apply to the owners and operators of tank vessels transporting oil or hazardous material as cargo within the Humboldt Bay Area.
(2908) (d) *Regulations*. (1) In addition to the arrival and departure notification requirements listed in title 33 CFR, part 160, Ports and Waterways Safety–General, subpart C–Notifications of "Arrivals, Departures, Hazardous Conditions, and Certain Dangerous Cargoes", the owner, master, agent or person in charge of a vessel to which this notice applies shall obtain permission to cross within four hours of crossing the Humboldt Bay Bar. Between 6:30 a.m. and 10 p.m., notification/requests for permission can be made to Station Humboldt Bay on VHF–FM Channel 16, or at 707–443–2213. If between 10 p.m. and 6:30 a.m., or if unable to reach the Station, notification/requests for permission can be made directly to Sector/Air Station Humboldt Bay on VHF–FM Channel 16 or at 707–839–6113.
(2909) (2) Permission for a bar crossing by vessels or towing vessels and their tows to which this regulation applies is dependent on environmental and safety factors, including but not limited to: Sea state, winds, visibility, size and type of vessel or tow, wave period, time of day/night, and tidal currents. The final decision to close the bar rests with Humboldt Bay Sector Commander or his designated representative. At a minimum, Humboldt Bay Bar Channel crossings by vessels subject to this advisory will generally not be permitted unless all of the following conditions exist: Proper permission to cross has been received, sea conditions at the bar are less than 6 feet, winds at the bar are less than 30 knots, the transit will take place during daylight hours, the vessel has only a single tow or no tow, the visibility at the bar is greater than 1,000 yards, and the vessel and tow are in proper operating condition.
(2910) (3) If the bar is closed to vessels to which this regulation applies, waiver requests will be accepted within four hours of crossing the entrance channel. If the waiver request is made between 6:30 a.m. and 10 p.m., the request should be made to Station Humboldt Bay on VHF–FM Channel 16, or at 707–443–2213. If between 10 p.m. and 6:30 a.m., or if unable to reach the Station, the request can be made directly to Sector/Air Station Humboldt Bay on VHF–FM Channel 16 or at 707–839–6113. Waiver requests must be made by the vessel master and must provide the following: A description of the proposed operation, the conditions for which the waiver is requested, the reasons for requesting the waiver, the reasons that the requester believes the proposed operation can be accomplished safely, and a callback phone number. The Station or Sector Watchstander receiving the request will brief the Officer in Charge of the Station who will then brief the Sector Commander. The authority to grant waivers rests with the Sector Commander or his designated representative.
(2911) (4) In addition to the requirements in paragraphs (d)(1)–(3) of this section, vessels transporting liquefied hazardous gases or compressed hazardous gases in bulk as cargo into or out of Humboldt Bay are required to be aided by two assist tugs. If the vessel carrying the gases is towed, the assist tug requirement is in addition

to the towing tug. The assist tugs shall escort the vessel through its transit and must be stationed so as to provide immediate assistance in response to the loss of power or steering of the cargo vessel, its towing tug, or loss of control over the tow.

(2912) (5) Vessels to which this regulation applies may be required by the Sector Commander or his designated representative to be escorted by a Coast Guard vessel during their transit. In addition, if a vessel master, agent, or pilot has concerns about the safety of a vessel's transit through the Humboldt Bay Entrance Channel, a Coast Guard escort may be requested. Requests for an escort should be directed to Station on VHF–FM channel 16 or at 707–443–2213 between 6:30 a.m. and 10 p.m., or to Sector on VHF–FM channel 16 or at 707–839–6113 if between 10 p.m. and 6:30 a.m.

(2913) (e) *Enforcement*. Acting as a representative of the Captain of the Port, the Humboldt Bay Sector Commander will enforce this regulation and has the authority to take steps necessary to ensure the safe transit of vessels in Humboldt Bay. The Sector Commander can enlist the aid and cooperation of any Federal, State, county, and municipal agency to assist in the enforcement of the regulation. All persons and vessels shall comply with the instructions of the Sector Commander or the designated on-scene patrol personnel. Patrol personnel comprise commissioned, warrant, and petty officers of the Coast Guard onboard Coast Guard, Coast Guard Auxiliary, local, State, and Federal law enforcement vessels.

(2914) Upon being hailed by U.S. Coast Guard patrol personnel by siren, radio, flashing light, or other means, the operator of a vessel shall proceed as directed.

(2915)

§ 165.1196 Regulated Navigation Areas; Harbor Entrances along the Coast of Northern California.

(2916) (a) *Regulated navigation areas*. Each of the following areas is a regulated navigation area (RNA):

(2917) (1) Humboldt Bay Entrance Channel: The navigable waters enclosed by the following coordinates:

(2918) (i) 40°45′17″N., 124°14′10″W., (Point A);

(2919) (ii) 40°45′56″N., 124°15′06″W., (Point B);

(2920) (iii) 40°46′25″N., 124°14′30″W., (Point C);

(2921) (iv) 40°46′04″N., 124°13′46″W., (Point D); and

(2922) (v) Thence back to Point A, in Eureka, CA (NAD 83).

(2923) (2) Noyo River Entrance Channel: The navigable waters of the Noyo River Entrance Channel enclosed by the following coordinates:

(2924) (i) 39°25′36″N., 123°48′34″W., (Point A);

(2925) (ii) 39°25′37″N., 123°48′38″W., (Point B);

(2926) (iii) 39°25′42″N., 123°48′39″W., (Point C);

(2927) (iv) 39°25′42″N., 123°48′32″W., (Point D); and

(2928) (v) Thence back to Point A, in in Fort Bragg, CA (NAD 83).

(2929) (3) Crescent City Harbor Entrance Channel: The navigable waters of the Crescent City Harbor Entrance Channel enclosed by the following coordinates:

(2930) (i) 41°43′50”N., 124°11′27”W., (Point A)

(2931) (ii) 41°44′12”N., 124°11′42”W., (Point B)

(2932) (iii) 41°44′26”N., 124°10′55”W., (Point C)

(2933) (iv) 41°44′13”N., 124°10′20”W., (Point D); and

(2934) (v) Thence back to Point A, in Crescent City, CA (NAD 83).

(2935) (4) Estero-Morro Bay Harbor Entrance Channel: The navigable waters of the Morro Bay Harbor Entrance Channel enclosed by the following coordinates:

(2936) (i) 35°21′21″ N, 120°52′12″ W (Point A);

(2937) (ii) 35°21′41″N., 120°52′37″W., (Point B);

(2938) (iii) 35°21′55″N., 120°52′10″W., (Point C);

(2939) (iv) 35°21′38″N., 120°51′51″W., (Point D); and

(2940) (v) Thence back to Point A, in Morro Bay, CA (NAD 83).

(2941) (b) *Definitions*. For purposes of this section:

(2942) (1) *Bar closure* means that the operation of any vessel within an RNA established in paragraph (a) of this section has been prohibited by the Coast Guard.

(2943) (2) *Bar crossing plan* (also known as a Go/No-Go plan) means a plan, developed by local industry, in coordination with Coast Guard, for a bar within an RNA established in paragraph (a) of this section and adopted by the master or operator of a small passenger vessel or commercial fishing vessel to guide his or her vessel's operations on and in the vicinity of that bar.

(2944) (3) *Bar restriction* means that operation of a recreational, uninspected passenger, small passenger, and commercial fishing vessel within an RNA established in paragraph (a) of this section has been prohibited by the Coast Guard.

(2945) (4) *Commercial fishing industry vessel* means a fishing vessel, fish tender vessel, or a fish processing vessel.

(2946) (5) *COTP designated representative* means any Coast Guard commissioned officer, warrant officer, petty officer or civilian that has been authorized by the Captain of the Port (COTP) to act on his or her behalf in the enforcement of the RNA.

(2947) (6)*Fish processing vessel*means a vessel that commercially prepares fish or fish products other than by gutting, decapitating, gilling, skinning, shucking, icing, freezing, or brine chilling.

(2948) (7) *Fish tender vessel* means a vessel that commercially supplies, stores, refrigerates, or transports fish, fish products, or materials directly related to fishing or the preparation of fish to or from a fishing, fish processing, fish tender vessel or a fish processing facility.

(2949) (8) *Fishing vessel* means a vessel that commercially engages in the catching, taking, or harvesting of fish or an activity that can reasonably be expected to result in the catching, taking, or harvesting of fish.

(2950) (9) *Operator* means a person who is an owner, a demise charterer, or other contractor, who conducts the operation of, or who is responsible for the operation of a vessel.

(2951) (10) *Readily accessible* means equipment that is taken out of stowage and is available within the same space as any person for immediate use during an emergency.

(2952) (11) *Recreational vessel* means any vessel manufactured or used primarily for non-commercial use or leased, rented, or chartered to another for noncommercial use. It does not include a vessel engaged in carrying paying passengers.

(2953) (12) *Small passenger* vessel means a vessel inspected under 46 CFR subchapter T or 46 CFR subchapter K.

(2954) (13) *Uninspected passenger vessel* means an uninspected vessel—

(2955) (i) Of at least 100 gross tons;

(2956) (A) Carrying not more than 12 passengers, including at least one passenger-for-hire; or

(2957) (B) That is chartered with the crew provided or specified by the owner or the owner's representative and carrying not more than 12 passengers; or

(2958) (ii) Of less than 100 gross tons;

(2959) (A) Carrying not more than six passengers, including at least one passenger-for-hire; or

(2960) (B) That is chartered with the crew provided or specified by the owner or the owner's representative and carrying not more than six passengers.

(2961) (14) Unsafe condition exists when the wave height within an RNA identified in paragraph (a) of this section is equal to or greater than the maximum wave height determined by the formula L/10 + F = W where:

(2962) L = Overall length of a vessel measured in feet in a straight horizontal line along and parallel with the centerline between the intersections of this line with the vertical planes of the stem and stern profiles excluding deckhouses and equipment.

(2963) F = The minimum freeboard when measured in feet from the lowest point along the upper strake edge to the surface of the water.

(2964) W = Maximum wave height in feet to the nearest highest whole number.

(2965) (c) Regulations. (1)(i) Bar restrictions. The COTP or a designated representative will determine when to restrict passage for recreational and uninspected passenger vessels across the bars located in the RNAs established in paragraph (a) of this section. In making this determination, the COTP or a designated representative will determine whether an unsafe condition exists for such vessels as defined in paragraph (b) of this section. Additionally, the COTP or a designated representative will use his or her professional maritime experience and knowledge of local environmental conditions in making his or her determination. Factors that will be considered include, but are not limited to: Size and type of vessel, sea state, winds, wave period, and tidal currents. When a bar is restricted, the operation of recreational and uninspected passenger vessels in the RNA established in paragraph (a) of this section in which the restricted bar is located is prohibited unless specifically authorized by the COTP or a designated representative.

(2966) (ii) Bar closure. The bars located in the RNAs established in paragraph (a) of this section will be closed to all vessels whenever environmental conditions exceed the operational limitations of the relevant Coast Guard Search and Rescue resources as determined by the COTP. When a bar is closed, the operation of any vessel in the RNA established in paragraph (a) of this section in which the closed bar is located, is prohibited unless specifically authorized by the COTP or a designated representative. For bars having deep draft vessel access, the COTP will consult with the local pilots association, when practicable, prior to closing the affected bar.

(2967) (iii) Notification. The Coast Guard will notify the public of bar restrictions and bar closures via a Broadcast Notice to Mariners on VHF–FM Channel 16 and 22A. Additionally, Coast Guard personnel may be on-scene to advise the public of any bar restrictions or closures. In some locations, the Coast Guard may use bar warning lights to provide a visual indication of unsafe conditions to the public. Monitoring cameras and associated websites may also provide mariners with additional information in some locations.

(2968) (2) Safety requirements for recreational vessels. The operator of any recreational vessel operating in an RNA established in paragraph (a) of this section shall ensure that all persons located in any unenclosed areas of the recreational vessel are wearing lifejackets and that lifejackets are readily accessible for/to all persons located in any enclosed area of the recreational vessel:

(2969) (i) When crossing the bar and a bar restriction exists or

(2970) (ii) Whenever the recreational vessel is being towed or escorted across the bar.

(2971) (3) Safety requirements for uninspected passenger vessels (UPVs). (i) The master or operator of any uninspected passenger vessel operating in an RNA established in paragraph (a) of this section shall ensure that all persons located in any unenclosed areas of their vessel are wearing lifejackets and that lifejackets are readily accessible for/to all persons located in any enclosed areas of their vessel uninspected passenger vessel:

(2972) (A) When crossing the bar and a bar restriction exists or

(2973) (B) Whenever the uninspected passenger vessel is being towed or escorted across the bar.

(2974) (ii) The master or operator of any uninspected passenger vessel operating in an RNA established in paragraph (a) of this section during the conditions described in paragraph (c)(3)(i)(A) of this section shall contact the Coast Guard on VHF–FM Channel 16 prior to crossing the bar. The master or operator shall report the following:

(2975) (A) Vessel name,

(2976) (B) Vessel location or position,

(2977) (C) Number of persons onboard the vessel and

(2978) (D) Vessel destination.

(2979) (4) *Safety Requirements for Small Passenger Vessels (SPV)*. (i) The master or operator of any small passenger vessel operating in an RNA established in paragraph (a) of this section shall ensure that all persons located in any unenclosed areas of the small passenger vessel are wearing lifejackets and that lifejackets are readily accessible for/to all persons located in any enclosed areas of the vessel:

(2980) (A) Whenever crossing the bar and a bar restriction exists or

(2981) (B) Whenever their vessel is being towed or escorted across the bar.

(2982) (ii) Small passenger vessels with bar crossing plans that have been reviewed by and accepted by the Officer in Charge of Marine Inspection (OCMI) are exempt from the safety requirements described in paragraph (c)(4)(i) of this section during the conditions described in paragraph (c)(4)(i)(A) of this section so long as when crossing the bar the master or operator ensures that all persons on their vessel wear lifejackets in accordance with their bar crossing plan. If the vessel's bar crossing plan does not specify the conditions when the persons on their vessel shall wear lifejackets, however, then the master or operator shall comply with the safety requirements provided in paragraph (c)(4)(i) of this section in its entirety.

(2983) (iii) The master or operator of any small passenger vessel operating in an RNA established in paragraph (a) of this section during the conditions described in paragraph (c)(4)(i)(A) of this section shall contact the Coast Guard on VHF–FM Channel 16 prior to crossing the bar. The master or operator shall report the following:

(2984) (A) Vessel name,

(2985) (B) Vessel location or position,

(2986) (C) Number of persons on board the vessel and

(2987) (D) Vessel destination.

(2988) (5) *Safety Requirements for Commercial Fishing Vessels (CFV)*. (i) The master or operator of any commercial fishing vessel operating in an RNA described in paragraph (a) of this section shall ensure that all persons located in any unenclosed areas of commercial fishing vessel are wearing lifejackets or immersion suits and that lifejackets or immersion suits are readily accessible for/to all persons located in any enclosed spaces of the vessel:

(2989) (A) Whenever crossing the bar and a bar restriction exists or

(2990) (B) Whenever the commercial fishing vessel is being towed or escorted across the bar.

(2991) (ii) The master or operator of any commercial fishing vessel operating in an RNA described in paragraph (a) of this section during the conditions described in paragraph (c)(5)(i)(A) of this section shall contact the Coast Guard on VHF–FM Channel 16 prior to crossing the bar. The master or operator shall report the following:

(2992) (A) Vessel name,

(2993) (B) Vessel location or position,

(2994) (C) Number of persons on board the vessel and

(2995) (D) Vessel destination.

(2996) (6) *Penalties*. All persons and vessels within the RNAs described in paragraph (a) of this section shall comply with orders of Coast Guard personnel. Coast Guard personnel includes commissioned, warrant, petty officers, and civilians of the United States Coast Guard. Any person ho fails to comply with this regulation is subject to civil penalty in accordance with 46 U.S.C. 70036.

(2997)

§165.1197 Security Zones; San Francisco Bay, San Pablo Bay, Carquinez Strait, Suisun Bay, CA.

(2998) (a) *Locations*. The following areas are security zones:

(2999) (1) *Chevron Long Wharf, San Francisco Bay*. This security zone includes all waters extending from the surface to the sea floor within approximately 100 yards of the Chevron Long Wharf, Richmond, CA, and encompasses all waters in San Francisco Bay within a line connecting the following geographical positions–

(3000) 37°55'52.2"N., 122°24'04.7"W.

(3001) 37°55'41.8"N., 122°24'07.1"W.

(3002) 37°55'26.8"N., 122°24'35.9"W.

(3003) 37°55'47.1"N., 122°24'55.5"W.

(3004) 37°55'42.9"N., 122°25'03.5"W.

(3005) 37°55'11.2"N., 122°24'32.8"W.

(3006) 37°55'14.4"N., 122°24'27.5"W.

(3007) 37°55'19.7"N., 122°24'23.7"W.

(3008) 37°55'22.2"N., 122°24'26.2"W.

(3009) 37°55'38.5"N., 122°23'56.9"W.

(3010) 37°55'47.8"N., 122°23'53.3"W.

(3011) and along the shoreline back to the beginning point.

(3012) (2) *Conoco-Phillips, San Pablo Bay*. This security zone includes all waters extending from the surface to the sea floor within approximately 100 yards of the Conoco-Phillips Wharf, Rodeo, CA, and encompasses all waters in San Pablo Bay within a line connecting the following geographical positions–

(3013) 38°03'06.0"N., 122°15'32.4"W.

(3014) 38°03'20.7"N., 122°15'35.8"W.

(3015) 38°03'21.8"N., 122°15'29.8"W.

(3016) 38°03'29.1"N., 122°15'31.8"W.

(3017) 38°03'23.8"N., 122°15'55.8"W.

(3018) 38°03'16.8"N., 122°15'53.2"W.

(3019) 38°03'18.6"N., 122°15'45.2"W.

(3020) 38°03'04.0"N., 122°15'42.0"W.

(3021) and along the shoreline back to the beginning point.

(3022) (3) *Shell Terminal, Carquinez Strait*. This security zone includes all waters extending from the surface to the sea floor within approximately 100 yards of the Shell Terminal, Martinez, CA, and encompasses all waters in San Pablo Bay within a line connecting the following geographical positions–

(3023) 38°01'39.8"N., 122°07'40.3"W.

(3024) 38°01'54.0"N., 122°07'43.0"W.

(3025) 38°01'56.9"N., 122°07'37.9"W.

(3026) 38°02'02.7"N., 122°07'42.6"W.

(3027) 38°01'49.5"N., 122°08'08.7"W.

(3028) 38°01'43.7"N., 122°08'04.2"W.
(3029) 38°01'50.1"N., 122°07'50.5"W.
(3030) 38°01'36.3"N., 122°07'47.6"W.
(3031) and along the shoreline back to the beginning point.
(3032) (4) *Amorco Pier, Carquinez Strait*. This security zone includes all waters extending from the surface to the sea floor within approximately 100 yards of the Amorco Pier, Martinez, CA, and encompasses all waters in the Carquinez Strait within a line connecting the following geographical positions–
(3033) 38°02'03.1"N., 122°07'11.9"W.
(3034) 38°02'05.6"N., 122°07'18.9"W.
(3035) 38°02'07.9"N., 122°07'14.9"W.
(3036) 38°02'13.0"N., 122°07'19.4"W.
(3037) 38°02'05.7"N., 122°07'35.9"W.
(3038) 38°02'00.5"N., 122°07'31.1"W.
(3039) 38°02'01.8"N., 122°07'27.3"W.
(3040) 38°01'55.0"N., 122°07'11.0"W.
(3041) and along the shoreline back to the beginning point.
(3042) (5) *Valero, Carquinez Strait*. This security zone includes all waters extending from the surface to the sea floor within approximately 100 yards of the Valero Pier, Benicia, CA, and encompasses all waters in the Carquinez Strait within a line connecting the following geographical positions–
(3043) 38°02'37.6"N., 122°07'51.5"W.
(3044) 38°02'34.7"N., 122°07'48.9"W.
(3045) 38°02'44.1"N., 122°07'34.9"W.
(3046) 38°02'48.0"N., 122°07'37.9"W.
(3047) 38°02'47.7"N., 122°07'42.1"W.
(3048) and along the shoreline back to the beginning point.
(3049) (6) *Avon Pier, Suisun Bay*. This security zone includes all waters extending from the surface to the sea floor within approximately 100 yards of the Avon Pier, Martinez, CA, and encompasses all waters in Suisun Bay within a line connecting the following geographical positions–
(3050) 38°02'24.6"N., 122°04'52.9"W.
(3051) 38°02'54.0"N., 122°05'19.5"W.
(3052) 38°02'55.8"N., 122°05'16.1"W.
(3053) 38°03'02.1"N., 122°05'19.4"W.
(3054) 38°02'55.1"N., 122°05'42.6"W.
(3055) 38°02'48.8"N., 122°05'39.2"W.
(3056) 38°02'52.4"N., 122°05'27.7"W.
(3057) 38°02'46.5"N., 122°05'22.4"W.
(3058) and along the shoreline back to the beginning point.
(3059) (b) *Regulations*. (1) In accordance with the general regulations in §165.33, entry into the security zones described in paragraph (a) of this section is prohibited, unless specifically authorized by the Captain of the Port San Francisco Bay, or his designated representative.
(3060) (2) Persons desiring to transit the area of a security zone may contact the Captain of the Port at telephone number 415–399–3547 or on VHF-FM 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 his designated representative.
(3061) (c) *Enforcement.* The U.S. Coast Guard may be assisted in the patrol and enforcement of these security zones by federal, state and local law enforcement as necessary.

(3062)

§165.1198 Safety zone; Military Ocean Terminal Concord Safety Zone, Suisun Bay, Military Ocean Terminal Concord, CA.

(3063) (a) *Location*. This safety zone is established in the navigable waters of Suisun Bay near Military Ocean Terminal Concord, CA (MOTCO) as depicted in National Oceanic and Atmospheric Administration (NOAA) Chart 18656. Upon commencement of military onloads and offloads, the safety zone will encompass the navigable waters in the area between 500 yards of MOTCO Pier 2 in position 38°03′30"N, 122°01′14"W (NAD 83) as depicted in National Oceanic and Atmospheric Administration (NOAA) Chart 18656 (the perimeter of the existing security zone) and 3,000 yards of the pier.
(3064) (b) *Enforcement period*. The zone described in paragraph (a) of this section will be enforced during all military onload and offload operations. The Captain of the Port San Francisco (COTP) will notify the maritime community of periods during which this zone will be enforced via actual notice on-scene during military onloads and offloads.
(3065) (c) *Regulations*. (1) The safety zone is open to all persons and vessels for transitory use.
(3066) (2) Persons and vessels operating within the safety zone may not anchor or otherwise loiter within the safety zone.
(3067) (3) Vessel operators desiring to anchor or otherwise loiter within the safety zone must contact Sector San Francisco Vessel Traffic Service at 415–556–2760 or VHF Channel 14 to obtain permission.
(3068) (4) All persons and vessels transiting through or operating within the safety zone must comply with all directions given to them by the COTP or a designated representative.
(3069) (5) The public can contact Sector San Francisco Bay at 415–399–3530 to obtain information concerning enforcement of this rule.
(3070) (d) *Enforcement*. All persons and vessels must comply with the instructions of the COTP or the designated on-scene patrol personnel. Patrol personnel comprise commissioned, warrant, and petty officers of the Coast Guard onboard Coast Guard, Coast Guard Auxiliary, local, state, and federal law enforcement vessels. The U.S. Coast Guard may be assisted in the patrol and enforcement of the safety zone by local law enforcement and the MOTCO police as necessary. Upon being hailed by U.S. Coast Guard patrol personnel by siren, radio, flashing light, or other means, the operator of a vessel must proceed as directed.

(3071)

§ 165.1199 Security Zones; Military Ocean Terminal Concord (MOTCO), Concord, California.

(3072) (a) *Location*. The security zone(s) reside(s) within the navigable waters of Suisun Bay, California, extending from the surface to the sea floor, within 500 yards of the three Military Ocean Terminal Concord (MOTCO) piers in Concord, California.

(3073) (b) *Definitions*. As used in this section, ''designated representative'' means any Coast Guard commissioned, warrant, or petty officer or any Federal, state, or local law enforcement officer who has been designated by the Captain of the Port San Francisco (COTP) to act on the COTP's behalf. The COTP's representative may be on a Coast Guard vessel, a Coast Guard Auxiliary vessel, a Federal, state, or local law enforcement vessel, or a location on shore.

(3074) (c) *Regulations*. (1) The security zone(s) described in paragraph (a) of this section will be in force during active military onloading and/or offloading operations and at any time a vessel loaded with munitions is present at a pier.

(3075) (2) When one or more piers are involved in onload or offload operations at the same time, there will be a 500-yard security zone for each involved pier.

(3076) (3) Under the general regulations in subpart D of this part, entry into, transiting or anchoring within the security zone(s) described in paragraph (a) of this section is prohibited during times of enforcement unless authorized by the COTP or a designated representative.

(3077) (4) Vessel operators desiring to enter or operate within the security zone(s) during times of enforcement must contact the COTP or a designated representative on VHF-16 or through the 24-hour Command Center at telephone (415) 399–3547 to obtain permission to do so. Vessel operators given permission to enter or operate in the security zone(s) must comply with all directions given to them by the COTP or a designated representative.

(3078) (5) Upon being hailed by the COTP or designated representative by siren, radio, flashing light, or other means, the operator of a vessel approaching the security zone(s) must proceed as directed to avoid entering the security zone(s).

(3079) (d) *Notice of enforcement or suspension of enforcement of security zone(s)*. During periods that one or more security zones are enforced, the COTP or a designated representative will issue a Broadcast Notice to Mariners and/or notify mariners via actual notice onscene. In addition, COTP maintains a telephone line that is maintained 24 hours a day, 7 days a week. The public can contact COTP at (415) 399–3547 to obtain information concerning enforcement of this section. When the security zones are no longer needed, the COTP or designated representative will cease enforcement of the security zones. Upon suspension of enforcement, all persons and vessels are granted general permissions to enter, move within, and exit the security zones, but should remain cognizant of the applicable restricted area designated in 33 CFR 334.1110.

(3080)

Subpart G–Protection of Naval Vessels

(3081)

§165.2010 Purpose.

(3082) 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.

(3083)

§165.2015 Definitions.

(3084) The following definitions apply to this subpart:

(3085) *Atlantic Area* means that area described in 33 CFR 3.04–1 Atlantic Area.

(3086) *Large U.S. naval vessel* means any U.S. naval vessel greater than 100 feet in length overall.

(3087) *Naval defensive sea area* means those areas described in 32 CFR part 761.

(3088) *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.

(3089) *Navigable waters of the United States* means those waters defined as such in 33 CFR part 2.

(3090) *Navigation rules* means the Navigation Rules, International-Inland.

(3091) *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.

(3092) *Pacific Area* means that area described in 33 CFR 3.04–3 Pacific Area.

(3093) *Restricted area* means those areas established by the Army Corps of Engineers and set out in 33 CFR part 334.

(3094) *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.

(3095) *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.

(3096) *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.

(3097)

§165.2020 Enforcement authority.

(3098) (a) *Coast Guard*. Any Coast Guard commissioned, warrant or petty officer may enforce the rules and regulations contained in this subpart.

(3099) (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.

(3100)

§165.2030 Pacific Area.

(3101) (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 Pacific Area, which includes the Eleventh, Thirteenth, Fourteenth, and Seventeenth U.S. Coast Guard Districts.

(3102) **Note to paragraph** (a): The boundaries of the U.S. Coast Guard Pacific Area and the Eleventh, Thirteenth, Fourteenth, and Seventeenth U.S. Coast Guard Districts are set out in 33 CFR part 3.

(3103) (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 dry dock, except when the large naval vessel is moored or anchored within a restricted area or within a naval defensive sea area.

(3104) (c) The Navigation Rules shall apply at all times within a naval vessel protection zone.

(3105) (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.

(3106) (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.

(3107) (f) When conditions permit, the Coast Guard, senior naval officer present in command, or the official patrol should:

(3108) (1) Give advance notice on VHF-FM channel 16 of all large U.S. naval vessel movements;

(3109) (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

(3110) (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

(3111) (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.

(3112) **Note to 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.

(3113)

Part 166–Shipping Safety Fairways

(3114)

Subpart A–General

(3115)

§166.100 Purpose.

(3116) 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.

(3117)

§166.103 Geographic coordinates.

(3118) 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.

(3119)

§166.105 Definitions.

(3120) (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.

(3121) (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.

(3122)

§166.110 Modification of areas.

(3123) Fairways and fairway anchorages are subject to modification in accordance with 33 U.S.C. 1223(c); 92 Stat. 1473.

(3124)

Subpart B–Designations of Fairways and Fairway Anchorages

(3125)

§166.300 Areas along the coast of California.

(3126) (a) *Purpose*. Fairways as described in this section are established to control the erection of structures therein to provide safe vessel routes along the coast of California.

(3127) (b) *Designated Areas*—(1) *Port Hueneme Safety Fairway*. An area one nautical mile in width centered on the alinement of Port Hueneme Entrance Channel and extending seaward from the 30-foot-depth curve for a distance of 1.5 nautical miles, thence turning southerly and widening to 1.5 nautical miles at the 3-mile limit, all between lines joining the following points:

(3128) 34°06'30"N., 119°15'00"W.

(3129) 34°07'37"N., 119°14'25"W.

(3130) 34°08'49"N., 119°13'21"W. thence generally along the 30-foot-depth curve to the seaward end of the west entrance jetty; seaward end of the east entrance jetty, thence generally along the 30-foot-depth curve to:

(3131) 34°08'21"N., 119°12'15"W.

(3132) 34°07'10"N., 119°13'20"W.

(3133) 34°05'48"N., 119°13'23"W.

(3134) (2) [Reserved]

(3135)

Part 167–Offshore Traffic Separation Schemes

(3136)

Subpart A–General

(3137)

§167.1 Purpose.

(3138) 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.

(3139)

§167.3 Geographic coordinates.

(3140) Geographic coordinates are defined using North American 1927 Datum (NAD 27) unless indicated otherwise.

(3141)

§167.5 Definitions.

(3142) (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.

(3143) (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.

(3144) (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.

(3145) (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.

(3146) (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.

(3147) (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.

(3148) (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.

(3149)

§167.10 Operating rules.

(3150) The operator of a vessel in a TSS shall comply with Rule 10 of the International Regulations for Preventing Collision at Sea, 1972, as amended.

(3151)

§167.15 Modification of schemes.

(3152) (a) A traffic separation scheme or precautionary area described in this Part may be permanently amended in accordance with 46 U.S.C. 70003 (92 Stat. 1473), and with international agreements.

(3153) (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.

(3154)

Subpart B—Description of Traffic Separation Schemes and Precautionary Areas

(3155)

§167.400 Off San Francisco Traffic Separation Scheme: General.

(3156) The Off San Francisco Traffic Separation Scheme consists of six parts: a Precautionary Area, a Northern Approach, a Southern Approach, a Western Approach, a Main Ship Channel, and an Area To Be Avoided. The specific areas in the Off San Francisco TSS and Precautionary Area are described in **§167.40**1 through **§167.406** of this chapter. The geographic coordinates in **§167.401** through **§167.406** are defined using North American Datum 1983 (NAD 83).

(3157)

§167.401 Off San Francisco: Precautionary area.*

(3158) (a)(1) A precautionary area is established bounded to the west by an arc of a circle with a radius of 6 miles centering upon geographical position 37°45.00'N., 122°41.50'W., and connecting the following geographical positions: 37°42.70'N., 122°34.60'W., thence to 37°50.30'N., 122°38.00'W.

(3159) (2) The precautionary area is bounded to the eat by a line connecting the following geographic positions: 37°42.70'N., 122°34.60'W., thence to 37°45.90'N., 122°38.00'W., thence to 37°50.30'N., 122°38.00'W.

(3160) (b) A pilot boarding area is located near the center of the precautionary area described in paragraph (a) of this section. 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.

(3161) *Amended Traffic Separation Scheme references IMO Circular COLREG.2/Circ.64, 4 Dec. 2012.

(3162)

§167.402 Off San Francisco: Northern approach.*

(3163) (a) A separation zone is bounded by a line connecting the following geographical positions: 37°48.52'N., 122°47.63'W., thence to 37°58.45'N., 123°09.49'W., thence to 38°09.09'N., 123°20.82'W., thence to 38°08.03'N., 123°21.34'W., thence to 37°57.67'N., 123°10.31'W., thence to 37°47.66'N., 122°48.29'W.

(3164) (b) A traffic lane for north-westbound traffic is established between the separation zone and a line connecting the following geographical positions: 37°49.29'N., 122°46.79'W., thence to 37°59.22'N., 123°08.66'W., thence to 38°10.14'N., 123°20.29'W.

(3165) (c) A traffic lane for south-eastbound traffic is established between the separation zone and a line connecting the following geographical positions: 38°06.92'N., 123°21.82'W., thence to 37°56.89'N., 123°11.14'W., thence to 37°46.72'N., 122°48.76'W.

(3166) *Amended Traffic Separation Scheme references IMO Circular COLREG.2/Circ.64, 4 Dec. 2012.

(3167)

§167.403 Off San Francisco: Southern approach.*

(3168) (a) A separation zone is bounded by a line connecting the following geographical positions: 37°39.07'N., 122°40.40'W., thence to thence to 37°18.45'N., 122°40.40'W., thence to 37°18.71'N., 122°43.00'W., thence to 37°39.12'N., 122° 43'.00.

(3169) (b) A traffic lane for northbound traffic is established between the separation zone and a line connecting the following geographical positions: 37°39.30'N., 122°39.14'W., thence to 37°18.36'N., 122°39.14'W.

(3170) (c) A traffic lane for southbound traffic is established between the separation zone and a line connecting the following geographical positions: 37°18.89'N., 122°44.26'W., thence to 37°39.41'N., 122°44.26'W.

(3171) *Amended Traffic Separation Scheme references IMO Circular COLREG.2/Circ.64, 4 Dec. 2012.

(3172)

§167.404 Off San Francisco: Western approach.*

(3173) (a) A separation zone is bounded by a line connecting the following geographical positions: 37°41.90'N., 122°47.99'W., thence to 37°33.54'N., 123°03.79'W., thence to 37°34.15'N., 123°00.37'W., thence to 37°41.09'N., 122°47.25'W.

(3174) (b) A traffic lane for south-westbound traffic is established between the separation zone and a line connecting the following geographical positions: 37°42.81'N., 122°48.55'W., thence to 37°34.37'N., 123°04.49'W.

(3175) (c) A traffic lane for north-eastbound traffic is established between the separation zone and a line connecting the following geographical positions: 37°31.87'N., 123°02.40'W., thence to 37°40.38'N., 122°46.33'W.

(3176) *Amended Traffic Separation Scheme references IMO Circular COLREG.2/Circ.64, 4 Dec. 2012.

(3177)

§167.405 Off San Francisco: Main ship channel.*

(3178) (a) A separation line connects the following geographical positions: 37°45.90'N., 122°38.00'W., thence to 37°47.00'N., 122°34.30'W., thence to 37°48.10'N., 122°31.00'W.

(3179) (b) A traffic lane for eastbound traffic is established between the separation line and a line connecting the following geographical positions: 37°45.80'N., 122°37.70'W., thence to 37°47.80'N., 122°30.80'W.

(3180) (c) A traffic lane for westbound traffic is established between the separation line and a line connecting the following geographical positions: 37°46.20'N., 122°37.90'W., thence to 37°46.90'N., 122°35.30'W., thence to 37°48.50'N., 122°31.30'W.

(3181) *Amended Traffic Separation Scheme references IMO Circular COLREG.2/Circ.64, 4 Dec. 2012.

(3182)

§167.406 Off San Francisco: Area to be avoided.*

(3183) A circular area to be avoided, with a radius of half of a nautical mile, is centered upon geographic position: 37°45.00'N., 122°41.50'W.

(3184) *Amended Traffic Separation Scheme references IMO Circular COLREG.2/Circ.64, 4 Dec. 2012.

(3185)

§167.450 In the Santa Barbara Channel Traffic Separation Scheme: General.

(3186) The Traffic Separation Scheme in the Santa Barbara Channel is described in **§167.451** and**§167.452**. The geographic coordinates in **§167.451** and **§167.452** are defined using North American Datum 1983 (NAD 83).

(3187)

§167.451 In the Santa Barbara Channel: Between Point Vicente and Point Conception.*

(3188) (a) A separation zone is bounded by a line connecting the following geographical positions: 34°20.84'N., 120° 30.28'W., thence to 34°03.87'N., 119°15.63'W., thence to 33°44.93'N., 118°35.75'W., thence to 33°44.06'N., 118°36.34'W., thence to 34°02.94'N., 119°16.09'W., thence to 34°19.88'N., 120°30.59'W.

(3189) (b) A traffic lane for north-westbound traffic is established between the separation zone and a line connecting the following geographical positions: 34°21.80'N., 120°29.96'W., thence to 34°04.80'N., 119°15.16'W., thence to 33°45.80'N., 118°35.15'W.

(3190) (c) A traffic lane for south-eastbound traffic is established between the separation zone and a line connecting the following geographical positions: 33°43.18'N., 118°36.94'W., thence to 34°02.01'N., 119°16.56'W., thence to 34°18.92'N., 120°30.91'W.

(3191) Note: Port Hueneme Fairway: A safety fairway is established in the approach to Port Hueneme.

(3192) *Amended Traffic Separation Scheme references IMO Circular COLREG.2/Circ.64, 4 Dec. 2012.

(3193)

§167.452 In the Santa Barbara Channel: Between Point Conception and Point Arguello.*

(3194) (a) A separation zone is bounded by a line connecting the following geographical positions: 34°20.84'N., 120°30'.28'W., thence to 34°19.88'N., 120°30.59'W., thence to 34°24.76'N., 120°52.10'W., thence to 34°25.72'N., 120°51.78'W.

(3195) (b) A traffic lane for westbound traffic is established between the separation zone and a line connecting the following geographical positions: 34°21.80'N., 120°29.96'W., thence to 34°26.68'N., 120°51.46'W.

(3196) (c) A traffic lane for eastbound traffic is established between the separation zone and a line connecting the following geographical positions: 34°18.92'N., 120°30.91'W., thence to 34°23.80'N., 120°52'.42'W.

(3197) *Amended Traffic Separation Scheme references IMO Circular COLREG.2/Circ.64, 4 Dec. 2012.

(3198)

§167.500 In the approaches to Los Angeles-Long Beach Traffic Separation Scheme: General.

(3199) The Traffic Separation Scheme in the approaches to Los Angeles-Long Beach consists of three parts: a Precautionary Area, a Western Approach, and a Southern Approach. The specific areas in the approaches to Los AngelesLong Beach are described in **§167.501** through **§167.503**. The geographic coordinates in **§167.501** through **§167.503** are defined using North American Datum 1983 (NAD 83).

(3200)

§167.501 In the approaches to Los Angeles–Long Beach: Precautionary area.*

(3201) (a) The precautionary area consists of the water area enclosed by the Los Angeles – Long Beach breakwater and a line connecting Point Fermin Light at 33°42.30'N., 118°17.60'W., with the following geographical positions: 33°35.50'N., 118°17.60'W., thence to 33°35.50'N., 118°09.00'W., thence to 33°37.70'N., 118°06.50'W., thence to 33°43.40'N., 118°10.80'W.

(3202) (b) Pilot boarding areas are located within the precautionary area described in paragraph (a) of this section. 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.

(3203) *Amended Traffic Separation Scheme references IMO Circular COLREG.2/Circ.64, 4 Dec. 2012.

(3204)

§167.502 In the approaches to Los Angeles–Long Beach: Western approach.*

(3205) (a) A separation zone is bounded by a line connecting the following geographical positions: 33°37.70'N., 118°17.60'W., thence to 33°36.50'N., 118°17.60'W., thence to 33°36.50'N., 118°20.48'W., thence to 33°44.06'N., 118°36.34'W., thence to 33°44.93'N., 118°35.75'W., thence to 33°37.70'N., 118°20.57'W.

(3206) (b) A traffic lane for northbound coastwise traffic is established between the separation zone and a line connecting the following geographical positions: 33°38.70'N., 118°17.60'W., thence to 33°38.70'N., 118°20.24'W., thence to 33°45.80'N., 118°35.15'W.

(3207) (c) A traffic lane for southbound coastwise traffic is established between the separation zone and a line connecting the following geographical positions: 33°35.50'N., 118°17.60'W., thence to 33°43.18'N., 118°36.94'W., thence to 33°35.50'N., 118°20.81'W.

(3208) *Amended Traffic Separation Scheme references IMO Circular COLREG.2/Circ.64, 4 Dec. 2012.

(3209)

§167.503 In the approaches to Los Angeles–Long Beach TSS: Southern approach.*

(3210) (a) A separation zone is established bounded by a line connecting the following geographic positions: 33°35.50'N., 118°10.30'W., thence to 33°19.00'N., 118°05.60'W., thence to 33°35.50'N., 118°12.75'W., thence to 33°19.70'N., 118°03.50'W.

(3211) (b) A traffic lane for northbound traffic is established between the separation zone and a line connecting the following geographical positions: 33°35.50'N., 118°09.00'W., thence to 33°20.00'N., 118°02.30'W.

(3212) (c) A traffic lane for southbound traffic is established between the separation zone and a line connecting the following geographical positions: 33°35.50'N., 118°14.00'W., thence to 33°18.70'N., 118°06.75'W.

(3213) *Amended Traffic Separation Scheme references IMO Circular COLREG.2/Circ.64, 4 Dec. 2012.

(3214)

Part 168–Escort Requirements for Certain Tankers

(3215)

§168.01 Purpose.

(3216) (a) This part prescribes regulations in accordance with section 4116(c) of the Oil Pollution Act of 1990 (OPA 90) (Pub. L. 101-380), as amended by section 711 of the Coast Guard Authorization Act of 2010 (Pub. L. 111–281). The regulations will reduce the risk of oil spills from laden, single hull and double hull tankers over 5,000 GT by requiring that these tankers be escorted by at least two suitable escort vessels in applicable waters, as defined in §168.40. The escort vessels will be immediately available to influence the tankers' speed and course in the event of a steering or propulsion equipment failure, thereby reducing the possibility of groundings or collisions.

(3217) (b) The regulations in this part establish minimum escort vessel requirements. Nothing in these regulations should be construed as relieving the master of a tanker from the duty to operate the vessel in a safe and prudent manner, taking into account the navigational constraints of the waterways to be traversed, other vessel traffic, and anticipated weather, tide, and sea conditions, which may require reduced speeds, greater assistance from escort vessels, or other operational precautions.

(3218)

§168.05 Definitions.

(3219) As used in this part–

(3220) *Disabled tanker* means a tanker experiencing a loss of propulsion or steering control.

(3221) *Double hull tanker* means any self-propelled tank vessel that is constructed with both double bottom and double sides in accordance with the provisions of 33 CFR 157.10d.

(3222) *Escort transit* means that portion of the tanker's voyage through waters where escort vessels are required.

(3223) *Escort vessel* means any vessel that is assigned and dedicated to a tanker during the escort transit, and that is fendered and outfitted with towing gear as appropriate for its role in an emergency response to a disabled tanker.

(3224) *Laden* means transporting in bulk any quantity of applicable cargo, except for clingage and residue in otherwise empty cargo tanks.

(3225) *Single hull tanker* means any self-propelled tank vessel that is not constructed with both double bottom and double sides in accordance with the provisions of 33 CFR 157.10d.

(3226) *Tanker master* means the licensed onboard person in charge of the tanker.

(3227) *Tanker owner or operator* means the owner or shoreside organization (individual, corporation, partnership, or association), including a demise charterer, responsible for the overall management and operation of the tanker.

(3228)

§168.10 Responsibilities.

(3229) (a) The tanker owner or operator shall:

(3230) (1) select escort vessels that can meet the performance requirements of this part; and

(3231) (2) inform the tanker master of the performance capabilities of the selected escort vessels. This information must be provided to the master before beginning the escort transit.

(3232) (b) The tanker master shall operate the tanker within the performance capabilities of the escort vessels, taking into account speed, sea and weather conditions, navigational considerations, and other factors that may change or arise during the escort transit.

(3233) (c) In an emergency, the tanker master may deviate from the requirements of this part to the extent necessary to avoid endangering persons, property, or the environment, but shall immediately report the deviation to the cognizant Coast Guard Captain of the Port (COTP).

(3234)

§168.20 Applicable vessels.

(3235) The requirements of this part apply to the following laden tankers of 5,000 gross tons or more:

(3236) (a) All single hull tankers on the waters listed in §168.40(a) and (b); and

(3237) (b) All double hull tankers on the waters listed in §168.40(a).

(3238)

§168.30 Applicable cargoes.

(3239) The requirements of this part apply to any petroleum oil listed in 46 CFR Table 30.25–1 as a pollution category I cargo.

(3240)

§168.40 Applicable waters and number of escort vessels.

(3241) The requirements of this part apply to the following waters:

(3242) (a) *Prince William Sound*: Each tanker to which this part applies must be escorted by at least two escort vessels in those navigable waters of the United States within Prince William Sound, Alaska, and the adjoining tributaries, bays, harbors, and ports, including the navigable waters of the United States within a line drawn from Cape Hinchinbrook Light, to Seal Rocks Light, to a point on Montague Island at 60°14.6'N., 146°59'W., and

the waters of Montague Strait east of a line between Cape Puget and Cape Cleare.

(3243) (b) *Puget Sound and certain associated waters*: Each tanker to which this part applies must be escorted by at least two escort vessels in those navigable waters of the United States and Washington State east of a line connecting New Dungeness Light with Discovery Island Light and all points in the Puget Sound area north and south of these lights. This area includes all the navigable waters of the United States within Haro Strait, Rosario Strait, the Strait of Georgia, Puget Sound, and Hood Canal, as well as those portions of the Strait of Juan de Fuca east of the New Dungeness-Discovery Island line.

(3244)

§168.50 Performance and operational requirements.

(3245) (a) Except as provided in paragraph (c) of §168.10, at all times during the escort transit each tanker to which this part applies:

(3246) (1) Must be accompanied by escort vessels that meet the performance requirements of paragraph (b) of this section (but not less than the number of escorts required by §168.40).

(3247) (2) Must have the escort vessels positioned relative to the tanker such that timely response to a propulsion or steering failure can be effected.

(3248) (3) Must not exceed a speed beyond which the escort vessels can reasonably be expected to safely bring the tanker under control within the navigational limits of the waterway, taking into consideration ambient sea and weather conditions, surrounding vessel traffic, hazards, and other factors that may reduce the available sea room.

(3249) (b) The escort vessels, acting singly or jointly in any combination as needed, and considering their applied force vectors on the tanker's hull, must be capable of–

(3250) (1) Towing the tanker at 4 knots in calm conditions, and holding it in steady position against a 45-knot headwind;

(3251) (2) [Reserved]

(3252) (3) Holding the tanker on a steady course against a 35-degree locked rudder at a speed of 6 knots; and

(3253) (4) Turning the tanker 90 degrees, assuming a free-swinging rudder and a speed of 6 knots, within the same distance (advance and transfer) that it could turn itself with a hard-over rudder.

(3254)

§168.60 Pre-escort conference.

(3255) (a) Before commencing an escort transit, the tanker master shall confer, by radio or in person, with the tanker pilot and the masters of the escort vessels regarding the escort operation.

(3256) (b) The purpose of the pre-escort conference is for all parties to plan and discuss particulars of the escort transit.

(3257) (c) At a minimum, the following topics must be addressed during the pre-escort conference:

(3258) (1) The destination, route, planned speed, other vessel traffic, anticipated weather, tide, and sea conditions, and other navigational considerations;

(3259) (2) The type and operational status of communication, towing, steering, and propulsion equipment on the tanker and escort vessels;

(3260) (3) The relative positioning and reaction time for the escort vessels to move into assist positions, including, if appropriate, pre-tethering the escort vessels at crucial points along the route;

(3261) (4) The preparations required on the tanker and escort vessels, and the methods employed in making an emergency towline connection, including stationing of deck crews, preparation of messenger lines, bridles, and other towing gear, and energizing appropriate deck equipment;

(3262) (5) The manner in which an emergency towline connection would be made (which escort vessel will respond, how messengers and towlines will be passed, etc.);

(3263) (6) Other relevant information provided by the tanker master, pilot or escort vessel masters.

(3264)

Part 169–Ship Reporting Systems

(3265)

Subpart A–General

(3266)

§169.1 What is the purpose of this part?

(3267) 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.

(3268) **Note to §169.1:** For ship reporting system requirements not established by the Coast Guard, see 50 CFR Part 404.

(3269)

§169.5 How are terms used in this part defined?

(3270) As used in this part–

(3271) *Administration* means the Government of the State whose flag the ship is entitled to fly.

(3272) *Cargo ship* means any ship which is not a passenger ship.

(3273) *Flag Administration* means the Government of a State whose flag the ship is entitled to fly.

(3274) *Gross tonnage* means tonnage as defined under the International Convention on Tonnage Measurement of Ships, 1969 (Incorporated by reference, see §169.15).

(3275) *Gross tons* means vessel tonnage measured in accordance with the method utilized by the flag state administration of that vessel.

(3276) *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=3.7×displ.1667, where "V" is the maximum speed and "displ" is the vessel displacement corresponding to the design waterline in cubic meters.

(3277) *High speed passenger craft* means a high speed craft carrying more than 12 passengers.

(3278) *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.

(3279) *Long range identification and tracking (LRIT) information or position report* means report containing the following information:

(3280) (1) The identity of the ship;

(3281) (2) The position of the ship (latitude and longitude); and

(3282) (3) The date and time of the position provided.

(3283) *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.

(3284) *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.

(3285) *Mobile offshore drilling unit* means a self-propelled vessel capable of engaging in drilling operations for the exploration or exploitation of subsea resources.

(3286) *Passenger ship* means a ship that carries more than 12 passengers.

(3287) *Self-propelled ships* means ships propelled by mechanical means.

(3288) *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.

(3289) *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.

(3290)

§169.10 What geographic coordinates are used?

(3291) 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.

(3292)

§169.15 Incorporation by reference: Where can I get a copy of the publications mentioned in this part?

(3293) (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 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.

(3294) (b) *International Electrotechnical Commission (IEC) Bureau Central de la Commission Electrotechnique Internationale*, 3 rue de Varembé, P.O. Box 131, 1211 Geneva 20, Switzerland.

(3295) (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.

(3296) (2) [Reserved]

(3297) (c) *International Maritime Organization (IMO),* 4 Albert Embankment, London SE1 7SR, U.K.

(3298) (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.

(3299) (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.

(3300) (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.

(3301) (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.

(3302) (5) International Convention on Tonnage Measurement of Ships, 1969, incorporation by reference approved for §169.5.

(3303)

Subpart C—Transmission of Long Range Identification and Tracking Information

(3304)

§169.200 What is the purpose of this subpart?

(3305) 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.

(3306)

§169.205 What types of ships are required to transmit LRIT information (position reports)?

(3307) The following ships, while engaged on an international voyage, are required to transmit position reports:

(3308) (a) A passenger ship, including high speed passenger craft.

(3309) (b) A cargo ship, including high speed craft, of 300 gross tonnage or more.

(3310) (c) A mobile offshore drilling unit while underway and not engaged in drilling operations.

(3311)

§169.210 Where during its international voyage must a ship transmit position reports?

(3312) 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.

(3313) (a) *Flag State relationship*. A U.S. flag ship engaged on an international voyage must transmit position reports wherever they are located.

(3314) (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.

(3315) (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.

(3316)

§169.215 How must a ship transmit position reports?

(3317) 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).

(3318)

§169.220 When must a ship be fitted with LRIT equipment?

(3319) A ship identified in §169.205 must be equipped with LRIT equipment–

(3320) (a) Before getting underway, if the ship is constructed on or after December 31, 2008.

(3321) (b) By the first survey of the radio installation after December 31, 2008, if the ship is–

(3322) (1) Constructed before December 31, 2008, and

(3323) (2) Operates within–

(3324) (i) One hundred (100) nautical miles of the United States baseline, or

(3325) (ii) Range of an Inmarsat geostationary satellite, or other Application Service Provider recognized by the Administration, with continuous alerting is available.

(3326) (c) By the first survey of the radio installation after July 1, 2009, if the ship is–

(3327) (1) Constructed before December 31, 2008, and

(3328) (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.

(3329)

§169.225 Which Application Service Providers may a ship use?

(3330) A ship may use an application Service Provider (ASP) recognized by its administration. Some Communication Service Providers may also serve as an ASP.

(3331)

§169.230 How often must a ship transmit position reports?

(3332) 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.

(3333)

§169.235 What exemptions are there from reporting?

(3334) A ship is exempt from this subpart if it is–

(3335) (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,

(3336) (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

(3337) (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.

(3338)

§169.240 When may LRIT equipment be switched off?

(3339) 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).

(3340)

§169.245 What must a ship master do if LRIT equipment is switched off or fails to operate?

(3341) (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.

(3342) (b) The master must also make an entry in the ship's logbook that states–

(3343) (1) His or her reason for switching the LRIT equipment off, or an entry that the equipment has failed to operate, and

(3344) (2) The period during which the LRIT equipment was switched off or non-operational.

(3345) 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.

(3346)

Part 207—Navigation Regulations

(3347)

§207.800 Collection of navigation statistics.

(3348) (a) *Definitions*. For the purpose of this regulation the following terms are defined:

(3349) (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.)

(3350) (2) *Offenses and Violations* mean:

(3351) (i) Failure to submit a required report.

(3352) (ii) Failure to provide a timely, accurate, and complete report.

(3353) (iii) Failure to submit monthly listings of idle vessels or vessels in transit.

(3354) (iv) Failure to submit a report required by the lockmaster or canal operator.

(3355) (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 a specified remuneration from the lessee. Commercial movements on an affreightment basis are not considered a lease or charter of a particular vessel.

(3356) (4) *Person or entity* means an individual, corporation, partnership, or company.

(3357) (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.

(3358) (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.

(3359) (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 included 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.

(3360) (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.

(3361) (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.

(3362) (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.

(3363) (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.

(3364) (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 movement.

(3365) (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 1986 (Pub. L. 99-662), mandates the following.

(3366) (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.

(3367) (i) For vessels under lease/charter agreements, the lessee or chartered of any commercial vessel engaged in commercial transportation will be responsible for the filing of said reports until the lease/charter expires.

(3368) (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.

(3369) (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:

(3370) (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, P.O. Box 61280, New Orleans, LA 70161-1280.

(3371) (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.

(3372) (B) Vessels idle during the month must also be reported.

(3373) (C) Notwithstanding the above requirements, the following waterborne vessel movements need not be reported:

(3374) (1) Movements of recreational vessels.

(3375) (2) Movements of fire, police, and patrol vessels.

(3376) (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.

(3377) (4) Movements of dredges to or from the dredging site. However, vessel movements of dredge material from the dredging site to the disposal site must be reported.

(3378) (5) Specific movements granted exemption in writing by the Waterborne Commerce Statistics Center.

(3379) (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.

(3380) (E) The vessel operating company may request a waiver from the Army Corp of Engineers, and upon written approval by the Waterborne Commerce Center, the company may be allowed to provide the requisite information of the above paragraph (D), on computer printouts, magnetic tape, diskettes, or alternate medium approved by the Center.

(3381) (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).

(3382) (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.

(3383) (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 Form 3925.

(3384) (3) Refer to 19 CFR part 24 for detailed information on exemptions and ports subject to the Harbor Maintenance Tax.

(3385) (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.

(3386) (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.

(3387) (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.

(3388) (c) *Penalties for Noncompliance*. The following penalties for noncompliance can be assessed for offenses and violations.

(3389) (1) *Criminal Penalties*. Every person or persons violating the provisions of this regulation shall, for each and very 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.

(3390) (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.

(3391) (3) *Denial of Passage*. In addition to these fines, penalties, and imprisonments, the lockmaster or canal operator can refuse to allow vessel passage.

(3392) (d) *Enforcement Policy*. Every means at the disposal of the Army Corps of Engineers will be utilized to monitor and enforce these regulations.

(3393) (1) To identify vessel operating companies that should be reporting waterborne commerce data, the Corps will make use of, but is not limited to, the following sources.

(3394) (i) Data on purchase and sale of vessels.

(3395) (ii) U.S. Coast Guard vessel documentation and reports.

(3396) (iii) Data collected at Locks, Canals, and other facilities operated by the Corps.

(3397) (iv) Data provided by terminals on ENG Form 3926.

(3398) (v) Data provided by the other Federal agencies including the Internal Revenue Service, Customs Service, Maritime Administration, Department of Transportation, and Department of Commerce.

(3399) (vi) Data provided by ports, local facilities, and State or local governments.

(3400) (vii) Data from trade journals and publications.

(3401) (viii) Site visits and inspections.

(3402) (2) *Notice of Violation*. Once a reporting violation is determined to have occurred, the Chief of the Waterborne Commerce Statistics Center will notify the responsibility 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 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.

(3403) (3) *Administrative Assessment of Civil Penalties*. Civil penalties may be assessed in the following manner.

(3404) (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.

(3405) (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.

(3406) (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, Virginia 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.

(3407) (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.

(3408)

Part 334–Danger Zones and Restricted Area Regulations

(3409)

§334.1 Purpose.

(3410) The purpose of this part is to:

(3411) (a) Prescribe procedures for establishing, amending and disestablishing danger zones and restricted areas;

(3412) (b) List the specific danger zones and restricted areas and their boundaries; and

(3413) (c) Prescribe specific requirements, access limitations and controlled activities within the danger zones and restricted areas.

(3414)

§334.2 Definitions.

(3415) (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.

(3416) (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.

(3417)

§334.3 Special policies.

(3418) (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.

(3419) (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),

(3420) (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, Hydrographic Center, 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.

(3421)

§334.4 Establishment and amendment procedures.

(3422) (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 a minimum must contain the following:

(3423) (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.

(3424) (2) Name of waterway and if a small tributary, the name of a larger connecting waterbody.

(3425) (3) Name of closest city or town, county/parish and state.

(3426) (4) Location of proposed or existing danger zone or restricted area with a map showing the location, if possible.

(3427) (5) A brief statement of the need for the area, its intended use and detailed description of the times, dates and extent of restriction.

(3428) (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.

(3429) (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:

(3430) (i) Applicable statutory authority or authorities; (40 Stat. 266; 33 U.S.C. 1) and (40 Stat. 892; 33 U.S.C. 3).

(3431) (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.

(3432) (iii) The address of the District Engineer as the recipient of any comments received.

(3433) (iv) The identity of the applicant/proponent;

(3434) (v) The name or title, address and telephone number of the Corps employee from whom additional information concerning the proposal may be obtained;

(3435) (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.

(3436) (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:

(3437) (i) The Federal Aviation Administration (FAA) where the use of airspace is involved.

(3438) (ii) The Commander, Service Force, U.S. Atlantic Fleet, if a proposed action involves a danger zone off the U.S. Atlantic coast.

(3439) (iii) Proposed danger zones on the U.S. Pacific coast must be coordinated with the applicable commands as follows:

(3440) Alaska, Oregon and Washington:

(3441) Commander, Naval Base, Seattle

(3442) California:

(3443) Commander, Naval Base, San Diego

(3444) Hawaii and Trust Territories:

(3445) Commander, Naval Base, Pearl Harbor

(3446) (c) *Public hearing.* The District Engineer may conduct a public hearing in accordance with 33 CFR part 327.

(3447) (d) *Environmental documentation*. The District Engineer shall prepare environmental documentation in accordance with appendix B to 33 CFR part 325.

(3448) (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**.

(3449) (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.

(3450)

§334.5 Disestablishment of a danger zone.

(3451) (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.

(3452) (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.

(3453)

§334.6 Datum.

(3454) (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.

(3455) (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 6147, Silver Spring, MD 20910-3282.

(3456)

§334.860 San Diego Bay, CA: Naval restricted area.

(3457) (a) *The Area*. The water of the Pacific Ocean in Middle San Diego Bay in an area extending from the northern and eastern boundary of the Naval Amphibious Base about 0.1 nautical miles and 0.6 nautical miles from the southern shoreline and basically outlined as follows:

(3458) Station

(3459) 1–32°40'33.0"N., 117°10'02.4"W.

(3460) 2–32°40'34.7"N., 117°09'54.0"W.

(3461) 3–32°40'46.0"N., 117°09'44.2"W.

(3462) 4–32°41'00.0"N., 117°09'24.6"W.

(3463) 5–32°40'20.0"N., 117°08'36.7"W.

(3464) 6–32°40'00.0"N., 117°09'00.0"W.

(3465) 7–32°39'18.0"N., 117°08'45.0"W.

(3466) 8–32°39'16.0"N., 117°08'48.5"W.

(3467) (b) *The regulations*. (1) Swimming, fishing, waterskiing, mooring or anchoring shall not be allowed within the restricted area.

(3468) (2) A portion of the restricted area extending 120 feet from pierheads and from the low water mark on shore where piers do not exist is closed to all persons and vessels except those owned by, under hire to, or performing work for, the Naval Amphibious Base.

(3469) (3) All vessels entering the restricted area shall proceed across the area by the most direct route and without unnecessary delay. For vessels under sail, necessary tacking shall constitute a direct route.

(3470) (4) The regulations in this section shall be enforced by the Commanding Officer, Naval Amphibious Base, Coronado, California, and such agencies as he/she shall designate. Organized activities (such as sail races and regattas) within the restricted area may be allowed providing that a request has been made to the Commanding Officer, Naval Amphibious Base, Coronado, San Diego, California 92155 or by calling, telephone number (619) 522–4833 at least 10 days prior to the event.

(3471)

§334.865 Naval Air Station North Island, San Diego, CA, Restricted Area.

(3472) (a) *The area.* The waters within an area beginning at

(3473) 32°42'55.0"N., 117°11'30.5"W.; to

(3474) 32°42'57.0"N., 117°11'22.5"W.; to

(3475) 32°42'56.0"N., 117°11'19.0"W.; to

(3476) 32°42'49.0"N., 117°11'08.5"W.; to

(3477) 32°42'44.5"N., 117°11'06.5"W.; and thence to

(3478) 32°42'40.0"N., 117°11'06.5"W.

(3479) (b) *The regulation*. (1) The restricted area shall not be open to swimming, fishing, water-skiing, mooring or anchorage.

(3480) (2) Dragging, seining, other fishing operations, and other activities not under the direction of the United States, which might foul underwater installations within the restricted area, are prohibited.

(3481) (3) All tows entering the restricted area shall be streamed and shortened to the seaward of the area and towing appendages and catenaries shall not be dragged along the bottom while proceeding through the area.

(3482) (4) All vessels entering the restricted area shall proceed across the area by the most direct route and without unnecessary delay.

(3483) (5) No vessel or craft of any size shall lie-to or anchor in the restricted area at any time other than a vessel operated by or for components, or other vessels

authorized by Commander, Navy Region Southwest, or his/her designee.

(3484) (6) When security conditions dictate, Naval security forces may impose strict enforcement of stand-off distances within the restricted area. This enforcement will not prevent utilization of navigable channels, but will serve to control its use in order to protect vital National interests.

(3485) (c) *Enforcement*. The regulation in this section, promulgated by the United States Army Corps of Engineers, shall be enforced by the Commander, Navy Region Southwest, and such agencies or persons as he/she may designate.

(3486)

§334.866 Pacific Ocean at Naval Base Coronado, in the City of Coronado, San Diego County, CA; Naval Danger Zone.

(3487) (a) *The area.* A fan-shaped area extending westerly into the waters of the Pacific Ocean from a point on the beach of Naval Base Coronado, Coronado, California beginning at

(3488) 32°41'13"N., 117°12'45"W.; thence easterly, along the mean high water mark, to

(3489) 32°41'14"N., 117°12'32"W.; thence southerly to

(3490) 32°40'31"N., 117°12'12"W.; thence westerly to

(3491) 32°40'25"N., 117°12'43"W.; thence northerly, landward, to the point of origin.

(3492) (b) *The regulations*. (1) Range live firing on the Naval Base Coronado, Coronado, California small arms range may occur at any time. Information on live firing schedules and coordination for community concerns can be obtained by calling the Naval Base Coronado Small Arms Range Safety Officer at 619–545–8413 during normal working hours. Assistance is also available via the Naval Base Coronado Hotline at 619–545–7190 or the Naval Base Coronado operator at 619–545–1011. If the phone numbers are changed, they will be updated on the Naval Base Coronado Web site http://www.cnic.navy.mil/Coronado.

(3493) (2) The danger zone will be open to fishing and general navigation when no weapons firing is scheduled, which will be indicated by the absence of any warning flags or flashing lights on land in the locations specified in paragraphs (b)(3) and (b)(4) of this section.

(3494) (3) When live firing is about to be undertaken or is in progress during daylight hours, three (3) large red warning flags will be displayed at the top of the flag poles on the southern berm of the small arms range, so as to be clearly visible from all points of entry into the danger zone. The west flag pole is located on the southern berm at 32°41'21.5"N., 117°12'42.8"W., the middle flag pole is located at 32°41'21.7"N., 117°12'40.9"W., and the east flag pole is located at 32°41'22.4"N., 117°12'38.7"W.

(3495) (4) When live firing is about to be undertaken or is in progress during periods of darkness, three (3) red flashing warning lights will be displayed at the top of the flag poles on the southern berm of the small arms range at the locations described in paragraph (b)(3) of this section, so as to be clearly visible from all points of entry into the danger zone.

(3496) (5) The danger zone is not considered safe for vessels or individuals when live firing is in progress. When live firing is about to begin or is scheduled as indicated by the warning flags or flashing warning lights described in paragraphs (b)(3) and (b)(4) of this section, all vessels will be required to expeditiously vacate the danger zone.

(3497) (6) Anchoring by any vessel within the danger zone is prohibited.

(3498) (7) Prior to conducting live firing, Navy personnel will visually scan the danger zone to ensure that no vessels or individuals are located within it. Any vessels or individuals in the danger zone will be notified by the Navy Range Safety Officer using a marine VHF-FM marine radio and by other means as necessary, to exit the danger zone and remain outside the area until conclusion of live firing. As new technology becomes available, the VHF-FM marine radio communications system may be updated.

(3499) (8) Safety observers will be posted in accordance with range standard operating procedures at all times when the warning flags or flashing lights described in paragraphs (b)(3) and (b)(4) of this section are displayed. Operation of the small arms range will only occur when visibility is sufficient to maintain visual surveillance of the danger zone and vicinity. In the event of limited visibility due to rain, fog or other conditions, live firing will be postponed until the danger zone can be confirmed clear of all vessels and individuals.

(3500) (9) Naval Base Coronado will maintain a schedule of live firing at the small arms range on its Web site, http://www.cnic.navy.mil/Coronado, which will be accessible to the public, mariners, and recreationists. The Navy will maintain the Web site on a year round basis and update information as needed for public safety.

(3501) (c) *Enforcement.* The regulation in this section will be enforced by the Commanding Officer, Naval Base Coronado, and such agencies and persons as he/she may designate.

(3502)

§334.870 San Diego Harbor, CA; restricted areas.

(3503) (a) *Restricted area at Bravo Pier, Naval Air Station*.

(3504) (1) *The area*. The water of the Pacific Ocean in North San Diego Bay in an area extending from the western boundary of North Island about 0.2 nautical miles bayward and basically outlined as follows:

(3505) 32°41'51.3"N., 117°13'34.0"W.;

(3506) 32°41'51.3"N., 117°13'46.6"W.;

(3507) 32°41'43.3"N., 117°13'50.0"W.;

(3508) 32°41'35.8"N., 117°13'48.0"W.;

(3509) 32°41'35.8"N., 117°13'35.0"W.

(3510) (2) *The regulations*. (i) The restricted area shall not be open to swimming, fishing, mooring or anchorage.

(3511) (ii) Transit will be allowed through the restricted area except that no transit will be allowed within 100 feet of the

ammunition pier (Bravo Pier). All unauthorized vessels entering the restricted area shall proceed across the area by the most direct route and without unnecessary delay. Only vessels owned by, under hire to, or performing work for the Naval Air Station or the Naval Weapons Station may operate within 100 feet of the ammunition pier.

(3512) (b) *Restricted area at U.S. Naval Degaussing Station*. (1) *The area*. That portion of San Diego Bay near Point Loma, inclosed by lines connecting the following points, which are rectangular coordinates and are referred to U.S. Coast and Geodetic Survey station "Old Town" as their origin:

(3513) "a" S. 18,738.80, W. 16,299.50.

(3514) "b" S. 18,817.60, W. 15,791.30.

(3515) "c" S. 19,376.09, W. 14,270.73.

(3516) "d" S. 20,023.15, W. 14,462.94.

(3517) "e" S. 21,080.24, W. 14,333.14.

(3518) "f" S. 22,074.40, W. 16,371.48.

(3519) (2) *The regulations*. (i) There shall be no introduction of external magnetic field sources within the area.

(3520) (ii) Craft of any size shall not be excluded from transiting the area. However, they shall proceed through the area by the most direct route without delay or loitering. On occasion, access to the bait barges may be delayed for intermittent periods not exceeding 30 minutes.

(3521) (iii) No craft of any size shall lay-to or anchor within the area except on prior permission granted by the Officer in Charge, U.S. Naval Degaussing Station.

(3522) (c) *Restricted area between Ballast Point and Zuniga Point*–(1) *The area*. An area in San Diego Bay between Ballast Point and Zuniga Point inclosed by lines connecting the following stations:

(3523) Station

(3524) A–32°41'17"N., 117°13'58"W.

(3525) B–32°41'19"N., 117°13'36.5"W.

(3526) C–32°41'01"N., 117°13'34"W.

(3527) D–32°40'59"N., 117°13'55"W.

(3528) E–32°41'03"N., 117°13'56"W.

(3529) A–32°41'17"N., 117°13'58"W.

(3530) (2) *The regulations*. (i) No vessel shall anchor within the restricted area at any time.

(3531) (ii) Dredging, dragging, seining, other fishing operations, and other activities not under the direction of the United States, which might foul underwater installations within the restricted area, are prohibited.

(3532) (iii) All tows entering the restricted area shall be streamed and shortened to the seaward of the area and towing appendages and catenaries shall not be dragged along the bottom while proceeding through the area.

(3533) (iv) All vessels entering the restricted area shall proceed across the area by the most direct route and without unnecessary delay.

(3534) (d) *Restricted area at the Naval Supply Center Pier*-(1) *The area.* The waters of San Diego Bay extending approximately 100 feet out from the north, west and south sides of the Naval Supply Center Pier enclosed by lines connecting the following stations: Station

(3535) A–32°42'50"N., 117°10'25"W.

(3536) B–32°42'50"N., 117°10'38"W.

(3537) C–32°42'54"N., 117°10'38"W.

(3538) D–32°42'54"N., 117°10'25"W.

(3539) (2) *The regulations*. (i) No vessel or craft of any size shall lie-to or anchor in the restricted area at any time or than a vessel operated by or for the U.S. Navy, U.S. Coast Guard, other authorized military components, or other vessels authorized by Commander Naval Base, San Diego or his designee.

(3540) (ii) Loitering, dredging, dragging, seining, fishing and similar activities within the restricted area are prohibited.

(3541) (e) *Enforcement*. The regulations in this section shall be enforced by the Commander, Naval Base, San Diego, California, and such agencies as he/she may designate.

(3542)

§334.880 San Diego Harbor, CA; naval restricted area adjacent to Point Loma.

(3543) (a) *The area*. That portion of San Diego Bay southerly of Ballast Point, exclusive of the southwesterly portion of the restricted area described in §334.870(b) located westerly of the entrance channel, bounded on the west by the shoreline at Point Loma, on the east by the entrance channel west project line, and on the south by latitude 32°40'.

(3544) (b) *The regulations.* (1) The area is reserved for anchorage of vessels of the U.S. Government and authorized harbor pilot and patrol boats. All other craft may navigate and operate through the area, and temporary mooring of vessels (not to exceed 24 hours) is permissible.

(3545) (2) No other vessels shall anchor or moor permanently in the area except by special permission obtained in advance from the Commander, Naval Base, San Diego, CA.

(3546) (3) The regulations in this section shall be enforced by the Commandant, 11th Naval District, San Diego, CA, and such agencies as he may designate.

(3547)

§334.890 Pacific Ocean off Point Loma, CA; naval restricted area.

(3548) (a) *The area*. The waters of the Pacific Ocean within an area extending southerly from Point Loma, California, described as follows: Beginning at latitude 32°39'54", longitude 117°13'18"; thence southeasterly to latitude 32°34'31", longitude 117°09'41"; thence 270° true to longitude 117°16'40"; thence due north to latitude 32°39'54"; and thence 90° true to the point of beginning.

(3549) (b) *The regulations*. (1) No vessel shall anchor within the restricted area at any time without specific permission of the enforcing agency.

(3550) (2) Dredging, dragging, seining, and other similar operations within the restricted area are prohibited.

(3551) (3) The regulations in this section shall be enforced by the Commandant, Eleventh Naval District, San Diego, California, and such agencies as he may designate.

(3552)

§334.900 Pacific Ocean, U.S. Marine Corps Base, Camp Pendleton, CA; restricted area.

(3553) (a) *The area*. Beginning at the shoreline north of the boat basin,

(3554) 33°13'10"N., 117°24'19"W.; thence westward to

(3555) 33°12'48"N., 117°24'56"W.; thence southward to

(3556) 33°12'32"N., 117°24'44"W.; thence eastward to

(3557) 33°12'47"N., 117°24'17"W. (a point on the breakwater); thence northeastward along breakwater to

(3558) 33°12'58"N., 117°24'09"W.; thence northward along shoreline to point of beginning.

(3559) (b) *The regulations*. (1) No vessels shall anchor within the restricted area at any time.

(3560) (2) Dredging, dragging, seining, fishing operations, and other activities, which might foul underwater installations within the restricted area, are prohibited.

(3561) (3) All vessels entering the restricted area shall proceed across the area by the most direct route and without unnecessary delay.

(3562) (4) The regulations in this section shall be enforced by the Commanding General, U.S. Marine Corps Base, Camp Pendleton, California, and such agencies as he may designate.

(3563)

§334.905 Pacific Ocean, Offshore of Camp Pendleton, CA; Fallbrook restricted area.

(3564) (a) *The area*. The waters of the Gulf of Santa Catalina, offshore of Camp Pendleton in the Pacific Ocean, San Diego County, California. The center of the restricted area is located at 33°18.6'N. latitude, 117°32.0'W. longitude, with a radius of 9,000 feet.

(3565) (b) *The regulations*. (1) No vessel or craft of any size shall lie-to or anchor in the restricted area at any time other than a vessel operated by or for the U.S. Coast Guard, local, State or Federal law enforcement agencies.

(3566) (2) Loitering, dredging, dragging, anchoring, seining, fishing, and similar activities within the restricted area during vertical replacement operations use is prohibited.

(3567) (c) *Enforcement*. The regulations in this section shall be enforced by the U.S. Coast Guard, local, State, or Federal law enforcement agencies.

(3568)

§334.910 Pacific Ocean, Camp Pendleton Boat Basin, U.S. Marine Corps Base, Camp Pendleton, CA; restricted area.

(3569) (a) *The area*. All of the waters of Camp Pendleton Boat Basin entrance channel lying northerly of a line between a light on the north Camp Pendleton jetty at

(3570) 33°12'22", 117°24'07", and a light on the north Oceanside Harbor groin at

(3571) 33°12'29", 117°23'55".

(3572) (b) *The regulations*. (1) The area is reserved exclusively for use by vessels owned or operated by the Federal Government. Permission to enter the area must be obtained from the enforcing agency.

(3573) (2) The regulations in this section shall be enforced by the Commanding General, U.S. Marine Corps Base, Camp Pendleton, California, or such agencies as he may designate.

(3574)

§334.920 Pacific Ocean off the east coast of San Clemente Island, CA; naval restricted area.

(3575) (a) *The area*. The waters of the Pacific Ocean within an area extending easterly from the east coast of San Clemente Island, California, described as follows: The northerly boundary to be a continuation, to seaward of the existing southerly boundary of the restricted anchorage area, as described in 33 CFR 110.218, of this chapter, to

(3576) 33°00.3'N., 118°31.3'W.; thence to

(3577) 32°58.6'N., 118°30.0'W.; thence to

(3578) 32°57.9'N., 118°31.3'W. on the shoreline; thence northerly along the shoreline to point of beginning.

(3579) (b) *The regulations*. (1) No person or vessels, other than Naval Ordnance Test Station craft, and those cleared for entry by the Naval Ordnance Test Station, shall enter the area at any time except in an emergency, proceeding with extreme caution.

(3580) (2) Dredging, dragging, seining or other fishing operations within these boundaries are prohibited.

(3581) (3) No seaplanes, other than those approved for entry by Naval Ordnance Test Station, may enter the area.

(3582) (4) The regulations in this section shall be enforced by security personnel attached to the U.S. Naval Ordnance Test Station, China Lake, California, and by such agencies as may be designated by the Commandant, Eleventh Naval District, San Diego, California.

(3583)

§334.921 Pacific Ocean at San Clemente Island, CA; naval restricted area.

(3584) (a) *The area*. All waters between the northern and southern boundaries of the area known as West Cove seaward approximately four miles.

(3585) The northern boundary is defined by the coordinates:

(3586) 33°00'52"N., 118°36'18"W.

(3587) 32°59'30"N., 118°37'30"W.

(3588) 32°59'20"N., 118°38'38"W.

(3589) The southern boundary is defined by the coordinates:

(3590) 33°00'40"N., 118°35'27"W.

(3591) 32°58'30"N., 118°36'40"W.

(3592) 32°57'45"N., 118°38'38"W.

(3593) (b) *The regulation.* (1) The use of this area for anchorage is prohibited to all craft at all times.

(3594) (2) The regulations in this section shall be enforced by the Commander, Naval Base, San Diego, and such agencies as he/she shall designate.

(3595)

§334.930 Anaheim Bay Harbor, CA; Naval Weapons Station, Seal Beach.

(3596) (a) *The restricted area*. The water of Anaheim Bay Harbor between the east and west jetties at the United States Naval Weapons Station, Seal Beach, California,

and the contiguous tidal channel and basin as far east as the Anaheim Bay bridge.

(3597) (b) *The regulation*. (1) The authority of the Naval Weapons Station Commanding Officer in this area extends to restricting and disallowing the navigating or anchorage of craft during such times as the Commanding Officer determines that considerations of national security or safety warrant such action(s).

(3598) (2) All craft authorized transit of this area shall stay within the limits of the entrance channel in the Outer Harbor, and confine their movement to within the limits of the marked small craft channel at the southern portion of the Inner Harbor.

(3599) (3) Recreational craft, such as water skis, jet skis (personal water craft), row boats, canoes, kayaks, wind surfers, sail boards, surf boards, etc, and any activity involving persons in the water, are specifically prohibited within the restricted area.

(3600) (4) Boats unable to throttle down or to maintain steerage way at 5 miles per hour speed shall proceed at the minimum speed consistent with seamanship in an area regularly subject to waterborne explosive handling operations. In case of doubt, boat operators of inbound boats will remain in the west end of the basin and outbound boats in the east end of the basin until informed by a representative of the Naval Weapons Station or U.S. Coast Guard of the completion of the waterborne explosive handling hazard.

(3601) (5) Smoking, open flames and barbecues in boats are prohibited during the transit of this area.

(3602) (6) Nothing in the regulations in this section shall be construed as relieving the owner or persons in command of any vessels or plant from the penalties of the law for obstructing navigation or for not complying with the navigation laws in regard to lights or signals or for otherwise violating law.

(3603) (7) All vessel operators shall heed and obey all posted signs and/or instructions issued by security personnel of the U.S. Naval Weapons Station.

(3604) (8) The regulations in this section shall be enforced by the Commanding Officer, U.S. Naval Weapons Station, Seal Beach, California, and such agencies as he/she may designate. For clarification or other information, the U.S. Naval Weapons Station Command Duty Officer should be contacted at 213–594–7101.

(3605)

§334.938 Federal Correctional Institution, Terminal Island, San Pedro Bay, California; restricted area.

(3606) (a) *The area*. The waters of San Pedro Bay on the east side of Reservation Point extending 150 feet (50 yards), from the Federal Correctional Institution fence along the shore to the following stations:

(3607) Station

(3608) 1–33°43'45.5"N., 118°16'02.0"W.

(3609) 2–33°43'37.0"N., 118°15'58.0"W.

(3610) 3–33°43'27.5"N., 118°15'54.5"W.

(3611) The stations will be marked by three special purpose buoys (white with an orange diamond in the center).

(3612) (b) *The regulations*. No person or vessel of any kind shall enter, navigate, anchor or moor within the restricted area without first obtaining the permission of the Warden, Federal Correctional Institution, Terminal Island. The regulations in this section shall be enforced by the U.S. Coast Guard, the Warden of the Federal Correctional Institution, Terminal Island, and such agencies and he/she may designate.

(3613)

§334.940 Pacific Ocean in vicinity of San Pedro, CA; practice firing range for United States Army Reserve, National Guard, and Coast Guard units.

(3614) (a) *The danger zone*. (1) [Reserved]

(3615) (2) *Zone B*. An area extending southwest and northwest from Point Vicente, described as follows: Beginning at Point Vicente Light,

(3616) 33°44'30"N., 118°24'36"W.; thence southwesterly to

(3617) 33°43'42"N., 118°25'24"W.; thence northwesterly to

(3618) 33°46'30"N., 118°27'06"W.; thence southeasterly to the shore,

(3619) 33°44'54"N., 118°24'42"W.; and thence southerly along the shore to the point of beginning.

(3620) (b) *The regulations*. (1) Intermittent firing may take place in the danger zone on any day from sunrise to sunset.

(3621) (2) Except as otherwise provided in this paragraph, the danger zone will be open to fishing and general navigation. When firing is not scheduled the danger zone may be occupied without restriction. When firing is in progress safety observers will be maintained to warn all vessels. Notice to vacate the area, or to stop at the boundaries, will be given by siren, patrol vessel, or other effective means, and such notice shall be promptly obeyed. All vessels permitted to enter the danger zone during a firing period, other than those owned by and operated by or under the direction of the United States Government, shall proceed across the area by the most direct route and clear the area with the greatest possible dispatch. No person shall enter the water and no vessel, fishing boat, or recreational craft shall anchor in the danger zone during an actual firing period.

(3622) (3) Nothing in this section shall be construed as relieving the owner or person in charge of a vessel from any penalties for obstructing navigation, or for obstructing or interfering with range lights, or for not complying with the navigation laws in regard to lights and fog signals, or for otherwise violating any law or regulations.

(3623) (4) The regulations in this section shall be enforced by the Commanding Officer, Fort MacArthur, California, and such agencies as he may designate.

(3624)

§334.950 Pacific Ocean at San Clemente Island, CA; Navy shore bombardment areas.

(3625) (a) *The danger zones*. (1) The waters of the Pacific Ocean within an area beginning at China Point Light; extending in a direction of 181 degrees true, 2.0 nautical miles; thence 072.5 degrees true, 5.375 nautical miles; thence 313 degrees true to Pyramid Head Light.

(3626) (2) The waters of the Pacific Ocean within an area beginning at China Point Light; extending in a direction of 181 degrees true, 2.0 nautical miles; thence 303 degrees true, 5.35 nautical miles; thence 040.4 degrees true to the beach.

(3627) (3) The waters of the Pacific Ocean within an area beginning at Pyramid Head Light; extending in a direction of 133 degrees true, 2.0 nautical miles; thence 024 degrees true, 2.14 nautical miles, thence 313 degrees true, 7.6 nautical miles; thence 220 degrees true to the beach.

(3628) (b) *The regulations*. (1) All persons and all vessels shall promptly vacate the areas when ordered to do so by the Navy or the Coast Guard. Persons and vessels shall not enter the areas during periods scheduled for firing. These areas are used for various surface and air gunnery and aerial bombing exercises by the United States Navy, Coast Guard and Marine Corps. Hazardous conditions exist during shore bombardment by naval ships in the area seaward of that described in paragraphs (a)(1) and (a)(2) of this section between the firing vessel and the shore. The area described in paragraph (a)(3) of this section is hazardous due to the possibility of rounds landing in the waters east of San Clemente Island.

(3629) (2) All persons in the area are warned that unexploded ordinance exists within the shore bombardment area on San Clemente Island and in the surrounding waters. All persons should exercise extreme caution when operating in the area.

(3630) (3) Information about scheduled exercises will be published in the Local Notice to Mariners and also may be obtained by calling the shore bombardment area scheduler at (619) 437–2231. Vessels in the vicinity of San Clemente Island may obtain information on the status of the range by contacting the Navy Observation Post by marine radio on channel 16. However, the Navy Observation Post is normally manned only during firing exercises. In addition, since the Navy Observation Post may not be able to receive radio transmissions or answer a vessel calling from the area described in paragraph (A)(3) of this section due to interference from the land mass, it is recommended that callers position their craft for line-of-sight transmission with the Navy Observation Posts near Pyramid Cove prior to assuming that the range is not in use.

(3631) (4) Except in an emergency, no vessel shall anchor in these areas without first obtaining permission from the Commander, Naval Base, San Diego or from the senior officer present in the area who may grant permission to anchor not exceeding the period of time that he, himself, is authorized to remain there. The senior officer present shall advise the Commander, Naval Base, San Diego when and to whom a berth is assigned.

(3632) (5) The regulations in this section shall be enforced by the Commander, Naval Base, San Diego, and such agencies as he/she shall designate.

(3633)

§334.960 Pacific Ocean, San Clemente Island, CA; naval danger zone off West Cove.

(3634) (a) *The danger zone*. The waters of the Pacific Ocean in an area about one-half mile off the west coast of San Clemente Island basically outlined as follows:

(3635) 33°00'40"N., 118°35'45"W.

(3636) 32°57'40"N., 118°34'25"W.

(3637) 32°57'10"N., 118°35'40"W.

(3638) 33°00'10"N., 118°37'00"W.

(3639) 33°00'40"N., 118°35'45"W.

(3640) (b) *The regulations*. (1) Intermittent firing may take place in the danger zone on any day from 8:00 a.m. until 1:00 p.m.

(3641) (2) Except as otherwise provided in this section, the danger zone will be open to fishing and general navigation.

(3642) (3) The operations officer, Naval Ordnance Test Station, Pasadena Annex, Pasadena, California, will announce firing schedules. Each week, public notices will be issued giving advance firing schedules. Such notices will appear in the local newspapers and in local "Notice to Mariners" and "Notice to Airmen." For the benefit of the fishermen and small-craft operators, announcements will be made on the marine radio.

(3643) (4) When a scheduled firing is about to be undertaken, fishing boats and other small craft will be contacted by surface patrol boats or aircraft equipped with loudspeaker system. When so notified, all persons and vessels shall leave the area immediately by the shortest route. Upon completion of firing or if the scheduled firing is canceled for any reason, fishermen and small-boat operators will be notified as far in advance as possible by Marine Radio Broadcast.

(3644) (5) The regulations in this section shall be enforced by security personnel attached to the Naval Ordnance Test Station, Pasadena Annex, and by such agencies as may be designated by the Commandant, Eleventh Naval District, San Diego.

(3645)

§334.961 Pacific Ocean, San Clemente Island, California; naval danger zone off northwest shore.

(3646) (a) *The danger zone*: The waters of the Pacific Ocean adjacent to San Clemente Island, California, bounded by the following coordinates and San Clemente Island:

(3647) Point A–33°01'38.0"N., 118°36'20"W.

(3648) Point B–33°01'11.0"N., 118°37'25"W.

(3649) Point C–33°00'11.0"N., 118°37'00"W.

(3650) Point D–33°00'05.0"N., 118°38'53"W.

(3651) Point E–33°02'55.0"N., 118°39'05"W.

(3652) Point F–33°04'25.0"N., 118°37'41"W.

(3653) Point G–33°02'02.5"N., 118°35'53"W.

(3654) (b) *The regulations*: (1) No person shall enter this area during closure periods unless authorized to do so by the enforcing agency. No vessel or other craft, except vessels of the U.S. Government or vessels duly authorized by the enforcing agency shall enter this area during closure periods.

(3655) (2) The regulations in this section shall be enforced by the Commander, Naval Base, San Diego, California and such agencies as he/she shall designate.

(3656)

§334.980 Pacific Ocean, around San Nicholas Island, CA, naval restricted area.

(3657) (a) *The area*. (1) *Perimeter (restricted).*The waters of the Pacific Ocean around San Nicholas Island, CA, extending about 3 miles seaward from the shoreline, described as follows:

(3658) Point A—33°10′10″N, 119°24′20″W

(3659) Point C—33°10′10″N, 119°31′10″W

(3660) Point D—33°12′00″N, 119°35′30″W

(3661) Point E—33°14′20″N, 119°37′40″W

(3662) Point F—33°16′40″N, 119°38′10″W

(3663) Point G—33°19′10″N, 119°37′10″W

(3664) Point I—33°20′10″N, 119°31′10″W

(3665) Point K—33°17′40″N, 119°24′50″W

(3666) Point L—33°13′50″N, 119°21′50″W

(3667) (2) *Sections of area*.

(3668) (i) ALPHA section is the northerly section of the area, and is described as follows:

(3669) Point H—33°20′01″N, 119°32′02″W

(3670) Point I—33°20′10″N, 119°31′10″W

(3671) Point K—33°17′40″N, 119°24′50″W

(3672) Point L—33°13′50″N, 119°21′50″W

(3673) Point O—33°13′50″N, 119°26′02″W

(3674) Thence northwesterly along shoreline to Point N

(3675) Point N—33°17′04″N, 119°32′02″W

(3676) Point H—33°20′01″N, 119°32′02″W

(3677) (ii) BRAVO section is the westerly section of the area, and is described as follows:

(3678) Point N—33°17′04″N, 119°32′02″W

(3679) Thence westerly, southerly and easterly along the shoreline to Point M

(3680) Point M—33°13′10″N, 119°29′40″W

(3681) Point B—33°10′10″N, 119°29′40″W

(3682) Point C—33°10′10″N, 119°31′10″W

(3683) Point D—33°12′00″N, 119°35′30″W

(3684) Point E—33°14′20″N, 119°37′40″W

(3685) Point F—33°16′40″N, 119°38′10″W

(3686) Point G—33°19′10″N, 119°37′10″W

(3687) Point H—33°20′01″N, 119°32′02″W

(3688) Point N—33°17′04″N, 119°32′02″W

(3689) (iii) CHARLIE section is the southerly section of the area, and is described as follows:

(3690) Point L—33°13′50″N, 119°21′50″W

(3691) Point O—33°13′50″N, 119°26′02″W

(3692) Thence southerly and westerly along the shoreline to Point M

(3693) Point M—33°13′10″N, 119°29′40″W

(3694) Point B—33°10′10″N, 119°29′40″W

(3695) Point A—33°10′10″N, 119°24′20″W

(3696) Point L—33°13′50″N, 119°21′50″W

(3697) (b) *The regulations*. (1) Except during closure periods or as otherwise provided in this section, the restricted area will be open to all vessels.

(3698) (2) Boats must remain at least 300 yards from the shoreline of San Nicolas Island at all times. Nothing in this provision shall be construed as authorization to anchor within 300 yards or to land on San Nicolas Island, except in an emergency.

(3699) (3) No person, vessel or other craft shall enter the restricted area or designated section(s) during closure periods unless authorized to do so by the Commanding Officer, Naval Base Ventura County or the Officer in Charge, San Nicolas Island.

(3700) (4) Submarine cables within the restricted area post a risk to the equipment of vessels engaged in dredging, dragging, seining, anchoring and other bottom contact operations. Appropriate care must be taken to avoid damage.

(3701) (5) *Closure Periods*. Notice that the restricted area or section(s) ALPHA, BRAVO, or CHARLIE are closed to entry shall be given by radio broadcast Monday through Friday at 0900 and 1200 on 2638 kHz and 2738 kHz or by contacting "PLEAD CONTROL" on VHF–FM radio channel 11 or 16. Closure information may also be requested by telephone between 0600 and 1800 Monday through Friday at 805–989–8841 or via recorded message at 805–989–1470.

(3702) (6) The regulations in this section shall be enforced by personnel attached to Naval Base Ventura County, Point Mugu, CA, and by such agencies as may be designated by the Commandant, 11th Naval District, San Diego, CA.

(3703)

§334.990 Long Beach Harbor, California; naval restricted area.

(3704) (a) *The area*. All the waters between the Navy mole and Terminal Island to the westward of longitude 118°13'10".

(3705) (b) *The regulations*. (1) The area is reserved exclusively for use by naval vessels. Permission for any person or vessel to enter the area must be obtained from the enforcing agency.

(3706) (2) The regulations in this section shall be enforced by the Commander, U.S. Naval Base Los Angeles, Long Beach, California, and such agencies as he may designate.

(3707)

§334.1010 San Francisco Bay in vicinity of Hunters Point; naval restricted area.

(3708) (a) *The area*. Bounded by the shore of the San Francisco Naval Shipyard and the following lines: Beginning at a point on the northerly shore of the Shipyard bearing 292°40', 950 yards, from Hunters Point Light; thence 035°27', 730 yards to the U.S. Pierhead Line; thence 142°55', 1,300 yards, along the Pierhead

Line; thence 180°, 2,450 yards, to the San Francisco-San Mateo County Line; thence 270°, 430 yards, along the County Line; thence 305°27', 1,313 yards, to and along the southwesterly side of South Basin; and thence due north, 413 yards, to the southwesterly shore of the Shipyard.

(3709) **Note**: All bearings in this section are referred to true meridian.

(3710) (b) *The regulations*. No person may enter the area and no vessel or other craft, except vessels of the U.S. Government or vessels duly authorized by the Commander, San Francisco Naval Shipyard, shall navigate, anchor or moor in this area.

(3711)

§334.1020 San Francisco Bay and Oakland Inner Harbor; restricted areas in vicinity of Naval Air Station, Alameda.

(3712) (a) *The areas*. (1) The waters of San Francisco Bay bounded by the shore of Naval Air Station, Alameda, and a line beginning at a point on the north side of Oakland Inner Harbor Entrance Channel at approximately:

(3713) 37°47'57"N., 122°19'43"W; WSW to
(3714) 37°47'53"N., 122°19'57"W; SE to
(3715) 37°47'46"N., 122°20'00"W; SE to
(3716) 37°47'41"N., 122°19'52"W; S to
(3717) 37°46'49"N., 122°19'52"W; E to
(3718) 37°46'49"N., 122°19'28"W; SE to
(3719) 37°46'46"N., 122°19'21"W; E to
(3720) 37°46'45"N., 122°19'05"W; SE to
(3721) 37°46'38"N., 122°18'59"W; SSW to
(3722) 37°46'18"N., 122°19'05"W, SE to
(3723) 37°46'00"N., 122°18'28"W; E to
(3724) 37°46'00"N., 122°18'22"W; N to
(3725) 37°46'03"N., 122°18'22"W; E to
(3726) 37°46'00"N., 122°17'28"W; NE to
(3727) 37°46'03"N., 122°17'26"W; where it joins the naval air station breakwater.

(3728) (2) The waters of the entrance channel to Oakland Inner Harbor (San Antonio Estuary) between the westerly end of the rock wall on the south side of the channel and the easterly boundary of the Naval Air Station.

(3729) (b) *The regulations*. (1) No person shall enter this area and no vessel or other craft, except vessels of the U.S. Government or vessels duly authorized by the Commanding Officer, U.S. Naval Air Station, Alameda, California, shall navigate, anchor or moor in the area described in paragraph (a)(1) of this section.

(3730) (2) No person shall enter this area and no vessel without special authorization of the Commander, Twelfth Coast Guard District, shall lie, anchor or moor in the area described in paragraph (a)(2) of this section. Vessels may proceed through the entrance channel in process of ordinary navigation or may moor alongside wharves on the Oakland side of the channel.

(3731)

§334.1030 Oakland Inner Harbor adjacent to Alameda Facility, Naval Supply Center, Oakland; restricted area.

(3732) (a) *The area*. Within 100 feet of the Alameda Facility wharf.

(3733) (b) *The regulations*. No persons and no vessels or other craft, except vessels of the United States Government or vessels duly authorized by the Commanding Officer, Naval Supply Center, Oakland, shall enter this area.

(3734)

§334.1040 Oakland Harbor in vicinity of Naval Supply Center, Oakland; restricted area and navigation.

(3735) (a) *The area*. Bounded by the shore of the Naval Supply Center and the following lines: Beginning at a point on the north shore located at about 37°48'26"N., 122°19'34"W.; thence 225°12', 290 yards; and thence 173°10', 620 yards to a point on the south shore at about 37°48'02"N., 122°19'39"W.

(3736) (b) *The regulations*. (1) No persons and no vessels or other craft, except vessels of the U.S. Government or vessels duly authorized by the Commanding Officer, Naval Supply Center, Oakland, shall enter this area.

(3737) (2) All vessels over 1,000 tons displacement, bound for the Naval Supply Center, Oakland, shall use a qualified pilot regularly licensed for the waters of Oakland Harbor.

(3738)

§334.1050 Oakland Outer Harbor adjacent to the Military Ocean Terminal, Bay Area, Pier No. 8 (Port of Oakland Berth No. 10); restricted area.

(3739) (a) *The area*. Within 100 feet of the pier.

(3740) (b) *The regulations*. No persons and no vessels or other craft, except vessels of the U.S. Government or vessels duly authorized by the Commander, Oakland Army Base, shall enter this area.

(3741)

§334.1060 Oakland Outer Harbor adjacent to the Oakland Army Base; restricted area.

(3742) (a) *The area*. Within 100 feet of the pier.

(3743) (b) *The regulations*. No persons and no vessels or other craft, except vessels of the U.S. Government or vessels duly authorized by the Commander, Oakland Army Base, shall enter this area.

(3744)

§334.1065 U.S. Coast Guard Station, San Francisco Bay, Yerba Buena Island, San Francisco Bay, California; Restricted Area.

(3745) (a) *The area*. San Francisco Bay on the east side of Yerba Buena Island: From a point along the southeastern shore of Yerba Buena Island at

(3746) 37°48'27"N., 122°21'44"W.; east to
(3747) 37°48'27"N., 122°21'35"W.; north to
(3748) 37°48'49"N., 122°21'35"W., a point on the northeastern side of Yerba Buena Island.

(3749) (b) *The regulation*. (1) All persons and vessels are prohibited from entering the waters within the Restricted Area for any reason without prior written permission

from the Commanding Officer of the Coast Guard Group San Francisco on Yerba Buena Island.

(3750) (2) Mooring, anchoring, fishing, transit and/or swimming shall not be allowed within the Restricted Area without prior written permission from the Commanding Officer of the Coast Guard Group San Francisco on Yerba Buena Island.

(3751) (c) *Enforcement*. The regulation in this section shall be enforced by the Commanding Officer of the Coast Guard Group San Francisco on Yerba Buena Island, and such agencies and persons as he/she shall designate.

(3752)

§334.1070 San Francisco Bay between Treasure Island and Yerba Buena Island; naval restricted area.

(3753) (a) *The area*. All the water of the cove bounded by the south shore of Treasure Island, the north shore of Yerba Buena Island, and the connecting causeway, west of a line extending from the southeast corner of the most southerly of the four finger piers along the east side of Treasure Island, at about 37°49'11"N., 122°21'40"W., approximately 153°20' to the northeasterly point of Yerba Buena Island, at about 37°48'55"N., 122°21'30"W.

(3754) (b) *The regulations*. No person and no vessel or other craft, except vessels owned and operated by the U.S. Government or vessels duly authorized by the Commanding Officer, Naval Station, Treasure Island, shall enter the restricted area.

(3755)

§334.1080 San Francisco Bay adjacent to northeast corner of Treasure Island; naval restricted area.

(3756) (a) *The area*. Beginning at the intersection of Pier 21 and the bulkhead line, thence northwesterly along the bulkhead to the northernmost point of Treasure Island; thence 288° true, 290 yards; thence 26° true, 475 yards; thence 115°30' true, 520 yards; thence 152° true, 500 yards to Pier 21; thence along the pier to the point of beginning.

(3757) (b) *The regulations*. No person shall enter the restricted area. No vessels, except those engaged in naval operations, shall lie, anchor, moor or unnecessarily delay in the area. Vessels may pass through the area in the process of ordinary navigation except as directed by patrol boats. The regulations in this paragraph shall be enforced by the Commandant, Twelfth Naval District, and such agencies as he may designate.

(3758)

§334.1090 San Francisco Bay in vicinity of NSC Fuel Department, Molate Point; restricted area.

(3759) (a) *The area*. Bounded by the easterly shore of upper San Francisco Bay and the following lines: Beginning at a point on shore bearing 017° 800 yards, from "Tree" at Molate Point thence 270°, 870 yards; thence 189° 1,100 yards; and thence 123° to the shore.

(3760) (b) *The regulations*. Persons and vessels not operating under supervision of the local military or naval authority or public vessels of the United States, shall not enter this area except by specific permission of the Commanding Officer, Naval Supply Center.

(3761)

§334.1100 San Pablo Bay, Carquinez Strait and Mare Island Strait in vicinity of U.S. Naval Shipyard, Mare Island; restricted area.

(3762) (a) *The area.* (1) Beginning at point A on the shore west of the mouth of a small slough (known as Hastings Slough) and passing east of buoy R "6" bearing 60°30′ for 2,860 yards, through Point B on the eastern end of the two Seal Islands, to point C on the southern edge of the Roe Island Channel near buoy R "16A"; thence in a generally easterly direction running along the southern edge of the Roe Island Channel, Port Chicago Reach and Middle Ground West Reach (points D and E) to point F directly north of the eastern shore boundary (point G); thence 180° to point G on the shore line; thence following the high water shore line in a general westerly direction to the point of beginning. The coordinates for the points in paragraph (a)(1) of this section are provided in Table 1.

(3763) TABLE 1 to Paragraph (a)(1):

(3764) Point A (shoreline) – 38°03'05"N., 122°03'27"W.

(3765) Point B – 38°03'28"N., 122°02'35"W.

(3766) Point C – 38°03'47"N., 122°01'50"W.

(3767) Point D – 38°03'40"N., 122°01'01"W.

(3768) Point E – 38°03'33"N., 122°00'04"W.

(3769) Point F – 38°03'34"N., 122°59'18"W.

(3770) (2) The datum for these coordinates is NAD–83.

(3771)

§334.1110 Military Ocean Terminal Concord; restricted area.

(3772) (a) *The area*. Beginning at a point on the shore and on the easterly side of the mouth of a small slough (known as Hastings Slough) bearing 189°, 2,412 yards from Tripon at Preston Point on Roe Island; thence 340°30', 400 yards to the shoreline of the westerly of the two Seal Islands; thence 060°30', 940 yards; thence 75°, 1,650 yards; thence 102°, 1,850 yards; thence 99°, 1,880 yards; thence 180°, 435 yards, to the shoreline; thence following the high water shoreline in a general westerly direction to the point of beginning.

(3773) (b) *The regulations*. (1) No person, vessel, watercraft, conveyance or device shall enter or cause to enter or remain in this area. No person shall refuse or fail to remove any person or property in his custody or under his control from this area upon the request of the Commanding Officer of the Naval Weapons Station Concord or his/her authorized representative.

(3774) (2) The regulations in this section shall be enforced by the Commanding Officer, Naval Weapons Station Concord, and such agencies as he/she shall designate.

(3775)

§334.1120 Pacific Ocean in the vicinity of Point Mugu, CA; naval small arms firing range.

(3776) (a) *The danger zone*. A triangular area extending westerly into the waters of the Pacific Ocean from a point

on the beach north of Point Mugu, California, described as follows: Beginning at

(3777) 34°05'32", 119°03'57"; thence southwesterly approximately 4,000 yards to

(3778) 34°04'22", 119°05'55"; thence northwesterly approximately 1,500 yards to

(3779) 34°05'01", 119°06'17"; thence northeasterly to the point of beginning.

(3780) (b) *The regulations*. (1) Range firing will normally take place between 6 a.m. and 6 p.m., Thursday through Monday, and between 6 a.m. and 11:30 p.m., Tuesday and Wednesday of each week. Within the above periods, firing will be conducted as determined by the Commanding Officer, U.S. Naval Construction Battalion Center, Port Hueneme, CA.

(3781) (2) Except as otherwise provided in this section, the danger zone will be open to fishing and general navigation.

(3782) (3) The Commanding Officer, U.S. Naval Construction Battalion Center, Port Hueneme, California, will announce firing schedules. Each week, public notices will be issued giving advance firing schedules. Such notices will appear in the local newspapers and in local "Notice to Mariners," and "Notice to Airmen." For the benefit of fishermen and small-craft operators, announcements will be made on the marine radio.

(3783) (4) When a scheduled firing is about to be undertaken or is in progress, a large red flag will be displayed from the control tower situated at latitude 34°05'32", longitude 119°03'57", so as to be clearly visible for a distance of at least three (3) miles offshore. Safety observers will be on duty at all times when the warning flag is being displayed from the tower. Upon completion of firing, or if the scheduled firing is canceled for any reason, fishermen and small-boat operators will be notified as far in advance as possible by Marine Radio Broadcast.

(3784) (5) Persons, vessels or other craft shall not enter or remain in the danger zone when the warning flag is being displayed unless authorized to do so by the range officer in the control tower.

(3785) (6) The regulations in this section shall be enforced by the Commandant, Eleventh Naval District, San Diego, California, and such agencies as he may designate.

(3786)

§334.1125 Pacific Ocean Naval Air Weapons Station, Point Mugu Small Arms Range, Ventura County, California; danger zone.

(3787) (a) *The area*. A triangular area extending southerly into the waters of the Pacific Ocean from a point on the beach north of Point Mugu, California, as follows:

(3788) Station

(3789) 1–34°05'48"N.,119°07'03"W.

(3790) 2–34°03'20"N., 119°08'16"W.

(3791) 3–34°03'11"N., 119°07'39"W.

(3792) 4–34°05'42"N., 119°06'59"W.

(3793) 5–34°05'41"N., 119°06'51"W.

(3794) 6–34°05'45"N., 119°06'52"W.

(3795) (b) *The regulations*. (1) Range firing will normally take place between 7 a.m. and 5 p.m. Monday through Friday.

(3796) (2) The danger zone may be used at all times for navigation and fishing, except when advance notice of intention to use this area has been given by the enforcing agency by one or more of the following means:

(3797) (i) Notice published in Ventura County daily newspaper, at least two days in advance of the date of said use and in the local "Notice to Mariners."

(3798) (ii) Display of red flag from the tower at 34°05'53"N., 119°06'59"W.; or display of red flashing beacons in the case of night firing.

(3799) (iii) Radio broadcast on VHF-FM channel 16.

(3800) (iv) Notice to individual craft by visit of United States vessel.

(3801) (v) Telephone advice to such fisherman's organizations as may request, in writing, that such advice be given.

(3802) (3) Safety observers will be on duty at all times when the range is in use. Upon completion of firings, or if the scheduled firing is canceled for any reason, fishermen and small boat operators will be notified as far in advance as possible by Marine Radio Broadcast.

(3803) (4) Persons, vessels or other craft shall not enter or remain in the danger zone when the warning flag or beacon is being displayed unless authorized to do so by the range officer in the control tower.

(3804) (5) The regulations in this section shall be enforced by personnel attached to the Naval Air Weapons Station, Point Mugu, California, and by such other agencies as the Commandant, Eleventh Naval District, San Diego, California, may designate.

(3805)

§334.1126 Naval Base Ventura County, Point Mugu, California; Restricted Area.

(3806) (a) *The area*. The restricted area at Naval Base Ventura County Point Mugu incorporates its shorelines and connects the following points:

(3807) 34°7'9.9"N., 119°9'35.6"W. (up-coast shoreline point);

(3808) 34°7'00.0"N., 119°9'46.7"W.;

(3809) 34°6'44.9"N., 119°9'22.5"W.;

(3810) 34°6'30.2"N., 119°8'59.0"W.;

(3811) 34°6'20.5"N., 119°8'46.7"W.;

(3812) 34°6'08.4"N., 119°8'25.2"W.;

(3813) 34°5'53.7"N., 119°7'59.5"W.;

(3814) 34°5'45.9"N., 119°7'41.5"W.;

(3815) 34°5'40.1"N., 119°7'21.0"W.;

(3816) 34°5'33.6"N., 119°6'58.1"W.;

(3817) 34°5'31.2"N., 119°6'37.9"W.;

(3818) 34°5'31.0"N., 119°6'22.2"W.;

(3819) 34°5'32.9"N., 119°6'14.4"W.;

(3820) 34°5'44.7"N., 119°5'54.0"W.;

(3821) 34°5'45.2"N., 119°5'43.5"W.;

(3822) 34°5'41.0"N., 119°5'21.2"W.;

(3823) 34°5'42.2"N., 119°5'13.3"W.;

(3824) 34°5'27.8"N., 119°4'49.5"W.;
(3825) 34°5'17.9"N., 119°4'27.9"W.;
(3826) 34°5'05.7"N., 119°3'59.9"W.;
(3827) 34°5'17.9"N., 119°3'55.4"W. (down-coast shoreline point).
(3828) (b) *The regulation*. No vessels may enter the restricted area unless permission is obtained in advance from the Commanding Officer of Naval Base Ventura County, Contact Naval Base Ventura County Security at 805–989–7907.
(3829) (c) *Enforcement*. The regulation in this section, promulgated by the United States Army Corps of Engineers, shall be enforced by the Commanding Officer of Naval Base Ventura County, and such agencies or persons as he/she may designate.

(3830)

§334.1127 Naval Base Ventura County, Port Hueneme, California; Restricted Area.

(3831) (a) *The area.* The waters within Port Hueneme Harbor, beginning at the seaward ends of the two Port Hueneme Harbor entrance jetties, with the northwestern entrance jetty end occurring at 34°8'37.0"N., 119°12'58.8"W., and the southeastern entrance jetty occurring at 34°8'34.8"N, 119°12'43.2"W., and extending northeasterly to the shoreline.
(3832) (b) *The regulation*. No vessels or persons may enter the restricted area unless permission is obtained in advance from the Commanding Officer of Naval Base Ventura County. Commercial vessels that are required to make Advanced Notifications of Arrival shall continue to do so. All vessels must obtain clearance from "Control 1" over marine radio channel 06 VHF-FM prior to crossing the COLREGS (Collision Regulations) demarcation line. Vessels without marine radio capability must obtain clearance in advance by contacting "Control 1" via telephone at 805–982–3938 prior to crossing the COLREGS demarcation line. The COLREGS demarcation line is defined as a line approximately 1,500 feet in length connecting the seaward limits or ends of the two Port Hueneme Harbor entrance jetties, with the northwestern jetty end occurring at 34°8'37.0"N., 119°12'58.8"W., and the southeastern entrance jetty occurring at 34°8'34.8"N., 119°12'43.2"W. (NAD 83).
(3833) (c) *Enforcement*. The regulation in this section, promulgated by the United States Army Corps of Engineers, shall be enforced by the Commanding Officer of Naval Base Ventura County, and such agencies or persons as he/she may designate.

(3834)

§334.1130 Pacific Ocean, Western Space and Missile Center (WSMC), Vandenberg AFB, California; danger zones.

(3835) (a) *The area*. (1) The waters of the Pacific Ocean in an area extending seaward from the shoreline a distance of about three nautical miles and basically outlined as follows:
(3836) Station
(3837) Point Sal–34°54'08"N., 120°40'15"W.
(3838) 1–34°54'08"N., 120°44'00"W.
(3839) 2–34°52'48"N., 120°44'00"W.
(3840) 3–34°50'00"N., 120°40'30"W.
(3841) 4–34°44'50"N., 120°42'15"W.
(3842) 5–34°41'50"N., 120°40'12"W.
(3843) 6–34°35'12"N., 120°42'45"W.
(3844) 7–34°33'00"N., 120°41'05"W.
(3845) 8–34°30'40"N., 120°37'29"W.
(3846) 9–34°24'18"N., 129°30'00"W.
(3847) 10–34°23'34"N., 120°27'05"W.
(3848) 11–34°24'21"N., 120°24'40"W.
(3849) 12–34°27'20"N., 120°24'40"W.
(3850) Point Sal–34°54'08"N., 120°40'15"W.
(3851) (2) The danger area described in paragraph (a) (1) of this section will be divided into zones in order that certain firing tests and operations, whose characteristics as to range and reliability permit, may be conducted without requiring complete evacuation of the entire area. These zones are described as follows:
(3852) (i) *Zone 1*. An area extending seaward about three nautical miles from the shoreline beginning at Point Sal,
(3853) 34°54'08", 120°40'15"; thence due west to
(3854) 34°54'08", 120°44'00"; thence to
(3855) 34°52'48", 120°44'00"; thence to
(3856) 34°50'00", 120°40'30"; thence due east to the shoreline at
(3857) 34°50'00", 120°36'30".
(3858) (ii) *Zone 2.* An area extending seaward about three nautical miles from the shoreline beginning at
(3859) 34°50'00", 120°36'30"; thence due west to
(3860) 34°50'00", 120°40'30", thence to
(3861) 34°45'28", 120°42'05"; thence due east to the shoreline at Purisima Point,
(3862) 34°45'28", 120°38'15".
(3863) (iii) *Zone 3*. An area extending seaward about three nautical miles from the shoreline beginning at Purisima Point
(3864) 34°45'28", 120°38'15"; thence due west to
(3865) 34°45'28", 120°42'05"; thence to
(3866) 34°44'50", 120°42'15"; thence to
(3867) 34°41'50", 120°40'12"; thence due east to the shoreline at the mouth of the Santa Ynez River,
(3868) 34°41'50", 120°36'20".
(3869) (iv) *Zone 4*. An area extending seaward about three nautical miles from the shoreline beginning at the mouth of the Santa Ynez River
(3870) 34°41'50", 120°36'20"; thence due west to
(3871) 34°41'50", 120°40'12"; thence to
(3872) 34°35'12", 120°42'45"; thence
(3873) 34°34'32", 120°42'15"; thence due east to the shoreline at Point Arguello,
(3874) 34°34'32", 120°39'03".
(3875) (v) *Zone 5.* An area extending seaward about three nautical miles from the shoreline beginning at Point Arguello,
(3876) 34°34'32", 120°39'03"; thence due west to
(3877) 34°34'32", 120°42'15"; thence to

(3878) 34°33'00", 120°41'05"; thence to
(3879) 34°30'40", 120°37'29"; thence due north to the shoreline at
(3880) 34°33'15", 120°37'29".
(3881) (vi) Zone 6. An area extending seaward about three nautical miles from the shoreline beginning at
(3882) 34°33'15", 120°37'29"; thence due south to
(3883) 34°30'40", 120°37'29"; thence due east to the shoreline at
(3884) 34°30'40", 120°30'10".
(3885) (vii) *Zone 7*. An area extending seaward about three nautical miles from the shoreline beginning at
(3886) 34°30'40", 120°30'10"; thence due west to
(3887) 34°30'40", 120°37'29"; thence to
(3888) 34°26'56", 120°33'06"; thence due east to the shoreline at Point Conception,
(3889) 34°26'56", 120°28'10".
(3890) (viii) *Zone 8*. An area extending seaward about three nautical miles from the shoreline beginning at Point Conception,
(3891) 34°26'56", 120°28'10"; thence due west to
(3892) 34°26'56", 120°33'06"; thence to
(3893) 34°24'18", 120°30'00"; thence to
(3894) 34°23'34", 120°27'05"; thence shoreward to Point Conception,
(3895) 34°26'56", 120°28'10".
(3896) (ix) *Zone 9*. An area extending seaward about three nautical miles from the shoreline beginning at Point Conception,
(3897) 34°26'56", 120°28'10"; thence seaward to
(3898) 34°23'34", 120°27'05"; thence to
(3899) 34°24'21", 120°24'40"; thence due north to the shoreline at
(3900) 34°27'20", 120°24'40".
(3901) (b) *The regulations*. (1) Except as prescribed in this section or in other regulations, danger zones will be open to fishing, location of fixed or movable oil drilling platforms and general navigation without restrictions.
(3902) (2) The stopping or loitering by any person or vessel is expressly prohibited within Danger Zone 4, between the mouth of the Santa Ynez River and Point Arguello, unless prior permission is obtained from the Commander, Western Space and Missile Center (WSMC) at Vandenberg AFB, California.
(3903) (3) The impacting or missile debris from launch operations will take place in any one or any group of zones in the danger areas at frequent and irregular intervals throughout the year. The Commander, WSMC, will announce in advance, the closure of zones hazarded by missile debris impact. Such advance announcements will appear in the weekly "Notice to Mariners." For the benefit of fishermen, small craft operators and drilling platform operators, announcements will also be made on radio frequency 2182 kc, 2638 kc, VHF channel 6 (156.30 MHz), VHF channel 12 (156.60 MHz), and VHF channel 16 (156.80 MHz) for daily announcements. Additionally, information will be posted on notice boards located outside Port Control Offices (Harbormasters) at Morro Bay, Port San Luis, Santa Barbara, Ventura, Channel Islands, and Port Hueneme Harbors, and any established harbor of refuge between Santa Barbara and Morro Bay.
(3904) (4) All fishing boats, other small craft, drilling platforms and shipping vessels with radios are requested to monitor radio frequency 2182 kc, 2638 kc, VHF channel 6 (156.30 MHz), channel 12 (156.60 MHz), or channel 16 (156.80 MHz) while in these zones for daily announcements of zone closures.
(3905) (5) When a scheduled launch operation is about to begin, radio broadcast notifications will be made periodically, starting at least 24 hours in advance. Additional contact may be made by surface patrol boats or aircraft equipped with a loudspeaker system. When so notified, all persons and all vessels shall leave the specified zone or zones immediately by the shortest route.
(3906) (6) The Commander, WSMC, will extend full cooperation relating to the public use of the danger area and will fully consider every reasonable request for its use in light of requirements for national security and safety of persons and property.
(3907) (7) Where an established harbor of refuge exists, small craft may take shelter for the duration of zone closure.
(3908) (8) Fixed or movable oil drilling platforms located in zones identified as hazardous and closed in accordance with this regulation shall cease operations for the duration of the zone closure. The zones shall be closed continuously no longer than 72 hours at any one time. Such notice to evacuate personnel shall be accomplished in accordance with procedures as established by the Commander, WSMC, the U.S. Department of the Interior, Minerals Management Service and the oil industry in the adjacent waters of the outer continental shelf.
(3909) (9) No seaplanes, other than those approved by the Commander, WSMC, may enter the danger zones during launch closure periods.
(3910) (10) The regulations in this section shall be enforced by personnel attached to WSMC and by such other agencies as may be designated by the Commander, WSMC.
(3911) (11) The regulations in this section shall be in effect until further notice. They shall be reviewed again during August 1994.

(3912)

§334.1140 Pacific Ocean at San Miguel Island, California; naval danger zone.

(3913) (a) *The area*. The waters around San Miguel Island, extending about 3 miles seaward from the shoreline within the following points:
(3914) A–34°01'32"N., 120°23'17"W.
(3915) B–33°58'48"N., 120°23'17"W.
(3916) C–33°58'48"N., 120°15'00"W.
(3917) D–34°02'50"N., 120°15'00"W.
(3918) E–34°05'45"N., 120°17'25"W.
(3919) F–34°07'00"N., 120°20'05"W.

(3920) G–34°09'18"N., 120°23'17"W.

(3921) H–34°03'09"N., 120°23'17"W.

(3922) (b) *Markers*. Range markers, as delineated below, are installed at points A and H for navigational purposes for both surface vessels and aircraft:

(3923) (1) At point A two triangular markers are installed facing southward, 10 feet in length on each side, with red and white diagonal stripes, each marker mounted atop 80-foot poles spaced 100 yards apart, each pole being placed on the line of longitude 120°23'17"W. and near the southerly shoreline at latitude 34°01'32"N. The southernmost marker is 20 feet below the other.

(3924) (2) At point H two triangular markers are installed facing true north 10 feet in length on each side, with red and white diagonal stripes, each marker mounted atop 80-foot poles spaced 100 yards apart, each pole being placed on the line of longitude 120°23'17"W. and near the northwesterly shoreline at latitude 34°03'09"N. The northernmost marker is 20 feet below the other.

(3925) (c) *The regulations*. (1) Except as prescribed in this section or in other regulations, the danger zone will be open to fishing and general navigation. Bomb drops between designated hours are expected to be intermittent, and when safe to do so, commercial fishing boats and other small craft will be granted permission to proceed through the danger zone. All vessels permitted to enter the zone during a scheduled bomb drop period, other than those owned or operated by the U.S. Government, shall proceed across the zone by the most direct route and clear the area as soon as possible. When bomb drops are not scheduled, the zone may be occupied without restriction.

(3926) (2) The anchoring, stopping or loitering by any person, vessel, fishing boat or recreational craft within the danger zone during scheduled firing/drop hours is expressly prohibited.

(3927) (3) The bomb drops will take place in the danger zone at frequent and irregular intervals throughout the year. Danger zone usage demands are identified in the Eleventh Coast Guard District, "Local Notice to Mariners". Announcements will also be made on marine radio channel 16, at 0800 local time, 1200 local time and/or 1 hour prior to bomb drop operations. Status of the zone and/or permission to enter, may be requested by calling "Plead Control" on marine channel 16 or by calling the Pacific Missile Test Center (PMTC) on telephone number (805) 982–8280 or 982–8841.

(3928) (4) The Commander, PMTC will extend full cooperation relating to the public use of the danger zone area and will fully consider every reasonable request for its use in light of requirements for national security and safety of persons and property.

(3929) (5) No seaplanes, other than those approved for entry by the Commander, PMTC, may enter the danger zone during firing periods.

(3930) (6) Landing by any vessel or going ashore by any person on San Miguel Island is specifically prohibited without prior permission of the Superintendent, Channel Islands National Park. Applications for such permission should be made to: Superintendent, Channel Islands National Park, 1699 Anchors Way Drive, Ventura, California 93003.

(3931) (7) The regulations in this section shall be enforced by personnel attached to the Pacific Missile Test Center, Point Mugu, California, and by such other agencies as the Commandant, 11th Naval District, San Diego, CA, may designate.

(3932) (8) The regulations in this section shall be in effect until further notice. They shall be reviewed in 1986.

(3933)

§334.1150 Monterey Bay, CA.

(3934) (a) *Firing range, Fort Ord, CA*–

(3935) (1) *The danger zone*. (i) A rectangular area in Monterey Bay, the southerly limit of which is an extension seaward of the southerly line of the Fort Ord Military Reservation boundary and bears 307° true, 8,000 yards from a point on the shore at latitude 36°37'47", longitude 121°50'28", and the northerly limit of which is a line bearing 307° true, 8,000 yards, from a point on the shore at latitude 36°41'57", longitude 121°48'30", opposite Marina, Monterey County, CA. The seaward boundary is a straight line joining the outer ends of the southerly and the northerly boundaries at the 8,000 yard range and is approximately parallel to the shore.

(3936) (ii) The danger zone is divided into a short range area, extending seaward from the shore a distance of 5,000 yards measured along the southerly and northerly boundaries, and a long range area embracing the entire danger zone.

(3937) (2) *The regulations*. (i) The 5,000 yard shore range is prohibited to all persons, vessels and craft, except those authorized by the enforcing agency, each week, between dawn and midnight from Monday through Friday and between dawn and dusk on Saturday and Sunday.

(3938) (ii) The area between the 5,000 yard short range and the 8,000 yard seaward boundary of the danger zone may be used at all times for navigation and fishing, except when advance notice of intention to use this area has been given by the enforcing agency by one or more of the following means.

(3939) (a) Notice published in Monterey County and Santa Cruz County daily newspapers, at least two days in advance of the date of said use.

(3940) (b) Display of red flags at Indian Head Beach and near the Point Pinos Lighthouse.

(3941) (c) Radio Broadcast.

(3942) (d) Notice to individual craft by a visit of a United States vessel.

(3943) (e) Telephone advice to such fishermen's organizations as may request, in writing, that such advice be given.

(3944) (iii) The regulations in this paragraph will be enforced by the Commanding General, Fort Ord, California.

(3945) (b) *Navy mining operations area*–(1) *The danger zone*. Shoreward of a line beginning at the stack at about latitude 36°58'06", longitude 121°54'06"; thence 230°

true, 6.0 miles; thence 140° true, 7.5 miles; thence 50° true to the shore.

(3946) (2) *The regulations.* The danger zone will be used for training in various phases of mine warfare operations. During the period from August 1 to February 15, inclusive, each year, no operations will be carried on which will involve placing any obstructions in the water nor will any operations be carried on at night. During the period from February 16 to July 31, inclusive, each year, operations may be carried on which will involve laying exercise mines and other moored or bottom obstructions. In each case when moored or bottom obstructions are laid a notice to mariners will be issued giving notice of their approximate location within the danger zone and all persons and vessels shall keep clear.

(3947)

§334.1160 San Pablo Bay, California; target practice area, Mare Island Naval Shipyard, Vallejo.

(3948) (a) *The danger zone*. A sector in San Pablo Bay adjacent to the westerly shore of Mare Island with a radius of 4,700 yards, centered at a point bearing 316° true, 3,605 yards, from Mare Island Strait Light 1, with limiting true bearings from that center of 266°30' and 222°.

(3949) (b) *The regulations*. The Commander, Mare Island Naval Shipyard, Vallejo, California, will conduct target practice in the area at intervals of which the public will be duly notified. At such times all persons and vessels shall stay clear.

(3950)

§334.1170 San Pablo Bay, California: gunnery range, Naval Inshore Operations Training Center, Mare Island, Vallejo.

(3951) (a) *The danger zone*. A sector in San Pablo Bay delineated by lines joining the following points:

(3952) 38°02'08"N., 122°25'17"W.

(3953) 38°02'21"N., 122°22'55"W.

(3954) 38°05'48"N., 122°19'34"W.

(3955) 38°07'46"N., 122°23'23"W.

(3956) **NOTE:** The danger zone will be used until September 30, 1982, after which it shall be subject to review to determine the further need thereof.

(3957) (b) *The Regulations*. The Commanding Officer, Coastal River Division Eleven, Department of the Navy, Mare Island, Vallejo, California, will conduct gunnery practice in the area during the period April 1 through September 30, between the hours of 10 a.m. and 3 p.m. on the first Wednesday of each month and the third full weekend (Saturday and Sunday) of June. No persons or vessels shall enter or remain in the danger zone during the above stated periods except those persons and vessels connected with the gunnery practice operations. All firing will be from the southerly portion of the danger zone in a northerly direction, and only during good visibility. The public will be notified prior to each firing by a Notice to Mariners issued by the U.S. Coast Guard and the area will be patrolled by boat and searched by radar to insure a clear range. A safety officer will always be aboard the firing boat to guarantee that all safety precautions are observed. The regulations in this section will be enforced by the Commandant, 12th Naval District and such agencies as he may designate.

(3958)

TITLE 40–PROTECTION OF ENVIRONMENT

(3959)

Part 140–Marine Sanitation Device Standard

(3960)

§140.1 Definitions.

(3961) For the purpose of these standards the following definitions shall apply:

(3962) (a) *Sewage* means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes;

(3963) (b) *Discharge* includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping;

(3964) (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;

(3965) (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;

(3966) (e) *New vessel refers* to any vessel on which construction was initiated on or after January 30, 1975;

(3967) (f) *Existing vessel* refers to any vessel on which construction was initiated before January 30, 1975;

(3968) (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.

(3969)

§140.2 Scope of standard.

(3970) 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.

(3971)

§140.3 Standard.

(3972) (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.

(3973) (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.

(3974) (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).

(3975) (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.

(3976) (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.

(3977) (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.

(3978) (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.

(3979) (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.

(3980)

§140.4 Complete prohibition.

(3981) (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:

(3982) (1) A certification that the protection and enhancement of the waters described in the petition require greater environmental protection than the applicable Federal standard;

(3983) (2) A map showing the location of commercial and recreational pump-out facilities;

(3984) (3) A description of the location of pump-out facilities within waters designated for no discharge;

(3985) (4) The general schedule of operating hours of the pump-out facilities;

(3986) (5) The draught requirements on vessels that may be excluded because of insufficient water depth adjacent to the facility;

(3987) (6) Information indicating that treatment of wastes from such pump-out facilities is in conformance with Federal law; and

(3988) (7) Information on vessel population and vessel usage of the subject waters.

(3989) (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.

(3990) (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):

(3991) (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.

(3992) (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/.

(3993) (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):

(3994) (A) A large passenger vessel;

(3995) (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.

(3996) (ii) For purposes of paragraph (b)(2) of this section:

(3997) (A) "Marine waters of the State of California" means the territorial sea measured from the baseline as determined 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 illustrating these waters can be obtained from EPA or viewed at http://www.epa.gov/region9/water/no-discharge/overview.html.

(3998) (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 International 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 has berths or overnight accommodations for passengers.

(3999) (C) A "large oceangoing vessel" means a private, commercial, government, or military vessel of 300 gross tons or more, as measured under the International 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.

(4000) (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.

(4001) (c)(1) Prohibition pursuant to CWA section 312(f)(4)(B): A State may make written application to the Administrator of the Environmental Protection 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:

(4002) (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;

(4003) (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;

(4004) (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

(4005) (iv) Include a statement of basis justifying the size of the requested drinking water intake zone, for example, identifying areas of intensive boating activities.

(4006) (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.

(4007) (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.

(4008) (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):

(4009) (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.

(4010) (ii) [Reserved]

(4011)

§140.5 Analytical procedures.

(4012) 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.

(4013)

TITLE 46–SHIPPING

(4014)

Part 15–Manning Requirements (in part)

(4015)

Subpart J–Vessels in Foreign Trade

(4016)

§15.1001 General.

(4017) Self-propelled vessels engaged in foreign commerce are required to use a pilot holding a valid MMC or license with appropriate endorsement as a first-class pilot when operating in the navigable waters of the United States specified in this subpart.

(4018)

§15.1010 California.

(4019) The following offshore marine oil terminals located within U.S. navigable waters of the State of California:

(4020) (a) *Carlsbad, CA*. The waters including the San Diego Gas and Electric, Encina Power Plant, lying within an area bounded by a line beginning at

(4021) 33°10'06"N., 117°21'42"W.; thence southwesterly to

(4022) 33°08'54"N., 117°24'36"W.; thence southwesterly to

(4023) 33°04'30"N., 117°21'42"W.; thence northeasterly to

(4024) 33°05'36"N., 117°18'54"W.; thence northwesterly along the shoreline to

(4025) 33°10'06"N., 117°21'42"W.

(4026) (b) *Huntington Beach, CA*. The waters including the Golden West Refining Company, Huntington Beach Marine Terminal, lying within an area bounded by a line beginning at

(4027) 33°39'06"N., 118°00'00"W.; thence westerly to

(4028) 33°39'18"N., 118°05'12"W.; thence southeasterly along a line drawn three nautical miles from the baseline to

(4029) 33°35'30"N., 118°00'00"W.; thence easterly to

(4030) 33°35'30"N., 117°52'30"W.; thence northwesterly along the shoreline to

(4031) 33°39'06"N., 118°00'00"W.

(4032) (c) *El Segundo, CA*. The waters including the Chevron USA, El Segundo Marine Terminal, lying within an area bounded by a line beginning at

(4033) 33°56'18"N., 118°26'18"W.; thence westerly to

(4034) 33°56'18"N., 118°30'48"W.; thence southeasterly along a line drawn three nautical miles from the baseline to

(4035) 33°51'48"N., 118°27'54"W.; thence easterly to

(4036) 33°51'48"N., 118°24'00"W.; thence northwesterly along the shoreline to

(4037) 33°56'18"N., 118°26'18"W.

(4038) (d) *Oxnard, CA*. The waters including the Southern California Edison Company, Mandalay Generating Station, lying within an area bounded by a line beginning at

(4039) 34°14'12"N., 119°16'00"W.; thence westerly to

(4040) 34°14'12"N., 119°19'36"W., thence southeasterly along a line drawn three nautical miles from the baseline to

(4041) 34°09'24"N., 119°17'20"W.; thence easterly to

(4042) 34°09'24"N., 119°13'24"W.; thence northwesterly along the shoreline to

(4043) 34°14'24"N., 119°16'00"W.

(4044) (e) *Goleta, CA*. The waters including the ARCO, Ellwood Marine Terminal, lying within an area bounded by a line beginning at

(4045) 34°26'12"N., 119°57'00"W.; thence southerly to

(4046) 34°22'48"N., 119°57'00"W.; thence southeasterly along a line drawn three nautical miles from the baseline to

(4047) 34°21'06"N., 119°50'30.5"W.; thence northerly to

(4048) 34°24'18"N., 119°50'30"W.; thence northwesterly along the shoreline to

(4049) 34°26'12"N., 119°57'00"W.

(4050) (f) *Gaviota, CA*. The waters including the Texaco Trading and Transportation, Gaviota Marine Terminal, lying within an area bounded by a line beginning at

(4051) 34°28'06"N., 120°16'00"W.; thence southerly to

(4052) 34°25'06"N., 120°16'00"W.; thence easterly along a line drawn three nautical miles from the baseline to

(4053) 34°25'24"N., 120°08'30"W.; thence northerly to

(4054) 34°28'24"N., 120°08'30"W.; thence westerly along the shoreline to

(4055) 34°28'06"N., 120°16'00"W.

(4056) (g) *Moss Landing, CA*. The waters including the Pacific Gas and Electric Company Power Plant, lying within an area bounded by a line beginning at

(4057) 36°49'00"N., 121°47'42"W.; thence westerly to

(4058) 36°49'00"N., 121°51'00"W.; thence southerly to

(4059) 36°47'00"N., 121°51'00"W.; thence easterly to

(4060) 36°47'00"N., 121°47'54"W.; thence northerly along the shoreline to

(4061) 36°49'00"N., 121°47'42"W.

(4062) (h) *Estero Bay, CA*. The waters including various moorings, including the Pacific Gas and Electric Company mooring and the two Chevron Oil Company Terminals lying within an area bounded by a line beginning at

(4063) 36°25'00"N., 120°52'30"W.; thence westerly to

(4064) 36°25'00"N., 120°56'00"W.; thence southerly to

(4065) 36°22'00"N., 120°56'00"W.; thence easterly to

(4066) 36°22'00"N., 120°52'12"W.; thence northerly along the shoreline to

(4067) 36°25'00"N., 120°52'30"W.

(4068) (i) *San Luis Obispo Bay, CA*. The waters including the Unocal Corporation Avila Terminal and the approaches thereto, lying in an area bounded by a line beginning at

(4069) 35°09'42"N., 120°46'00"W.; thence southerly to

(4070) 35°07'00"N., 120°46'00"W.; thence easterly to

(4071) 35°07'00"N., 120°43'00"W.; thence northerly to

(4072) 35°10'24"N.,120°43'00"W.; thence westerly along the shoreline to

(4073) 35°09'42"N., 120°46'00"W.

(4074)

TITLE 50–Wildlife and Fisheries

(4075)

Part 224–Endangered Marine and Anadromous Species

(4076)

§224.103 Special prohibitions for endangered marine mammals.

(4077) (a) *Approaching humpback whales in Hawaii*. Except as provided in part 222, subpart C, of the chapter (General Permit Procedures), it is unlawful for any person subject to the jurisdiction of the United States to commit, to attempt to commit, to solicit another to commit, or to cause to be committed, within 200 nautical miles (370.4 km) of the Islands of Hawaii, any of the following acts with respect to humpback whales (Megaptera novaeangliae):

(4078) (1) Operate any aircraft within 1,000 feet (300 m) of any humpback whale;

(4079) (2) Approach, by any means, within 100 yards (90 m) of any humpback whale;

(4080) (3) Cause a vessel or other object to approach within 100 yd (90 m) of a humpback whale; or

(4081) (4) Disrupt the normal behavior or prior activity of a whale by any other act or omission. A disruption of normal behavior may be manifested by, among other actions on the part of the whale, a rapid change in direction or speed; escape tactics such as prolonged diving, underwater course changes, underwater exhalation, or evasive swimming patterns; interruptions of breeding, nursing, or resting activities, attempts by a whale to shield a calf from a vessel or human observer by tail swishing or by other protective movement; or the abandonment of a previously frequented area.

(4082)

Part 226-Designated Critical Habitat

(4083) **§ 226.206 Critical habitat for the Southern Resident killer whale (*Orcinus orca*).**

(4084) Critical habitat is designated for the Southern Resident killer whale as described in this section. The maps, clarified by the textual descriptions in this section, are the definitive source for determining the critical habitat boundaries.

(4085) (a) *Critical habitat boundaries*. Critical habitat is designated to include all areas in paragraphs (a)(1) and (2) of this section.

(4086) (1) *Inland waters of Washington State*. Critical habitat includes three specific marine areas of Puget Sound, Washington, within the following counties: Clallam, Jefferson, King, Kitsap, Island, Mason, Pierce, San Juan, Skagit, Snohomish, Thurston, and Whatcom. Critical habitat includes all waters relative to a contiguous shoreline delimited by the line at a depth of 20 ft (6.1 m) relative to extreme high water in each of the following areas:

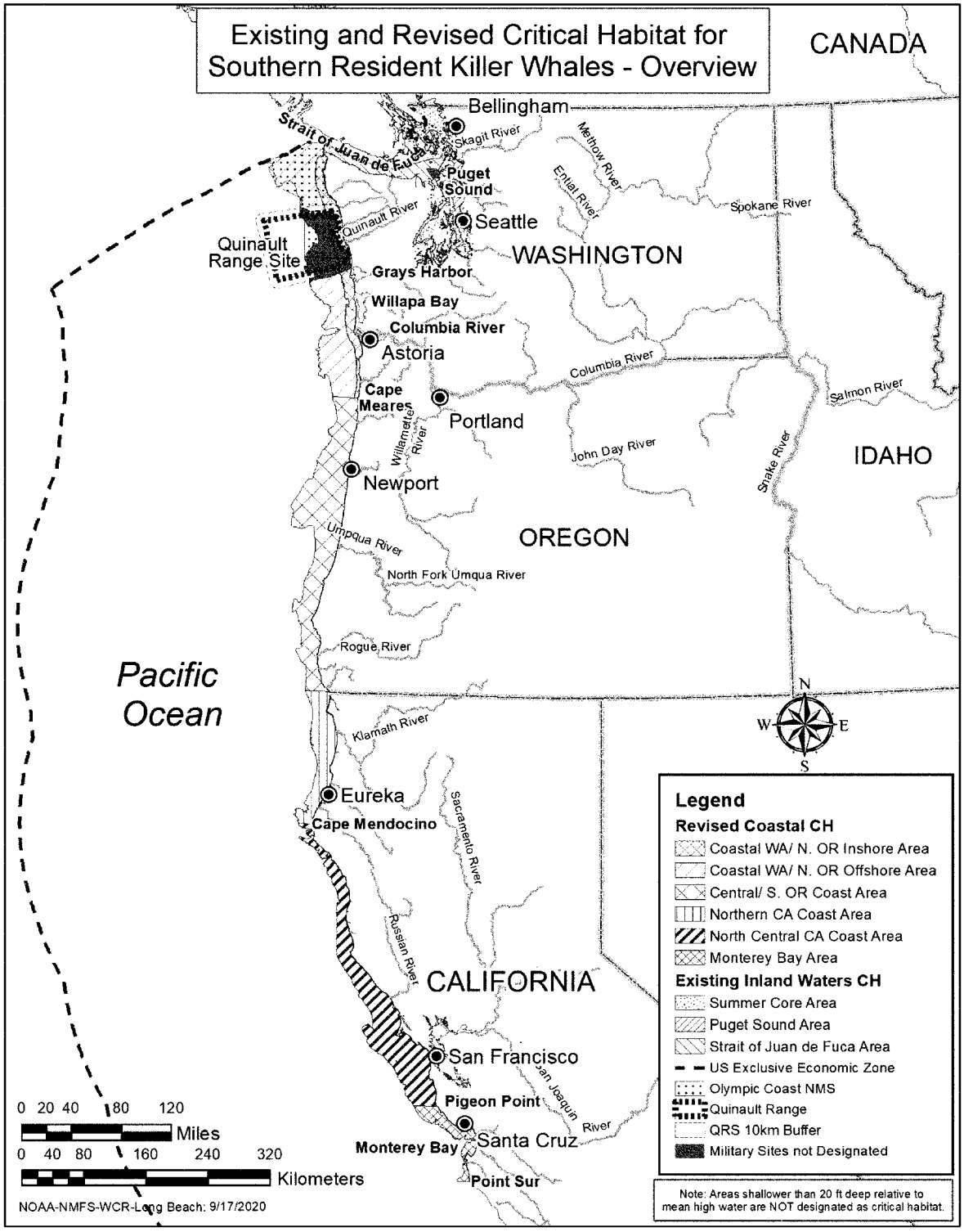
(4087) (i) *Summer Core Area*. All U.S. marine waters in Whatcom and San Juan counties; and all marine waters in Skagit County west and north of the Deception Pass Bridge (Highway 20) (48°24′25″N., 122°38′35″W.).

(4088) (ii) *Puget Sound Area*. All marine waters in Island County east and south of the Deception Pass Bridge (Highway 20) (48°24′25″N.,122°38′35″W.), and east of a line connecting the Point Wilson Lighthouse (48°8′39″N., 122°45′12″W.) and a point on Whidbey Island located at 48°12′30″N., 122°44′26″W.; all marine waters in Skagit County east of the Deception Pass Bridge (Highway 20) (48°24′25″N., 122°38′35″W.); all marine waters of Jefferson County east of a line connecting the Point Wilson Lighthouse (48°8′39″N., 122°45′12″W.) and a point on Whidbey Island located at latitude 48°12′30″N., 122°44′26″W., and north of the Hood Canal Bridge (Highway 104)(47°51′36″N., 122°37′23″W.); all marine waters in eastern Kitsap County east of the Hood Canal Bridge (Highway 104) (47°51′36″N., 122°37′23″W.); all marine waters (excluding Hood Canal) in Mason County; and all marine waters in King, Pierce, Snohomish, and Thurston counties.

(4089) (iii) *Strait of Juan de Fuca Area*. All U.S. marine waters in Clallam County east of a line connecting Cape Flattery, Washington (48°23′10″N., 124°43′32″W.), Tatoosh Island, Washington (48°23′30″N., 124°44′12″W.), and Bonilla Point, British Columbia (48°35′30″N., 124°43′00″W.); all marine waters in Jefferson and Island counties west of the Deception Pass Bridge (Highway 20) (48°24′25″N., 122°38′35″W.), and west of a line connecting the Point Wilson Lighthouse (48°8′39″N., 122°45′12″.W) and a point on Whidbey Island located at 48°12′30″N., 122°44′26″W.

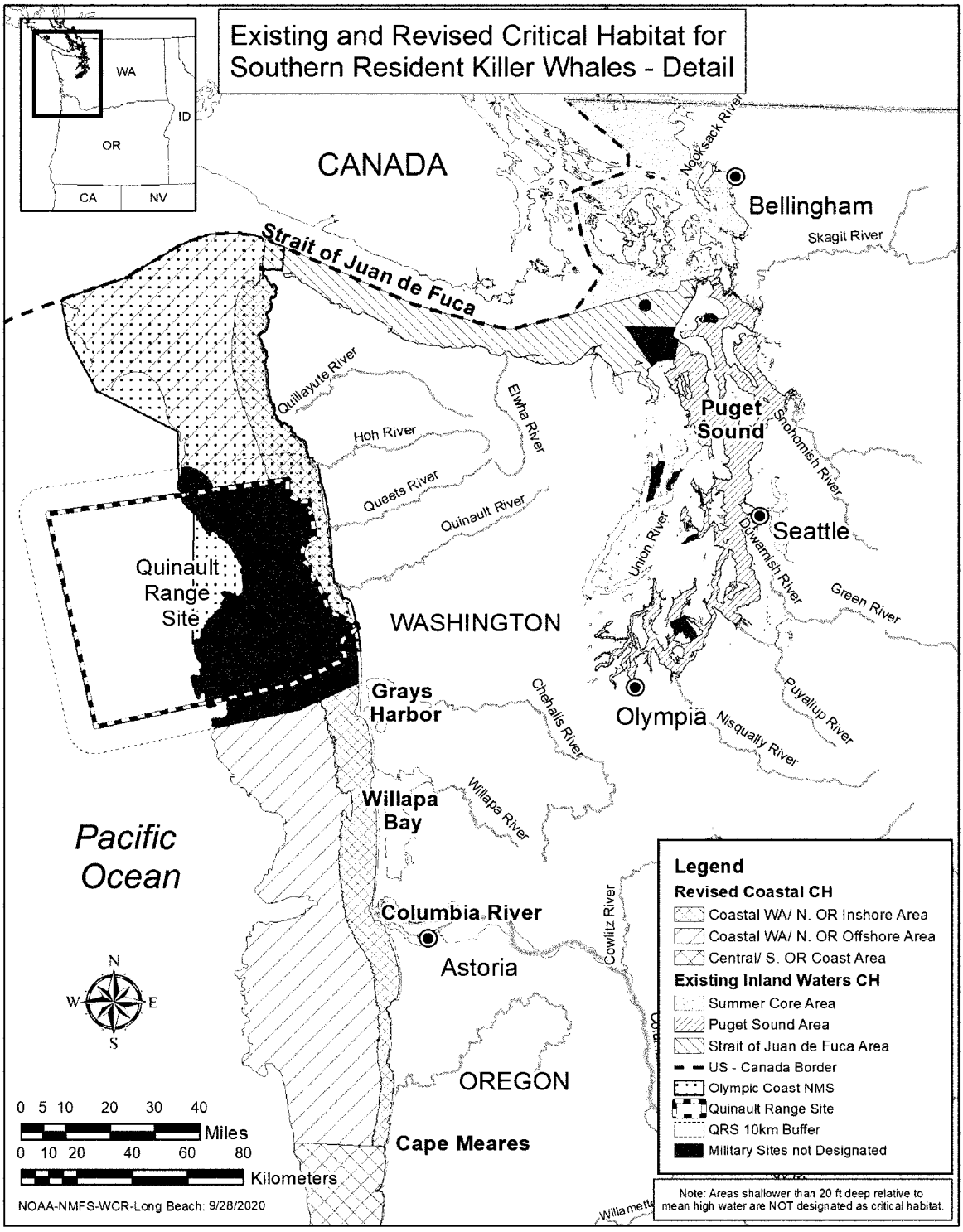
(4122)

Figure 1 to Paragraph (d) – Existing and Revised Critical Habitat for Southern Resident Killer Whales - Overview



(4123)

Figure 2 to paragraph (d) – Existing and Revised Critical Habitat for Southern Resident Killer Whales - Detail



(4090) (2) *Coastal marine waters along the U.S. West Coast*. Critical habitat includes six specific marine areas along the coasts of Washington, Oregon, and California. Critical habitat includes all waters relative to a contiguous shoreline delimited by the line at a depth of 20 ft (6.1 m) relative to mean high water in each of the following areas:

(4091) (i) *Coastal Washington/Northern Oregon Inshore Area*. U.S. marine waters west of a line connecting Cape Flattery, Washington (48°23′10″N., 124°43′32″W.), Tatoosh Island, Washington (48°23″N., 124°44′12″W.), and Bonilla Point, British Columbia (48°35′30″N., 124°43′00″W.), from the U.S. international border with Canada south to Cape Meares, Oregon (45°29′12″N.), between the 6.1-m and 50-m isobath contours. This includes waters off Clallam, Jefferson, Grays Harbor, and Pacific counties in Washington and Clatsop and Tillamook counties in Oregon.

(4092) (ii) *Coastal Washington/Northern Oregon Offshore Area*. U.S. marine waters west of a line connecting Cape Flattery, Washington (48°23′10″N., 124°43′32″W.), Tatoosh Island, Washington (48°23′30″N., 124°44′12″W.), and Bonilla Point, British Columbia (48°35′30″N., 124°43′00″W.) south to Cape Meares, Oregon (45°29′12″N.), between the 50-m and 200-m isobath contours. This includes waters off Clallam, Jefferson, Grays Harbor, and Pacific counties in Washington and Clatsop and Tillamook counties in Oregon.

(4093) (iii) *Central/Southern Oregon Coast Area*. U.S. marine waters from Cape Meares, Oregon (45°29′12″N.) south to the border between Oregon and California (42°00′00″ N), between the 6.1-m and 200-m isobath contours. This includes waters off Tillamook, Lincoln, Lane, Douglas, Coos, and Curry counties in Oregon.

(4094) (iv) *Northern California Coast Area*. U.S. marine waters from the border between Oregon and California (42°00′00″N.) south to Cape Mendocino, California (40°26′19″N.), between the 6.1-m and 200-m isobath contours. This includes waters off Del Norte and Humboldt counties in California.

(4095) (v) *North Central California Coast Area*. U.S. marine waters from Cape Mendocino, California (40°26′19″N.) south to Pigeon Point, California (37°11′00″N.), between the 6.1-m and 200-m isobath contours. This includes waters off Humboldt, Mendocino, Sonoma, Marin, San Francisco, and San Mateo counties in California.

(4096) (vi) *Monterey Bay Area*. U.S. marine waters from Pigeon Point, California (37°11′00″N.) south to Point Sur, California (36°18′00″ N), between the 6.1-m and 200-m isobath contours. This includes waters off San Mateo, Santa Cruz, and Monterey counties in California.

(4097) (b) *Essential features*. The essential features for the conservation of Southern Resident killer whales are the following:

(4098) (1) Water quality to support growth and development;

(4099) (2) Prey species of sufficient quantity, quality, and availability to support individual growth, reproduction, and development, as well as overall population growth; and

(4100) (3) Passage conditions to allow for migration, resting, and foraging.

(4101) (c) *Sites owned or controlled by the Department of Defense*. Critical habitat does not include the following particular areas owned or controlled by the Department of Defense, or designated for its use, in the State of Washington, including shoreline, nearshore areas around structures such as docks and piers, and marine areas where they overlap with the areas described in paragraph (a) of this section:

(4102) (1) Naval Undersea Warfare Center, Keyport;

(4103) (2) Naval Ordnance Center, Port Hadlock (Indian Island);

(4104) (3) Naval Fuel Depot, Manchester;

(4105) (4) Naval Air Station, Whidbey Island;

(4106) (5) Naval Station, Everett;

(4107) (6) Naval Hospital Bremerton;

(4108) (7) Fort Lewis (Army);

(4109) (8) Pier 23 (Army);

(4110) (9) Puget Sound Naval Ship Yard;

(4111) (10) Strait of Juan de Fuca naval air to-surface weapon range, restricted area;

(4112) (11) Strait of Juan de Fuca and Whidbey Island naval restricted areas;

(4113) (12) Admiralty Inlet naval restricted area;

(4114) (13) Port Gardner Naval Base restricted area;

(4115) (14) Port Orchard Passage naval restricted area;

(4116) (15) Sinclair Inlet naval restricted area;

(4117) (16) Carr Inlet naval restricted area;

(4118) (17) Port Townsend/Indian Island/ Walan Point naval restricted area;

(4119) (18) Crescent Harbor Explosive Ordnance Units Training Area; and

(4120) (19) Quinault Range (including the surf zone at Pacific Beach) and a 10-km buffer around most of the Quinault Range, not including the portion of this buffer that extends beyond 10 km into the Olympic Coast National Marine Sanctuary (OCNMS).

(4121) (d) Maps of Southern Resident killer whale critical habitat.

California

(1) The California coast of the United States,is mostly rugged and mountainous, with high land rising abruptly from the sea in many places. South of San Francisco Bay the mountains are usually bare or covered with chaparral and underbrush. North of the bay the mountains are generally well timbered.

(2)

Disposal sites and dumping grounds

(3) These areas are rarely mentioned in the Coast Pilot but are shown on the nautical charts. (See Disposal Sites and Dumping Grounds, chapter 1, and charts for limits.)

(4)

Aids to navigation

(5) Lights are numerous along the coast; there are only a few places where a vessel is not in sight of one or more lights. Sound signals are at most of the principal light stations. Many coastal and harbor buoys are equipped with radar reflectors, which greatly increase the range at which the buoys may be detected. The critical dangers are buoyed and are generally marked by kelp.

(6) There are many aerolights along the coast that are useful for navigation purposes, but they should not be confused with the marine lights. (See the Light List for a complete description of navigational aids.)

(7) The frequent occurrence of fog along this coast makes radar an invaluable aid in detecting other traffic and obtaining a line of position and/or fix. Bridge-to-bridge radio communication (VHF-FM) is another useful aid, regardless of weather, in waters where maneuvering room is limited or restricted. The primary advantages of this radio system are its line-of-sight characteristic and relative freedom from static interference.

(8)

COLREGS Demarcation Lines

(9) 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.)

(10)

Ports and Waterways Safety

(11) (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.)

(12)

Channels

(13) **Federal project depth** is the dredging depth of a channel as authorized by an Act of Congress upon recommendation of the Chief of Engineers, U.S. Army. **Controlling depth** in a channel is its least depth; it restricts use of the channel to drafts less than that depth.

(14) Where deepwater channels are maintained by the Corps of Engineers and the controlling depths are printed on the charts, the Coast Pilot usually gives only the project depth. Because of constant shoaling in places, depths may vary considerably between maintenance dredgings. (See Notice to Mariners and latest editions of charts for controlling depths.)

(15) Where secondary channels are maintained regularly by the Corps of Engineers, the Coast Pilot refers to information in Appendix A. Surveys and channel condition reports are available through a USACE hydrographic survey website listed in Appendix A. For detailed channel information and minimum depths as reported by the U.S. Army Corps of Engineers (USACE), use NOAA Electronic Navigational Charts.

(16) In the case of other channels, the controlling depths printed in the Coast Pilot are from the latest available reports, which may, however, be several years old.

(17)

Depths

(18) **Depths** along most of the Pacific coast decrease much too rapidly from seaward to be of any practical use as an aid to navigation. The 100-fathom curve lies at an average distance of less than 10 miles from shore, but this distance is exceeded in the approaches to San Francisco Bay.

(19) In general, depths given alongside wharves are those 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 current controlling depths.

(20) Depths are in feet below the low-water tidal datum of the charts; deck heights where given are in feet above the chart datum for water depths.

(21)

Traffic Separation Schemes

(22) **Traffic Separation Schemes (Traffic Lanes)** have been established from the Gulf of Santa Catalina to the

(27)

North American Emission Control Area Low Sulfur Fuel Oil Regulations

General Information

International Maritime Organization: The International Convention for the Prevention of Pollution from Ships (MARPOL) ANNEX VI Regulation 14 requires ships with Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder use fuel with sulfur content less than 0.1%, after 01 January 2015 within 200 miles of the North American area and when operating in the United States Caribbean Sea area – as defined in Appendix VII of Annex VI of MARPOL.

The California Air Resources Board (ARB) created regulations for vessel emissions reductions for California's ports as part of its continued mission to improve air quality around the state. The requirements came into effect in July 2009, under Title 13 California Code of Regulations (CCR), Section 2299.2, *Fuel Sulfur and Other Operational Requirements for Ocean Going Vessels within California Waters and 24 Nautical Miles of the California Baseline*.

The regulations require vessels use distillate fuel, either marine gas oil with maximum 0.1% sulfur, or marine diesel oil with maximum 0.1% sulfur, in their main and auxiliary engines. These regulations are still in effect pending review in April 2015.

Following the implementation of the regulations, California continued to experience loss of propulsion (LOP) incidents within state waters at a much higher rate than was seen prior to July 2009. This advisory focuses upon reducing the probability of an LOP incident occurring on vessels due to the use of Low Sulfur Distillate Fuel Oil (LSDFO).

OPERATIONS

Initial Entry

For vessels intending to enter the North American Emissions Control Area (NAECA) for the first time, the crew is advised to conduct a "TRIAL" (actual) fuel switching within 45 days prior to entering NAECA waters. Run main and auxiliary engines no less than four (4) hours on LSDFO if the vessel intends to use distillate fuel to comply with MARPOL ECA regulations. This will help identify any specific change over or operational issues or problems.

REPEAT AND INITIAL ENTRY

Part One–Training:

- Within 45 days prior to entering any port within the NAECA, vessel engineers are strongly advised to exercise*:*
  - A. Operating main engine from the engine control room.
  - B. Operating main engine from engine side (local).
- Crew should become familiar with "Failure to Start" procedures while maneuvering and establish corrective protocols for "Failure to Start" incidents.

Part Two–While Underway after Fuel Switching Completed (HFO to Low Sulfur Distillate):

- Ensure one of the senior* engineering officers is in the engine control room while the vessel is in pilot waters and be:
  - A. Able to operate the vessel main engine from the engine control room.
  - B. Able to operate the vessel main engine from engine side (local).

*Special Attention to International Standards of Training, Certification and Watchkeeping (STCW) Rest Requirements

Part Three–Engine Guidelines:

- Consult engine and boiler manufacturers for fuel switching guidance.
- Consult fuel suppliers for proper fuel selection.
- Exercise strict control when possible over the quality of the fuel oils received.
- Consult manufacturers to determine if system modifications or additional safeguards are necessary for intended fuels.
- Develop detailed fuel switching procedures.
- Establish a fuel system inspection and maintenance schedule.
- Ensure system pressure and temperature alarms, flow indicators, filter differential pressure transmitters, etc., are all operational.
- Ensure system purifiers, filters and strainers are maintained.
- Ensure system seals, gaskets, flanges, fittings, brackets and supports are maintained.
- Ensure that the steam isolation valves on fuel lines, filters, heaters etc. are fully tight in closed position while running on Low Sulfur Distillate Fuel Oil.
- Ensure that the fuel oil viscosity and temperature control equipment is accurate and operational.
- Ensure detailed system diagrams are available and engineers are familiar with systems and troubleshooting techniques. Senior engineering officers should know the location and function of all automation components associated with starting the main engine.

(28)

California Code of Regulations – Oil Spill Contingency Plans for Non-tank Vessels

Non-tank vessels (300 gross tons or greater) entering California waters should be aware of California state regulations that set forth planning requirements for oil spill prevention and response, unless otherwise exempt as defined in the regulation.

Owners or operators of non-tank vessels which are 300 gross tons or greater, shall provide an oil spill contingency plan for that non-tank vessel. The planning requirements specify that the owner/operator of a non-tank vessel must own or have contracted for on-water recovery and storage resources sufficient to respond to all spills up to the reasonable worst case spill volume in the time frames specified. The information required must be submitted to the Office of Spill Prevention and Response (OSPR), and maintained by the owner/operator.

For more information, reference the **California Code of Regulations (CCR), Title 14, Division 1, Subdivision 4, Chapter 3, Subchapter 4**: *wildlife.ca.gov/OSPR/Legal/OSPR-Regulations-Index*

In addition to the state regulations noted above, non-tank vessel owners/operators should be familiar with Federal regulations for a Notification of Arrival requirement (**33 CFR 160 – Subpart C, chapter 2**) and non-tank vessel response plans (**33 CFR 155 – Subpart J**, not contained in this Coast Pilot.)

vicinity of Point Conception, off the entrance to San Francisco Bay.

(23)

Vessel Traffic Services

(24) **Vessel Traffic Services (VTS)** have been established in the San Francisco Bay area. The services have been established to prevent collisions and groundings and to protect the navigable waters from environmental harm.

(25) The Vessel Traffic Services provide for a **Vessel Traffic Center (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 systems consists of traffic lanes, separation zones, precautionary areas and reporting points.

(26) Participation in the **Vessel Traffic Service San Francisco** is mandatory for certain vessels within navigable waters of the United States and within the 12-mile boundary of the U.S. territorial sea. (See chapter 7 for details.) (See **33 CFR 161.1** through **161.60**, chapter 2, for rules governing vessel operations in the Vessel Traffic Service)

(29) **Offshore Vessel Movement Reporting System San Francisco** has been established in the ocean approaches to San Francisco; the system is mandatory. (See chapter 7 for details.)

(30) **Vessel Traffic Information Service LosAngeles/ Long Beach** has been established for the approaches to Los Angeles and Long Beach; the Service is voluntary. (See chapter 4 for details.)

(31)

Area to be Avoided

(32) Along the coast of California are areas that require specific attention. Most of these areas are associated with marine sanctuaries and are noted on charts as an Area to be Avoided. These areas are adopted by the International Maritime Organization in an effort to avoid the risk of pollution to their associated sanctuaries. See the following chapters for detailed information on the areas: the Channel Islands (chapter 5) and off San Francisco (chapter 7).

(33)

Recommended Tracks, California

(34) Along the California coast, west of Monterey Bay and between Point Sur and Pigeon Point, recommended tracks have been adopted by the International Maritime Organization. These tracks consist of two sets (northbound and southbound) each. The tracks closest to the coast are for vessels 300 gross tons or greater, except those carrying hazardous cargo in bulk or crude oil. The other set of tracks farthest offshore is for vessels carrying hazardous cargo in bulk. (See chapter 6 for details.)

(35)

Offshore Vessel Traffic Management Recommendations

(36) Based on the West Coast Offshore Vessel Traffic Risk Management Project, which was co-sponsored by the Pacific States/British Columbia Oil Spill Task Force and U.S. Coast Guard Pacific Area, it is recommended that, where no other traffic management areas exist such as Traffic Separation Schemes, Vessel Traffic Services or recommended routes, vessels 300 gross tons or larger transiting along the coast anywhere between Cook Inlet and San Diego should voluntarily stay a minimum distance of 25 nautical miles offshore. It is also recommended that tank ships laden with persistent petroleum products and transiting along the coast between Cook Inlet and San Diego should voluntarily stay a minimum distance of 50 nautical miles offshore. Vessels transiting short distances between adjacent ports should seek routing guidance as needed from the local Captain of the Port or VTS authority for that area. This recommendation is intended to reduce the potential for vessel groundings and resulting oil spills in the event of a vessel casualty.

(37)

Drawbridges

(38) 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.

(39) 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.

(40) The mariner should be acquainted with the general and specific regulations for drawbridges over waterways to be transited.

(41)

Anchorages

(42) Anchorages, affording shelter for large vessels from the severe northwest winds of summer, may be had in a number of places along the coast. In southeast and southwest weather there are few places where shelter is available; San Diego Bay, Los Angeles Harbor, the lee side of the Channel Islands and Monterey Bay are the only places south of San Francisco Bay. North of San Francisco, good shelter is found in Humboldt Bay but must be made before the sea rises, as afterward the bars become impassable. Many anchorages have been established in the area covered by this Coast Pilot. (See **33 CFR Part 110**, chapter 2, for limits and regulations.)

(43)

Dangers

(44) There are few outlying dangers, the principal ones being Bishop Rock, west of San Diego; Noonday Rock and the Farallon Islands, off San Francisco Bay; and Blunts, St. George, Rogue River, Orford and Umatilla Reefs, north of San Francisco. The Channel Islands, off southern California, are the largest, most prominent and the farthest offshore of any islands along the coast.

(45)

Oil Well Structures

(46) Offshore drilling and exploration operations are increasing in the waters off California, especially in Santa Barbara Channel.

(47) Obstructions in these waters consist of submerged wells and oil well structures (platforms), including appurtenances thereto, such as mooring piles, anchor and mooring buoys, pipes and stakes.

(48) Pacific offshore platforms are regulated by **safety zones** administered and enforced by the United States Coast Guard. (See **33 CFR 147**, chapter 2, for limits and regulations.) If, for safety reasons, a vessel must approach an offshore platform, it is essential to notify the operator of the platform and/or the Captain of the Port on VHF-FM channel 16 for permission to enter the safety zone. Boarding or mooring to a platform is strongly discouraged and may be considered trespass unless permission is given in advance from the platform operator or Captain of the Port or access to the platform is required as a result of emergency circumstances.

(49) In general, the oil well structures (platforms), depending on their size, depth of water in which located, proximity of vessel routes, nature and amount of vessel traffic and the effect of background lighting, may be marked in one of the following ways:

(50) Quick flashing white light(s) visible at least 5 miles: sound signal sounded when visibility is less than 5 miles.

(51) Quick flashing white light(s) visible at least 3 miles: sound signal sounded when visibility is less than 3 miles.

(52) Quick flashing white or red lights visible at least 1 mile: may or may not be equipped with sound signal.

(53) 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.

(54) Associated structures within 100 yards of the main structure, 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.

(55) 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 lights on the structure. The attending vessel's foghorn may also be used as a substitute.

(56) Submerged wells may or may not be marked depending on their location and depth of water over them.

(57) All obstruction lights and sound signals, used to mark the various structures, are operated as privately maintained aids to navigation. (See **33 CFR 67**, for detailed regulations for the marking of offshore structures.)

(58) Information concerning the establishment, change or discontinuance of offshore oil-well structures and their appurtenances is published in the Local Notice to Mariners or by Broadcast Notice. Additional information may also be obtained from the Coast Guard Commander. Mariners are advised to navigate with caution in the vicinity of these structures and in those waters where oil exploration is in progress and to use the latest and largest scale chart of the area.

(59) During the continuing program of establishing, changing and discontinuing oil-well structures, special caution should be exercised when navigating the inshore and offshore waters of the affected areas in order to avoid collision with any of the structures.

(60) Information concerning seismographic operations is not published in Notice to Mariners unless such operations 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. Casings 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.

(61)

Pipelaying barges

(62) 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.

(63)

Fish havens

(64) Fish havens, some marked by private buoys, are numerous along the Pacific coast. Navigators should be cautious about passing over fish havens or anchoring in their vicinity.

(65)

Kelp

(66) Kelp grows on nearly every danger with a rocky bottom and is particularly heavy at various points in Santa Barbara Channel and in the vicinity of San Diego Bay. It will be seen on the surface of the water during the summer and autumn; during the winter and spring it is not always to be seen, especially where it is exposed to a heavy sea. Many rocks are not marked by kelp, because a heavy sea will occasionally tear it away and a moderate current will draw it under water so that it will not be seen. When passing on the side of a kelp patch from which the stems stream away with the current, care should be taken to give it a good berth. Dead, detached kelp floats on the water curled in masses, while live kelp, attached to rocks, streams away level with the surface. Live kelp is usually an indication of depths less than 10 fathoms.

(67)

River entrances

(68) Along the coast, bars build up at the mouths of the many rivers and streams that empty into the Pacific Ocean. The tidal currents at these entrances can obtain considerable velocity, especially when the ebb tide is reinforced by the river runoff. The most dangerous condition prevails when a swift ebb current meets the heavy seas rolling in from the Pacific at the shallow river entrances. The water piles up and breaks and creates a bar condition too rough for small craft. In a bar area, sea conditions can change rapidly and without warning; always cross with caution.

(69)

Regulated boating areas

(70) The bars located in the regulated navigation areas will be closed to all vessels whenever environmental conditions exceed the operational limitations of the relevant Coast Guard search and rescue resources as determined by the Captain of the Port (COTP). When a bar is closed, the operation of any vessel in the regulated navigation area is prohibited unless specifically authorized by the COTP or his designated representative. It is important for the small-craft operators to know when operating in the general vicinity of a regulated navigation area and be prepared for any changing tidal or sea conditions which may be hazardous to the vessel.

(71)

Danger zones

(72) **Danger zones** and **restricted areas** are along the Pacific coast around the Channel Islands. (See **33 CFR 334**, chapter 2, for limits and regulations.)

(73)

Caution

(74) Heavy concentrations of fishing gear may be expected off Drakes Bay and Humboldt Bay between December 1 and August 15, from shore to about 30 fathoms.

(75) To reduce the destruction of fishing gear by vessels and to reduce the fouling of propellers and shafts by fishing gear, Washington Sea Grant, Washington State University Extension has coordinated an agreement between towboaters and crab fishermen for the establishment of towboat lanes along the Pacific coast between San Francisco, California and Cape Flattery, Washington. Copies of the agreement showing fishing areas and towboat lanes may be obtained from Washington Sea Grant, 3716 Brooklyn Avenue NE, Box 355060, Seattle, WA 98105-6716; 206–543–6600; *seagrant@uw.edu*.

(76)

Tides

(77) A very important characteristic of the tides along the west coast of the United States is the large inequality in the heights of the two high waters and of the two low waters of each day. On the outer coast the average difference between the heights of the two high waters of the day is from 1 to 2 feet and the average difference in the heights of the two low waters from 2 to 3 feet. It was because of this large difference in the low-water heights that the mean of the lower low waters, rather than the mean of all low waters, was adopted as the plane of reference for the charts of this region.

(78) This inequality changes with the declination of the moon. When the moon is near the equator the inequality is relatively small; but when the moon is near its greatest north or south declination, the difference in the heights of the two high waters or of the two low waters of each day reaches a maximum. The tides at this time are called **tropic tides**.

(79) Off the outer coast, the mean rise of the tide is about 5 feet off southern California. Extreme variations from 3 feet below to 10 feet above the datum may reasonably be expected.

(80) At the entrance to San Francisco Bay the mean rise of the tide is about 5 feet. At the south end of the bay the tide occurs about 1½ hours later, and the mean rise is about 2.5 feet greater than at the entrance of the bay. Passing north into San Pablo Bay, the tide occurs from 1 to 2 hours later than at the Golden Gate, with a mean rise of about 0.5 foot greater than at the latter place. In Suisun Bay the time of tide is about 3 hours later than at the Golden Gate, with a mean rise about the same. It requires about 4 hours for high water to pass from Suisun Bay to Stockton, on the San Joaquin River, and about 5 hours from Suisun Bay to Sacramento, on the Sacramento River. The mean rise of the tide at Stockton is 3.6 feet and at Sacramento is 2.6 feet.

(81) In Humboldt Bay the tide is from ½ to 1 hour later than on the outer coast. The mean rise is about 6 feet.

(82) In using the Tide Tables, high or low water should not be confused with slack water. For ocean stations there is usually little difference between the time of high or low water and the beginning of ebb or flood currents; but for places in narrow channels, landlocked harbors, or on tidal rivers the time of slack water may differ by several hours from the time of high or low water stand. The relation of the times of high and low water to the turning of the current depends upon a number of factors, hence no simple rule can be given. See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for the predicted times of slack water, and the strength and velocity of currents in the area. Links to a user guide for this service can be found in chapter 1 of this book. .)

(83)

Currents

(84) A current, the outer limit of which extends offshore more than 300 miles, flows approximately parallel to the U.S. Pacific coast from latitude 50° to 30°N. The direction of the current is generally south throughout the year except as noted below. Its velocity, which averages about 0.2 knot, is greatly influenced by prevailing winds; north winds increase it, and south winds diminish it. North of latitude 45°N. the set is usually north from November through February.

(85) Along the coast during certain periods there is a weak north flow known as the **Davidson Inshore Current**, which is evident between San Diego and Point Conception from July through February and between Point Conception and Cape Flattery from November through February.

(86) The above statements apply to general or average conditions. The currents, particularly offshore, at a specific time depend largely upon prevailing winds, whereas alongshore and off the entrances to inland waterways they depend also upon tidal and drainage effects. See 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.

(87)

Tsunamis

(88) Although the coast of California is not generally subject to waves of the magnitude that strike the Hawai‘ian Islands and other Pacific areas, widespread damage to shipping and to waterfront areas occasionally occurs. The tsunami of March 28, 1964, originating in the Gulf of Alaska, caused 16 deaths and several million dollars damage to ships and property in California, Oregon and Washington. 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. (See chapter 1 for details about these waves.)

(89) The Warning System operated by the National Oceanic and Atmospheric Administration and described in Coast Pilot 10 supplies warnings to the Civil Defense authorities in California, Oregon and Washington who are responsible for disseminating this information to the affected areas. The warnings are also broadcast by the National Weather Service on NOAA Weather Radio.

(90) When a warning is received, persons should vacate waterfront areas and seek high ground. The safest procedure for ships will depend on the amount of time available, and this may not always be known. A ship well out at sea would ride such waves safely, and hence if time is available to put to sea, that would be the safest action. On the other hand, the crew of a ship in harbor may have a difficult time averting serious damage. The ship may be washed ashore by incoming waves or grounded because of excessive withdrawal of water between crests. Much of the damage in the Los Angeles area during the 1960 Chilean tsunami was caused by rapid currents and the swift rise and fall of the water level that parted mooring lines and set floating docks and ships adrift.

(91)

Blue, fin and humpback whales

(92) All whales are protected under the Marine Mammal Protection Act (MMPA) and, when in Sanctuary waters, under the National Marine Sanctuaries Act (NMSA). Certain large whales, including blue, fin and humpback whales, are also listed as endangered under the Endangered Species Act (ESA). Blue, fin and humpback whales migrate through or may be found in large aggregations feeding in the nutrient-rich and highly productive waters along the continental shelf of California, Oregon and Washington. Whales may not react to approaching vessels, increasing the risk of collision. A collision could result in significant damage to the vessel and death or serious injury to the whale. Collisions with vessels in these waters may be affecting the recovery of blue, fin and humpback whales. NOAA is responsible for providing protection to whales under the MMPA, ESA and NMSA and provides the following species information and

(114)

Mean Surface Water Temperatures (°C) and Densities

	Years		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
La Jolla, CA	56	Temp	13.9	13.9	14.4	15.4	16.9	18.4	19.9	20.8	19.3	18.0	16.3	14.9	16.8
		Density	24.9	24.8	24.8	24.9	25.0	25.0	25.0	25.0	24.9	24.9	24.9	24.9	24.9
Newport Bay, CA	17	Temp	14.0	14.5	15.4	16.6	17.7	19.0	20.3	21.2	19.9	18.7	16.4	14.7	17.4
		Density	24.4	24.4	24.5	24.5	24.9	25.0	25.0	25.0	25.0	24.9	24.6	24.5	24.7
Los Angeles, CA (Outer Harbor)	49	Temp	13.9	14.2	14.7	15.4	16.2	17.7	18.9	19.7	19.0	18.1	16.5	14.8	16.6
		Density	24.7	24.6	24.8	24.9	25.1	25.1	25.1	25.1	25.1	25.0	24.9	24.8	24.9
Santa Monica, CA	27	Temp	13.5	13.7	13.9	14.7	15.7	17.5	19.2	19.9	19.0	17.6	15.7	14.3	16.2
		Density	24.9	24.9	25.0	25.0	25.2	25.2	25.2	25.2	25.1	25.0	25.0	24.9	25.0
Avila Beach, CA	27	Temp	12.4	12.5	12.3	12.5	13.1	14.1	15.4	15.9	15.7	15.0	13.9	12.8	13.8
		Density	24.5	24.4	24.7	24.9	25.2	25.4	25.4	25.3	25.2	25.1	24.9	24.8	25.0
Pacific Grove, CA	51	Temp	11.8	12.0	12.2	12.4	12.8	13.4	13.8	13.9	14.2	13.7	12.9	12.4	13.0
		Density	24.7	24.6	24.6	24.7	24.9	25.0	25.1	25.0	25.0	24.9	24.8	24.8	24.8
San Francisco, CA (Fort Point)	51	Temp	10.4	10.9	11.6	12.4	13.1	13.9	14.7	15.2	15.5	14.8	13.0	11.2	13.1
		Density	21.1	20.0	19.9	20.0	20.7	21.5	22.9	23.7	23.8	23.8	23.2	22.4	21.9
Alameda, CA	33	Temp	10.3	11.9	13.9	16.1	17.8	19.4	20.5	20.5	20.2	17.7	14.4	11.4	16.2
		Density	17.3	15.6	15.7	16.5	17.6	18.7	20.5	21.8	22.4	21.9	21.1	19.5	19.0
Crescent City, CA	37	Temp	9.6	9.9	10.2	10.7	11.5	12.5	13.6	14.3	13.5	12.1	11.2	10.2	11.7
		Density	20.8	20.7	21.1	21.8	22.6	23.3	24.0	24.1	24.2	24.0	22.8	21.8	22.6

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).

precautionary measures for mariners to reduce risk of vessel collisions.

(93) **Descriptions of blue, fin and humpback whales:**

(94) **Blue whales**: body is mottled bluish-gray; up to 85 feet in length; blow is tall and columnar; relatively small dorsal fin is usually not seen during surfacing (but can be seen prior to a dive); tail flukes are often raised before a dive. The most recent population estimate for blue whales off the U.S. west coast is approximately 2,500.

(95) **Fin whales**: body is solid gray to black above and white below, with a chevron pattern behind head often visible from above; up to 79 feet in length; blow is tall and shaped like an inverted cone; the dorsal fin is usually sickle shaped and visible during surfacing; tail flukes are rarely raised before a dive. The most recent population estimate for fin whales off the U.S. west coast is approximately 3,000.

(96) **Humpback whales**: body is dark gray with black and white patches on underside; up to 52 feet in length; blow is round and bushy; long white and black flippers; head covered with knobs or nodules; relatively prominent dorsal fin relative to body size; flukes are often raised before deep dives. The most recent population estimate for humpback whales off the U.S. west coast is approximately 2,000.

(97) **Occurrence of blue, fin and humpback whales:** Though these large whales are found along the western coast of the United States year-round, overall abundance is highest from May to November, when whales are feeding on dense aggregations of krill and other forage fish. Blue whales are most commonly seen in California from May through September. Fin whales are most common in summer and winter, and humpback whales are most common in summer and fall. These whales regularly occur in large feeding groups around the Channel Islands and off of Long Beach and Orange County in southern California and in the waters off of San Francisco and Monterey Bay in central California.

(98) **Precautions when transiting whale habitat:**

(99) Vessel operators and observers are advised to keep a sharp lookout for whales when transiting near the coast, especially near the 100-fathom curve and offshore islands. NOAA has established two whale advisory zones to alert mariners of the seasonal presence (May through November) of blue, fin and humpback whales and to encourage vessel operators to keep a sharp lookout for whales and proceed with caution within these areas. One whale advisory zone, in southern California, includes the waters from Point Arguello to Dana Point; a second, in Central California, extends from Point Piedras Blancas to Bodega Bay. NOAA works with the U.S. Coast Guard and the National Weather Service to broadcast and publish this information annually.

(100) NOAA may make recommendations to large vessels to reduce speed in specific areas to reduce the risk of lethal ship strikes. NOAA's recommendations are broadcast via the Coast Guard Notice to Mariners (and appear in the published Local Notice to Mariners) and NOAA Weather Radio. To receive current advisories and other whale-related information, mariners can sign up for e-mail announcements here: *rain.org/mailman/listinfo/noaa-whale-advisory-l*.

(101) Please report any collisions with whales or any observed injured, entangled or dead whales to NOAA at 877–SOS–WHALE (877–767–9425) or to the U.S. Coast Guard on VHF Channel 16. For more information, visit: *sanctuaries.noaa.gov/protect/shipstrike/welcome.html*.

(102) **Precautions when in the presence of whales**:

(103) NOAA has established additional guidelines to help keep both mariners and whales safe. In the presence of whales, mariners should:

(104) Maintain a distance of at least 100 yards from any marine mammal;

(105) Never pass in front of a whale's path;

(106) Avoid sudden speed or directional changes around whales;

(107) Never get between two whales, especially a cow and her calf;

(108) Always travel parallel to whales and at or below their speed;

(109) Never chase whales.

(110) Civil and criminal penalties could apply if these guidelines are not observed. NOAA's National Marine Fisheries Service (NMFS) has regulatory responsibility for implementing the MMPA and ESA. Whales in a national marine sanctuary are also protected under the National Marine Sanctuaries Act (NMSA), which prohibits unauthorized take or possession of any marine mammal in sanctuary waters, including harassment and disturbance.

(111)

Weather, West Coast

(112) This section presents an overall, seasonal picture of the weather that can be expected in the offshore waters along the entire west coast of the United States as well as coastal and near-coastal sites and the Hawai'ian and Pacific Islands. Detailed information, particularly concerning navigational weather hazards, can be found in the weather articles in the following chapters.

(113) All weather articles in this volume are the product of the **National Oceanographic Data Center (NODC)** and the **National Climatic Data Center (NCDC).** The meteorological and climatological tables are the product of the NCDC. Both centers are entities of the **National Environmental Satellite, Data, and Information Service (NESDIS)** of the **National Oceanic and Atmospheric Administration (NOAA)**. If further information is needed in relation to the content of the weather articles, meteorological tables or climatological tables, contact the National Climatic Data Center, Attn: Customer Service Division, Federal Building, 151 Patton Avenue, Room 120, Asheville, NC 28801-5001. You may also contact the CSD at 704–271–4994, or fax your request to 704–271–4876.

(115) Climatological tables and meteorological tables for coastal locations relevant to discussions within this volume are located in this chapter (chapter 3) and in following chapters within the appropriate port text description. 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 (NCDC), Fleet Numerical Meteorology and Oceanography Detachment-Asheville, 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 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.

(116) The Pacific coastal region of the United States and the adjacent ocean areas are located along the east portion of the Pacific high-pressure system. This high, when well developed, forms the principal circulation control forcing most of the low-pressure systems to follow a course to the north of the contiguous United States. This is reflected in the presence of the Aleutian low in the Gulf of Alaska. This action damps out weather changes that might otherwise occur and brings a stability factor that would not otherwise exist. Air that reaches the coast as a result of the prevailing westerly winds has acquired much moisture during its ocean passage, resulting in high humidities along the coast. The marine influence is also evidenced in a cooling effect in summer and a warming influence in winter.

(117) Two features of the climate in these waters, while not commonplace, warrant the mariner's attention because of their severity. One is the tropical cyclones and the other a local wind known as the Santa Ana.

(118) **Tropical cyclones** originate south of the area, off the west Mexican coast, in summer and autumn. About 15 form each season, of which eight reach hurricane intensity. Few come far enough north to affect U.S. coastal waters. The ones that do have usually lost their hurricane intensity and are short lived. However, these storms can be dangerous and have generated winds of more than 120 knots. Further reference is made to tropical cyclones in the seasonal description.

(119) The **Santa Ana** is an offshore desert wind that occurs in or near San Pedro Bay. While infrequent, it may be violent; speeds have been measured at more than 50 knots. These winds diminish little, if any, immediately after passing over water, and can extend up to 50 miles (93 km) out to sea. They are most likely in late autumn or winter. (See Weather articles, chapter 4, for more details.)

(120) A third feature, the **El Niño/Southern Oscillation (ENSO)**, sporadically influences these waters. **ENSO** is a two-phased weather phenomenon with roots in the equatorial Pacific and coastal South America; El Niño is the warm water phase and **La Niña**, the cool water phase.

(121) El Niño is an abnormally warm, eastward-moving, equatorial Pacific current that is thought to have a pronounced influence on the global atmospheric circulations. It is known that during an El Niño event, the normal southeast trade winds of the near equatorial

Pacific region break down allowing for near-global-wide altered weather patterns. During a strong El Niño, this typically means an unusually strong subtropical jet stream that brings storms from central and southern California eastward through the gulf coast and southeast states. If the El Niño is weaker, drought to California and rains to the Gulf Coast and southeast states may be expected.

(122) Following an El Niño event, the near-equatorial trade winds return to normal. On occasion, the southeast trade winds become stronger than normal. If this occurs, a La Niña is present, the opposite of El Niño. It is believed that a strong La Niña leads to drought across much of North America.

(123) Winter, like an incoming tide, creeps over the northeastern North Pacific. Subtle changes begin in September. Seas off central and southern California come under the protection of a weak, good-weather subtropical high centered near 35°N and 145°W. Only enough storms penetrate this protective barrier to make winter a distinguishable season off southern California. This same high-pressure system in conjunction with a strengthening Aleutian Low, bodes differently for points further north. Summer breezes become gales. Rain is commonplace. Winds and cool temperatures make the air feel damp and chilly. Storms become routine and onshore flow is near-persistent. Choppy seas turn rough.

(124) Winter storms usually work their way from the central Pacific northward into the Gulf of Alaska or to the coast of British Columbia, trailing their frontal systems across the area. Two or three times a month, on an average, a storm will move directly through the seas off the Washington-Oregon coast. The more seaward storms generate the moderate to strong southeast through west winds that prevail over northern waters and influence the weather as far south as central California. The stronger winds that blow over a long fetch of water whip up rough seas. Seas of 12 feet (3.7 m) or more are generated 15 to 20 percent of the time. In addition, the warm south flow brings cloudiness, drizzle and sometimes fog. Drizzle occurs about 5 to 8 percent of the time, and there are about 2 to 4 days a month when dense fog reduces visibilities to 0.5 mile (0.9 km) or less at sea. These conditions can persist for a week or more if one of these big storms stalls in the Gulf of Alaska. The south flow is also responsible for air temperatures in the upper forties and fifties (8.9° to 15°C). Cold temperatures are unusual and are most likely when cold Arctic air is fed into a low in the Gulf by a large high in the Bering Sea or when a rare outbreak of Arctic air occurs over the area from the north or northeast. Temperatures at these times may drop below freezing (<0°C) off the Washington coast and into the upper thirties (3.3° to 3.9°C) farther south. The infrequency of cold temperatures lessens the chances for snow, which is observed less than 2 percent of the time off Washington and less than 1 percent of the time off Oregon.

(125) When a storm moves close or through these northern waters, weather changes rapidly. The center is preceded by a strong southeast to southwest flow that may reach gale force (gales occur on about 3 to 5 days per winter month) and may whip seas up to 20 feet (6.1 m) or more; seas of these heights occur up to 4 percent of the time. These conditions are often accompanied by clouds and rain, with temperatures in the fifties (10° to 15°C). After the center passes, winds will veer to the west through north and remain strong for a while. Brief showers soon end, the clouds break, and temperatures drop into the low forties (5° to 6.7°C). A high-pressure system from the central Pacific may follow and bring a brief period of clear conditions. If a storm stalls or it is followed by a series of storms, bad weather can be prolonged for a week or more. Rain falls on 18 to 28 days per winter month in these north waters, and skies are overcast or obscured 40 to 50 percent of the time.

(126) About once or twice a month, a storm moves into northern California offshore waters. While these lows are often weaker than those farther north, some cause gales and rough seas. Gales blow on 4 to 5 days per month, and seas reach 12 feet (3.7 m) or more about 8 to 16 percent of the time. These conditions can also be generated by the interaction of a low to the north and a high to the south. The south winds can raise temperatures into the sixties (16.1° to 20.6°C) off northern and central California. Clouds and rain accompany these systems. Rain falls on about 10 to 15 days per month.

(127) Off northern and central California, storms bring a preponderance of southeast through southwest winds, but this is matched by northwest and north winds that blow around the subtropical highs. These highs either form in the Pacific or migrate from Asia. They dominate the weather off the southern California coast, where west through north winds blow more than 60 percent of the time. However, these highs are weakest during winter, and occasionally storms move close enough to bring some clouds, rain and wind. Rain occurs on about 5 to 10 days per month off central and southern California. Gales and rough seas are rare south of Los Angeles. Between Los Angeles and San Francisco, gales blow on about 1 to 4 days per month, while seas of 12 feet (3.7 m) or more occur about 4 to 8 percent of the time.

(128) Fog is a problem in the offshore waters between Los Angeles and San Francisco. Visibilities less than 2 miles (4 km) occur 5 to 7 percent of the time, while dense fog reduces visibilities to less than 0.5 mile (0.9 km) on 2 to 5 days per month.

(129) Spring brings change. March is an epilogue to winter, while May provides a prologue to summer. Cold rainy days alternate with mild sunny ones. The gradual changeover takes place under the forceful prodding of the expanding good-weather Pacific high. In March the center approximates 30°N and 140°W. As the high expands, it forces the increasingly weak and infrequent storms north into the western Gulf of Alaska and Bering Sea. Since the high is not yet a permanent feature, storms will occasionally penetrate the area, particularly in early spring, when they sometimes move into the Pacific northwest or even across the northern California coast.

Southern California waters remain protected by the high. This expanding high-pressure system, which brings good weather, creates a problem in the offshore waters of central and northern California. It causes a tightening of the pressure gradient, which increases wind strength. In other areas, winds and waves are becoming less of a problem. A change is taking place in the direction of prevailing winds. Off southern California, prevailing northwest and north winds are becoming increasingly persistent. With the expansion of the high, north and northwest winds are becoming the prevailing directions throughout the area. This is a slow change. In March, south and north winds share equal billing.

(130) Storms to the west and northwest of the Washington-Oregon offshore waters, while not as frequent as in winter, still generate southeast to west winds as they work their way north. The prevailing storm track is shifting northward so not as many lows move directly through the area, and they are often less intense. Gales from these near and distant storms blow on about 2 days in March, and they are rare by May. Seas also calm down. In March, waves of 12 feet (3.7 m) or more occur 15 to 20 percent of the time; this drops to 10 percent by April and to around 5 percent by May. The general south flow from these storms still bring rain, drizzle and fog. Rain or drizzle can be expected on about 15 to 18 days in March and 9 to 15 days in May. Dense fog (visibilities less than 0.5 mile (0.9 km)) forms on less than 2 days per month, while visibilities drop below 2 miles (4 km), 2 to 4 percent of the time. Because of the clouds and rain associated with this south flow, it is not always responsible for the warmest spring temperatures. Usually, it is accompanied by temperatures in the forties and low fifties (5° to 11.1°C) in March and 50°F (10°C) readings during May. An occasional cold north outbreak, usually following a storm, can drop March temperatures into the mid- to upper thirties (0.6° to 3.9°C).

(131) Occasionally a low will move close enough to bring some clouds, rain and drizzle; distant lows often account for some of the cloudy days. This is more likely in early spring, when rain falls on about 4 to 5 days in the south and 5 to 15 days in central and northern waters. By May, storms are less frequent, and rain occurs on just 1 or 2 days south of Los Angeles and 3 to 10 days to the north.

(132) Fog is a problem in the offshore waters between Los Angeles and San Francisco. In April and May, visibilities drop below 2 miles (4 km) 8 percent of the time, and fog reduces visibilities to less than 0.5 mile (0.9 km) on about 2 to 3 days per month. It occurs mostly with winds from the southwest through northwest, when they bring warm air over the cooler waters.

(133) Two important features are responsible for the summer weather in these offshore waters, the subtropical Pacific high and the cold California Current.

(134) The influence of high-pressure systems becomes increasingly frequent in these northern waters during spring. In fact, a principal path of highs from the central and western Pacific runs through this area and onto the Washington-Oregon coast. These systems bring clearing conditions, west through north winds and sometimes mild temperatures. Temperatures can, on occasion, get up into the upper fifties and low sixties (14.4° to 16.7°C) in March and into the upper sixties (19.4° to 20.0°C) in May. Clear to partly cloudy skies occur most often with west to north winds. Wind speeds are less than 10 knots most often with west to north winds.

(135) High-pressure systems dominate the weather in California offshore waters, although an occasional storm disrupts the good weather, particularly in early spring. Wind and sea conditions are not so good, however, in waters from off San Francisco northward. In this region, the pressure gradient between highs and lows is often very tight, creating strong north winds that blow at speeds that average near 20 knots and whip up seas of 12 feet (3.7 m) or more from 8 to 20 percent of the time. This situation continues throughout spring.

(136) Conditions improve rapidly toward the south, where winds are lighter and seas calmer. The high-pressure systems are responsible for west through north winds, clear skies and cool temperatures. Winds become increasingly persistent during spring, as the highs become more frequent. By May, northwest through north winds are blowing close to 70 percent of the time north of San Francisco, and west through northwest, about the same to the south. These winds blow over cold water and help keep temperatures in the fifties (10.6° to 15.0°C) throughout the spring, north of San Francisco. Even to the south, temperatures in the fifties (10.6° to 15°C) in March only climb into the mid-fifties to mid-sixties (11.7° to 19.4°C) by May. This compares with temperatures in the 70° to 80° (21.1° to 26.7°C) range at the same latitudes in North Atlantic offshore waters, where the Gulf Stream helps warm the air. The high-pressure systems are also responsible for the clear skies (about one-quarter cloud cover) that occur 25 to 50 percent of the time in these offshore California waters.

(137) The high is made up of high-pressure systems, which either form in the eastern Pacific or move into the area from western Pacific waters, the Bering Sea, or the Gulf of Alaska. By July the mean center of the Pacific High is located around 40°N and 150°W. The south flowing California Current is partially driven by the clockwise circulation of these high-pressure systems. Upwelling also contributes to cool water temperatures. Sea-surface temperatures run 10° to 15° cooler than they do off the Atlantic coast. Its influence is so great that average air temperatures off Eureka never get out of the fifties (10.6° to 15.0°C), and extremes have only reached 87°F (30.6°C), just 9° warmer than the January extreme. The California Current and coastal upwelling are responsible for the poor visibilities of summer and fall. The most dense and frequent fog occurs over the narrow stream of coldest water, just off the coast and is often limited to a band of 50 miles (81 km) or less. At other times, fog covers large areas, both in latitude and longitude, and may extend for hundreds of miles (>161 km). Its effect

is even more pronounced onshore, as you can read in the weather articles in the chapters following. The effect of the California Current in summer extends along the entire coast.

(138) When a high sits to the west, which is most of the time in summer, west through north winds blow over the offshore waters. Between Point Arguello and Portland, this warm moist air is being chilled by the California Current. This results in not only cool temperatures but low clouds and fog. West through north winds blow 70 to 80 percent of the time. In the offshore waters, where merchant ships are trying to avoid poor visibilities, fog and haze are still encountered 30 to 40 percent of the time between Point Arguello and San Francisco. The fog reduces visibilities to below 0.5 mile (0.9 km) up to 5 days per month. Skies are obscured by fog, or are overcast, up to 50 percent of the time in these offshore waters. Temperatures are often in the mid-fifties to mid-sixties (11.7° to 19.4°C) at these times.

(139) Between San Francisco and Portland, fog and haze occur 15 to 25 percent of the time. Fog reduces visibilities to below 0.5 mile (0.9 km) on about 3 to 8 days per month. Skies are obscured or overcast about 30 to 40 percent of the time. In addition to fog, this offshore area is often plagued by gales and rough seas created by a tight pressure gradient between a high off the coast and a heat low over the southwestern United States and Mexico. Gales blow on about 4 to 6 days per month. Strong winds whip up seas of 12 to 20 feet (3.7 to 6.1 m) about 3 to 10 percent of the time.

(140) As storms become less frequent during summer, so does rain. By August, rain falls 3 to 7 percent of the time in the offshore waters from Point Arguello to Vancouver Island.

(141) In the offshore waters between Portland and Vancouver Island, west and northwest winds blow more than one-half of the time, skies are clear 20 to 30 percent of the time, and temperatures are frequently in the sixties (16.1° to 20.6°C). Gales are rare, and, while it rains 5 to 10 percent of the time, this a lot less frequent than during any other season. West through north winds often bring poor visibilities to this area. Fog and haze are encountered 8 to 15 percent of the time. Fog drops visibilities below 0.5 mile (0.9 km) on about 2 to 5 days per month and is most frequent from midsummer on.

(142) South of Point Arguello, weather is fair. Visibilities are usually better than 5 miles, winds and seas are calmer, but temperatures are cool. These offshore waters are almost always under the influence of a high. West through northwest winds, which blow 70 to 75 percent of the time, keep temperatures mostly in the sixties (16.1° to 20.6°C) and bring haze and fog about 15 percent of the time. These warm, moist winds blowing over the California Current also help keep the sky overcast or obscured almost one-half of the time. Skies are clear about one-quarter of the time. Gales are rare, as are rough seas. Winds blow at about 10 knots.

(143) The subtropical high-pressure system forces most tropical storms south of southern California. There is a threat of tropical cyclones from June through November. An average tropical cyclone season sees about 15 tropical cyclones (winds of about 34 knots), of which an average of 8 reach hurricane strength. These storms seldom move north of 30°N. They are most likely to reach the latitudes of 30° to 35°N in August or September. However, by this time, they are usually weak and either well out to sea or well inland over Arizona. The eastern North Pacific season peaks in July, August and September. About three to five tropical cyclones can be expected each month, with an average of one to two reaching hurricane strength. The last damaging tropical cyclone to affect southern California was the September 1939 storm that moved inland near Los Angeles. In September 1972, the remains of a hurricane moved inland between San Diego and Los Angeles; it carried only 20-knot winds at the time of landfall. Several other tropical storms have completed the decaying process in the California coastal waters near the Channel Islands.

(144) Fall arrives subtly in September north of Point Arguello. It is delayed a month or so to the south by the subtropical high. High-pressure systems still bring some sunny, mild days with light west through north winds off Oregon and Washington, but even on these days, swells from distant storms often cast an ominous mood over these waters. Some storms move close enough to generate a southeast through southwest flow off Oregon and Washington. They also bring rain to offshore Washington waters about 8 to 13 percent of the time. A tightening of pressure gradients off northern California and Oregon in September is responsible for gales on 2 to 5 days and for seas of 12 feet (3.7 m) or more 2 to 4 percent of the time. Meanwhile, off central California, gales blow less often and seas are calmer than they were last month. September is usually the driest month in offshore waters from Oregon southward. Precipitation frequencies range from 6 percent off Oregon to less than 1 percent off southern California. Poor visibilities continue to plague the offshore waters north of Point Arguello. Fog reduces visibilities to less than 0.5 mile (0.9 km) on about 4 to 6 days in September. September temperatures usually range from the upper fifties and low sixties (14.4° to 16.7°C) in the north to the mid- and upper sixties (18.3° to 20.6°C) off southern California.

(145) During October and particularly November, storms become more frequent and more intense and move closer to the area than those of summer and early autumn. As the subtropical high weakens and retreats southward and the Aleutian Low is at its deepest, these storms move to the northwest and north, most affecting the vulnerable waters off Washington and Oregon. They frequently sweep these seas with strong southeast through southwest winds, which carry rain and sometimes fog. These winds average 15 to 20 knots. Gales occur on about 2 to 4 days in October and 3 to 6 days in November, off Washington and Oregon. Strong winds whip up seas of 12 feet (3.7

m) or more about 10 to 16 percent of the time. Rain falls more often as autumn progresses. It occurs about 8 to 20 percent of the time in October, increasing to 16 to 30 percent by November in these north seas. This is about as much as it rains in any month. Fog continues to plague this area and often rides in on a strong, warm south flow that accompanies a low-pressure system. It reduces visibilities to below 0.5 mile (0.9 km) on about 2 to 5 days per month. Temperatures of Washington and Oregon are often in the fifties (10.6° to 15°C) in October and mid-forties to mid-fifties (8.9° to 13.9°C) the following month.

(146) The winter transition comes later to California offshore waters. High-pressure systems remain influential, so winds often blow out of the north and northwest through late autumn, particularly in the south. Even off northern California, winds out of the north are only slightly less frequent than southerlies as late as November. Storms move closer and occasionally break through the protective barrier in November. In offshore northern California waters, they are responsible for about 3 to 5 gale days per month and for seas of 12 feet (3.7 m) or more 6 to 10 percent of the time. They also dump rain up to 10 percent of the time. Weather generally improves to the south, where rain falls as little as 3 percent of the time. Gales occur on about 2 days or less. Seas of 12 feet (3.7 m) or more occur about 8 percent of the time in central waters and about 1 percent in the south. Temperatures change slowly over offshore waters. In October, they frequently run in the fifties (10.6° to 15.0°C) in the north and in the sixties (16.1° to 20.6°C) to the south. Temperatures drop just a few degrees in November.

(147) Fog continues to be the most frequent navigational weather hazard in the waters of offshore northern and central California. Fog reduces visibilities to below 0.5 mile (0.9 km) on about 5 to 7 days during October, the worst month. Fog and haze are reported about 15 to 20 percent of the time, except off Los Angeles, where they occur about 40 percent of the time.

(148)

Principal ports

(149) The principal deep-draft commercial ports within the area of this Coast Pilot are San Diego, Long Beach, Los Angeles, San Francisco, Oakland, Richmond, Stockton and Humboldt Bay.

(150) Other ports are Port Hueneme, Port San Luis, Redwood City and Sacramento.

(151)

Pilotage

(152) In the area covered by this Coast Pilot, pilotage, with a few exceptions, is compulsory for all foreign vessels and for U.S. vessels under register in the foreign trade. It is optional for U.S. vessels in the coastwise trade, provided they are under the control and direction of a pilot duly licensed by federal law for the waters which that vessel travels.

(153) Only at San Francisco do pilot boats cruise on station continuously. At the other ports the pilots must be notified in advance in order for the pilot boat to meet the vessel at the proper time. Most of the pilot boats and stations may be contacted by radio; though ships' agents normally arrange for pilots, a vessel may notify the pilot station of its estimated time of arrival by radio. Specific information is given in the description of the various ports.

(154)

Towage

(155) Tugs of various sizes are available at all the deep-draft ports. Arrangements for their use are usually made by the ship's agent but in some cases may be made from the vessel by radio. For further information, refer to the description of the port.

(156)

Vessel arrival inspections

(157) Quarantine, customs, immigration and agricultural quarantine officials are stationed in most major U.S. ports. Consult Appendix A for a list of ports of entry found in this Coast Pilot. Vessels subject to such inspections generally make arrangements in advance through ships' agents. Unless otherwise directed, officials usually board vessels at their berths.

(158)

Harbormasters and wharfingers

(159) Harbormasters and wharfingers are mentioned in the text when applicable. They generally have charge of the anchorage and berthing of vessels.

(160)

Supplies

(161) Supplies of all kinds are available at San Diego, Los Angeles, Long Beach and San Francisco Bay. Limited quantities can be obtained at many other ports.

(162)

Repairs

(163) Large ocean-going vessels may be drydocked for complete repairs at Los Angeles, Long Beach, and San Francisco Bay. Smaller ships of up to about 7,000 tons may also be drydocked at San Diego. Fishing boats and yachts can be hauled out and can have hulls and engines repaired at numerous other places. The Coast Pilot gives information on some of these facilities; usually the largest repair facility in each area is mentioned.

(164) **Salvage** equipment is available at Los Angeles and San Francisco Bay.

(165)

Small-craft facilities

(166) There are numerous places where fuel, supplies, protected berths, repairs and shore facilities 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 online and from various local small-craft guides.

(167) **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).)**

(168) Southern California has many small-craft harbors with excellent facilities, but north of San Francisco the distances between protected harbors having facilities increases considerably until in the Puget Sound area. Temporary moorage is usually available for transients at most of the harbors. The intense yachting activity of California as far north as San Francisco, however, makes transient moorage more difficult along this section of the coast, even with its numerous harbors built especially for such craft.

(169)

Standard time

(170) The time zone in California is Pacific Standard Time, which is 8 hours behind Coordinated Universal Time (UTC).

(171)

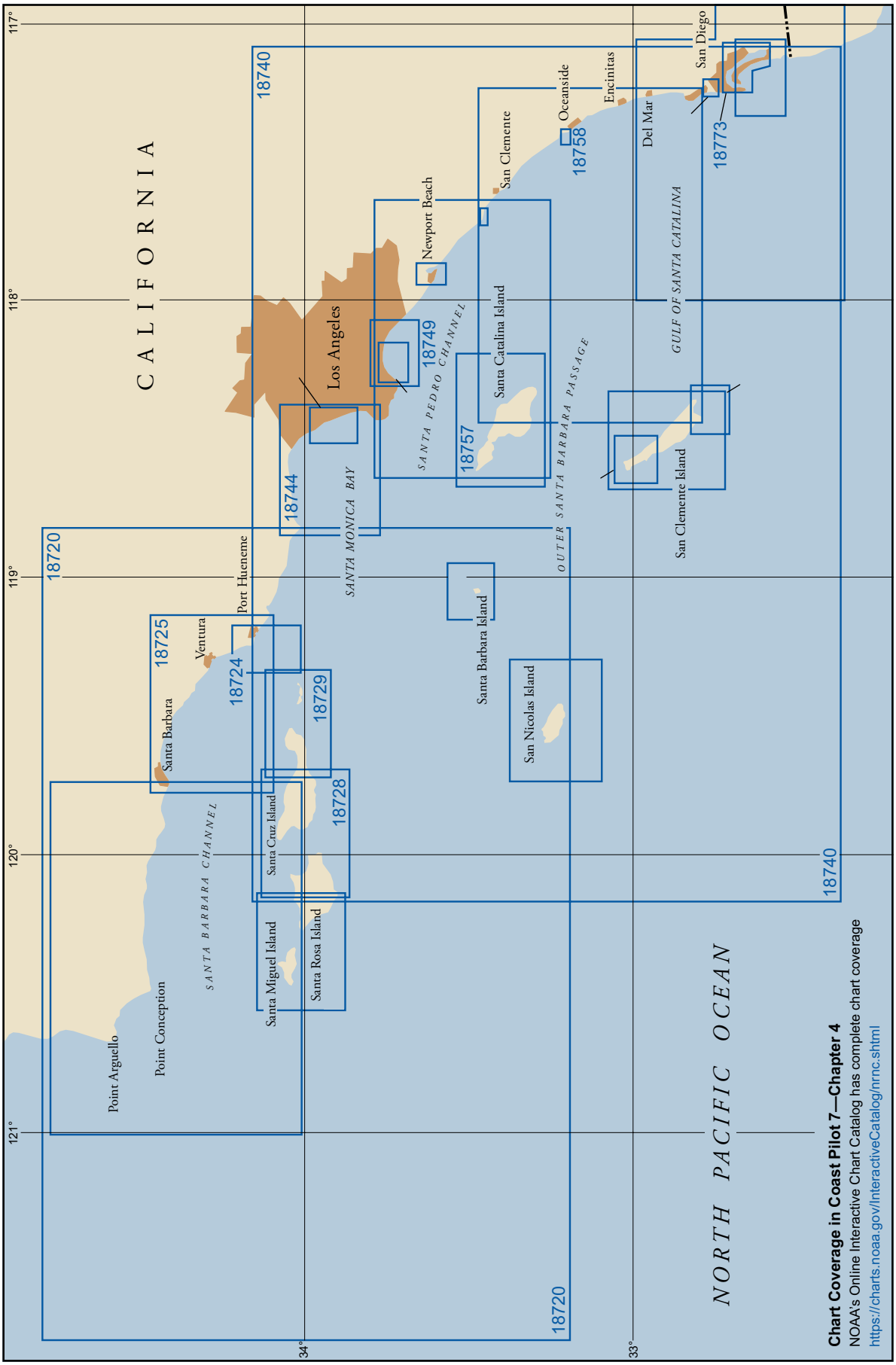
Daylight saving time

(172) In California, clocks are advanced 1 hour on the second Sunday of March and are set back to standard time on the first Sunday of November.

(173)

Legal public holidays

(174) The following are legal holidays in the area covered by this Coast Pilot: New Year's Day, January 1; Martin Luther King, Jr.'s Birthday, third Monday in January; Presidents' Day, February 17; César Chávez Day, March 31; Memorial Day, last Monday in May; Independence Day, July 4; Labor Day, first Monday in September; General Election Day, first Tuesday after first Monday in November; 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 states in every case.


CALIFORNIA
NORTH PACIFIC OCEAN
SANTA BARBARA CHANNEL
SANTA MONICA BAY
SANTA PEDRO CHANNEL
OUTER SANTA BARBARA PASSAGE
GULF OF SANTA CATALINA
Point Arguello
Point Conception
Santa Barbara
Ventura
Port Hueneme
Los Angeles
Newport Beach
San Clemente
Oceanside
Encinitas
Del Mar
San Diego
Santa Cruz Island
Santa Rosa Island
Santa Miguel Island
Santa Barbara Island
San Nicolas Island
Santa Catalina Island
San Clemente Island
18720
18725
18724
18729
18728
18744
18740
18749
18757
18758
18773
117°
118°
119°
120°
121°
34°
33°
Chart Coverage in Coast Pilot 7—Chapter 4
NOAA's Online Interactive Chart Catalog has complete chart coverage
https://charts.noaa.gov/InteractiveCatalog/nrnc.shtml

San Diego to Point Arguello, California

(14)

METEOROLOGICAL TABLE – COASTAL AREA OFF SAN DIEGO, CA
Between 31°N to 34°N and 116°W to 120°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	0.4	0.5	0.4	0.4	0.3	0.1	0.0	0.0	0.1	0.1	0.2	0.5	48
Wave Height > 9 feet [1]	0.8	1.3	1.7	1.8	1.2	0.8	0.5	0.3	0.4	0.6	0.9	1.2	48
Visibility < 2 nautical miles [1]	4.4	4.5	2.8	2.4	1.5	3.2	2.9	2.2	3.0	4.7	3.3	4.0	48
Precipitation [1]	3.6	3.6	2.4	1.7	1.2	1.4	0.8	0.5	0.9	0.9	2.1	3.1	1.8
Temperature > 69° F	1.2	0.8	1.2	1.4	1.9	3.0	9.2	14.7	14.8	9.0	4.4	1.7	5.4
Mean Temperature (°F)	58.3	58.4	58.5	59.3	60.4	62.1	64.7	66.4	66.5	65.2	62.7	59.9	61.9
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	79	78	79	81	83	84	84	83	81	77	76	80
Overcast or Obscured [1]	19.4	21.4	22.2	25.7	37.9	48.1	45.7	38.8	31.4	26.3	15.4	16.7	29.3
Mean Cloud Cover (8ths)	3.8	3.9	4.1	4.2	5.0	5.5	5.6	5.3	4.6	4.2	3.4	3.5	4.4
Mean SLP (mbs)	1018	1018	1017	1015	1015	1013	1013	1013	1012	1014	1017	1018	1015
Ext. Max. SLP (mbs)	1040	1040	1037	1034	1030	1029	1027	1027	1028	1031	1035	1040	1040
Ext. Min. SLP (mbs)	996	996	995	998	999	998	999	998	997	997	999	995	995
Prevailing Wind Direction	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW
Thunder and Lightning [1]	0.1	0.1	0.2	0.1	0.0	0.1	0.2	0.1	0.3	0.2	0.1	0.1	0.1

[1] Percentage Frequency

(1) This chapter describes the 240-mile irregular coast of southern California from the Mexican border to Point Arguello. The coast extends in a general northwest direction and includes the major ports of San Diego, Long Beach, Los Angeles and Port Hueneme. This chapter also describes the recreational and fishing ports of Oceanside, Newport Beach, Ventura, Santa Barbara and the many other ports on San Pedro and Santa Monica Bays and along the Santa Barbara Channel.

(2)

COLREGS Demarcation Lines

(3) The lines established for this part of the coast are described in **33 CFR 80.1104** through **80.1126**, chapter 2.

(4)

Blue, fin and humpback whales

(5) All whales are protected under the Marine Mammal Protection Act (MMPA) and, when in Sanctuary waters, under the National Marine Sanctuaries Act (NMSA). Certain large whales, including blue, fin and humpback whales, are also listed as endangered under the Endangered Species Act (ESA). See chapter 3 for more information.

(6)

ENC - US2WC05M
Chart - 18022

(7) There are several islands and dangers from 7 to 100 miles off the southern California coast; they are described in chapter 5.

(8) Many restricted and danger areas are in these waters. (See **33 CFR 334.860**, **334.870**, **334.880**, and **334.890**, chapter 2 for limits and regulations.) In addition, missile firing, gunnery and bombing operations are conducted on and over offshore waters not included in the areas defined in chapter 2 and at times endanger surface vessels. Information about these areas is published in Local Notice to Mariners issued by Commander, Eleventh Coast Guard District, Alameda, CA, and Notices to Mariners issued by National Geospatial-Intelligence Agency, Washington, DC.

(9) Submerged submarine operations are conducted at various times in the waters off the coast of southern California; proceed with caution.

(10)

Weather, San Diego to Point Arguello

(11) The mild climate from San Diego to Point Arguello is controlled by the Pacific high-pressure system. Aided by the sea breeze, it brings winds from off the water, mainly south through north, which help keep coastal temperatures up in winter and down in summer. Coldest average temperatures range from the middle to upper fifties (12° to 16°C), while summertime readings are most often in the seventies (22° to 27°C). Occasionally a hot dry flow off the land in autumn will cause temperatures to soar into the nineties (33° to 38°C), and a rare winter outbreak from the east can drop temperatures to below freezing (<0°C). Winter is the rainy season, although not much rain falls along these coasts.

(12) Strong winds and rough seas, while less frequent than farther north, can be a problem from the middle of fall through late spring. Strong pressure gradients, distant storms and infrequent close storms account for most of the gales and seas of 12 feet (3.7 m) or more, particularly off Point Arguello and in the Santa Barbara Channel. Strong local winds (Santa Ana) also generate gales along sections of this coast.

(13) Advection or sea fog, formed by warm moist air flowing over cool water, frequently confronts mariners in these waters. It is a persistent and widespread problem, particularly in the summer and fall north of Santa Monica and in fall and winter south of Santa Monica.

(15)

ENC - US3CA70M
Chart - 18740

(16) In clear weather, vessels coming from south will sight Table Mountain and its surrounding high land and Los Coronados before picking up the San Diego landmarks.

(17) **Table Mountain**, conspicuous and flat-topped, is in Mexico, 25 miles southeast of Point Loma and 6 miles inland.

(18) **Los Coronados (Coronado Islands)** are four bare, rocky islands, extending 4.5 miles in a northwest direction, 7 miles offshore in Mexican waters, and 15 miles south of Point Loma. These islands are prominent in clear weather, and the passage east of them is commonly used by vessels. Depths in the vicinity of the islands are irregular, and in thick weather or at night caution must be observed when near them.

(19) A light is shown from a white cylindrical masonry tower on the south end of the south island; it is obscured from certain directions by the north islands. Another light is shown from a white square masonry tower near the north end of the south island; local fog sometimes obscures it.

(20) The boundary between the United States and Mexico is marked by a 14-foot white marble obelisk on a pedestal 41 feet above the water near the edge of a low table bluff. The visible marker is 200 yards from the beach and 10 miles 142° from Point Loma Light. A large circular concrete arena is conspicuous just south of the marker. A stone mound, 365 feet above the water and 1 mile east of the obelisk, marks another point on the boundary line. Directly north of the obelisk the mesa falls to the low marshy land south of San Diego Bay.

(21) About 1.5 miles north of the border at Imperial Beach is a fishing pier extending 400 yards to seaward.

(22) In the approach from seaward in clear weather, San Clemente Island, the southernmost of the off-lying islands, will be sighted before the distinguishing features of the coast are seen. This will check the vessel's position and indicate subsequent shaping of the course for Point Loma. Upon a nearer approach, Cuyamaca Peak and the high land of the interior, Los Coronados, and Point Loma will be distinguished. Several aerolights in the vicinity of San Diego are visible at night from seaward.

(23) When making the approach to San Diego, useful radar targets are San Clemente Island, Los Coronados, the pleasure piers at Imperial Beach and Ocean Beach, the jetties of Mission Bay, Point Loma and Ballast Point.

(24) When entering the harbor, the buoys marking the channel and Ballast Point are easily identified targets, thence Shelter Island, the radar reflector on North Island, and the various piers on either side of the channel; thence Harbor Island, the Coast Guard station pier, B Street Pier and the Tenth Avenue Marine Terminal.

(25)

ENC - US5CA72M
Chart - 18773

(26) **San Diego Bay** is a crescent shaped bay, 10 miles northwest of the U.S./Mexico boundary. The bay is one of the finest natural harbors in the world, and affords excellent protection in any weather; it is free of excessive tidal current movements. A low, narrow sand spit, which expands to a width of 1.6 miles at North Island on its northwest end, separates the bay from the ocean. The port of San Diego, which occupies much of the bay, is a major U.S. Naval base and has good commercial marine facilities.

(27) The city of **San Diego** is on the northeast shore of the bay. **Coronado** is on the sandspit opposite San Diego. **National City** and **Chula Vista** are south of San Diego on the southeast shore of the bay. The principal wharves are at San Diego and National City. Coronado, connected to San Diego by a highway bridge, is a residential and resort area of little commercial importance.

(28)

Prominent features

(29) **Point Loma**, on the west side of the entrance to San Diego Bay, is a ridged peninsula with heights of about 400 feet. The ridge is bare of trees except in the gullies and where planted around the houses near the summit and is sparsely covered with grass, sagebrush and cactus. The tanks and buildings of a sewage treatment plant are conspicuous about 0.9 mile north of the point. At a distance the point usually has the appearance of an island. **Point Loma Light** (32°39'54"N., 117°14'34"W.), 88 feet above the water, is shown from a black house on a 90-foot white square pyramidal skeleton tower at the south end of the point. A mariner-radio-activated sound signal at the light is initiated by keying the microphone five times on VHF-FM channel 81A. Thick kelp beds extend more than 1.5 miles south of the point, and a sunken wreck is about 0.5 mile south of the light.

(30) On the nearer approach, an abandoned lighthouse will be seen on the highest part of the hill immediately back of Point Loma Light. The old lighthouse and grounds form the **Cabrillo National Monument**, honoring the discoverer of San Diego Bay. The statue of Cabrillo, about 300 yards northeast of the abandoned lighthouse,

is reported to be an excellent mark when fog obscures the old lighthouse. From inside the bay, prominent objects along the crest of the ridge are a large red and white checkered elevated tank, a green standpipe and a tall lookout tower all about 2.5 miles north from the light.

(31) **Ballast Point**, low and sandy, projects 0.4 mile northeast from the east side of Point Loma, 1.3 miles north from Point Loma Light. **Ballast Point Light B** (32°41'11"N., 117°13'58"W.), 16 feet above the water, is shown from a dolphin with a green and white diamond-shaped daymark off the end of the point. A mariner-radio-activated sound signal at the light is initiated by keying the microphone five times on VHF-FM channel 81A. Three piers of the Naval Submarine Base are just north of Ballast Point.

(32) **North Island**, the filled northwest end of the sand spit on the east side of the bay entrance, is Naval Base Coronado. On its southeast side is the City of Coronado. Prominent features that show up well from the entrance are the tall condominiums at Coronado Shores 2.7 miles east of the entrance, the cupola of Hotel del Coronado 3 miles east of the entrance, and the tower of the Naval Air Station Administration Building, which is marked by an aerolight and is operated intermittently with varying characteristics. In clear weather the skyline of the city of San Diego is very prominent on the south approach.

(33)

COLREGS Demarcation Lines

(34) The lines established for San Diego Harbor are described in **33 CFR 80.1104**, chapter 2.

(35)

Channels

(36) A **federal project** provides for a dredged channel with depths of 55 feet in the approach, thence 47 feet in the entrance and through North San Diego Bay to the turning basin on the northeast side of North Island (near Pier K), thence 42 feet to just northwest of the San Diego-Coronado Bay bridge, thence 37 feet to a basin southwest of the National City Marine Terminal. 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.

(37)

Anchorages

(38) General anchorages, special anchorages and anchorages for Government vessels have been established in San Diego Bay. (See **33 CFR 110.1**, **110.90**, and **110.210**, chapter 2, for limits and regulations. The Port of San Diego has temporarily prohibited anchoring or mooring in **Special Anchorage A-8** (Sweetwater Anchorage), in South San Diego Bay.

(39) Permission to use anchorage berths 212 through 216 and Mooring Buoy 19, south of Harbor Island, must be obtained from Navy Afloat Training Group Pacific at 619–556–0914.

(40) Vessels waiting outside the entrance for a pilot will find good anchorage in 36 feet or more southeast of the entrance to the channel, although permission to anchor in the restricted area must be obtained from the local naval authorities. For permission to use anchorage berths 125, 126, 147, 158 and 171, contact Navy Afloat Training Group Pacific at 619–556–0914. For permission to use anchorage berths 124, 135, 146, and 170, contact Navy Region Southwest Port Operations at 619–556–3147 or 619–556–3148. For permission to use all other anchorage berths off Silver Strand, contact COMNVBEACHGRU at 619–437–2476. An obstruction in anchorage berth 171 is reported to be a fouled anchor in about 32°38'21"N., 117°11'50"W.—mariners are advised against anchoring near this area.

(41) The area in the lee of Point Loma, south of Ballast Point and west of the east line of the project channel, is reserved for pilot boats and harbor patrol or U.S. Government craft. (See **33 CFR 334.880**, chapter 2, for limits and regulations.)

(42)

Dangers

(43) A submerged jetty, marked by lights and a sound signal at the seaward end, extends 1 mile south along **Zuñiga Shoal** from **Zuñiga Point**, the southwest extremity of North Island. The outer two-thirds of the jetty has only small sections visible at high water. The lights marking the jetty have a white daymark with orange border and the words "DANGER SUBMERGED JETTY."

(44) A submerged jetty, marked by lights with daymarks that read "DANGER SUBMERGED JETTY," extends about 220 yards west from Zuñiga Point.

(45) There are numerous wrecks and obstructions in the shallow area of southeast San Diego Bay. Caution should be exercised when navigating outside the marked channels.

(46)

Regulated navigation areas

(47)

Restricted Areas in San Diego Bay

Title and Part Number	Location
33 CFR 334.860	On the western shore of South San Diego Bay
33 CFR 334.865	North side of North Island in North San Diego Bay
33 CFR 334.870	• Between Ballast Point and Zuñiga Point (degaussing station) • West side of North Island. • West of the dredged channel, 0.4 mile north of Ballast Point. • North San Diego Bay, surrounding the Navy Pier
33 CFR 334.880	In the lee of Point Loma and south of Ballast Point.
33 CFR 334.890	Large area south of Point Loma

(48)

Safety and Security Zones in San Diego Bay	
Title and Part Number	**Location**
33 CFR 165.1101	South San Diego Bay, Naval Station San Diego (See Note)
33 CFR 165.1102	Between Ballast Point and Shelter Island, Naval Base Point Loma (See Note)
33 CFR 165.1103	West Basin, west of Harbor Island
33 CFR 165.1104	North San Diego Bay, north side of North Island (See Note)
33 CFR 165.1105	West side of North Island
33 CFR 165.1106	North San Diego Bay, east of Harbor Island
33 CFR 165.1108	Surrounding all cruise ships
33 CFR 165.1110	Surrounding the Coronado Bay Bridge
33 CFR 165.1120	Southeast of Glorietta Bay
Note – A series of floating protection barriers, anchored by lighted buoys, surrounds the Naval facilities within these security zones.	

(49) **Regulated navigation areas** have been established in all waters of San Diego Bay, Mission Bay and their approaches and adjacent to the Naval Submarine Base just north of Ballast Point, extending east across the channel to the west shore of North Island. (See **33 CFR 165.1122** and **165.1107**, chapter 2, for limits and regulations.)

(50)

Bridges

(51) A fixed highway bridge linking San Diego and Coronado crosses San Diego Bay 0.3 mile southeast of the Tenth Avenue Marine Terminal.

(52)

San Diego-Coronado Bay Bridge Clearances (feet)		
Span	**Horizontal**	**Vertical**
Piers 14 and 15	194	156
Piers 18 and 19	600	195
Piers 19 and 20	600	214
Piers 21 and 20	500	175
RACONS mark the center of the spans between piers 18-19 and 19-20 and a sound signal is on pier 19.		

(53)

Currents

(54) The currents set generally in the direction of the channels. In the vicinity of the entrance the usual velocity varies from 0.5 to 5 knots depending upon the stage of the tide. South of the end of the jetty there is a slight set toward Zuñiga Shoal on the ebb. Great care should be taken while passing Ballast Point as a vessel may take a sudden sheer because of a crosscurrent deflected from Ballast Point.

(55) The eddy usually encountered along the ends of the municipal piers makes docking difficult. The velocity and direction of the eddy are irregular, and the greatest care must be exercised by even the most experienced. Strangers should not attempt to dock large vessels without a pilot. 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.

(56)

Weather, San Diego

(57) In the San Diego Bay area, visibilities are reduced to less than 0.5 mile (0.9 km), mostly by radiation fog, on about 3 to 7 days per month from September through April. December is the foggiest month. This fog is worst during the late night and early morning hours. Dense fog is as frequent at North Island as it is at Imperial Beach. However, sound signals indicate that in general it is foggier around the entrance to the bay than it is in the north sections. For example, in December, the sound signal at Point Loma is operating about 20 percent of the time, compared to 10 percent at Ballast Point.

(58) Winds in the area are strongest from March through September, when they blow 17 knots or more about 2 percent of the time. Gales are unheard of. Wind gusts have reached 50 knots or more during January. Strong winds often have a southerly component, but they also blow from the west and east. Winds along the coast are often affected by local topography, particularly when the flow is off the land. For example, at Imperial Beach, east winds blow 15 to 20 percent of the time from November through March. At Lindbergh Field Municipal Airport, prevailing winds are out of the north through northeast during this period. West through northwest winds are also common at both places. They become increasingly more frequent by March. During the late spring and summer, southwest through northwest winds prevail at both locations. However, at the more exposed Imperial Beach, west winds occur up to 25 percent of the time, whereas the flow is more variable at San Diego. By October, the winter wind regime begins to reestablish itself.

(59) No vessel over 1,600 designed displacement tons should transit the Coronado Bay Bridge in low visibility conditions if the bridge is not held visually within stopping distance. Tank ships or barges carrying petroleum products, explosive or other hazardous materials should not commence a movement in the approaches to or within the outer or inner harbor of San Diego when visibility of less than 0.5 mile or 1,000 yards is prevalent.

(60) The National Weather Service maintains an office at Lindbergh Field Municipal Airport; barometers may be compared there or by telephone.

(61)

Pilotage, San Diego

(62) All foreign vessels and vessels from a foreign port or bound thereto, and all vessels over 300 gross tons sailing under register between the port of San Diego and any other U.S. port, are subject to pilotage. Further information regarding pilotage requirements are detailed in the Pilotage section of the **Port of San Diego Tariff**,

available through the ship's agent or directly from the Port District at (619) 686–6343.

(63) Vessels sailing under enrollment and licensed, and engaged in the coasting trade, between the port of San Diego and other U.S. ports, are exempt from all pilotage, unless a pilot is actually employed.

(64) Pilotage and berthing requirements for naval vessels are coordinated by Navy Region Southwest Port Operations, 619–556–1433.

(65) Estimated time of arrival is required 48 hours in advance with changes at least 2 hours before arrival. Vessels are advised to avoid arriving between 0715 and 1045 hours on Mondays, or on mornings following public holidays, due to increased U.S. Naval vessel movements. San Diego Bay is served by the San Diego Bay Pilots Association, Inc. (Dispatch phone 619–233–3096). The pilot boat monitors VHF-FM channels 16 and 12, 1 hour prior to scheduled vessel arrivals; VHF-FM channel 12 is used as a working frequency. If contact with the pilot is needed prior to 1 hour in advance of arrival, information should be relayed via the ship's agent.

(66) Pilot boat NATIONAL CITY is a 38-foot white monohull with the word PILOT on the forward-facing bulkhead. An AIS transmitter identifies the vessel as "SD Pilot Boat." International Code flag 'H' is displayed during daylight hours and white over red lights are displayed at night.

(67) Arrangements for pilots are made via ship's agent and boarding information via radio by calling "San Diego Pilots" on VHF-FM channel 12. Pilots will monitor VHF-FM channels 12 and 16 one hour prior to scheduled arrivals.

(68) Pilots board vessels just southeast of the San Diego Bay Approach Lighted Whistle Buoy SD in approximate position 32°37'12"N., 117°14'00"W. Vessels should pass to the south and east of the buoy leaving it on the port side when making the approach, unless otherwise directed by the pilot. When boarding, pilots request vessels maintain a speed of 7 knots and rig the pilot ladder 6 feet (2 meters) above the water on the lee side (typically starboard side).

(69) The San Diego Unified Port District operates a VHF-FM radio station from Harbor Control Headquarters at Shelter Island for contacting merchant ships, port pilots and other nearby stations. Channel 16 is for calling; channels 12 and 17 are for port operations. The station call sign is KJC-824.

(70)

Towage

(71) Tugs to 5,000 hp are available from commercial operators in the San Diego area. Naval tugs handle navy vessels but will assist commercial vessels in emergencies.

(72)

Quarantine, customs, immigration and agriculture quarantine

(73) San Diego is a customs port of entry. U.S. Customs requires that all non-commercial vessels, including corporate yachts, less than 130 feet in length returning from a foreign port or place, report directly to the Harbor Police Dock (32°42'30"N., 117°14'05"W.) on Shelter Island. When space is unavailable at the dock, vessels should utilize one of the three quarantine buoys located across from the dock until space is available. Commercial and non-commercial vessels greater than 130 feet in length returning from a foreign port or place must contact the Harbor Police Communications Center at 619–686–6272, eight hours prior to arrival and request dock space. Only the master may leave the vessel to contact Customs and Border Protection in order to request an inspector respond to Shelter Island. All persons aboard the clearing vessel are quarantined to the vessel until cleared by Customs. Additionally, no visitors are allowed aboard the vessel. Persons of foreign nationality should identify themselves to make arrangements to declare entry into the county with the Immigration and Naturalization Service. Officials usually board documented vessels at their berths. Customs and Border Protection can be reached at 619–685–4300, 24 hours a day.

(74) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(75)

Coast Guard

(76) Coast Guard Sector San Diego is on the mainland just northeast of the east end of Harbor Island. Coast Guard Sector San Diego is a consolidated unit that includes an air station, a small boat station, cutters, an aids-to-navigation team, a command center and other personnel. The Prevention Department handles the business of the former Marine Safety Office (see Appendix A for address); telephone, 619–278–7000. On San Diego Bay adjacent to the base is a **safety zone** for Coast Guard search and rescue and law enforcement missions.

(77)

Harbor regulations

(78) The Port of San Diego is under control of the San Diego Unified Port District. Rules and regulations are enforced by a Port Director, who is appointed by the Board of Port Commissioners. The general offices of the port district are at 3165 Pacific Highway, San Diego. The manager of marine operations and the chief wharfinger have offices at the Tenth Avenue Marine Terminal, 687 Switzer Street, San Diego. The office of wharfinger can be reached by telephone at 619–686–6346, by fax at 619–686–6354, or by email at tamt@portofsandiego.org.

(79) The Coast Guard Captain of the Port, San Diego, has designated the ship channels in San Diego Harbor as "narrow channels" for the purposes of enforcing Rule 9 of the Navigation Rules. Vessels of less than 20 meters (65.6 feet), sailing vessels, vessels engaged in fishing and crossing vessels shall not impede the passage of a vessel that can safely navigate only within a narrow channel.

(80) As a general rule, the areas of the bay that are not regulated by a speed zone are to be navigated at a safe and prudent speed with regards to Rule 6 of the U.S.

(87)

Facilities in the Port of San Diego

Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Mechanical Handling Facilities and Storage	Purpose	Owned/ Operated by:
B Street Pier Cruise Ship Terminal	32°43'03"N., 117°10'36"W.	2,400	35-37	13	Passenger terminal	Mooring cruise ships; Boarding passengers	San Diego Unified Port District
Broadway Pier	32°42'57"N., 117°10'36"W.	2,135	35	13	n/a	Mooring cruise ships; Mooring miscellaneous excursion vessels and craft for US Customs	San Diego Unified Port District
Tenth Avenue Marine Terminal (Berths 1 and 2)	32°42'05"N., 117°09'32"W.	1,120	30	13	Tank storage (167,850 barrels); Pipelines extend from storage tanks to berths	Receipt and shipment of conventional and containerized general cargo and perishable food; Bunkering vessels	San Diego Unified Port District/ Jankovich & Son
Tenth Avenue Marine Terminal (Berths 3, 4, 5 and 6)	32°41'55"N., 117°09'28"W.	2,244	41	13	Covered storage (40,000 tons); Open storage (3.5 acres); Tank storage (3 million gallons); One traveling gantry cement unloader served by a conveyer	Receipt and shipment of conventional and containerized general cargo and perishable food; Receipt of bulk fertilizer and cement; Bunkering vessels	San Diego Unified Port District/ Jankovich & Son/ Pacific Coast Cement Corp.
Tenth Avenue Marine Terminal (Berths 7 and 8)	32°41'48"N., 117°09'12"W.	920	41-42	13	Tank/Silo storage (33,000 metric tons); One traveling bulk shiploader served by a belt conveyer	Receipt and shipment of miscellaneous dry bulk commodities and conventional/ containerized general cargo; Bunkering vessels	San Diego Unified Port District/ Jankovich & Son/ North American Terminals, Inc.
National City Marine Terminal (Berths 24-1 and 24-2)	32°39'25"N., 117°07'18"W.	1,400	20-35	13	Open storage (107 acres); Covered storage (40,320 square feet); Tank storage (348,000 barrels)	Receipt and shipment of general cargo and automobiles; Occasional reciept of fuel oil	San Diego Unified Port District
National City Marine Terminal (Berths 24-3 and 24-4)	32°39'14"N., 117°07'18"W.	1,000	35	13	One traveling container crane (40 long tons); One mobile straddle carrier (40 tons)	Receipt and shipment of conventional and containerized general cargo and automobiles; Occasional reciept of fuel oil	San Diego Unified Port District
National City Marine Terminal (Berths 24-10 and 24-11)	32°38'56"N., 117°06'54"W.	1,430	35	13	Open storage (76 acres)	Receipt and shipment of conventional general cargo and automobiles; Receipt of lumber; Shipment of cattle	San Diego Unified Port District

* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

Coast Guard Navigation Rules. South San Diego Bay is governed by a 5 mph speed limit and is delineated by concrete pylons. All lagoons are posted as 5 mph zones. These include the Shelter Island Yacht Basin, the America's Cup Harbor, Harbor Island West and East Lagoons and Glorietta Bay. The speed limit for areas near anchorages is 5 mph.

(81) The Navy Port Operations Manager requests that vessels slow to 7 knots when an aircraft carrier is moored in the restricted area (See **33 CFR §334.865**, chapter 2) on the northeast side of North Island. This is especially important for heavier/larger vessels as the surge is greater than smaller vessels.

(82) The State of California, with the approval of the Environmental Protection Agency, has established a No-Discharge Zone (NDZ) in San Diego Bay. The NDZ is comprised of the portion of San Diego Bay that is less than 30 feet deep at mean lower low water (MLLW), as determined from the most recent NOAA nautical chart.

(83) Within the NDZ, discharge of sewage, whether treated or untreated, from all vessels is prohibited. Outside the NDZ, discharge of sewage is regulated by **40 CFR 140** (see chapter 2).

(84) In addition to the **No-Discharge Zone** and concurrent with the federal regulations above, the **San Diego Unified Port District Code** (section 8.50) prohibits the discharge of any material, including sewage, into San Diego Bay without written permission by the Port Director.

(85)

Wharves

(86) The **San Diego Unified Port District** owns the deepwater commercial facilities in the bay and operates them either independently or in conjunction with private firms. The port piers and wharves have water, rail and highway connections. There are a number of smaller privately operated wharves and piers used for receiving oil and repairing vessels and for mooring and fueling small craft. Only the deep-draft commercial facilities are listed in the table. The alongside depths given for each facility listed are reported depths. (For information on latest depths, contact the Port of San Diego.)

(88) General cargo at the port is usually handled by ship's tackle; special handling equipment, if available, is listed in the table for the particular facility.

(89) In the port area, the San Diego Unified Port District and private companies operate warehouses having a total of 764,500 square feet of dry storage space and 1,997,400 cubic feet of cold storage space. A large amount of transit shed space and open storage is available.

(90)

Supplies

(91) Marine supplies of all kinds are available in San Diego. Bunker fuel, diesel oil and lubricants are available. Large vessels can be bunkered via pipeline at the Tenth Avenue Marine Terminal, or arrangements can be made to fuel at all commercial berths from barges. Water is available at most of the berths.

(92)

Repairs

(93) There are shipbuilding and repair yards in San Diego with floating drydocks, the largest of which has a lifting capacity of 44,000 tons. The largest marine railway can handle craft up to 1,000 tons. Complete shipyard facilities are available for all types of repair work.

(94) A U.S. Navy graving dock, located at the naval station near the foot of 32nd Street, may be used by local repair firms by prior arrangements with the San Diego Unified Port District and local naval authorities. The dock has a clear inside length of 693 feet and an entrance width of 90 feet. The dock is served by a 27½-ton full portal traveling crane. The graving dock at National Steel and Shipbuilding Co., about 0.9 mile northwest of the Navy graving dock, has a clear length of 1,000 feet and an entrance width of 108 feet.

(95)

Communications

(96) San Diego has transcontinental railroad connections to the north and east. Major airline service is available at San Diego International Airport, Lindbergh Field. San Diego is the port of call for many steamship and cruise lines. Major bus, railroad and motor freight lines serve the city.

(97)

Small-craft facilities

(98) **Shelter Island**. across the channel from North Island and 1.5 miles above Ballast Point, includes the **Shelter Island Yacht Basin** on the south and the **Americas Cup Harbor** on the north. Shelter Island is the most important small-boat area in San Diego Bay. The yacht basin has several large marinas and yacht clubs. It can accommodate more than 2,000 boats at its piers, floats, and moorings. The entrance channel has depths of 20 feet to inside the entrance, thence 15 feet to most of the facilities; the least depth is 9 feet. The entrance is marked by lights and lighted buoys. The **354°** lighted range marking the entrance to San Diego Bay also marks the approach to the entrance to Shelter Island Yacht Basin. The **harbor police** are at the Harbor Control Headquarters just inside the entrance to the yacht basin. The police dock is also the boarding station for the inspection of small craft by Customs, Public Health, Immigration and Agricultural quarantine personnel when such inspections are necessary. Harbor police boats, providing fire protection, law enforcement and assistance to small boats in distress, operate from this facility on a 24-hour basis. Overnight berths for transient vessels are usually available at one of the marinas; if no such berth is available, temporary mooring or berthing may be made available through the harbor police. The Americas Cup Harbor has accommodations for over 600 vessels and is the home port for many commercial fishing vessels. Repair yards in the basin have marine railways that can handle craft up to 800 tons. All kinds of repairs to small vessels may be obtained here. Both the yacht basin and the Americas Cup Harbor have fueling docks, a launching ramp and marine supplies.

(99) **Harbor Island**, about 0.5 mile northeast of Shelter Island, is in the northernmost part of the bay. **Harbor Island West Basin** has berthing and mooring accommodations for nearly 1,600 craft. A number of marinas, hotels, restaurants and shops are along the shore of the basin. A light shows from atop a building near the west end of the island.

(100) A **090°–270° measured nautical mile** is off the south side of Harbor Island. Each range is marked by two diamond-shaped markers.

(101) **Glorietta Bay**, on the south side of Coronado and 6 miles from Ballast Point, is a small-craft harbor occupied by a yacht club and a small marina. The facilities include berths for over 215 yachts and small craft. A channel marked by lighted and unlighted buoys and a **232°** lighted range leads from the main channel in San Diego Bay to the basin in Glorietta Bay. In 2004, the controlling depth in the channel was 15 feet; thence in 1993, depths of 15 to 17 feet were reported in the basin with lesser depths along the edges. A 5 mph **speed limit** is enforced in Glorietta Bay. Water, ice, and a launching ramp are available.

(102) A **restricted area**, marked by buoys, is outside the southeast limit of the channel into Glorietta Bay. (See **33 CFR 334.860**, chapter 2, for limits and regulations.)

(103) A **security zone** is also outside the southeast limit of the channel into Glorietta Bay, within the restricted area off the Naval Amphibious Base. (See **33 CFR 165.1** through **165.8**, **165.30**, **165.33**, and **165.1120**, chapter 2, for limits and regulations.)

(104) **Speed Control Lights** cross South San Diego Bay, near the head, north of Chula Vista.

(105) **Chula Vista Harbor** is on the east side near the head of South San Diego Bay at Chula Vista. The entrance is protected by breakwaters marked at the outer ends by private lights. The entrance channel and basin channel are marked by private buoys, lights and daybeacons. In 2002, the approach to the basin had a reported depth of 18 feet with 16 feet reported alongside the piers. Berthing, electricity, water, ice, sewage pump-out, nautical supplies and a launching ramp are available.

(106)

ENC - US3CA70M
Chart - 18740

(107) The 80-mile coast between San Diego Bay and San Pedro Bay is thickly settled, and the buildings of numerous towns and resorts are prominent from offshore. Several small-boat harbors and the port of Newport Bay are along the coast.

(108) The first 11 miles of the coast, between Point Loma and Point La Jolla, is extremely rocky, and the kelp beds extend up to 2 miles from shore; vessels should stay well offshore.

(109) About 1 mile north of Point Loma Light is a submerged sewer outfall line extending about 1 mile to the west.

(110) **Ocean Beach**, 5 miles north of Point Loma, has a large Y-shaped fishing pier with a private sound signal on the end.

(111)

Weather, Gulf of Santa Catalina

(112) Over the Gulf of Santa Catalina and along its shores, fog is a problem during fall and winter. This is most often a land (radiation) fog that drifts out over the gulf at night. By late morning, conditions begin to clear, particularly along the coast. Offshore, fog reduces visibilities to less than 0.5 mile (0.9 km) on about 4 to 9 days per month, from September through February and in May. September and October are the worst months. Along the coast, visibilities drop below 0.5 mile (0.9 km) on about 2 to 8 days per month from August through April. November, December and February are the worst months.

(113) Gale force winds never occur as much as 1 percent of the time in the Gulf of Santa Catalina. They are infrequently encountered from November through April. Wind speeds of 17 knots or more occur about 1 to 3 percent of the time from December through May. Winds on the coast are often light. At Camp Pendleton, winds less than 3 knots occur 40 to 50 percent of the time from September through March. Seas are most likely to get choppy from November through April, when distant storms south of 40°N. generate west swells. These swells are 6 feet (1.8 m) or more, about 2 to 5 percent of the time. In winter, they occasionally exceed 9 feet (2.7 m) and some 12-foot (3.7 m) swells have been reported.

(114)

Mission Bay to Del Mar

(115) **Mission Bay**, entered between two jetties 5.5 miles north of Point Loma, is a recreational small-craft harbor administered by the city of San Diego. Lights mark the entrance to the bay as well as a sound signal on the outer end of the north jetty. The mariner-radio-activated sound signal is initiated by keying the microphone five times on VHF-FM channel 81A. A prominent feature when approaching the harbor is the municipal fishing pier at Ocean Beach, 0.3 mile south of the entrance. The lighted 338-foot tower at Sea World is prominent 1.8 miles east of the entrance. Sound signals are sounded from the fishing pier. A dredged channel leads from deep water in the Pacific Ocean to the highway bridge about 1.3 miles above the entrance. **Quivira Basin** and **Mariners Basin**, on the east and west sides of the channel, respectively, are entered about 1 mile above the entrance. A jetty marked on its outer end by a light extends about 125 yards northwest from the south side of the entrance to Quivira Basin.

(116) The entrance to Mission Bay can be difficult to navigate under certain conditions. Large swells in any season and from virtually any direction can break completely across the entrance channel. With a rough sea outside, a heavy surge exists inside the bay, especially in Quivira Basin. Boats must be securely moored to prevent damage from this surge condition. Mission Bay contains an enormous amount of water that is funneled in and out of the narrow entrance channel with tidal changes. During periods of unusually large tidal flow, an extremely strong current may be present in the channel; mariners are urged to use caution when transiting the entrance.

(117)

No-Discharge Zone

(118) The State of California, with the approval of the Environmental Protection Agency, has established a No-Discharge Zone (NDZ) in Mission Bay. It encompasses the entire bay; see the chart for zone limits.

(119) Within the NDZ, discharge of sewage, whether treated or untreated, from all vessels is prohibited. Outside the NDZ, discharge of sewage is regulated by **40 CFR 140** (see chapter 2).

(120)

COLREGS Demarcation Lines

(121) The lines established for Mission Bay are described in **33 CFR 80.1106**, chapter 2.

(122) Two fixed highway bridges cross Mission Bay. The first bridge, crossing above the entrance between Ventura Point and Sunset Point, has a clearance of 38 feet. The second bridge, connecting Vacation Isle with Crown Point to the north and Dana Landing to the south, has a

clearance of 31 feet under the north span and 38 feet under the south span.

(123) An aerial tramway cable, with a clearance of 42 feet, crosses the entrance to **Perez Cove**, immediately southeast of Dana Landing.

(124) The San Diego City Lifeguard Headquarters and the San Diego Police Department, Mission Bay Harbor Unit, are on the south side of the entrance to Quivira Basin. Harbor regulations are enforced and emergency assistance is provided by the two units. The Lifeguard Service maintains a 24-hour watch on VHF-FM Channel 16 and handles all dispatches. Police matters are dispatched to the Police Harbor Patrol. Calls for assistance in Mission Bay and within 3 miles of the coastline, from Point Loma to the south, to Blacks Beach, about 3 miles north of Point La Jolla to the north, are the responsibility of the Lifeguard Service. Both units have patrol boats and make safety inspections. Water skiing, swimming, sailing, fishing and speed regulations are enforced in Mission Bay. Most regulations are posted; complete regulations are available from the City Lifeguard Headquarters Office. A full service repair facility is available in Quivira Basin. A 100-ton hoist for hull and engine repairs, gasoline, diesel fuel, water, ice and marine supplies are available. There are numerous launching ramps and parking areas around the bay. The inner bay has several marinas and many private moorings.

(125)

Anchorages

(126) **Special anchorages** are along the west side of Mission Bay in **San Juan Cove**, **Santa Barbara Cove**, **Bonita Cove**, Mariners Basin and Quivira Basin. (See **33 CFR 110.1** and **110.91**, chapter 2, for limits and regulations.)

(127) **Mission Beach**, 6.5 miles north of Point Loma, is an amusement place with prominent buildings. From seaward the highest part of the roller coaster looks like a dome.

(128) **Pacific Beach**, 8 miles north of Point Loma, has a pleasure pier extending about 260 yards from the beach. The pier was partially destroyed in the winter of 1984, and submerged piles are reported within 90 yards of the seaward end; caution is advised.

(129) A 2-mile rounding rocky point, 9 miles north of Point Loma, is the first high land north of San Diego Bay. The point is a spur from 822-foot **Soledad Mountain**. The south end of this headland is called **False Point**, and the north end is **Point La Jolla**. In the vicinity of Point La Jolla, rock cliffs with caves rise abruptly from the water to heights of 80 feet. The buildings at **La Jolla** and Pacific Beach, and the television towers on Soledad Mountain are prominent.

(130) **Scripps Institution of Oceanography**, one of the leading institutions in research in oceanography and marine biology, has extensive facilities 12 miles north of Point Loma. The institution maintains a long pier for observation purposes.

(131) Just north of Scripps Institution the bluffs rise to a height of 300 feet, then decrease gradually for the next 5 miles to heights of 20 to 80 feet.

(132) A **000°–180° measured nautical mile** has been established 13.5 miles north of Point Loma; each range is marked by two steel towers.

(133) **Del Mar**, 18 miles north of Point Loma, is a resort city.

(134) The coast from Del Mar north for 31 miles to San Mateo Point is a low, flat tableland with abrupt cliffs 60 to 130 feet high and with broad beaches. The tableland is intersected by numerous deep valleys with streams that usually dry in the summer. In the north part, the high ridges of the interior are much nearer the coast. Paralleling this coast are U.S. Highway 101 and a Class I railroad.

(135)

ENCs - US3CA70M, US5CA77M
Charts - 18740, 18758

(136) **Carlsbad**, 30 miles north of Point Loma, is a resort area with a number of hotels and motels. A submerged pipeline extends 0.9 mile seaward; caution is advised. Near the north edge of town the low white square tower on the west end of the San Diego Army and Navy Academy is distinctive.

(137) The pleasure pier at **Oceanside**, 32.5 miles north of Point Loma, has a fish haven covered 10 feet around its seaward end. The pier is marked by lights.

(138) **Oceanside Harbor**, at the north end of the city, 1.2 miles northwest of the pleasure pier, is a small-craft harbor administered by the City of Oceanside, Department of Harbor and Beaches. The harbor, which can accommodate about 950 small craft, shares a common entrance with Del Mar Boat Basin (**Camp Pendleton Marine Corps Base**) to the north.

(139) Prominent features when approaching the harbor include a large lighted sign reading "OCEANSIDE" in white letters on a blue background located on a grassy bluff overlooking the middle of the harbor, a tall condominium on the east side of the harbor, a lighted tower on the southeast side of the harbor resembling a lighthouse, and a hotel in the vicinity of the harbor entrance.

(140) The common entrance to Oceanside Harbor and Del Mar Boat Basin is between two jetties. The long west jetty is marked by a single light at the seaward end. The short east jetty has a north and south extension that are both marked by lights. A mariner-radio-activated sound signal at the light on the south extension is initiated by keying the microphone five times on VHF-FM channel 81A. Inside the common entrance is a lighted junction buoy separating the entrance channels to Oceanside Harbor and Del Mar Boat Basin. The entrance channel for Oceanside Harbor is marked by lighted buoys, lights and a daybeacon. A submerged jetty, just north of the entrance channel to Oceanside Harbor, is marked by a danger buoy at its outer end.

(141)

No-Discharge Zone

(142) The State of California, with the approval of the Environmental Protection Agency, has established a No-Discharge Zone (NDZ) in Oceanside Harbor. It encompasses the entire harbor including Del Mar Boat Basin.

(143) Within the NDZ, discharge of sewage, whether treated or untreated, from all vessels is prohibited. Outside the NDZ, discharge of sewage is regulated by **40 CFR 140** (see chapter 2).

(144)

COLREGS Demarcation Lines

(145) The lines established for Oceanside Harbor are described in **33 CFR 80.1108**, chapter 2.

(146)

Channels

(147) A dredged channel leads from deep water through the entrance jetties, thence branches east to Oceanside Harbor and north to Del Mar Boat Basin. Strangers should not attempt the entrance at night in rough seas without assistance. The entrance channel is subject to severe wave action and shoaling, and buoys are frequently shifted with changing conditions. Mariners are requested to contact the harbor patrol on VHF-FM channel 16 before entering.

(148)

Harbor regulations

(149) The harbor is under the control of the City of Oceanside, Department of Harbor and Beaches. The harbor headquarters building is on the east side of the harbor opposite the entrance. About 50 berths for transient craft are available at the harbor headquarters. All moorage must be arranged with the harbor office in the headquarters building. Prepaid reservations are accepted for 24 guest slips, with the remainder available on a first come, first served basis. The **Oceanside Harbor Police** operates from the headquarters building. The police boats are equipped with rescue and fire fighting equipment. The police boats monitor VHF-FM channel 16, 24 hours a day, and work on channel 12.

(150)

Weather, Oceanside

(151) Wind speeds at Oceanside rarely get above 28 knots; they are most likely to occur from December through April. Fog is sometimes a late night and early morning navigational hazard from August through March. During this period, visibilities drop below 0.5 mile (0.9 km) on 2 to 8 days per month; November is usually the foggiest month. The worst time of day is between midnight and 0500. Swells are most frequent from January through April.

(152)

Supplies

(153) Gasoline and diesel fuel are pumped at the fuel dock. Marine supplies, ice and pumpout facilities are available.

(154)

Repairs

(155) A repair yard just north of the harbor district headquarters has a mobile lift that can handle craft to 42 feet and 14 tons. Hull, engine and electronic repairs are available.

(156) **Del Mar Boat Basin (Camp Pendleton)**, just north of Oceanside Harbor, is part of the U.S. Marine Corps reservation. (See **33 CFR 334.910**, chapter 2, for limits and regulations of the **restricted area.**) The boat basin shares a common entrance with Oceanside Harbor. The channel is marked by buoys and daybeacons. A **restricted area** is off the outer breakwater. (See **33 CFR 334.900**, chapter 2, for limits and regulations.)

(157) A **military exercise area** extends about 3 miles seaward from about 2 miles northwest of the boat basin northwestward to San Clemente. Mariners are advised to consult Eleventh Coast Guard District Local Notice to Mariners for scheduled exercise dates and times.

(158) A **restricted area** is within the military exercise area and centered about 4.5 miles northwest of Del Mar Boat Basin entrance. (See **33 CFR 334.905**, chapter 2, for limits and regulations.)

(159) A red and white checkered elevated tank, 1.7 miles northeast of the boat basin, is prominent from well offshore. The highway bridge and the trestlework of the railroad crossing of the **Santa Margarita River**, 1.7 miles west of the tank, also are prominent. A large white building nearly 7 miles northwest of the boat basin is conspicuous from seaward.

(160) **San Onofre Mountain**, 44 miles north of Point Loma and 1.5 miles inland, is the highest of the coastal range in the area.

(161) **San Mateo Point**, locally known as **Cottons Point** and 47 miles northwest of Point Loma, ends in cliffs 60 feet high and is the north head at the mouth of **San Mateo Creek**. Both San Mateo Creek and **Arroyo San Onofre**, a mile southeast, are crossed by a trestle. Two large domes of a nuclear power plant are 2.3 miles southeast of San Mateo Point. A smaller dome-shaped building is on top of the bluff a few hundred yards southeast.

(162) **San Mateo Point Light** (33°23'18"N., 117°35'45"W.), 63 feet above the water, is shown from a pole with a red and white diamond-shaped daymark on San Mateo Point.

(163)

ENC - US3CA70M
Chart - 18740

(164) From San Mateo Point to Dana Point, 7.5 miles northwest, the land is higher and more rugged and is broken by **San Juan Creek** about 1.5 miles east of Dana Point. The railroad and the highway run close together along the beach under the bluffs in this stretch of the coast to San Juan Creek, where the railroad turns inland.

(165) **San Clemente**, 2 miles north of San Mateo Point, has many white houses with red-tiled roofs, making the

place conspicuous from the sea. There is a small pleasure pier at the town; a fish haven covered 10 feet is off its seaward side. A reef that uncovers 3 feet is about 700 yards northwest of the pier.

(166) **Dana Point**, 8 miles northwest of San Mateo Point, is the seaward end of a high ridge. The spur forming the point ends in a moderately bold sandstone cliff 220 feet high with a precipitous broken face. Outlying rocks and ledges marked by a lighted whistle buoy extend offshore for 350 yards. **San Juan Rock**, 6 feet high and about 50 feet in extent, is 340 yards south of the highest point on the cliff, and a rock covered 2 fathoms is 2.4 miles southeast of the point.

(167)

<Deleted Chart Header>

(168) **Dana Point Harbor** is a small-craft harbor in the lee of Dana Point. The harbor, administered by the Orange County Harbor, Beaches, and Parks District, is entered from the east between two breakwaters each marked by a light on the seaward end. A mariner-radio-activated sound signal at the south light is initiated by keying the microphone five times on VHF-FM channel 81A. A church with a giant cross is very visible on the hill above the harbor. A submerged sewer outfall line extends about 0.6 mile from shore, passing about 300 yards east of the south breakwater light. A rock, covered 7½ feet and marked by a lighted buoy, is about 300 yards northeast of the south breakwater light. When entering the harbor care should be taken to remain clear of these dangers, especially during low stages of the tide and/or periods of heavy southeast swell.

(169) Numerous uncharted private racing buoys are off the entrance to the harbor.

(170) The harbor's east and west basins are separated by a fixed highway bridge with a 45-foot channel span and a clearance of 20 feet. Berths in the east basin can accommodate over 1,400 vessels, and berths in the west basin can accommodate over 1,000 vessels. A **harbormaster** assigns berths in the harbor.

(171) The Dana Point Harbor Patrol has an office in the most southeasterly building observed after passing through the breakwater. Patrol craft equipped with rescue and fire fighting equipment are stationed here. The patrol maintains a 24-hour radio watch on 2182 kHz and VHF-FM channel 16. Berthing assignments for about 42 transient craft are available at the harbor patrol office.

(172) A **speed limit** of 5 mph is enforced in Dana Point Harbor. A swimming area, marked by private buoys, is in the northwest corner of the harbor.

(173)

Anchorage

(174) A **special anchorage** is in the west part of the harbor. (See **33 CFR 110.1** and **110.93**, chapter 2, for limits and regulations.)

(175)

No-Discharge Zone

(176) The State of California, with the approval of the Environmental Protection Agency, has established a No-Discharge Zone (NDZ) in Dana Point Harbor. It encompasses the entire harbor; see the NOAA charts for zone limits.

(177) Within the NDZ, discharge of sewage, whether treated or untreated, from all vessels is prohibited. Outside the NDZ, discharge of sewage is regulated by **40 CFR 140** (see chapter 2).

(178)

COLREGS Demarcation Lines

(179) The lines established for Dana Point Harbor are described in **33 CFR 80.1110**, chapter 2.

(180)

Supplies and repairs

(181) Most supplies and repairs are available at the marinas and service facilities at the harbor. Lifts to 25 tons are available.

(182) **San Juan Capistrano**, a small town about 4 miles inland from Dana Point, is the site of the old mission founded in 1776. The grounds and the buildings have undergone extensive preservation, and services are held regularly in the chapel used by founding Father Junipero Serra. This mission is famous for the return of the swallows each March 19.

(183) The 11.5-mile coast from Dana Point to Newport Bay is bold with rocky cliffs 40 to 100 feet high; these are the seaward ends of ridges separated by narrow, deep valleys. The community of **Laguna Beach** is midway along this stretch. A fishing and pleasure pier is near the mouth of **Aliso Creek** about 3.5 miles northwest of Dana Point.

(184) **Santiago Peak**, 17.5 miles northeast of Dana Point and visible 80 miles, is the dominant feature of this part of the coast; the peak is double headed and dark in contrast with the immediate coastal range.

(185)

Newport Bay

(186) **Newport Bay**, 64 miles northwest of Point Loma, is an extensive lagoon bordered on the seaward side by a 3-mile sandspit. The bay is an important yachting and sport fishing center and offers excellent anchorage for large yachts and small craft under all weather conditions. The city of **Newport Beach** embraces the districts of **Newport** and **Balboa**, on the sandspit, and **Corona del Mar**, east of the entrance.

(187)

Prominent features

(188) The numerous houses and buildings along the beach and on the hills back of the bay are prominent from seaward. The tall office buildings at the Newport Center, 1.4 miles north of the harbor entrance, are the most conspicuous. The memorial hospital building, 0.3 mile

north of the turning basin, and the light-colored concrete school buildings on the high ground 1 mile back from the beach are also conspicuous.

(189) The entrance to Newport Bay is between jetties 275 yards apart with lights at their outer ends. A mariner-radio-activated sound signal at the west jetty light is initiated by keying the microphone five times on VHF-FM channel 81A. A lighted bell buoy is off the entrance.

(190) A **111°37'–291°37' measured nautical mile** is in San Pedro Channel, about 1.3 miles west of the entrance to Newport Bay. The east range is marked in front by a daymark on an 800-foot pleasure pier and in the rear by a daymark on shore at Balboa Beach. The west range is marked by daymarks on shore at Newport Beach. Another 950-foot pleasure pier is 2.8 miles northwest of the west jetty.

(191)

COLREGS Demarcation Lines

(192) The lines established for Newport Bay are described in **33 CFR 80.1112**, chapter 2.

(193)

Channels

(194) A **federal project** provides for a 20-foot main channel from the entrance to a turning basin of the same depth northwest of Lido Isle and a 10-foot Balboa Island North Channel extending north from the entrance along the east and north sides of Balboa Island. (See Notice to Mariners and latest editions of charts for controlling depths.)

(195)

Anchorages

(196) Special anchorages are in Newport Bay. (See **33 CFR 110.1** and **110.95**, chapter 2, for limits and regulations.) Assignments are made by the harbormaster.

(197)

Dangers

(198) A **speed limit** of 5 mph in Newport Bay has been established by the Orange County Harbors, Beaches, and Park District. The upper reaches of the bay are extremely shoal.

(199)

Bridges

(200) There are no bridges over the main channel. None of the bridges to the islands in the bay restrict passage to the anchorage areas.

(201)

Weather, Newport Bay

(202) Severe storms are rare. The Santa Ana is an exceptional wind that blows from the northeast or east with great violence, although of short duration. (See Weather, Los Angeles, indexed as such, this chapter for discussion of Santa Ana winds.)

(203)

Harbor regulations

(204) The City of Newport Harbor Department controls the movement and berthing of vessels under the direction of a harbormaster. The harbormaster's office is located at the Marina Park Community and Sailing Center, 1600 W. Balboa Boulevard, Newport Beach, CA—about 2¾ miles from the bay's entrance. Patrol and assistance craft operate from the harbor office on a 24-hour basis. The harbor office may be contacted by telephone 949–270–8159 or VHF-FM channel 19. The patrol boats monitor VHF-FM channel 16.

(205)

Coast Guard

(206) A search and rescue craft of the U.S. Coast Guard is stationed at the pier adjacent to the Harbor District Headquarters.

(207)

Wharves

(208) The numerous small wharves and landings in the bay are mostly for the use of local yachts and fishing craft. Five berths and several offshore moorings are available for transient craft at the Harbor District Headquarters pier. The harbormaster must be consulted before mooring. Five other transient berths are usually available at a marina at the northwest end of the turning basin.

(209)

Supplies

(210) Fuel, water, and marine supplies are available at most of the facilities in the bay.

(211)

Repairs

(212) The largest marine railway in Newport Bay has a capacity of 325 tons and can handle craft up to 150 feet. Machine shops are available. Several shipyards can haul out small boats for general repairs.

(213)

Huntington Beach State Park to Sunset Beach

(214) The 20-mile coast from Newport Bay to Point Fermin is low, and there are several lagoons near the beach. There are no trees near the shore; towns and resorts are almost continuous along the beach.

(215) **Huntington Beach State Park** is a recreational area that extends 2 miles northwest along the coast from the mouth of **Santa Ana River**, which is 4.5 miles northwest of Newport Bay entrance. The trestle crossing the mouth of this river is conspicuous. A buoy marks the seaward end of a terminal structure of a water conduit extending from shore 1.4 miles northwest of Santa Ana River. The twin stacks of the Southern California Edison Co. plant on shore and a spire about 1 mile back from the beach are conspicuous from any direction.

(216) A submerged oil pipeline extends nearly 1.2 miles seaward, 2 miles northwest of Santa Ana River; mooring buoys are off the end of the pipeline. **Huntington Beach**, a resort 5 miles northwest of Newport Beach, is identified by its many oil derricks. The city has a fishing and pleasure pier that has a fish haven covered 10 feet around its seaward end. **Sunset Beach** is a small town 5

miles northwest of Huntington Beach. An elevated tank is near the west extremity of the town.

(217)

ENC - US5CA61M
Chart - 18749

(218) **Anaheim Bay**, 14 miles northwest of Newport Bay, is the site of the U.S. Naval Weapons Station. Jetties protect the entrance to the bay. Waters inside the jetties are within a **restricted area**, and **explosive anchorages** have been established on the east and west sides of the channel. (See **33 CFR 334.930** and **33 CFR 110.215**, chapter 2, for limits and regulations.) All boating traffic is required to stay within the small craft channel at all times.

(219) An entrance channel leads northeast between converging jetties to a turning basin inside Anaheim Bay. The channel is marked by lighted and unlighted buoys, lights and a **036°48'** lighted range. The outer ends of the jetties are marked by lights. A mariner-radio-activated sound signal on the west jetty light is initiated by keying the microphone five times on VHF-FM channel 81A. An inner breakwater is under construction (2022) centered at about 33°43'56"N., 118°05'43"W., covered 15 feet; caution is advised.

(220) In Anaheim Bay, during a flooding tide, the current 50 to 75 yards from the Naval Weapons Station's pier flows east to west as opposed to the normal flow of west to east. This causes a ship approaching the berth for a portside mooring to experience difficulty in twisting to starboard. An ebbing tide has an opposite effect. After a heavy rain, runoff water from the area north of Anaheim Bay during an ebbing tide increases the rate of ebb up to 5 knots with resultant swirls and countercurrents.

(221)

COLREGS Demarcation Lines

(222) The lines established for Anaheim Bay are described in **33 CFR 80.1114**, chapter 2.

(223) **Huntington Harbour**, a small-boat basin, is just south of Anaheim Bay. The harbor is a private development, and, with the exception of two small marinas, consists of private docks adjacent to waterfront homes.

(224) The harbor is entered through the restricted waters of Anaheim Bay, and permission to pass must be obtained from the Commanding Officer, U.S. Naval Weapons Station, Seal Beach, CA. (See **33 CFR 334.930**, chapter 2, for regulations governing passage.)

(225) The **Harbor Patrol** office is adjacent to the boat launch ramp in the northwest corner of the harbor. A repair yard can handle craft to 50 feet and 25 tons for engine and hull repairs. Gasoline, diesel fuel and marine supplies are available in the harbor. Launching ramps are in the northwest and southeast corners of the harbor.

(226) **Seal Beach**, just northwest of Anaheim Bay, has several resort structures and a 1,650-foot pleasure pier, which has a fish haven covered 9 feet at its seaward end.

(227) **Alamitos Bay**, 15 miles northwest of Newport Bay, is the site of the **Long Beach Marina**, a small-craft harbor administered by the city of Long Beach Marine Department. The harbor is entered from the south between two jetties each marked by a light on the seaward end. A mariner-radio-activated sound signal at the light on the west jetty is initiated by keying the microphone five times on VHF-FM channel 81A.

(228) A dangerous wreck (33°43'45"N., 118°07'26"W.) is in the approach to the entrance of Alamitos Bay and a dangerous wreck (33°44'10"N., 118°07'35"W.), covered 19 feet, is just west of the entrance.

(229) A **general anchorage** has been designated around the entrance channel to Alamitos Bay. (See **33 CFR 110.214**, chapter 2, for limits and regulations.)

(230) The fixed bridge across Marine Stadium, which forms the inner part of the bay, has a fixed span with a clearance of 32 feet. A fixed bridge with a clearance of 13 feet crosses the junction of the west waterway and Marine Stadium. A fixed bridge, with a clearance of 11 feet, crosses the east waterway off Marine Stadium that leads to a northeast basin. A fixed bridge, with a clearance of 4 feet, crosses the west waterway between Naples and Belmont Shore. The five fixed bridges crossing the Rivo Alto Canal on Naples Island have a least clearance of 7 feet, and the power cable has a reported clearance of 55 feet.

(231) Berths in Long Beach marina are limited to about 1,800 boats, but extensive parking and ramp-launching areas are provided for trailer-drawn craft. Visiting yachts may obtain temporary berthing on a first-come first-served basis. All mooring is controlled by a **harbormaster**, who has an office on the east side of the entrance channel near the end of the point about 500 yards above the bend in the channel.

(232)

Supplies and repairs

(233) All types of supplies and services are available at the marinas and service facilities in the bay. The largest repair yard can handle craft up to 40 tons and 60 feet.

(234) A pleasure pier on the west side of Belmont Shore, 1.7 miles northwest of Alamitos Bay entrance, extends about 340 yards from the beach; a fish haven is 100 feet off the seaward end. A reported wreck covered 16 feet is about 940 yards south of the end of Belmont Pier.

(235)

ENC - US5CA61M
Chart - 18749

(236) **San Pedro Bay**, between Seal Beach on the east and Point Fermin on the west, is 82 miles northwest of San Diego. On the shores of the bay are the cities and port areas of **Long Beach** and **Los Angeles. Terminal Island**, in the northwest part of San Pedro Bay, separates the outer bay from Los Angeles and Long Beach inner harbors. The bay is protected by breakwaters and is a safe harbor in any weather.

(252)

Vessel Operating Procedures for Los Angeles/Long Beach (Best Maritime Practices)

Anchoring Procedures

In addition to observing all port tariffs and U.S. Coast Guard regulations, the Master of any commercial vessel at anchor shall implement the following Standards of Care:

- Maintain a 24-hour bridge watch by an English speaking licensed deck officer monitoring VHF-FM Channel 16.
- Make frequent checks to assure vessel is not dragging anchor.
- When winds exceed 40 knots, have the propulsion plant on standby ready to bring on line on short notice and make another anchor ready to let go. Accurate wind speed can be determined by contacting either VTS or the appropriate pilot station.
- Provide 15-minute advance notice to the Long Beach pilot station (for inside anchorages) or to VTS (for outside anchorages) before heaving anchor to get underway.

General Anchoring Guidelines

Santa Catalina Island

The three federal anchorages offshore of Santa Catalina Island (A, B and C) will be assigned by the Vessel Traffic Service.

Outside the Federal breakwaters:

- All anchorages outside the Federal breakwater will be managed and monitored by the Vessel Traffic Service (VTS).
- Any vessel desiring to use one of these anchorages must advise their intentions to VTS on VHF-FM Channel 14 and receive clearance to do so from VTS.
- VTS will not assign an anchorage to tankers or vessels exceeding 200 meters in length overall (LOA) on the first row of anchorage sites closest to the breakwater (G-1 to G-3 and F-1 to F-4).
- VTS will not provide shoreside radar direction during anchoring; however, ranges and bearings for either the Angel's Gate or Queen's Gate Light to the center of a particular anchorage site will be offered, if requested.
- Pilot or tug assistance outside the federal breakwater is not required for anchoring.

Inside the Federal breakwaters:

- All anchorages inside the Federal breakwater will be managed and monitored by the Long Beach Pilot Station.
- All vessels with a draft of 15.2 meters or greater must use a minimum of one tug to ensure proper placement of the anchor and chain, as well as to assist in turning the vessel at the proper placement of the anchor site. Tank vessel masters shall refer to the tug escort/assistant standards.

Under-Keel Clearance

Masters and Pilots should use their vessel's deepest draft in still water when calculating under-keel clearance. Masters and pilots should apply a plus or minus allowance for the tide when calculating depth of water, and consider the following factors: Vessel trim and list characteristics, depth of transit area, depth at the facility or anchorage, tide and current conditions and weather impact on water depth.

Port of Los Angeles

- Between **Los Angeles Approach Channel Lighted Buoy 1** and **Los Angeles Main Channel Lighted Buoy 11**, minimum under-keel clearance before correction for roll and pitch is 10 percent of vessel's draft.
- In the channel between **Los Angeles Main Channel Lighted Buoy 11** and a position off the designated berth, minimum under-keel clearance is 2.0 feet (0.61 meters).
- Vessels must always remain afloat in the final approach to the berth and while at berth.
- Shifts via outer harbor between Los Angeles and Long Beach, minimum under-keel clearance is 3.0 feet (0.91 meters).

Port of Long Beach

- Between the **Long Beach Channel Approach Lighted Whistle Buoy LB** and **Long Beach Channel Lighted Buoy 3**, minimum under-keel clearance before correction for roll and pitch is 10 percent of vessel's draft.
- In the channel between **Long Beach Channel Lighted Buoy 3** and a position off the designated berth, minimum under-keel clearance is 2.0 feet (0.61 meters).
- Vessels must always remain afloat in the final approach to the berth and while at berth.
- At anchorages inside the breakwater, minimum under-keel clearance is 4.0 feet (1.22 meters) for Anchorages B-7 and B-11 when vessels draft is 50 feet (15.24 meters) or more and 2.5 feet (0.76 meters) for all other anchorages.
- Shifts via outer harbor between Los Angeles and Long Beach, minimum under-keel clearance is 3.0 feet (0.91 meters). Tank vessel masters and operators should also be guided by the under-keel clearance regulations for tank vessels contained in 33 CFR §157.455. Chapter XIV of the Harbor Safety Plan includes formulas for calculating the increase in draft due to pitch or list.

(253)

Vessel Operating Procedures for Los Angeles/Long Beach (Best Maritime Practices)

Inclement Weather—Standards of Care for Vessel Movements

Inclement weather requires heightened awareness and vigilance. This section is intended to provide clear guidance to mariners as to what is expected of them when navigating in inclement weather in the area covered by the Harbor Safety Plan. Nothing in this section shall be construed to require the master of a vessel to commence a transit during inclement weather, nor does this section replace compliance with the COLREGS. It is recognized, however, under certain circumstances, **vessels may safely transit during inclement weather provided that equivalent safety levels are applied**.

Inclement Weather Definitions

High winds are defined once the National Weather Service issues a *small craft advisory* for sustained winds of 21 to 33 knots, potentially in combination with wave heights exceeding 10 feet (or wave steepness values exceeding local thresholds).
Restricted visibility is defined once conditions of visibility fall below the following:
• For tankers 150,000 DWT or greater: 1 nautical mile
• For tankers greater than 60,000 DWT, but less than 150,000 DWT: 0.75 nautical mile
• For all other vessels 45-foot draft or more: 0.75 nautical mile
• For all other tankers and petroleum barges: 0.5 nautical mile
• For all other vessels: Three (3) times vessel's LOA

Guidelines for Commencing a Transit During Inclement Weather Definitions

Vessel characteristics, navigational equipment and the availability of shoreside support must be considered when a movement is undertaken during inclement weather. Conditions of visibility and wind can vary considerably throughout the port complex at any given time and may impact the decision to proceed. While specific movement parameters are difficult, if not impossible, to define, it is recommended that mariners carefully consider commencing vessel movements inside the federal breakwater when conditions reach the defined thresholds shown above under **Inclement Weather Definitions**.

Piloted Vessel Guidelines

When inclement weather exists along a vessel's intended route, the respective pilot station management will be notified. Prior to commencing a transit, the operating pilot will conduct a risk analysis that includes consultation with a second pilot. This expanded participation is a key risk reduction measure.
Reduced Visibility
• When visibility inside the federal breakwater is less than 0.5 mile, the respective vessel traffic center (VTC) will impose one-way traffic restrictions when and where appropriate.
• When commencing a vessel movement in reduced visibility (0.75 nautical mile) shoreside radar assistance and carry-on enhanced navigational tools such as a Portable Pilot Unit (PPU) shall be readily available for use.
• When reduced visibility is encountered after commencing a transit, the operating pilot should take appropriate precautions to minimize the risk of collision. Precautions may include but are not limited to continuing the transit or anchoring, reducing speed, enlisting shore-based radar support and securing additional tug assistance.
High Winds
Vessel movements will proceed on a case by case basis. Depending on direction and force of wind, type and characteristics of the vessel, movements requiring more than 50 tons of force to hold the vessel against a wind on the beam shall be carefully considered. Below are examples of wind velocities acting on corresponding sail areas that would require 50 tons of counter force exerted by tugs and/or thrusters.

Wind Force

		Force (tonnes per square meter)						
Wind force (knots)	Wind force (m/sec)	1000 m^2	5000 m^2	7500 m^2	10,000 m^2	12,000 m^2	14,000 m^2	16,000 m^2
5	2.5	0.3	1.74	2.60	3.5	4.2	4.9	5.6
10	5	1.4	6.94	10.42	13.9	16.7	19.4	22.2
15	7.5	3.1	15.63	23.44	31.3	37.5	43.8	50.0
20	10	5.6	27.78	41.67	55.6	66.7	77.8	88.9
25	12.5	8.7	43.40	65.10	86.8	104.2	121.5	138.9
30	15	12.5	62.50	93.75	125.0	150.0	175.0	200.0
35	17.5	17.0	85.07	127.60	170.1	204.2	238.2	272.2
40	20	22.2	111.11	166.67	222.2	266.7	311.1	355.6
45	22.5	28.1	140.63	210.94	281.3	337.5	393.8	450.0
50	25	34.7	173.61	260.42	347.2	416.7	486.1	555.6

$V^2/18$ = tonnes per 1000 m^2
V = wind speed in m/sec

(254)

Vessel Operating Procedures for Los Angeles/Long Beach
(Best Maritime Practices)

Non-piloted Vessel Guidelines
It is recommended that all vessels develop, and follow, their own internal operating guidelines for inclement weather transits, including a provision for second opinion consultation.

Application of Equivalent Safety Levels
When a vessel master intends to commence a transit during inclement weather, at a minimum, the following equivalent safety levels should be adhered to.

Vessels 1600 GT or greater:
• When operating inside the federal breakwater, be under the control of a USCG licensed pilot with the appropriate endorsement for the vessel and area of operation.
• Have shore-based radar immediately available to assist the vessel.

All vessel masters and pilots (if employed) should make a positive evaluation of the following:
• The number of vessels transiting within the harbor and expected traffic concentrations.
• Planned transit speeds appropriate for the prevailing conditions.
• The maneuvering characteristics of the vessel.
• The quality of the vessel's radar and navigation systems.
• The vessel's size and draft in relation to the area to be transited.
• Number, type and power of assist tugs.
• Number and power of bow/stern thrusters available.
• Maneuvering room at various stages of the transit.
• Quality of the vessel's bridge team.
• Special circumstances to be encountered (e.g. dredging projects, obstructions).
• Wind direction in relation to planned maneuvers.

COTP Notification of Intention to Move in Inclement Weather Without Applying Equivalent Safety Levels
Vessels 1600 GT or greater that intend to commence a vessel transit during inclement weather without complying with **inclement weather standards of care for vessel movements** (including shore-based radar support) shall make the following broadcast to the VTS on VHF Channel 14 at least 15 minutes prior to getting underway:

*"**Vessel name/call sign**, making our inclement weather COTP notification, as per guidance within the Harbor Safety Plan, that we intend to transit from **vessel location to intended destination**."*

In addition, a safety broadcast will be made on Channel 13 and the vessel will coordinate its movement with the appropriate pilot station and the VTS.

(237) **Long Beach Harbor**, in the east part of San Pedro Bay, includes the City of Long Beach and part of Terminal Island.

(238) **Los Angeles Harbor**, at the west end of San Pedro Bay, includes the districts of **San Pedro** and **Wilmington** and a major part of Terminal Island.

(239) Long Beach and Los Angeles Harbors are connected by Cerritos Channel. The distance between the seaward entrance to the two harbors is about 4 miles.

(240) Four oil production islands, marked by lights, are to the north and east of Long Beach Pier J. A sound signal is sounded from the south end of each island.

(241) The **Port of Long Beach**, one of the largest ports on the Pacific coast, has the reputation of being America's most modern port. It has extensive foreign and domestic traffic with modern facilities for the largest vessels. It is a major container cargo port with several of the largest and most efficient container terminals on the Pacific coast. Principal exports are bulk petroleum, bulk coke, chemicals, waste paper and foods. Principal imports are crude petroleum, electronics, plastics, furniture and clothing.

(242) The **Port of Los Angeles**, also one of the largest ports on the Pacific coast, has a history of leading the Pacific coast ports in terms of tonnage handled. It has extensive facilities to accommodate all types of traffic. Some of the principal exports are crude minerals, iron and steel scrap, inorganic chemicals, animal feed, cotton, manufactured fertilizers and fresh fruits and nuts. Some of the principal imports are iron and steel products, motor vehicles and parts, organic chemicals, fresh fruits/nuts, paper/paperboard, sugar, molasses and syrups, glass and fresh/frozen fish.

(243)

Prominent features

(244) **San Pedro Hill**, 3.3 miles northwest of Point Fermin, is the distinguishing feature for making San Pedro Bay from southeast or west. The hill terminates seaward in steep, rocky cliffs about 60 feet high, with several horizontal terraces between them and the summit. On top of the summit are two large white radar domes.

(245) Because it is high above the usual low-lying fog area, the lighted tower atop Santa Catalina Island is reported a useful guide for vessels approaching the Los

Angeles-Long Beach area; the light can be seen for about 16 miles.

(246) **Point Fermin**, the southeast extremity of San Pedro Hill, is a bold cliff about 100 feet high. **Point Fermin Light** (33°42'17"N., 118°17'38"W.), 120 feet above the water, is shown from a pole on the southern extremity of the point. A prominent pavilion (The Bell of Friendship) is on the high ground about 0.3 mile north of the light.

(247) In Long Beach Harbor, prominent charted objects are a hotel tower located just north of the Municipal Auditorium and the white stone tower of another hotel 0.4 mile east and the lighted large white dome on the south side of the entrance to Queensway Bay. The derricks on the artificial oil islands east of Long Beach Pier J are constructed to appear as high-rise apartment buildings.

(248) Prominent charted objects in Los Angeles Harbor that are of use to the navigator are the green and white tank near the south end of Pier 1, the lighted radio tower atop San Pedro City Hall and the stack on Terminal Island.

(249) **Long Beach Light** (33°43'23"N., 118°11'13"W.), 50 feet above the water, is shown from a 42-foot white rectangular tower on a white building on the east end of Middle Breakwater; a sound signal is at the light.

(250) **Note:** The Long Beach Pilots have established a current meter in about 57 feet of water 0.41 mile and bearing 198.5° from Long Beach Light. A cable runs from the meter to the Long Beach Light. Mariners are requested to avoid anchoring or bottom fishing in this area.

(251) **Los Angeles Light**, (33°42'31"N., 118°15'06"W.), 73 feet above the water, is shown from a white cylindrical tower with black stripes on a concrete block on the outer end of the San Pedro breakwater; a sound signal is at the light.

(255)

COLREGS Demarcation Lines

(256) The lines established for San Pedro Bay are described in **33 CFR 80.1114**, chapter 2.

(257)

Traffic Separation Scheme

(258) **Traffic Separation Schemes for Los Angeles/Long Beach** are between the Gulf of Santa Catalina and San Pedro Channel and along the coast between Point Arguello and Point Vicente—see **33 CFR 167.1** through **167.15**, **167.450** through **167.452** and **167.500** through **167.503**. This Traffic Separation Scheme is recommended for use by all vessels traveling between the points involved. They have been designated to aid in the prevention of collisions at the approaches to major harbors and along heavily traveled waters but are not intended in any way to supersede or to alter the applicable Navigation Rules. Separation zones are intended to separate inbound and outbound traffic and to be free of ship traffic. Separation zones should not be used except for crossing purposes. Mariners should use extreme caution when crossing traffic lanes and separation zones. Rule 10 of the Navigation Rules apply to this Traffic Separation Scheme. Note—parts of the charted Traffic Separation Scheme have been amended by the International Maritime Organization (IMO), and have not been updated in the Code of Federal Regulations. (See IMO COLREG.2/Circ.64.)

(259) Extreme caution must be exercised in the Precautionary Area off the entrances to Los Angeles and Long Beach Harbors as both incoming and outgoing vessels use this area. (See also Traffic Separation Schemes, chapter 1, for additional information.)

(260) **Ferry Routes** in the Gulf of Santa Catalina and San Pedro Channel differ from the Traffic Separation Scheme in that area. Mariners using the area's Traffic Separation Scheme are advised to **use caution and beware of crossing ferries** enroute between local coastal ports and ports at Santa Catalina Island.

(261)

Vessel Traffic Service

(262) The **Vessel Traffic Service (VTS) Los Angeles/Long Beach**, jointly operated by the U.S. Coast Guard and the Marine Exchange, has been established within the approaches to San Pedro Bay and the ports of Los Angeles and Long Beach. The VTS is a California State mandatory service and a federally mandated Vessel Movement Reporting System (VMRS). It is designed to enhance navigational safety in the main approaches to the ports of Los Angeles and Long Beach.

(263) The VTS area consists of the waters of San Pedro Bay and San Pedro channel, including Santa Monica Bay, within a 25-nautical-mile radius of Point Fermin Light and Los Angeles and Long Beach Harbors, inside the breakwater. This includes parts of the Traffic Separation Scheme Lanes and the Precautionary Area. Communication in the VTS area outside the breakwater will be handled by the Marine Exchange Vessel Traffic Center (VTC) and inside the breakwater by the appropriate Pilot Station. All reports and communications made to the VTC (voice call **San Pedro Traffic**) shall be on VHF-FM channel 14, to Los Angeles Pilots on VHF-FM channel 73, and to Long Beach Pilots on VHF-FM channel 12. All stations monitor VHF-FM channels 16 and 13.

(264) Participating vessels are to ensure that a copy of the **VTS User Manual** is available on board the vessel when operating within the VTS area. The manual is available at no charge from the Marine Exchange of Southern California, P.O. Box 1949, San Pedro, CA 90733, phone 310–832–6411. The manual can be viewed and downloaded at *www.mxsocal.org*.

(265) The State of California has established Tank Vessel Escort Regulations for tank vessels underway in the Los Angeles/Long Beach Harbor and their approaches. The full text of the regulations can be found at *wildlife.ca.gov/ospr* or can be obtained from the California Office of Spill Prevention and Response 24-hour Communications Center at 916–445–0045.

(266) Tug Escort Applicability: All laden tank vessels (tankers or barges carrying as cargo a total volume of oil

greater than or equal to 5,000 metric tons of oil) entering the port should ensure proper implementation of either the Tanker Force Selection Matrix or the Tank Barge and Tug Matching Criteria listed below. In addition, except for tank barge/primary towing units that have total displacements of 20,000 metric tons or less, escort tugs must be tethered.

(267) Three Tank Vessel Escort Zones are established as follows:

(268) Zone 1: Upon all waters within 2.0 nautical miles to seaward of the Federal Breakwater, escort tugs required for all laden tank vessels.

(269) Zone 2: Upon all waters in the approaches to the Port of Long Beach within 3.5 nautical miles to seaward of the Federal Breakwater, escort tugs required for all laden tank vessels with static deep draft greater than 16.5 meters.

(270) Zone 3: Upon all waters in the approaches to the Port of Los Angeles within 4.0 nautical miles to seaward of the Federal Breakwater, escort tugs required for all laden tank vessels with static deep draft greater than 14.0 meters.

(271) Inbound, laden Oil and Chemical Tank Vessels shall not proceed closer than the seaward limit of the applicable Tank Vessel Escort Zone, unless the prescribed escort tug(s) are in position at the seaward limit of the applicable Tank Vessel Escort Zone. Masters shall also ensure the anchors are ready for letting go prior to entering the applicable Tank Vessel Escort Zone. The tank vessel master/pilot shall hold a "pre-escort conference" that should at a minimum include:

(272) 1. Contacting the escort tug operator to confirm the number and position of the escort tug(s); and

(273) 2. Establishing the radio frequency to be used; and

(274) 3. Establishing the destination of the tank vessel; and

(275) 4. Discussing any other pertinent information that the master/pilot and escort tug operator deem necessary.

(276) An "escort tug," as defined by California regulations, is a tug that is designed primarily for pushing or pulling ahead or astern, or towing alongside another vessel. A tug is considered to be designed for escort work whether or not it is involved in such activity. In the harbors of Los Angeles/Long Beach, an "assist/escort tug" means any tug that is accepted by the tank vessel master and/or pilot to escort a tank vessel that is transiting waters where an assist/escort is required. Arrangements should be made via the vessel agent, tug company and appropriate pilot service. Outbound laden tank vessels are not required to use tugs once they have safely cleared the breakwater. All tank vessels shifting within the harbor(s) (including dock to anchor, anchor to anchor, and dock to dock) shall comply with the escort requirements. Arrangements should be made via the vessel agent, tug company or appropriate pilot service to ensure compliance.

(277)

TANKER FORCE SELECTION MATRIX

Tanker Displacement	Forces For Tug(s) Tethered at the Stern (see notes below)
Metric Tons	**Short Tons**
0 to < 60,000	10
60,000 to < 100,000	20
100,000 to < 140,000	30
140,000 to < 180,000	40
180,000 to < 220,000	50
220,000 to < 260,000	62
260,000 to < 300,000	75
300,000 to < 340,000	87
340,000 to < 380,000	105
380,000 to < 420,000	128
Note 1: Ahead forces for tugs using stern lines (e.g., Voith-Schneider propeller – VSP tugs). Astern forces for tugs using headlines (e.g., azimuth stern drive – ASD tugs)	
Note 2: The *Forces For Tugs* described in the Tanker Force Selection Matrix were evaluated in a water depth equal to 1.2 times the tanker's deep draft for tankers with a displacement of less than 260,000 metric tons, and in a water depth equal to 1.1 times the tanker's deep draft for tankers with a displacement equal to or greater than 260,000 metric tons.	

(278)

Small Tank Barge Matrix

Total Displacement Tonnage of the Tank Barge and the Primary Towing Tug	Minimum Required Escort Tug(s) Static Bollard Pull *tethered escort tug(s)/un-tethered escort tug(s)*
0 to 20,000 displacement tons	10 short tons/15 short tons
> 20,000 displacement tons	A total astern static bollard pull (in pounds) equal to or greater than the sum of both the primary towing tug(s) and barge(s) total displacement tonnage. (e.g., where the total towing tug and tank barge displacement is 25,000 displacement tons, the escort tug(s) astern static bollard pull shall be at least 25,000 pounds or 12.5 short tons.)

(279) All the escort tugs required to satisfy the Tanker Force Selection Matrix shall be tethered on the tanker's stern.

(280) These force requirements reflect favorable circumstances and conditions. The tanker master/pilot shall arrange for additional escort tug(s) should adverse weather conditions, unusual port congestion, the contemplated movement of the vessel or other conditions or circumstances so require.

(281) (See **33 CFR 157**, chapter 2, for regulations for Tank Vessels Carrying Oil in Bulk and Maneuvering Performance Capability.)

(282) **Vessel Speed Reductions**, in addition to the mandatory 12 knot speed limit in the Los Angeles/Long Beach Vessel Traffic Service (VTS) Precautionary Area, the following excerpt is from Rule 402 from the South Coast Air Quality Management District (SCAQMD):

(283) The Port of Long Beach asks every vessel entering or leaving the port to observe the **voluntary 12-knot speed limit** that extends seaward 40 nautical miles from

Point Fermin. Reducing ship speed will reduce exhaust emissions into Southern California's air, which will result in better air quality. The speed of every vessel in the speed reduction zone is measured and recorded by the Marine Exchange of Southern California; please contact the Marine Exchange for more information. Your cooperation with this important air quality improvement program is greatly appreciated.

(284) Vessels making the breakwater entrances should proceed at speeds no greater than is necessary for steerage. Vessels that approach the entrance close in and attempt to turn at or near the entrance are in danger of collision with outbound vessels, especially with smaller craft at night when their lights are not easily distinguishable at low tide or against the background of lights in the harbor.

(285) Vessels awaiting a pilot should stay well to seaward and east of the outer fairway buoys.

(286) **San Pedro Breakwater** extends about 0.9 mile in a southeast direction from the east side of Point Fermin, then turns east-northeast for another 0.9 mile to Los Angeles Light. **Middle Breakwater** extends east-northeast for 2.1 miles from the Los Angeles entrance, thence east for 1 mile to the Long Beach entrance, and is marked at both ends by lights. **Long Beach Breakwater** extends east 2.2 miles from Long Beach entrance and is marked by lights on both ends. Ranges for a 090°–270° measured nautical mile are on the Long Beach Breakwater. They are yellow diamond-shaped daymarks on iron pipes.

(287) Kelp beds are along the inside edge of the west end of Middle Breakwater and a shallow water habitat is on the inside edge of San Pedro Breakwater; the shallow water habitat is surrounded by a submerged dike and is marked by lights.

(288) **Fish Harbor**, on the south side of Terminal Island near its west end, is protected by two sets of breakwaters and the mole of Pier 300, the outer ends of which are marked by lights. A dredged channel with a controlling depth of about 14 feet leads between the outer and inner breakwaters to Fish Harbor, which has depths of about 16 to 18 feet. The seawall is lined with canneries and other fish works. The outer breakwaters enclose the Yacht Club Anchorage, sometimes called the Fish Harbor Extension. This anchorage has depths of 17 to 20 feet east and depths of 11 to 14 feet west of the dredged channel.

(289)

Channels

(290) **Long Beach Channel** leads northwest from west of Long Beach Breakwater for 2.2 miles to **Middle Harbor**, thence north to **Back Channel** and the **Inner Harbor**. A **restricted harbor** entrance area has been designated in the channel and side areas that extends from about 1 mile north of the breakwater to inside Middle Harbor. The Board of Harbor Commissioners maintains these regulations in the Port of Long Beach, Tariff Number 004. These regulations grant priority to outbound vessels and stipulate a **6-knot speed limit** in this restricted area. The tariff is available from the Port of Long Beach website, *www.polb.com*.

(291) Most of the channels in Long Beach Harbor are maintained at more than the project depth of 35 feet. (See Notice to Mariners and latest editions of charts for depths.)

(292) **Los Angeles Main Channel** leads northwest from east of the San Pedro Breakwater for about 1 mile, thence north to the Inner Harbor turning basin, thence northeast through **East Basin Channel** and **Cerritos Channel**. About 0.6 mile northwest of the breakwater, **Super Tanker Channel** leads west from the Main Channel to the deep-draft facilities at Berths 45–50. Los Angeles Main Channel from the breakwater to the Super Tanker Channel and the Super Tanker Channel are maintained at more than the project depth of 45 feet and 40 feet, respectively. (See Notice to Mariners and latest editions of charts for depths.)

(293) Los Angeles Main Channel is marked by lights, lighted buoys and a **295.8°** lighted range.

(294) The Los Angeles and Long Beach main channels are considered narrow channels. Vessels less than 20 meters in length, sailing vessels, vessels engaged in fishing, or any vessel attempting to cross these channels shall not impede a vessel that can only safely navigate within a narrow channel per Inland Navigation Rules, Rule 9. To obtain information on the movement of deep draft vessels inside the Federal Breakwater, contact the Los Angeles Pilot Station on VHF-FM channel 73 or Long Beach Pilot Station of VHF-FM channel 74.

(295)

Anchorages

(296) Limits and regulations of general, naval, explosives and special anchorage areas in San Pedro Bay are given in **33 CFR 110.1**, **110.100**, and **110.214**, chapter 2. When inside the breakwaters, vessels are required to anchor in the anchorage area prescribed in the regulations except in cases of great emergency. The Santa Ana is the only wind dangerous to vessels anchored inside the breakwaters.

(297) The shallow water habitat along the east side of Pier 400 and about 0.4 mile south of the Naval Base Mole extends into Special Anchorage B-1 (**33 CFR 110.100**); however, there are no boating or anchorage restrictions associated with the shallow water habitat.

(298) Vessels are cautioned against anchoring in the vicinity of pipeline and cable areas shown on the charts.

(299)

Dangers

(300) A shoal area, with rocks having a least depth of 2 feet, extends about 0.3 mile south of the shore just east of Point Fermin Light. A lighted whistle buoy is about 300 yards southwest from the south end of the shoal area.

(301)

Regulated navigation areas

(302) A **regulated navigation area** has been established in the waters south of the Los Angeles-Long Beach breakwater encompassing the approaches to both

(308)

Structures across the Channels of Long Beach and Los Angeles Harbor

Name	Type	Location	Clearance (feet)		Information
			Horizontal	Vertical*	
Vincent Thomas Bridge	fixed	33°44'58"N., 118°16'17"W.	1,150	165 (185 for central 500 feet)	
Henry Ford Bridge	vertical lift	33°45'57"N., 118°14'25"W.	180	165 (up) 6 (down)	Notes 1 and 2
Commodore Schuyler F. Heim Bridge	fixed	33°45'58"N., 118°14'23"W.	180	52	Note 2
Overhead power cables		33°46'09"N., 118°13'35"W.		155	Note 3
Long Beach International Gateway Bridge	suspension	33°45'53"N., 118°13'16"W.	302	205	
Queen's Way/Magnolia Avenue Bridge	fixed	33°45'35"N., 118°11'58"W.	500	31 (45 at center)	

* Vertical clearance is referenced to mean high water
Note 1 – See **33 CFR 117.1** through **117.59** and **117.147**, chapter 2, for draw bridge regulations.
Note 2 – It is reported that clearance gages have been established on a pier flanking the navigable span of the Heim Bridge and on the dolphins flanking the Henry Ford Bridge. The gages indicate the vertical navigational clearance beneath each of the bridges at any height of tide.
Note 3 – Vessels are required to have a clearance of at least 6 feet under the cables to avoid the danger of arcing.

Los Angeles and Long Beach harbors, the pilot areas, and Commercial Anchorage G. (See **33 CFR 165.1** through **165.13** and **165.1152**, chapter 2, for limits and regulations.)

(303) **Safety zones** have been established in San Pedro Bay, including around the oil drilling platforms, in

(304)

33°35'45"N., 118°08'27"W.	Platform Edith (§147.1108)
33°35'00"N., 118°07'40"W.	Platform Elly (§147.1104)
33°34'57"N., 118°07'42"W.	Platform Ellen (§147.1104)
33°33'50"N., 118°07'00"W.	Platform Eureka (§147.1111)

(305) See **33 CFR 147.1** through **147.20** for general regulations and the specific regulations listed above in chapter 2; also see **Oil Well Structures** in chapter 3 for additional information.

(306) A **naval restricted area** is in the West Basin off the south shore of Terminal Island inside the jetty of the Naval Base Mole (See **33 CFR 334.990**, chapter 2, for limits and regulations.)

(307) A **restricted area** is off the east side of Reservation Point. (See **33 CFR 334.938**, chapter 2, for limits and regulations.)

(309)

Currents

(310) The tidal currents follow the axis of the channels and rarely exceed 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.

(311)

Surge

(312) Both Los Angeles and Long Beach Harbors are subject to seiche and surge. The most persistent and conspicuous oscillation has a period of approximately 1 hour. In the vicinity of Reservation Point and near the east end of Terminal Island, the hourly surge is very prominent, causing velocity variations that at times may be as great as 1 knot, and which often overcome the lesser tidal current so that the current floods and ebbs at half-hour intervals. Because of the more restricted channel, the surge through Back Channel at the east end of Terminal Island usually reaches a greater velocity than through the channel west of Reservation Point. In Back Channel, the hourly variation may sometimes be 1.5 knots or more. The hourly surge, together with other oscillations of shorter period and of more irregular occurrence, at times causes a very rapid change both in height of the water and the velocity and direction of the current and may endanger vessels tied up at the piers. A 3-minute surge is reported to be responsible for major ship movements and damage. Pilots advise taut lines to reduce the effect of the surge.

(313)

Weather, Los Angeles

(314) Fog is most likely from October through February. Out over the bay, it drops visibilities below 0.5 mile (0.9 km) on about 11 days per month during this period. It is mostly a land (radiation) fog that drifts out and is worst in the late night and early morning. Smoke from nearby industrial areas often adds to the thickness and persistence of the fog. There are times when it will hang over the inner channels for several days and along the coast can be very local in occurrence. For example, at Long Beach, which is particularly susceptible to cold air drainage, fog reduces visibilities to less than 0.5 mile (0.9 km) on an average of 18 more days annually than at nearby Los Angeles International Airport. Along the shores, visibilities drop to less than 0.5 mile (0.9 km) on about 3 to 8 days per month from August through April; December is usually the worst month.

(315) Winds are variable particularly in fall and winter. They are also strongest during this period when the **Santa Ana wind** can blow. This is an offshore desert wind which, though infrequent, may be violent. It occurs when a strong high-pressure system sits over the plateau region and generates a northeast to east flow over southern California. The air streams through Cajon Pass

into the Great Valley, swings toward the southwest, and follows either the Santa Ana River Canyon through the Santa Ana Mountains or moves directly over the low mountains south of the canyon and then follows a well-defined path over the plains of Orange County to reach the ocean near Newport. It diminishes little in intensity immediately after passing over the bay, and some reports credit it with blowing far out to sea. However, beyond 50 miles (93 km) from shore, Santa Anas are of little concern. These winds have reached speeds of 50 knots or more along the coast.

(316) Aside from weather forecasts, there is little warning of the onset of a Santa Ana. For some hours preceding its arrival, good visibility and unusually low humidity often prevail. Shortly before its arrival on the coast, the Santa Ana may be observed as an approaching dark-brown dust cloud. This will often give from 10 to 30 minutes warning and is a positive indication. The Santa Ana may come at any time of the day. It can be reinforced by a land breeze in the early morning or weakened by a sea breeze during the afternoon.

(317) Winter storms are also responsible for strong winds over San Pedro Bay, particularly from the southwest through northwest. Winds of 17 knots or greater occur about 1 to 2 percent of the time from November through May. Winter winds often have an east component, although west-northwest winds are most frequent at Long Beach. At Los Angeles International Airport, west and northeast winds are the most common, while at Los Alamitos, northeast, east and southwest winds are frequent. However, at both locations, calm conditions are as common or more so from fall through spring. Southwest through west winds begin to prevail in spring, and this lasts through the summer and into early fall. Gales are rare and have occurred occasionally during March and November. March, April and May are the windiest months and December the most calm. An all-time peak gust of 54 knots was recorded in March 1952.

(318) The National Weather Service maintains an office in Los Angeles—see Appendix A for address. Barometers may be compared here or by telephone/internet.

(319)

Pilotage, Port of Los Angeles

(320) All vessels 300 gross registered tons and over and all foreign vessels leaving, entering or shifting within the Port of Los Angeles are subject to pilotage. Vessels licensed and engaged in the fishing trade and enrolled vessels of the United States under the direction of an officer federally licensed for the port are exempt from pilotage.

(321) The Port of Los Angeles Pilot Service boards vessels in the vicinity of Los Angeles Approach Channel Lighted Whistle Buoy 3. Tank vessels will be boarded at least two miles from the Los Angeles entrance. Deep-draft vessels (draft more than 55 feet) will be boarded in the vicinity of Los Angeles Approach Channel Lighted Buoy 1. The pilot boats, STEPHEN M. WHITE and PHINEAS BANNING, have black hulls and white cabins with L.A. PILOTS displayed on each side. The pilot station is at the southeast end of Pier 1. Pilotage can be arranged through the pilot station, telephone 310–732–3805, or VHF-FM channels 73 and 16; call sign KEB-260. The pilot station and boats monitor and use as working frequencies VHF-FM channels 73, 14 and 16. The pilot boats display the standard day and night signals. The pilot station requests 2 hours advance notice of estimated time of arrival on VHF-FM channel 73. The pilots normally board the vessels on the starboard side with the ladder about 1 meter above the water. Vessels may not be boarded during periods of poor visibility or severe weather.

(322)

Pilotage, Port of Long Beach

(323) All foreign vessels and U.S. vessels of 300 gross registered tons and over sailing under register are subject to a pilotage fee whether or not a municipal pilot is actually employed. Vessels sailing under U.S. enrollment and licensed and engaged in coastwise, intercoastal or fishing trades under the direction of an officer federally licensed for the port are exempt from pilotage unless a municipal pilot is employed.

(324) The Jacobsen Pilot Service, Inc., handles pilotage for San Pedro Bay, Los Angeles Harbor, Anaheim Bay and primarily Long Beach Harbor. The pilots board vessels 1 mile south of Long Beach Approach Lighted Whistle Buoy LB. Large deep-draft vessels are boarded 2 miles or more south of the approach buoy. The pilot boats, POLARIS, VEGA, ORION and ALTAIR have yellow hulls and white cabins with LONG BEACH PILOTS displayed on each side. The pilot station is at the northwest end of Pier F. Pilotage can be arranged by telephone (562–432–0664) or through VHF-FM channel 12. The pilot station monitors VHF-FM channels 12 and 16; the pilot boats monitor VHF-FM channels 12, 13, 14 and 16. The pilot boats display the standard day and night signals. The pilot station requests 2 hours advance notice of estimated time of arrival (ETA) by radiotelephone; call sign, KMA-372. Vessels should state name, call sign, ETA at the pickup station and draft and, for vessels equipped with bow or stern thrusters, the operational status of the thrusters. Vessels will be given information regarding the desired lee for boarding. In normal weather, pilots board on the starboard side, with the ladder about 2 meters above the water, and a moderate speed. Accommodation ladders must not be used outside the breakwater. In very thick fog vessels may be requested to anchor outside the breakwater in Anchorage F.

(325)

Towage

(326) Several tugboat companies operate in the Los Angeles-Long Beach area with tugs up to 5,000 hp available. Large vessels usually have one or more tugs in attendance while berthing at or departing from the wharves along the inner channels.

(340)

Facilities in the Port of Los Angeles

Name	Location	Berthing Space	Depths*	Deck Height	Mechanical Handling Facilities and Storage	Purpose	Operated by
POLA Liquid Bulk Terminal (Berths 45-47)	33°42'53"N., 118°16'31"W.	1063	47	16	Two hydraulic unloading arms	Crude oil	Port of Los Angeles
POLA Breakbulk Terminal (Berths 49-53)	33°43'08"N., 118°16'26"W.	2100	35-51	14.6	Open storage (24 acres)	Breakbulk steel	Port of Los Angeles
SSA (Berths 54-55)	33°43'29"N., 118°16'34"W.	1340	35	14	Transit shed (211,000 sq feet)	Imported meats, Imported fruits	Stevedoring Services of America
Westway (Berths 70-71)	33°43'29"N., 118°16'29"W.	800	35	14.8	Tank storage (593,000 barrels)	Liquid bulk	Westway Terminal Company
World Cruise Center (Berths 91-93)	33°44'51"N., 118°16'34"W.	2850	37	15	Terminal buildings and warehouses	Handling passenger vessels	Pacific Cruise Ship Terminals
West Basin Container Terminal (Berth 100)	33°45'09"N., 118°16'30"W.	1200	45-53	15	• Four Panamax cranes • Open storage (75 acres)	General cargo in containers	West Basin Container Terminal LLC
Kinder Morgan Liquid Terminal	33°45'22"N., 118°16'51"W.	825	35	13	Tank storage (498,000 barrels)	Petroleum products	Kinder Morgan, Inc.
West Basin Container Terminal (Berths 121-131)	33°45'39"N., 118°16'33"W.	3500	35-45	15	• Eight Panamax cranes • Open storage (186 acres)	General cargo in containers	West Basin Container Terminal LLC
TraPac Terminal (Berths 135-139)	33°46'00"N., 118°16'25"W.	4050	35-53	15.7	• Eleven Panamax cranes • Open storage (173 acres)	General cargo in containers	Trans Pacific Container Service Corp.
ConocoPhillips Terminal (Berths 148-151)	33°45'18"N., 118°16'22"W.	1328	37	15.2	Tank storage (825,000 barrels)	Petroleum products	ConocoPhillips
Warehouse Terminal (Berths 153-155)	33°45'23"N., 118°16'12"W.	1781	34	12.8	Covered storage (26,880 sq ft)	General cargo	Port of Los Angeles
Valero (Berths 163-164)	33°45'36"N., 118°16'03"W.	888	40	13.7	Tank storage (1.5 million barrels)	Petroleum products	Valero
Ultramar (Berth 164)	33°45'35"N., 118°16'03"W.	888	40	13.7	Tank storage (947,000 barrels)	Petroleum products	Ultramar
Borax (Berths 165-166)	33°45'30"N., 118°16'05"W.	679	37	14.2	Storage for (350 tons)	Industrial borates	U.S. Borax Inc.
Shell Oil (Berths 167-169)	33°45'18"N., 118°16'04"W.	1238	40	13	Tank storage (580,000 barrels)	Petroleum products	Shell Oil
Pasha (Berths 174-181)	33°45'43"N., 118°15'40"W.	3300	35-45	15	• Three cranes (40 tons) • Transit shed (235,000 sq feet)	Steel	Pasha Properties Inc.
Vopak (Berths 187-191)	33°45'50"N., 118°15'35"W.	2336	38	15	• Tank storage (700,000 barrels) • Covered storage (86,000 sq feet)	Liquid bulk chemical products	Vopak
WWL Vehicle Services (Berths 195-199)	33°46'07"N., 118°15'09"W.	2250	32-34	16-18	Storage for up to 8000 vehicles	Automobiles	WWL Vehicle Services Americas, Inc.
POLA Container Terminal (Berths 206-209)	33°45'46"N., 118°14'55"W.	2180	40-45	15.5	• Four gantry cranes • Open storage (86 acres)	General cargo in containers	Port of Los Angeles
Hugo Neu-Proler (Berths 210-211)	33°45'40"N., 118°15'12"W.	1500	35	13.7	Open storage (26.7 acres)	Scrap metal (ferrous/non-ferrous)	Hugo Neu-Proler Co.
Yusen Terminal (Berths 212-225)	33°45'16"N., 118°15'46"W.	5800	35-45	15	• 10 Panamax cranes • Open storage (185 acres)	General cargo in containers	Yusen Terminals Inc.
Seaside Terminal (Berths 226-236)	33°44'32"N., 118°16'26"W.	4700	38-45	13-15	• Eight Panamax cranes • Open storage (205 acres)	General cargo in containers	Seaside Transportation Services, LLC
ExxonMobil (Berths 238-240C)	33°44'01"N., 118°16'21"W.	903	37	14	Tank storage (2.3 million barrels)	Petroleum products	ExxonMobil
LAXT (Berth 301)	33°43'51"N., 118°15'46"W.	1000	72	16	•Open and domed storage •Enclosed conveyor sysytem	Petroleum coke	Los Angeles Export Terminal, Inc.
APL Terminal/Global Gateway South (Berths 302-305)	33°44'00"N., 118°15'14"W.	4000	50	15	• 12 Panamax cranes • Open storage (292 acres)	General cargo in containers	Eagle Marine
APM Terminals/Pier 400 (Berths 401-406)	33°43'44"N., 118°15'30"W.	7190	55	15.2	• 14 Panamax cranes • Open storage (484 acres)	General cargo in containers	APM Terminals

Dimensions given are in feet
* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

(344)

Facilities in the Port of Long Beach

Name	Location	Berthing Space	Depths*	Deck Height	Mechanical Handling Facilities and Storage	Purpose	Operated by:
Pier J (Berths 266-270)	33°44'11"N., 118°11'24"W.	2711	47-56	15	• 16 gantry cranes • Open storage (64 acres)	General cargo in containers	SSA Marine
Pier J (Berths 243-247)	33°44'36"N., 118°11'44"W.	3300	36-40	16	• Open storage (57 acres) • Covered storage (100,000 sq feet)	General cargo in containers	SSA Marine
Pier G (Berths 226-236)	33°44'39"N., 118°11'56"W.	6379	36-42	15	• 16 gantry cranes • Open storage (160 acres) • Container freight station (70,000 sq feet)	General cargo in containers	International Transportation Service
Pier G (Berths 212-215)	33°44'52"N., 118°12'23"W.	1900	50	18-19	• Two traveling shiploaders • Covered storage (540 tons)	Petroleum Coke, Coal, Potash, Borax, Soda ash, Concentrates, Prilled sulfer	Metropolitan Stevedore Company
Pier F (Berths 211A and 209)	33°45'02"N., 118°12'24"W.	800	43	19	• Pipeline system • Tank storage (425,000 barrels)	Petroleum products	Chemoil Marine Terminal
Pier F (Berth 211)	33°45'02"N., 118°12'28"W.	1100	40	19	• Terminal services for bulk materials	Petroleum coke	Koch Carbon, Inc.
Pier F (Berth 210)	33°44'59"N., 118°12'34"W.	700	40	19	Belt conveyor system	Bulk salt	Morton Salt Company
Pier F (Berth 208)	33°44'54"N., 118°12'44"W.	420	29-33	19	• Storage space (50,000 sq feet) • Belt conveyor system	Bulk cement	MCC-Lucky Cement Company
Pier F (Berths 206-207)	33°44'46"N., 118°12'43"W.	1200	32	18.5	• Open storage (12.2 acres) • Covered storage (190,000 sq feet)	Steel products, Plywood, Lumber, Large machinery	Crecent Terminal (SSA)
Pier F (Berths 204-205)	33°44'38"N., 118°12'32"W.	1265	36	18.5	• Open storage (5.5 acres) • Covered storage (180,000 sq feet)	Steel products, Plywood, Lumber	Cooper/T. Smith Stevedoring
Pier F (Berths 6-10)	33°45'15"N., 118°12'40"W.	2750	50	14.4	• Seven gantry cranes • 240 reefer outlets	General cargo in containers	Long Beach Container Terminal, Inc.
Pier E (Berths 24-26)	33°45'35"N., 118°12'50"W.	2100	48	17.7	• Five gantry cranes • Open storage (58 acres) • 400 reefer outlets	General cargo in containers	California United Terminals
Pier D (Berths 30-31)	33°45'31"N., 118°12'55"W.	700	43	19.5	• Tank storage (6.7 million gallons)	Tallow, Vegetable oils	Baker Commodities, Inc.
Pier D (Berths 32-33)	33°45'31"N., 118°13'00"W.	680	36	13.8	• Silo storage (50k tons) • Open storage (87k sq. feet)	Bulk cement	Pacific Coast Cement Corp.
Pier T (Berths 134-140)	33°45'13"N., 118°14'08"W.	5000	55	14.7	• 14 gantry cranes • Open storage (237 acres) • 1088 reefer outlets	General cargo in containers	TTI-Hanjin Shipping Co.
Pier T (Berth 122)	33°45'17"N., 118°13'08"W.	600	40	23	• Open storage (7.7 acres) • Covered storage (15,000 sq feet)	Lumber and Lumber products	Fremont Forest Group Corp.
Pier T (Berth 121)	33°45'24"N., 118°13'11"W.	1140	76	20	• Tank storage available in Carson	Crude oil and Petroleum products	BP
Pier T (Berth 118)	33°45'39"N., 118°13'14"W.	900	36	22	• Vessel loading crane • Open storage (13.5 acres)	Recyclable metal & steel products	SA Recycling Co.
Pier T (Berths 116-117)	33°45'47"N., 118°13'17"W.	600	32-35	23	• Open storage (9.9 acres)	Lumber and Lumber products	Weyerhaeuser Company
Pier D (Berth 46)	33°46'10"N., 118°12'44"W.	640	40	17.2	• Belt-conveyor system • Storage shed (40,000 tons)	Gypsum	Georgia Pacific Gypsum Corp.
Pier D (Berths 50-54)	33°46'16"N., 118°12'36"W.	2370	36	10-17	• Open storage (6.9 acres) • Transit shed (495,000 sq feet)	Newsprint and Lumber	Crescent Warehouse Co.
Pier C (Berths 60-62)	33°46'13"N., 118°13'00"W.	1800	42	14.5	• Three gantry cranes • Open storage (57 acres)	General cargo in containers & Automobiles	SSA Marine-Matson Terminal
Pier B (Berths 76-78)	33°46'33"N., 118°12'47"W.	2200	46	14.4	Tank storage (1.8 million barrels)	Petroleum products	BP
Pier B (Berths 82-83)	33°46'28"N., 118°13'05"W.	1300	45	14.4	• Tank storage (410k barrels) • Open storage (110 acres) • Transit shed (150k sq. feet)	Bulk and Automobiles	Petro-Diamond and Toyota
Pier B (Berths 84-87)	33°46'20"N., 118°13'21"W.	1980	52	16.8	Tank storage (254k barrels)	Crude oil, Petroleum products, Bunker fuel	Tesoro Refining and Marketing Company

Facilities in the Port of Long Beach

Name	Location	Berthing Space	Depths*	Deck Height	Mechanical Handling Facilities and Storage	Purpose	Operated by:
Pier A (Berths 88-96)	33°46'09"N., 118°13'54"W.	3600	50	14.2	• Ten gantry cranes • Open storage (90 acres) • 652 reefer outlets	General cargo in containers	SSAT Long Beach Terminal

Dimensions given are in feet
* The depths given above are reported. For information on the latest depths contact the port authorities or the private operators.

(327)

Quarantine, customs, immigration and agricultural quarantine

(328) The Los Angeles/Long Beach Seaport is a customs port of entry (See Vessel Arrival Inspections, chapter 3.)

(329) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(330)

Coast Guard

(331) A **sector office** is located in the Los Angeles/Long Beach Harbor complex. (See Appendix A for addresses.)

(332) **Los Angeles/Long Beach Coast Guard Station** is on the east side of Main Channel at **Reservation Point**.

(333)

Harbor regulations

(334) Local rules and regulations for the Port of Los Angeles are enforced by the Port Warden of the Harbor Department. The Los Angeles Harbor Department Headquarters are at 425 South Palos Verdes Street, San Pedro.

(335) Similar regulations for the Port of Long Beach are enforced by the Executive Director of the Harbor Department assigned by a Board of Harbor Commissioners. The Long Beach Harbor Department Administration Building is located at 415 W. Ocean Blvd., Long Beach, CA 90802. The **speed limit** for Middle Harbor and Inner Harbor is 6 knots.

(336) Permits are required from the Port Warden for any method of underwater diving within Los Angeles Harbor. Similarly, a permit from the Port Manager is required in Long Beach Harbor.

(337) Copies of the regulations may be obtained from the local office concerned.

(338)

Wharves

(339) All land of the Port of Los Angeles is owned by the City of Los Angeles. This land is leased to various facilities listed in the table; only the major deep-draft facilities are listed. The alongside depths given in the table are reported. (For information on the latest depths contact the port authorities or the private operators.) Most of the piers and wharves have shore connections (electrical/water), highway and railroad connections.

(341) General cargo at the port is usually handled by ship's tackle. Special handling equipment, if available, is noted in the table. Floating cranes to 350 tons are available.

(342) The office of the chief wharfinger is at 425 South Palos Verdes Street, San Pedro.

(343) All land of the Port of Long Beach is owned by the City of Long Beach. This land is leased to various facilities listed in the table; only the major deep-draft facilities are listed. The alongside depths given in the table are reported. (For information on the latest depths contact the port authorities or the private operators.) Most of the piers and wharves have shore connections (electrical/water), highway and railroad connections.

(345) The famous passenger liner QUEEN MARY, retired in 1967 and purchased by the Port of Long Beach, is moored on the northeast side of Pier H, parallel to the skyline of the city of Long Beach. The ship is used as a floating museum, hotel and convention center.

(346) The large lighted white dome south of the QUEEN MARY was once the exhibit center for Howard Hughes' famous flying boat SPRUCE GOOSE. The dome is now used by Carnival Cruise Lines to support the Long Beach Cruise Terminal.

(347)

Supplies

(348) Fuel oil, water and marine supplies can be had in any quantity at both Los Angeles and Long Beach. Fuel oil can be supplied at the oil docks or by barge.

(349)

Repairs

(350) Los Angeles Harbor is well equipped with marine repair plants. The largest marine railway, at Berth 264 in the northeast end of Fish Harbor in East San Pedro, has a hauling power of 1,000 tons. There are a number of smaller facilities. There are no graving docks. The port is well equipped with salvage facilities. A trained salvage crew and a corps of expert divers are ready at all times to render aid in any disaster to shipping along the coast and at distant localities.

(351) Long Beach Harbor is also well equipped for marine repairs. A variety of barge cranes are available in the 40- to 275-ton capacity range. There are several marine railways for small craft at Long Beach Harbor.

(352)

Communications

(353) Los Angeles and Long Beach Harbors have connections to the extensive freeway system that connects the cities of Los Angeles and Long Beach and their suburbs; four U.S. or Interstate highways extend from the area freeway system to the north, south and east. The harbors are served by three major railroads and many

airlines. The harbors are ports of call for many foreign and domestic steamship lines and by coastal barge lines.

(354) While the Ports of Los Angeles and Long Beach are separate entities, their harbor facilities are closely interrelated.

(355)

Small-craft facilities

(356) The major small-craft facilities in Long Beach are Long Beach Marina in Alamitos Bay and the Downtown Marina on Queensway Bay, west of oil Island Grissom. Other facilities in Long Beach Harbor are just inside the entrances to both Channel Two and Channel Three. All repair facilities, supplies, fuel, moorage and related yacht requirements may be had at individual private marinas or from other establishments in the Middle Harbor. Several boatyards are in Channel Two and Channel Three.

(357) Los Angeles Harbor has small-craft facilities on both sides of Cerritos Channel from the Heim lift bridge to East Basin, on the east side of East Basin, in Watchhorn Basin and along the west side of West Channel. All the berths, fuel, supplies and services required for small boats are available at the individual private marinas or may be obtained nearby.

(358)

Point Fermin to Point Vicente

(359) From Point Fermin the coast trends in a general west direction 6.5 miles to Point Vicente and forms the north shore of San Pedro Channel, which is discussed in chapter 5. From Point Vicente the shoreline curves north. The coast is free of off-lying dangers and is well marked by kelp.

(360) The Traffic Separation Scheme between Point Fermin and Point Conception is discussed earlier in this chapter.

(361) Several submarine sewers extend 1.3 miles offshore near **White Point**, 1.3 miles northwest from Point Fermin.

(362) **Point Vicente**, 6.3 miles northwest of Point Fermin, is a steep rocky cliff, 120 feet high, white and red in color, with red predominating. A rock awash is 250 yards southwest from the point with kelp extending 100 yards farther to seaward. A small black 25-foot high pyramidal rock is close inshore 0.3 mile east of the point.

(363) **Point Vicente Light** (33°44'31"N., 118°24'38"W.), 185 feet above the water, is shown from a cylindrical tower on the southwest end of the point.

(364)

Danger zone

(365) A **danger zone** for practice firing extends off Point Vicente. (See **33 CFR 334.940**, chapter 2, for limits and regulations.)

(366)

ENCs - US3CA70M, US5CA63M
Charts - 18740, 18744

(367) **Palos Verdes Point**, 2 miles north-northwest of Point Vicente, is a bold, bluff point, 120 feet high, rising abruptly to the west extremity of Palos Verdes Hills. There are no dangers off the point, but heavy kelp extends 0.6 mile offshore and is marked by a lighted bell buoy 0.7 mile west of the point.

(368) **Lunada Bay** is a small bight on the south side of Palos Verdes Point. **Resort Point** forms the south side of this bay.

(369) **Flat Rock Point**, 1.7 miles northeast of Palos Verdes Point, is on the south side of Santa Monica Bay. A narrow spur protrudes from the otherwise rounded point. **Flat Rock**, 6 feet high, and **Bit Rock**, 5 feet high, are 175 yards and 250 yards, respectively, off the end of the spur. **Bluff Cove** is a shallow bight on the south side of Flat Rock Point. The beach is covered with boulders.

(370) **Santa Monica Bay** is formed by the curving coast between Point Vicente and Point Dume. From Flat Rock Point to Santa Monica the shore is comparatively low with a sand beach backed by a continuous city area to the inland mountains. The depths of Santa Monica Bay are comparatively shoal, the 10-fathom curve in general lying about 1 mile from shore, except at Redondo Beach where a deep submarine valley, **Redondo Canyon**, heads close to the shore.

(371) **Malaga Cove**, just north of Flat Rock Point, is used occasionally by fishing boats with local knowledge, but it is open to the prevailing west winds. Boats enter through a break in the kelp and anchor inside in 6 to 7 fathoms, with the south point of the cove bearing 207°.

(372) **King Harbor**, 4.5 miles north-northeast of Palos Verdes Point, is a large small-craft harbor at **Redondo Beach**. The harbor is used mostly by pleasure craft and accommodates upwards of 1,400 boats.

(373)

Prominent features

(374) At the north end of King Harbor and about 200 yards inshore is a large power plant with five large smokestacks approximately in line and parallel with the beach. A private light is shown from atop the power plant.

(375)

COLREGS Demarcation Lines

(376) The lines established for Redondo Harbor are described in **33 CFR 80.1116**, chapter 2.

(377) The entrance is between two lights at the ends of the breakwaters at the south end of the harbor. A mariner-radio-activated sound signal at the light on the east side of the entrance is initiated by keying the microphone five times on VHF-FM channel 81A. A lighted bell buoy is south-southwest of the south end of the west breakwater. The channel is marked by private buoys, with lights at the entrances to Basins 1 and 2. Natural depths through the entrance are 27 to 30 feet with a depth of 8 feet in the

three basins, except for an isolated depth of 6 feet in the northeasternmost channel of Basin 1. In 1977, shoaling was reported on the south side of the entrance to Basin 3, and in 1989, rocks awash were reported near the north side of the entrance to the basin.

(378)

Harbor regulations

(379) The harbor is administered by the city of Redondo Beach and is under the control of a harbormaster, who has an office near the entrance to Basin 2. Transients should contact the **harbormaster** for berth assignments. The harbor patrol operates from Basin 2. Both the harbor office and the patrol monitor radiotelephone VHF-FM channel 16 and can be reached be telephone at 310–318–0632.

(380)

Supplies

(381) There is a fuel dock that has gasoline and diesel fuel; most other small-craft supplies are available.

(382) A yacht club is in Basin 3.

(383)

Repairs

(384) A boatyard here can handle craft up to 50 feet and 60 tons for all general repairs.

(385)

Caution

(386) The city of Los Angeles advises that under certain tidal conditions, underwater installations between King Harbor and Marina del Rey, seaward to 9 fathom depths, present possible hazards to surface navigation.

(387) Sport fishing barges usually anchor 1 or 2 miles offshore during the summer; caution is advised to avoid them.

(388)

Submarine oil seepage

(389) About 1.5 miles off Redondo Beach, in the deep water of Redondo Canyon, there is a submarine oil seepage and the water surface is often covered with a film of petroleum. Gas bubbles have been reported in several locations in this vicinity. A second seepage 3.5 to 4 miles to the northwest is more noticeable and more continuously in action. On calm days, globules and large blobs of oil have been seen projected clear of the water surface. Gas also escapes continuously in large bubbles often 3 to 6 inches in diameter.

(390)

ENCs - US3CA70M, US5CA63M
Charts - 18740, 18744

(391) **Hermosa Beach** and **Manhattan Beach** are between Redondo Beach and El Segundo; both have public fishing piers with fish havens covered 9 feet around their seaward ends. The pier at Hermosa Beach is about 1.3 miles north of Redondo Beach and extends about 275 yards from shore; a private sound signal is at the outer end. The Manhattan Beach pier, 2.5 miles north of Redondo Beach, extends almost 175 yards from shore.

(392) **El Segundo**, about 2 miles north of Manhattan Beach, has extensive oil refineries with several large oil tanks on high ground being prominent. Other prominent features are an aero light north of El Segundo at Los Angeles International Airport, two 334-foot striped stacks in about 33°55'06"N., 118°25'39"W., and a power plant with four stacks about 0.6 mile south-southeast of the striped stacks. A rock groin, marked at its outer end by a private light, extends seaward from the north end of the power plant.

(393) An offshore oil terminal with two multi-buoy sea berths is about 1.3 miles west of El Segundo. The terminal, operated by Chevron USA, loads and discharges tankers through several submerged hoses and pipelines. A private lighted bell buoy is west of the offshore terminal and a safety zone surrounds the terminal. (See **33 CFR 165.1156**, chapter 2, for limits and regulations.) Two anchorages are west-southwest of the offshore terminal for vessels awaiting berthing assignments at the terminal. Vessels intending to use these anchorages must first contact the Vessel Traffic Information Service on VHF-FM channel 14 for assignment and further instruction.

(394)

Caution

(395) Mariners should exercise caution when navigating over the sewer outfalls and submerged pipelines that extend seaward from El Segundo. Numerous uncharted buoys and other potential hazards to navigation exist within this area.

(396) A **restricted area** extends about 7 miles offshore at El Segundo. (See **33 CFR 162.195**, chapter 2, for limits and regulations.)

(397) **Marina del Rey**, 7.6 miles north-northwest of Redondo Beach and King Harbor, is a large manmade small-craft harbor. It has a capacity for over 6,000 pleasure craft.

(398)

COLREGS Demarcation Lines

(399) The lines established for Marina del Rey are described in **33 CFR 80.1118**, chapter 2.

(400) A detached breakwater parallel to the shore is just to seaward of the jetties protecting the entrance channel.

(401)

Channels

(402) A dredged entrance channel leads northeast from the detached breakwater for about 0.7 mile, then the harbor channel continues north for about 0.6 mile to the north end of the harbor. There are two openings between the jetties and the detached breakwater; the chart is the best guide for navigating the openings. The north and south ends of the detached breakwater and the outer ends of the jetties are marked by lights. A mariner-radio-activated sound signal at the light on the outer end of the north jetty is initiated by keying the microphone five times on VHF-FM channel 81A.

(403) A **restricted area** governing navigation inside the detached breakwater has been established. (See **162.200**, chapter 2, for limits and regulations.)

(404) **Traffic separation lanes** have been established in the entrance channel to Marina del Rey. These lanes are marked by State Waterway Regulatory Buoys with the words "No Sail." All vessels under power, or power and sail, shall keep these buoys to their port when entering or departing the harbor. The center lane between the buoys is used by vessels solely under sail, both entering or departing the harbor.

(405)

Anchorage

(406) A **special anchorage** is in the upper reach of the harbor channel. (See **33 CFR 110.1** and **110.111**, chapter 2, for limits and regulations.)

(407)

Coast Guard

(408) A search and rescue craft is stationed at the pier just south of the harbor office, on the east side of the bend in the entrance channel.

(409)

Harbor regulations

(410) The harbor is administered by the Los Angeles County Department of Beaches and Harbors. The Harbormaster, under the Los Angeles County Sheriffs Department, has an office on the east side of the bend in the entrance channel. Guest berths are available further down the channel at Burton Chace Park.

(411) The Sheriff's Harbor Patrol operates the office on the east side of the entrance channel, providing 24-hour service. Radiotelephone VHF-FM channel 16 is monitored on a 24-hour basis, and the Sheriff's Department can be reached by telephone at 310–823–7762.

(412)

Supplies

(413) Marine supplies of all kinds can be obtain at most of the marinas and repair yards. Gasoline and diesel fuel are available at the fuel docks. Several yacht clubs are on the shores of the various basins. Medical facilities are available at the harbor, and a hospital is nearby.

(414)

Repairs

(415) There are two boatyards in the harbor that have hull and engine repair facilities. The largest lift can handle vessels to 100 tons.

(416) Fish havens, marked by private buoys, are about 1.1 miles west of the light at the north end of the detached breakwater.

(417)

ENCs - US3CA70M, US5CA63M
Charts - 18740, 18744

(418) About 1 mile north of the entrance to Marina del Rey is the 1,100-foot-long Los Angeleles city public fishing pier at Venice; a fish haven covered 10 feet surrounds its seaward end.

(419) A **144°40'-324°40' measured nautical mile** is off Marina del Rey. The south range is two triangular white and orange markers located at the midpoint of Marina del Rey detached breakwater. The north range is an orange and white triangle located on the centerline of Los Angeles city public fishing pier.

(420) **Santa Monica**, 3.5 miles northwest of Marina del Rey, has a large pleasure pier, but there is no water commerce. A private sound signal is on the outer end of the pier. A 0.3-mile-long breakwater, submerged at high tide, is off the outer end of the pier and parallel to the beach.

(421) The city of Santa Monica Harbor Patrol maintains a temporary office on the large pleasure pier. VHF-FM channels 12 and 16 are monitored on a 24-hour basis. A rescue boat is on call for emergencies.

(422) The buildings and structures along the beach are prominent. Most conspicuous from offshore are the tall General Telephone Building with a red and white antenna on top, and the clock tower atop a bank building.

(423) The 16-mile coast between Santa Monica and Point Dume is bold, rocky, and rugged. Steep cliffs rise abruptly from the water's edge, ascending gradually within 3 or 4 miles to the summits of the Santa Monica Mountain Range, about 3,000 feet high. The seaward termination of this range is at Point Mugu, 14 miles west of Point Dume.

(424) **Kellers Shelter**, 9 miles west of Santa Monica at **Malibu Beach**, is an open bight offering protection from north and west winds in 2 to 7 fathoms, sandy bottom. A reef marked by kelp extends a short distance offshore about 0.5 mile west of the anchorage.

(425) A fishing and pleasure pier, 700 feet long with 15 feet of water at its outer end, is on the west side of Kellers Shelter. Twin white buildings are prominent marks at the outer end of the pier. Private mooring buoys are maintained east of the pier for the use of sport fishing boats that leave for the nearby fishing grounds. Frequently the headlights of automobiles on the highway along the beach are directed toward the sea.

(426) **Paradise Cove**, 2 miles northeast of Point Dume, affords protection similar to Kellers Shelter. The anchorage is abreast the fourth break or arroyo in the cliffs from Point Dume, and is immediately outside the kelp line, in 6 to 7 fathoms, sand bottom, with Point Dume bearing 240°. Kelp should be avoided because of possible dangers. A 300-foot sport fishing pier is on the northwest side of Paradise Cove. A rescue vessel is moored in Paradise Cove.

(427) In 1985, hazardous submerged pilings were reported about 300 yards south-southwest of the fishing pier in about 34°01.1'N., 118°47.1'W.

(428) **Point Dume** is the seaward end of a rather low plateau that terminates in a dome-shaped head, about 200 feet high, rising from a bold rocky bluff. The bluff is reddish, with white cliffs east and west. A small bare rock is 150 yards south of the point, and a reef that uncovers

(436)

METEOROLOGICAL TABLE – COASTAL AREA OFF POINT MUGU, CA
Between 34°N to 36°N and 119°W to 125°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	1.0	1.5	2.0	2.2	1.8	1.5	0.7	0.4	0.5	0.9	1.1	1.4	1.3
Wave Height > 9 feet [1]	4.4	6.0	8.1	10.4	10.6	8.1	5.3	4.4	3.9	3.8	4.6	6.4	6.4
Visibility < 2 nautical miles [1]	4.5	6.3	4.6	4.9	5.7	5.8	8.5	8.0	7.7	8.7	5.5	5.6	6.3
Precipitation [1]	5.5	5.8	5.0	3.2	1.6	1.7	1.5	1.6	1.4	1.4	3.4	4.8	3.0
Temperature > 69° F	0.6	0.5	0.5	0.5	0.7	1.4	3.4	3.6	4.2	2.6	1.5	0.8	1.7
Mean Temperature (°F)	55.5	55.8	55.9	56.7	57.6	59.4	61.1	62.1	62.8	61.7	59.5	57.4	58.8
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 (%)	79	79	80	80	82	84	86	86	85	84	81	79	82
Overcast or Obscured [1]	21.2	25.7	24.4	24.5	32.1	40.0	50.6	48.2	36.6	29.4	18.9	20.4	31.4
Mean Cloud Cover (8ths)	4.1	4.3	4.3	4.2	4.5	4.7	5.4	5.4	4.6	4.3	3.7	3.9	4.5
Mean SLP (mbs)	1019	1019	1018	1017	1016	1015	1015	1015	1014	1016	1018	1019	1017
Ext. Max. SLP (mbs)	1036	1036	1045	1043	1035	1031	1033	1030	1032	1034	1040	1039	1045
Ext. Min. SLP (mbs)	987	992	990	996	997	995	998	998	996	998	996	991	987
Prevailing Wind Direction	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW
Thunder and Lightning [1]	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1

[1] Percentage Frequency

is 150 yards farther out. Foul ground extends about 500 yards east of the reef.

(429) A rescue boat is moored at **Zuma Beach**, about 1 mile northwest of Point Dume. The rescue boat can be contacted through the Coast Guard or the lifeguard station, which monitors VHF-FM channel 16, from 0900-1700 daily; call sign, Bay Watch.

(430) **Dume Canyon** is a submarine valley with extremely steep slopes running about 0.3 mile offshore from Point Dume and extending northwest roughly parallel to the beach. Moderately strong currents of a confused directional nature have been observed in the vicinity of this submarine valley.

(431)

ENC - US3CA69M
Chart - 18720

(432) The 14-mile coast between Point Dume and Point Mugu is very rugged, and there are no known outlying dangers. About 2 miles east of Point Mugu, on the beach at the foot of a very high bluff, is a 140-foot sand dune. This is quite prominent and can be made out on clear moonlit nights. The dune is charted as a "prominent slide."

(433) **Point Mugu**, the seaward termination of the Santa Monica Mountains, is prominent because of the lowland of the Santa Clara Valley to the west. The cuts and fills of the highway that skirt the shore from Point Mugu east are prominent. Aluminum-colored twin tanks, 1.5 miles northwest of the point and on the west slopes of Laguna Peak, show well from southeast through west. A pipeline runs from the tanks to a prominent white radar structure atop Laguna Peak. The tanks and the pipeline are marked by flashing red lights.

(434)

Weather, Point Mugu

(435) Fog hampers visibilities most often from July through December, when the visibility drops below 0.5 mile on about 5 to 8 days per month; September is usually the worst month. North through northeast winds are common from October through March, while west winds prevail from April through September. While gales are infrequent, wind gusts have reached 50 to 60 knots from fall through spring. These strong winds often blow out of the east-northeast. Calm conditions are frequent all year round, but particularly from May through October.

(437)

Caution

(438) The U.S. Navy advises navigation interests and others that continuous hazardous operations may take place on the Point Mugu Sea Range, Monday through Sunday. The range extends for 180 miles in a southwest direction from Point Mugu and is up to 210 miles wide. The specific danger portions of the firing area are broadcast daily Monday through Friday at 0900 and 1200 on 2638 kHz and 2738 kHz (See Eleventh Coast Guard District Local Notice to Mariners for additional information). The U.S. Navy will make broadcast every 30 minutes on VHF-FM Marine bridge-to-bridge radio channels 11 and 16 during hazardous operations. For information regarding the current hazardous operations status contact "PLEAD CONTROL" on VHF-FM channels 11 or 16, or at 805–989–8841/8843 from 0600-1800, or 805–816–0792 RODO (Range Operation Duty Officer) after 1800. A recorded message is available at 805–989–1470. If PLEAD CONTROL cannot be reached, contact "San Pedro Traffic" on VHF-FM channel 14 or 310–832–6411.

(439) The U.S. Navy requests all vessels transiting through the Point Mugu Sea Range submit a notification to PLEAD CONTROL indicating the vessel name, destination and estimated time of entry into and departure from the test

range. Notifications can be faxed to 805–989–0102. This is for information only and does not constitute approval to enter the range. When inbound, contact PLEAD CONTROL or "San Pedro Traffic" to determine when and where an exercise is scheduled. Communicate in sufficient time to divert or adjust vessel speed to avoid naval operations. When outbound, advise "San Pedro Traffic" intention to transit "Northbound" (through the Santa Barbara Channel) or "Westbound" (south of the Channel Islands) when reporting fifteen minutes prior to departing the federal breakwater. San Pedro Traffic will provide the most recent information regarding hazardous naval operations.

(440)

Danger zone

(441) **Danger zones** for Navy small-arms firing ranges extend about 2 miles offshore at Point Mugu and about 3 miles offshore at Laguna Point. (See **33 CFR 334.1120** and **334.1125**, chapter 2, for limits and regulations.)

(442) **Mugu Canyon** is a submarine valley with its head near Mugu Lagoon. The 50-fathom curve is about 0.5 mile offshore.

(443) **Santa Barbara Channel** is discussed in chapter 5.

(444)

ENC - US5CA58M
Chart - 18724

(445) **Point Hueneme** (pronounced: y-nee-me), 22 miles west-northwest of Point Dume is low, rounding, and sandy. It is the outermost point of the low land of the Santa Clara Valley.

(446) **Port Hueneme Light** (34°08'43"N., 119°12'36"W.), 52 feet above the water, is shown from a 48-foot white square tower on a building. A mariner-radio-activated sound signal at the light is initiated by keying the microphone five times on VHF-FM channel 81A. A sewer outfall line, about 1.4 miles south-southeast of Point Hueneme Light, extends about 1 mile from shore.

(447)

Weather, Point Hueneme

(448) In the coastal waters from Point Hueneme to Santa Barbara, sea fog hampers navigation most often from July through October. It is generally more widespread and often more persistent than land (radiation) fog. Visibilities fall below 0.5 mile (0.9 km) on about 5 to 10 days per month during these months; August and September are usually the worst.

(449) **Port Hueneme** is an inland basin, about 1,400 feet long by 1,200 feet wide, located at the head of a submarine canyon, **Hueneme Canyon**. It is under the control of the U.S. Navy, Naval Base Ventura County. The southeast part of the basin is owned by the Oxnard Harbor District and is operated as a deep-draft commercial terminal. The commercial terminal is used by cargo vessels, commercial and sport fishing craft and offshore supply vessels operating from here to offshore drilling rigs.

(450)

Prominent features

(451) The most prominent objects around the shores of the harbor are two red and white striped stacks at a power plant, 2.4 miles southeast of the harbor, are prominent, and the aerobeacon at Oxnard, 3 miles north of the harbor, is a good night mark.

(452)

COLREGS Demarcation Lines

(453) The lines established for Port Hueneme are described in **33 CFR 80.1120**, chapter 2.

(454) A **Safety Fairway** leading to the channel has been established. (See **33 CFR 166**, chapter 2, for limits and regulations.)

(455)

Channel

(456) The dredged channel leads between two jetties and through a land cut into the basin. The outer ends of the jetties are marked by lights. A lighted whistle buoy is about 800 yards southwest of the outer end of the east jetty. Lighted buoys and a **037°** lighted range mark the channel.

(457) A **federal project** provides for a depth of 36 feet in the entrance channel and 35 feet in the basin. Mariners are advised that between periodic dredging, depths in the channel and basin are subject to change due to minor silting. Vessels with deep drafts are advised to consult with the Port Hueneme Pilots Association (805–986–3213) concerning the available depths prior to vessel arrival. General guidelines call for under-keel clearances of 3 feet for inbound vessels and 2 feet for outbound vessels, taking tidal height into consideration. The narrowest width of the entrance channel is 330 feet. However, because of prevailing fresh winds only one-way traffic is permitted for large ships. The pilots control the traffic direction.

(458)

Anchorage

(459) There is no anchorage area in the harbor basin because of space limitations. The recommended anchorage for deep-draft vessels is about 1.7 miles south of Port Hueneme Light. This location offers no protection in heavy weather.

(460)

Dangers

(461) A **naval restricted area** is in Port Hueneme. (See **33 CFR 334.1** through **334.6**and **334.1127**, chapter 2, for limits and regulations.)

(462)

Currents

(463) The harbor is not affected by tidal streams or currents; however, cross-currents do occur near the entrance to the harbor and are not predictable.

(464)

Pilotage, Port Hueneme

(465) All commercial vessels 300 gross registered tons and over entering, leaving or shifting within the Port of Hueneme, including the area of the Oxnard Harbor District, must be piloted by a port pilot duly licensed to perform the services of piloting vessels within the Port. The Oxnard Harbor district does not maintain pilots. Requests for pilots may be made by calling the Port Hueneme Pilots Association, telephone 805–986–3213. Pilots are available on a 24-hour basis and board vessels from a tug at a point 2 miles from the sea buoy on the entrance range. When pilots are boarding, vessels should stay on the range line and reduce speed to 5 knots or less.

(466) Pilot ladder should be rigged on the lee side (normally starboard while inbound, port side outbound) amidship, about 5 feet (1.5 m) above the water. Pilot ladder should be rigged well away from any overboard discharge. At night, the ladder must be properly lighted.

(467) Access to and from the ladder to the deck of the ship should be through a break in the rail, or if the ladder tends over the rail, then steps should be provided on the inboard side to permit access back to the deck level. Manropes should NOT be rigged, when boarding a Pilot, coming from sea.

(468) A proper ring-buoy (with light and line attached) should be provided at the boarding area. The harbor pilots guard VHF-FM channel 16. Vessels are cautioned to remain a safe distance offshore when calling pilots because dock space must often be cleared.

(469)

Towage

(470) Tug service for the port is furnished by a private tug company. Requests for service may be made by telephone, 805–986–1600. Tugs up to 4,000 hp are available on a 24-hour basis.

(471)

Quarantine, customs, immigration and agricultural quarantine

(472) Port Hueneme is a U.S. Customs port of entry and can be reached at 805–488–8574. (See Vessel Arrival Inspections, chapter 3.)

(473) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(474)

Agricultural quarantine

(475) All vessels from outside of California that dock at Port Hueneme, except those specifically exempt, must be inspected by U.S. Department of Agriculture and/or the Ventura County Department of Agriculture. There are local representatives in the Oxnard area.

(476)

Harbor regulations

(477) The U.S. Navy exercises overall Port Control Authority. Port Hueneme, Control One, is on duty at all times and monitors VHF-FM channel 6; the Oxnard Harbor District is responsible for its commercial operations. The Wharfinger is on duty at all times and guards VHF-FM channel 14; the Wharfinger office is at the east end of Slip A, along with the pilot and tugboat offices. Entrance to Naval Base Ventura County is restricted, and no photography is permitted without clearance.

(478) No garbage, waste or refuse shall be discharged in any manner from any vessel in accordance with the California Administrative Code, a copy of which is available at the port's main administrative building. A 5-knot **speed limit** is enforced in the harbor.

(479)

Wharves

(480) Oxnard Harbor District has three 600-foot long deep-draft berths (Wharf No. 1) and two 700 foot-long deep-draft berths (Wharf No. 2). There is also a shallow depth wharf at the west end of the port property adjacent to the entrance channel. It is 379 feet long with 15 to 18 feet alongside.

(481) Wharf No. 1: 1,800 feet long; 35 feet alongside; deck height, 14 feet; three refrigerated warehouses providing 210,000 square feet of covered storage; 20 acres of open storage; three 60-ton vehicular weight scales; and Central Gate; operated by Oxnard Harbor District.

(482) Wharf No. 2: 1,450 feet long; 35 feet alongside; deck height, 14 feet; 96,000 square feet of warehouse; 23 acres of open storage; operated by Oxnard Harbor District.

(483)

Supplies

(484) Water and most marine supplies are available. Bunker fuel from dockside pipeline at commercial berths and diesel oil are obtainable.

(485)

Repairs

(486) Minor repairs may be made in the port. Machine shops in Ventura and Oxnard are qualified for normal voyage repair work.

(487)

Communications

(488) Oxnard has good rail, air and highway connections with Los Angeles and points north.

(489)

ENC - US5CA65M
Chart - 18725

(490) **Channel Islands Harbor**, 1 mile northwest of Port Hueneme and 5.8 miles southeast of Ventura Marina, is a small-craft harbor. It is used by pleasure and sport fishing vessels and has existing berthing facilities for over 2,400 boats.

(491)

No-Discharge Zone

(492) The State of California, with the approval of the Environmental Protection Agency, has established a No-Discharge Zone (NDZ) in Channel Islands Harbor. It

encompasses the entire harbor; see the chart for the zone limits.

(493) Within the NDZ, discharge of sewage, whether treated or untreated, from all vessels is prohibited. Outside the NDZ, discharge of sewage is regulated by **40 CFR 140** (see chapter 2).

(494)

COLREGS Demarcation Lines

(495) The lines established for Channel Islands Harbor are described in **33 CFR 80.1122**, chapter 2.

(496)

Channels

(497) The entrance to Channel Islands Harbor is between two jetties protected by an offshore breakwater. Each end of the breakwater and both the seaward and inshore ends of both jetties are marked by lights. A mariner-radio-activated sound signal at the light on the south jetty is initiated by keying the microphone five times on VHF-FM channel 81A.

(498) The areas southeast of the entrance channel and northwest of the north jetty are subject to rapid and uncertain shoaling. Mariners are advised to approach the entrance channel from the south and to exercise caution when approaching the harbor at night.

(499)

Coast Guard

(500) The Channel Islands Harbor Coast Guard Station is just south of the harbormaster's office. Search and rescue vessels are stationed here.

(501)

Harbor regulations

(502) The harbor is administered by the Harbor County Department, Ventura County, and is under control of a **harbormaster**, who has an office on the east side of the harbor about 400 yards north of the first bend in the channel. The harbor office maintains guest berths for 70 craft. Transients should report to the harbormaster for berth assignments. The harbormaster guards VHF-FM channel 16, 24 hours a day. Harbor patrol boats operate from the office.

(503)

Supplies

(504) Gasoline and diesel fuel are pumped at a fueling dock on the east side of the harbor just north of the harbor office. Water, ice and most marine supplies are available.

(505)

Repairs

(506) Two full-service marine repair yards are on the east side of the channel, about 0.5 mile north of the harbormaster's office. Mobile lifts can handle craft to 25 tons, and a fixed lift can handle vessels to 60 tons.

(507) A **147°51'–327°51'measured nautical mile** is off the breakwater and beach just north of the harbor entrance. The south range is marked by the breakwater south light and the south jetty light. The north range is marked by less visible poles on the beach.

(508) A row of cottages extends northwest along the beach for 2 miles from Point Hueneme. From the point, low sand beaches and dunes trend northwest for 9 miles to the mouth of **Ventura River**.

(509) A striped 209-foot stack having a bright flashing red light on top is 0.6 mile north of **Mandalay Beach** and is conspicuous throughout the area.

(510) **Ventura** is 8.5 miles north of Point Hueneme on **Pierpont Bay**. It has a 1,960-foot fishing pier with about 19 feet of water at the outer end, and about 18 feet at the inner end of a 250-foot loading face.

(511) Freshwater is piped to the pier, and gasoline is available in the town.

(512) Two fish havens are about 2.3 miles southwest and 1.7 miles south, respectively, from Ventura Pier.

(513) Small craft may anchor anywhere in Pierpont Bay, but the anchorage is unprotected and is not recommended except for short day use. Boats may obtain moorage at Ventura Harbor.

(514) The most prominent features around Ventura are the lighted microwave tower, atop a hill 1.8 miles northeast of the seaward end of Ventura Pier, and the tall motel, about 300 yards west of the pier. Also prominent are the railroad trestle crossing Ventura River, just west of town, and **Padre Junipero Serra Cross**, on a 350-foot hill immediately northwest of the center of town. There are several aluminum-colored tanks and many oil derricks high up the slopes of the hills northwest of town.

(515) **Ventura Harbor**, 6.7 miles north of Point Hueneme and just north of Santa Clara River, is a small-craft harbor used by pleasure craft and commercial fishing vessels. It has existing berthing facilities for about 1,500 boats. Commercial fish-handling facilities are available in the harbor.

(516)

COLREGS Demarcation Lines

(517) The lines established for Ventura Harbor are described in **33 CFR 80.1124**, chapter 2.

(518) The entrance to Ventura Harbor is between two jetties protected by a 1,800-foot detached breakwater. The south end of the breakwater and the seaward ends of both jetties are marked by lights. A mariner-radio-activated sound signal at the light on the south jetty is initiated by keying the microphone five times on VHF-FM channel 81A.

(519) Dangerous breakers can develop in the approach area to the entrance channel in winter when the prevailing winds are from the west. Inbound and outbound vessels are advised by local interests to run a direct course between Ventura Marina Entrance Lighted Whistle Buoy 2V and the breakwater entrance.

(520)

Channels

(521) The dredged entrance channel leads northeast between the jetties, then turns east into the harbor. The buoys in the entrance channel and harbor are frequently relocated due to changing conditions. Mariners are advised to exercise extreme caution and to contact the

harbormaster for the latest channel and harbor conditions prior to entering.

(522)

Harbor regulations

(523) Ventura Harbor is administered by the Ventura Port District and is under the control of a **harbormaster**, who has an office on the point north of the entrance basin. Transients should report to the harbormaster for guest slip assignments. The harbormaster monitors VHF-FM channels 16 and 12, from 0600 to 0200 daily.

(524)

Supplies

(525) Gasoline and diesel fuel are available just east of the harbormaster's office and at the south end of the harbor. Water, ice and marine supplies are available. Two yacht clubs are on the shores of the harbor.

(526)

Repairs

(527) Boatyards in the harbor have mobile lifts that can haul out vessels to 150 tons for hull and engine repairs. Electronic service is also available.

(528) From Ventura River, the **Santa Ynez Mountains** extend to Point Conception and Point Arguello. For 11 miles west from the river to Rincon Point the coast is very rugged; elevations of over 2,000 feet being found within 1 mile of the beach. The dangers do not extend over 0.5 mile from the beach, which is well fringed with kelp. Between Ventura and Santa Barbara are several small towns, and the highway and railroad skirt the shore; retaining walls are a common feature.

(529) **Pitas Point**, 5.5 miles northwest of Ventura, is the first bold point west of Ventura River. A very steep gulch is on the west side. East of the point is 1 mile of beach cottages. High on the steep slopes above the cottages are the derricks and tanks of an oil field. Aluminum-colored tanks and oil-processing plants are prominent 1 mile east of the point.

(530) **Punta Gorda**, 9 miles northwest of Ventura, is low at its outer extremity but rises rapidly to prominent **Rincon Mountain**. Tanks and numerous derricks are along the highway southeast of Punta Gorda. A causeway extends south from Punta Gorda for 0.5 mile to an artificial island used for oil operations.

(531) **Rincon Point,** 11 miles northwest of Ventura, is low and sandy. **Sand Point**, 3.5 miles west of Rincon Point, is low and rounding. A rock that uncovers is 550 yards offshore from Sand Point.

(532) Just east of **Carpinteria**, several submerged pipelines lead to offshore oil drilling platforms over three miles offshore. A pier here is used to load support boats operating to and from the oil platforms.

(533) **Ortega Hill**, just west of **Summerland** and 18 miles northwest of Ventura, is 250 feet high and conspicuous because of the extensive cuts for the highway; from offshore it has the appearance of a large slide.

(534) **Santa Barbara**, 29 miles northwest of Point Hueneme, is a resort city and popular yachting harbor. The harbor is used mostly by pleasure craft and fishing vessels. There are about 1,200 slips in the harbor.

(535) **Santa Barbara Light** (34°23'47"N., 119°43'21"W.), 142 feet above the water, is shown from a 24-foot white tower about 2 miles west of the harbor entrance. **Lavigia Hill**, 0.6 mile northeast of the light is 459 feet high and the distinguishing feature in approaching Santa Barbara from the east or west.

(536) Submerged shellfish structures are about 0.7 mile southeast of Santa Barbara Light in about 34°23'15"N., 119°42'45"W.

(537) **Santa Barbara Point**, 1 mile east of the light, is a high cliff at the southeast limit of the narrow tableland extending from Lavigia Hill. The point is the beginning of a sand beach extending 0.6 mile east to **Point Castillo**, the west point of the breakwater forming Santa Barbara Harbor.

(538) Conspicuous landmarks are the neon-lighted hotel tower on the beach 1 mile east of the town, the several radio towers and the many residences on the hillsides back of the town. At night the lights of Santa Barbara are prominent from the channel, but they are obscured from the west by Lavigia Hill.

(539)

COLREGS Demarcation Lines

(540) The lines established for Santa Barbara Harbor are described in **33 CFR 80.1126**, chapter 2.

(541) The harbor has a 500-yard breakwater extending northeast from **Point Castillo** to an extensive sandbar that forms the south side of the harbor. A jetty extends across the sandbar about 400 yards north from the northeast end of the breakwater. A light is at the end of the jetty and a light and sound signal mark the connection between the breakwater and jetty. The sound signal is activated by the Santa Barbara Harbor Patrol. The northeast side of the harbor is formed by Stearns Wharf; the wharf is marked by a light at the south end. A groin, about 125 yards long, extends south from shore about 0.3 mile west of Stearns Wharf. At night, sometimes the lights are difficult to see against the background of city lights.

(542)

Channels

(543) A dredged entrance channel leads northwest between the breakwater and Stearns Wharf then turns southwest into the harbor. The channel is marked by lighted buoys which are frequently relocated due to changing conditions. The entrance and harbor are subject to rapid shoaling. The harbormaster advises that the entrance channel has a tendency to shoal after southeast storms. Mariners should contact the harbormaster on VHF-FM channel 16 for channel conditions and assistance in entering.

(544)

Anchorage

(545) A special anchorage area is in the basin behind the breakwater. (See **33 CFR 110.1** and **110.115**, chapter 2, for limits and regulations.) Anchoring inside the harbor is usually prohibited by the harbormaster. A seasonal

anchorage area (April–October) and a permitted mooring area are east of Stearns Wharf; the mooring area contains several mooring buoys. Anchorage is prohibited within 300 feet east of Stearns Wharf. Large vessels should anchor outside the anchorage and mooring areas in better holding ground. The harbormaster desires advanced requests for permission to anchor (805–564–5530).

(546)

Regulated navigation area

(547) A security zone exists within a 100-yard radius of any cruise ship located within 3 nautical miles of the Santa Barbara Harbor Breakwater Light. (See **33 CFR 165.1157**, chapter 2, for limits and regulations.)

(548)

Caution

(549) The long sandbar north of the breakwater light is inconspicuous on a high-tide night, but the masts of boats moored in the harbor are quite visible over the breakwater. The **harbormaster** reports that these circumstances have caused several groundings on the sandbar when strangers making for the harbor at night failed to identify the breakwater light, failed to see the sandbar, but sighted the masts in the harbor and steered toward them, consequently going hard aground on the sandbar. The shoreline of the sandbar is subject to continual change. Caution should be exercised when entering at night; the buoyed channel should be carefully followed.

(550)

Weather, Santa Barbara

(551) Fog plagues the harbor most often from August through November, when it reduces visibilities to less than 0.5 mile (0.9 km) on 4 to 7 days per month. Morning is usually the worst time. Winds are often calm at Santa Barbara. Winds of 3 knots or less occur 18 percent of the time or more year round and 25 to 40 percent of the time from September through March. The sea breeze helps reduce this percentage. These spring and summer winds are mainly out of the east through west-southwest. Northeast winds, common throughout the year, are the most frequent winds from November through February, though a distant second to calm conditions.

(552)

Coast Guard

(553) A Coast Guard rescue vessel is stationed at the city pier in the southwest part of the harbor; Marine Safety Detachment is nearby.

(554)

Harbor regulations

(555) Santa Barbara Harbor is administered by the City of Santa Barbara Water Front Department and is under the control of a **harbormaster**, who has an office at the southwest corner of the harbor. Transients should report to the harbormaster for guest slip assignments. The office monitors VHF-FM channel 16 and can be reached by telephone 805–564–5530.

(556) The harbor patrol is on 24-hour duty and monitors VHF-FM channel 16. Strangers desiring assistance entering the harbor will be assisted by a patrol boat as needed when requested.

(557)

Supplies

(558) The City Pier, inside the harbor, has diesel fuel, gasoline, commercial ice, water and other marine supplies.

(559)

Repairs

(560) The City Pier has a hoist with a maximum lift of 2 tons. There is a boatyard on the southwest side of the basin that can handle craft up to 25 tons and 50 feet for hull and engine repairs. A small floating drydock in the harbor can lift craft up to 20 tons for hull maintenance and repair. There are several other boat builders and repair yards in the city of Santa Barbara.

(561)

Communication

(562) Communication is by rail and motor vehicle and by airplane. The Santa Barbara Municipal Airport is at **Goleta**, 7 miles west of the harbor.

(563)

Goleta Point to Point Arguello

(564) The 8-mile coast from Santa Barbara west to Goleta Point consists of bluffs 30 to 100 feet high with short stretches of sand beach and is fringed with kelp 0.2 mile offshore.

(565) **Goleta Point**, 6.2 miles west of Santa Barbara Light, is low and terminates in a cliff about 30 feet high. The buildings of the University of California at Santa Barbara are conspicuous just north of the point and are dominated by a lone tower. The aerolight 1.5 miles north and the two lighted radio towers 1.5 miles northeast of the point are good marks at night. A 1,475-foot pleasure pier is in the bight east of the point. A 4-ton hoist is available.

(566) The 32-mile coast from Goleta Point to Point Conception is more rugged than that Eastward. **Cañada de la Gaviota**, 12 miles east of Point Conception, is a conspicuous break in the mountains back of this coast. A railroad skirts the shore over trestles and embankments that cross the mouths of numerous gulches and arroyos. The kelp grows quite heavily and in some places extends over a mile offshore. The Pacific Coast Highway parallels the coast from Santa Barbara to Gaviota, where it turns inland.

(567) Oil well production heads covered 6 fathoms or more and submerged pipelines to shore extend as much as 3 miles offshore between Goleta Point and Point Conception. Several oil-well structures in the area are lighted and equipped with racons and fog signals.

(568)

Safety zones

(569) Safety zones have been established around oil drilling platforms and an offshore storage and treatment vessel mooring area, about 13 miles west of Goleta Point, in

(570) 34°23'27"N., 120°07'14"W. (**Platform Hondo**);

(571) 34°22'36"N., 120°10'03"W. (**Platform Harmony**);

(572) 34°21'01"N., 120°16'45"W. (**Platform Heritage**); and

(573) 34°24'19"N., 120°06'00"W. (**vessel mooring area**). (See **33 CFR 147.1** through **147.20**, **147.1105**, **147.1106**, **147.1114** and **147.1115**, chapter 2, for limits and regulations and chapter 3 under **Oil well structures** for additional information.)

(574) Temporary drilling platforms can be found along this coastline and may be moved periodically. Mooring buoys for tankers are southwest of Coal Oil Point and south of Gaviota.

(575) **Coal Oil Point**, 1.8 miles west of Goleta Point, is low and may be distinguished by the strong odor of petroleum discharged by a spring. This odor is noticeable over 2 miles offshore.

(576) Pilings of former piers and ruins of a drilling rig may exist from Coal Oil Point for about 2.5 miles northwest to the pier at **Ellwood**. The private 2,300-foot pier is owned by Arco Oil. Passage without local knowledge is not advisable.

(577) A rock covered 14 feet is at 34°25'18"N., 119°57'06"W., about 4.3 miles west of Coal Oil Point and 0.9 mile offshore; it is surrounded by kelp.

(578) **Capitan**, 7.5 miles west of Coal Oil Point, is in a small bight that offers little protection to small craft. A lone tank stands on a bare hill 500 feet high and 0.3 mile inland.

(579) **Refugio Beach** at **Orella**, 2.5 miles west of Capitan, is a state park for camping at the mouth of the canyon. A small bight here offers some protection for small boats in northwesterly winds in about 15 feet.

(580) Oil is loaded from a submerged pipeline at **Gaviota**, 13.5 miles east of Point Conception. A number of large green storage tanks mark the inshore end of the pipeline. About 1 mile west of Gaviota is a state beach park with a 545-foot pleasure-fishing pier. An electric hoist for launching skiffs is available. The railway trestle along the beach is quite prominent.

(581) **Cojo Anchorage**, 1.5 miles east of Point Conception, affords protection off the mouth of the Cojo Valley from moderate west and northwest winds. The suggested anchorage is opposite a culvert under the railroad tracks in 5 to 10 fathoms, hard sandy bottom. The cove 1.7 miles east of this anchorage known as Little (Old) Cojo is foul and affords little protection.

(582) **Point Conception**, 118 miles northwest of Point Fermin and at the west end of Santa Barbara Channel, is a bold headland 220 feet high that marks an abrupt change in the trend of the coast. There is comparatively low land immediately behind it. At a distance from north or east, it usually looks like an island.

(583) Point Conception has been called the **Cape Horn of the Pacific** because of the heavy northwest gales encountered off it during the passage through Santa Barbara Channel. A marked change of climatic and meteorological conditions is experienced off the point, the transition often being remarkably sudden and well defined. When the northwesterly winds are strong they blow down the canyons between Point Conception and Capitan and cause heavy offshore gusts.

(584) **Point Conception Light** (34°26'55"N., 120°28'15"W.), 133 feet above the water, is shown from a 52-foot white tower behind a building near the west part of the point. A low black rock, nearly awash at high tide, is 220 yards offshore, southwest of the light.

(585)

Danger and safety zones

(586) **Danger zones** extend offshore from Point Conception to Point Sal. (See **33 CFR 334.1130**, chapter 2, for limits and regulations.) For additional information on Vandenberg Danger Zones, contact 800–648–3019 or 805–606–8825.

(587) **Safety zones** have been established around oil drilling platforms in:

(588) 34°27'19"N., 120°38'47"W. (Platform Hermosa);

(589) 34°28'10"N., 120°40'46"W. (Platform Harvest); and

(590) 34°29'42"N., 120°42'08"W. (Platform Hidalgo); see **33 CFR 147.1** through **147.20**, **147.1109**, **147.1110**, and **147.1112**, chapter 2, for limits and regulations and chapter 3 under **Oil well structures** for additional information.)

(591) From Point Conception, the coast trends in a gentle curve northwest for 12 miles to Point Arguello and consists of bold rocky cliffs, 100 to 400 feet high. The coast railroad runs along these cliffs and through several tunnels.

(592) The 100-fathom depth curve off Point Arguello, and to a lesser extent off Point Conception, is characterized by a succession of indenting deeps or gorges. In following the curve during thick weather with an echo sounder, these submarine features should be found extremely useful.

(593) **Espada Bluff** is a prominent cliff 378 feet high, 5.5 miles north-northwest of Point Conception. The cliffs on each side drop sharply to less than 100 feet in height.

(594) **Tranquillon Mountain**, near the seaward end of the Santa Ynez Mountains, is prominent in clear weather. It terminates in Rocky Point, Point Arguello and Point Pedernales.

(595) **Rocky Point**, 1.2 miles south of Point Arguello, has numerous detached rocks extending in some cases 300 yards offshore.

(596) **Point Arguello** is a narrow, jagged, rocky projection, extending about 800 yards west of the general trend of the coast. An outlying rock is about 200 yards seaward. The extremity of the point overhangs the water's edge, and about 200 yards inshore the point is nearly divided

by gullies on the north and south sides. These form a saddle which, from north and south, looks like two heads. **Point Arguello Light** (34°34'37"N., 120°38'50"W.), 97 feet above the water, is shown from a 15-foot high post on the west end of the point.

(597)

Weather, Point Arguello

(598) Off Point Arguello, sea fog becomes a persistent and frequent navigational hazard. The cool California Current is responsible for a sudden increase in fog frequencies. These fogs are often thick, and Point Arguello is considered by mariners to be one of the most dangerous areas along the coast. The observing station at Point Arguello, 371 feet (113 m) above mean sea level, records an annual average of twice as many days with visibilities less than 0.5 mile (0.9 km) as at any location farther south. From June through October, visibilities drop below 0.5 mile (0.9 km) on about 12 to 20 days per month; July and August are the worst months.

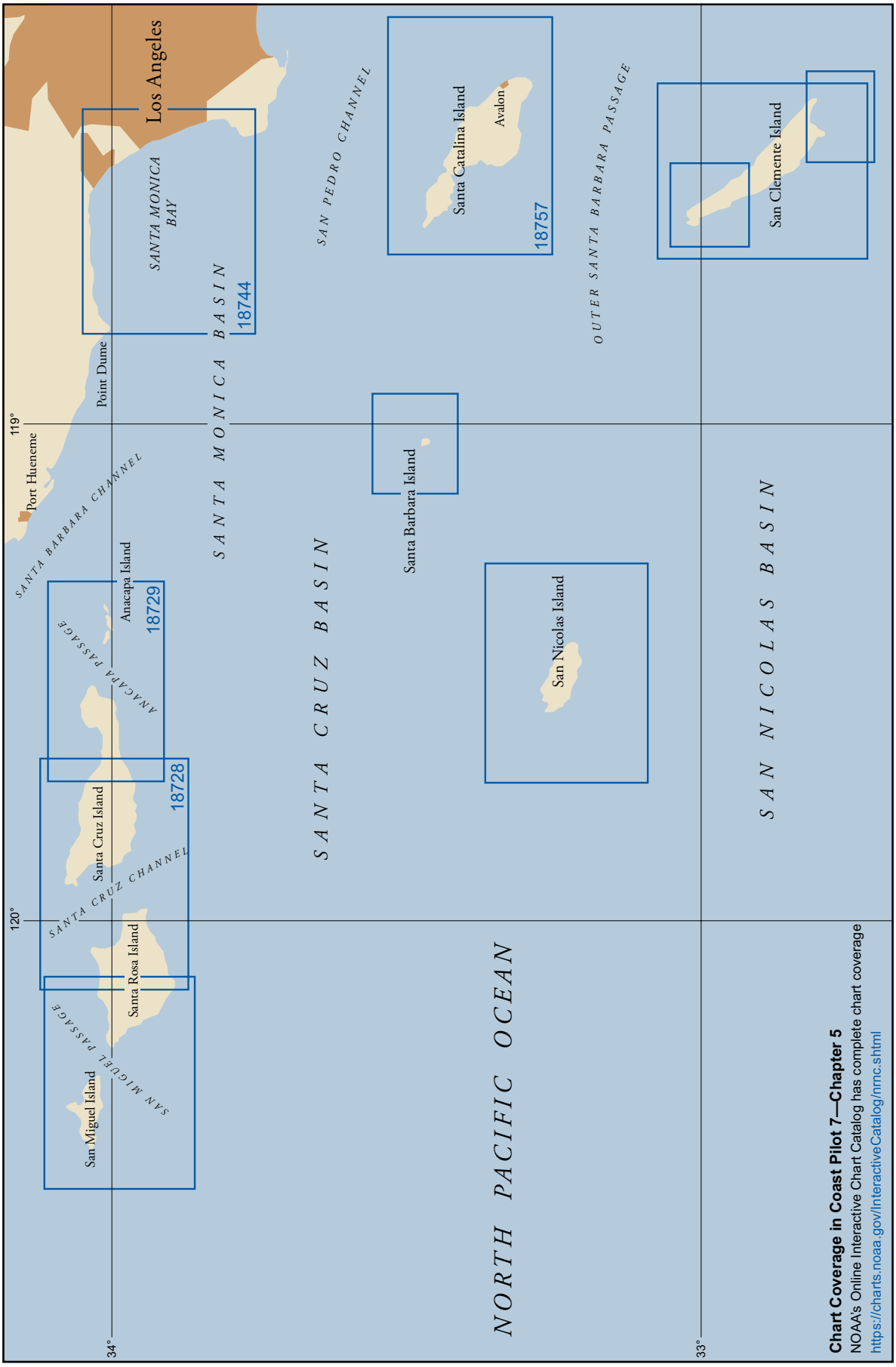
(599)

Lake Mead

(600) **Lake Mead**, Arizona-Nevada, is a National Recreation Area on the **Colorado River** impounded by **Hoover Dam** (36°01.0'N., 114°44.2'W.).

(601) Restricted and anchorage areas established by federal regulations are in Lake Mead. (See **33 CFR 110.1**, **110.127**, and **162.220**, chapter 2, for limits and regulations.) Additional information may be obtained from the local office of the National Park Service, U.S. Department of the Interior, 601 Nevada Highway, Boulder City, NV 89005.

(602) Eleventh Coast Guard District Local Notice to Mariners contains information concerning boating events, boating safety, bridge construction and lighting, aids to navigation, and anchorages on the Colorado River, Lake Mead National Recreation Area, and Glen Canyon National Recreation Area. These notices may be obtained through the web address listed in Appendix A under *Publications and Services*.


Los Angeles
SANTA MONICA BAY
Point Dume
Port Hueneme
SANTA BARBARA CHANNEL
Anacapa Island
ANACAPA PASSAGE
Santa Cruz Island
SANTA CRUZ CHANNEL
Santa Rosa Island
SAN MIGUEL PASSAGE
San Miguel Island
SANTA MONICA BASIN
SAN PEDRO CHANNEL
Santa Barbara Island
SANTA CRUZ BASIN
San Nicolas Island
NORTH PACIFIC OCEAN
Santa Catalina Island
Avalon
OUTER SANTA BARBARA PASSAGE
San Clemente Island
SAN NICOLAS BASIN
18744
18729
18728
18757
119°
120°
34°
33°
Chart Coverage in Coast Pilot 7—Chapter 5
NOAA's Online Interactive Chart Catalog has complete chart coverage
https://charts.noaa.gov/InteractiveCatalog/nrnc.shtml

Channel Islands, California

(1) This chapter describes the eight **Channel Islands** that extend for 130 miles in a northwest direction off the coast of southern California from San Diego to Point Conception. They include the four islands of the southern group: San Clemente, Santa Catalina, San Nicolas and Santa Barbara; and the four islands of the northern group also referred to as the **Santa Barbara Islands**: Anacapa, Santa Cruz, Santa Rosa and San Miguel. Also described are the passages and channels between these islands including Outer Santa Barbara Channel, San Pedro Channel, Anacapa Passage, Santa Cruz Channel, San Miguel Passage, Santa Barbara Passage and Avalon Bay on the southeast side of Santa Cataline Island, the most active harbor in the area, as well as many smaller harbors and landings.

(2)

COLREGS Demarcation Lines

(3) The lines established for this part of the coast are described in **33 CFR 80.1102**, chapter 2.

(4)

Blue, fin and humpback whales

(5) All whales are protected under the Marine Mammal Protection Act (MMPA) and, when in Sanctuary waters, under the National Marine Sanctuaries Act (NMSA). Certain large whales, including blue, fin and humpback whales, are also listed as endangered under the Endangered Species Act (ESA). See chapter 3 for more information.

(6)

ENC - US2WC05M
Chart - 18022

(7) San Clemente, San Nicholas and San Miguel Islands are military reservations and, except for San Miguel Island, off limits to the public.

(8) Santa Barbara, Anacapa, Santa Cruz, Santa Rosa and San Miguel Islands form **Channel Islands National Park.** The park was created in 1980 to protect the extensive flora and fauna of the islands. The park is under the supervision of the National Park Service, Department of the Interior.

(9) In the approach from the south, several banks are encountered before reaching the Channel Islands. **Sixtymile Bank**, 62 miles south-southwest of Point Loma (32°39.9'N., 117°14.5'W.), has a least depth of 53 fathoms over it.

(10) **Channel Islands National Marine Sanctuary** has been established to protect and preserve the natural, cultural and historical resources in the waters surrounding the northern Channel Islands and Santa Barbara Island. The sanctuary encompasses the waters within six nautical miles of Santa Barbara Island and the northern Channel Islands (Anacapa, Santa Cruz, Santa Rosa and San Miguel Islands), including Castle and Richardson Rocks. Visitor use is encouraged for boating, diving, snorkeling, fishing, swimming, kayaking and wildlife viewing. (See **15 CFR 922.70** through **922.74**, chapter 2, for limits and regulations.)

(11)

Area to be Avoided, Channel Islands

(12) The International Maritime Organization (IMO) has adopted the waters surrounding the Channel Islands as areas to be avoided. In order to avoid risk of pollution in the area designated as the Channel Islands National Marine Sanctuary, all ships, except those bound to and from ports on one of the islands within the area, engaged in the trade of carrying hazardous cargo, including but not limited to tankers and other bulk carriers and barges, should avoid the areas in the region of San Miguel, Santa Rosa, Santa Cruz and Anacapa Islands bounded by a line connecting the following points:

(13) 33°58.7'N., 119°12.8'W.
(14) 33°54.0'N., 119°17.0'W.
(15) 33°46.3'N., 120°07.8'W.
(16) 33°59.0'N., 120°39.5'W.
(17) 34°10.4'N., 120°39.5'W.
(18) 34°14.0'N., 120°31.3'W.
(19) 34°10.0'N., 119°56.4'W.
(20) 34°01.4'N., 119°18.6'W., and the area surrounding Santa Barbara Island contained within a circle of radius 7.5 nautical miles, centered on the following point:
(21) 33°28.6'N., 119°02.2'W.

(22)

Local magnetic disturbance

(23) Differences of 4° or more from the normal magnetic variation have been observed within a radius of 8 miles of Sixtymile Bank.

(24)

ENC - US3CA70M
Chart - 18740

(25) **Bishop Rock**, in about 32°27'N., 119°08'W. and which the clipper ship BISHOP struck in 1855, is awash and marked by a lighted bell buoy. The rock, about 40 miles southwest of San Clemente Island, is the farthest outlying danger along the coast. A wreck, covered ½ fathom and about 0.1 mile southeast of the rock, is the shallowest

point on **Cortes Bank**. The currents are largely nontidal in character; velocities between 1 and 2 knots have been measured. These currents cause considerable swell, and even in moderate weather the sea usually breaks at this rock.

(26) The area for about 2.5 miles east-southeast of Bishop Rock should be avoided because of the broken bottom. Deep-draft vessels should also avoid a 9-fathom spot 5 miles west-northwest of the rock where the bottom is extremely broken, although no breakers have been reported.

(27) **Tanner Bank** covers an area about 12 miles long in a west-northwest direction and about 5 miles wide. The least survey depth over it is 9 fathoms. The northwest end of the bank is about 28 miles southeast of San Nicolas Island.

(28) A bank covered 45 to 70 fathoms is 18 miles northwest of Tanner Bank. The bank extends 9 miles in a northwest-southeast direction and has an average width of 2 miles. The bottom is hard with fine gray sand and shells. The bank is fished extensively during the winter.

(29)

San Clemente Island to Outer Santa Barbara Passage

(30) **San Clemente Island** is 43 nautical miles south-southwest of Point Fermin and 57 nautical miles west-northwest of Point Loma. The island is oriented in a northwest direction and is 21 miles long and 4 miles wide at the widest part and reaches an elevation of 1,965 feet. Since 1934, the island has been owned and operated by various naval commands. More than a dozen range and operational areas are clustered within a 60-mile radius of the island. The island is closed to the public, and the waters around the island may be restricted at any time to non-military users. Vessels including yachts and fishing craft are warned that these waters may be dangerous at any time due to naval activities, including gunfire, bombing and rocket fire. Non-military users wishing to navigate through these waters should refer to *scisland.org* for schedule updates of hazardous conditions, limiting waterway access to the public and information on the eight sections surrounding San Clemente Island. Restricted access areas and times are highlighted in red and listed in the associated table on the website. If a safety zone section is green, mariners may access the waters for recreational or commercial uses.

(31) Waterway clearances are apt to change on a daily basis, thus, mariners should be acquainted with the information on the website and be prepared to change navigation plans if directed by the U.S. Navy or U.S. Coast Guard. Mariners should further note that the safety zones of Section G and the Wilson Cove section are always closed to marine traffic. If there is a need to transit through Section G, Wilson Cove or any closed section, contact the U.S. Navy on VHF-FM channel 82A via call sign *KRAKEN* or Coast Guard Sector San Diego on VHF-FM channel 16. (See **33 CFR 165.1131**, **165.1141**, **334.920**, **334.921**, **334.950**, **334.960** and **334.961**, chapter 2, for limits and regulations.) Regulation violations of the safety and security zones may carry fines up to $40,000 and criminal Class C or D felony violations.

(32)

Local magnetic disturbance

(33) Differences of as much as 5° from normal variation have been observed up to 3 miles offshore along the north, east and south coasts of the island.

(34) The top of the island appears as a tableland from a distance. A prominent white radar dome (32°53.1'N., 118°27.0'W.), on the highest part of the island, is visible from both the east and west sides of the island.

(35) The northeast side of the island is bold, with rocky cliffs. The water is generally deep close inshore, and kelp grows close to the beach. On this side of the island a prominent white rock is close inshore, 6 miles northwest of Pyramid Head. On the beach behind this rock is a freshwater spring, the only one available during the dry season.

(36) The southwest side of the island is more irregular, but it is lower and has more gentle slopes. Here the kelp extends several hundred yards offshore, and generally to or beyond the 10-fathom curve. Rocks are numerous close inshore and inside the kelp, but outside the kelp line, the bottom slope is more gradual than on the other side of the island, and there are many places where vessels might anchor safely in the lee of the island during the northeast storms, known as the Santa Anas.

(37) **Seal Cove**, on the southwest side of the island midway between the two ends, affords a boat landing and indifferent anchorage for small craft in northwest weather.

(38) **Outer Santa Barbara Passage** lies between San Clemente and Santa Catalina Islands.

(39)

China Point to Pyramid Head

(40) **China Point** is the southwest extremity of San Clemente Island and on the west side of Pyramid Cove. A light is shown from a white pyramidal structure on the point.

(41) **Pyramid Cove**, the deep bight in the south end of San Clemente Island, is used as a naval shore bombardment area and is included in a **danger zone**. (See **33 CFR 334.950**, chapter 2, for limits and regulations.) The cove offers protected anchorage in 10 fathoms or more in northwest weather. Vessels should not enter the kelp as there are indications of other dangers in addition to those already charted. Some swell makes into the cove most of the time.

(42) **Pyramid Head**, the southeast point of San Clemente Island and the east side of Pyramid Cove, is about 900 feet high, sharp, jagged and prominent. **Pyramid Head Light** (32°49'13"N., 118°21'12"W.), 226 feet above the water,

is shown from a post with red and white diamond-shaped daymark.

(43)

Wilson Cove to West Cove

(44) **Wilson Cove**, on the northeast shore of San Clemente Island, 15.5 miles northwest of Pyramid Head, is a fair anchorage in the prevailing west weather but is uncomfortable at times as the swells make around the point from the northwest. A strong wind usually blows down off the hills in the afternoon. A **restricted anchorage area** and a **naval restricted area** and **security zone** are in the vicinity of the cove. (See **33 CFR 110.218**, **165.1131**, and **334.920**, chapter 2, for limits and regulations.)

(45) **Wilson Cove Light** (33°00'14"N., 118°33'10"W.), 125 feet above the water, is shown from a post with a red and white diamond-shaped daymark.

(46) Wilson Cove should be approached from the northeast to avoid the numerous buoys north and south of the cove.

(47) The buildings on the hill overlooking Wilson Cove are prominent from the southeast. The best anchorage for small craft is in the lee of the kelp making off from a point nearly a mile northwest of the pier.

(48) The Navy pier in the middle of Wilson Cove is of steel construction and extends 550 feet from shore. A landing section at the outboard end of the pier is 38 feet wide and 210 feet long and has a deck height of 18 feet. Depths alongside the landing section range from 14 feet inboard to 24 feet outboard. The two breasting mooring buoys on each side opposite the landing should be used to avoid danger of damage from surge. Time of the tide is about the same as that for Los Angeles.

(49) **Northwest Harbor**, on the northwest end of the island, affords shelter in south weather and is a comfortable anchorage in the prevailing west weather, as the large beds of kelp and the low islet to the north of the anchorage afford protection. It is open north and is unsafe in heavy northwest weather.

(50) **San Clemente Island Light** (33°01'50"N., 118°35'47"W.), 202 feet above the water, is shown from a post with red and white diamond-shaped daymark on the headland at the north end of the island.

(51) A line of rocks extends west from the northwest extremity of San Clemente Island, terminating about 0.4 mile off the point in bold and rocky **Castle Rock**. A **danger area** for aerial bombing, rocket firing and strafing extends 300 yards around this prominent islet.

(52) **West Cove**, on the northwest side of San Clemente Island, 1.5 miles southeast of Castle Rock, offers some shelter from Santa Ana winds; holding ground is good. A **safety zone, naval restricted area and a danger zone** extend off the west coast of San Clemente Island from West Cove. (See **33 CFR 334.921**, **334.960**, and **334.961**, chapter 2, for limits and regulations.)

(53) A **150°-330°** measured nautical mile is 1.3 miles south from West Cove. The 70-foot towers of the front and rear markers on San Clemente Island are more than 500 feet high.

(54)

ENC - US5CA76M
Chart - 18757

(55) **Santa Catalina Island**, 18 miles south of Point Fermin, is 18.5 miles long in a southeast direction and has a greatest width of 7 miles. The island is privately owned. Arrangements for overnight permits and the leasing of the many mooring buoys found throughout the area may be made through Two Harbors Enterprises at Two Harbors. Except at Avalon, permits are required for activities other than day use on the other islands.

(56) The island is almost divided by a deep north cut about 6 miles from the west end. The cut forms coves less than 0.5 mile apart at their heads, and because the isthmus separating these coves is low, the island appears as two from a few miles off. Rugged and mountainous, the island has steep, precipitous shores intersected occasionally by deep gulches and valleys and is covered with a thick growth and some scrub oak. The highest peak, 2,125 feet, is near the middle of the east part of the island.

(57) Much of the north shore is free from kelp, but the south side in general has a narrow fringe of kelp close to the beach. The island rises abruptly from deepwater, the 30-fathom curve being close inshore. Most of the dangers in the approaches to the island are inside the kelp.

(58) Lights are shown from a pole with a red and white diamond-shaped daymark on the south end, **Long Point** (east side), and **West End** (northwest point) of the island.

(59) **Ribbon Rock**, on the west side of Santa Catalina Island, 2.9 miles southeast of West End, shows as a dark vertical rock wall with a gigantic ribbon of quartz veining that is visible for many miles.

(60) **Farnsworth Bank**, 9.2 miles south-southeast of West End and 1.6 miles offshore, has a least known depth of 9 fathoms over it.

(61) Shelter from Santa Ana winds can be had by anchoring in the bight near the **Palisades** on the south side of the island, 2 to 3 miles northwest of the south extremity.

(62) Two prominent rock quarries are on the island; one is on the east end of the island, about 1.5 miles southeast of Avalon Bay, and the other is about 1.5 miles southeast of Isthmus Cove. Private lighted mooring buoys are off the quarry at the east end of the island.

(63) **White Cove**, 3.5 miles northwest of Avalon, affords anchorage in 8 fathoms and provides almost the same protection as that found at Avalon. The beach in White Cove is known as **Whites Landing**.

(64)

COLREGS Demarcation Lines

(65) The lines established for Santa Catalina Island are described in **33 CFR 80.1102**, chapter 2.

(66) **Avalon Bay**, on the north shore of Santa Catalina Island, 2.5 miles from its southeast extremity is entered

between **Casino Point**, breakwater on the north and the breakwater extending from **Cabrillo Peninsula**, on the south. The breakwaters are marked by lights on their seaward ends.

(67) The small bay has depths of 2 to 13 fathoms; a depth of 20 fathoms is immediately outside the points of the bay. The **harbormaster** reports that shelter is good during southwest, northwest and southeast weather if the wind does not exceed 20 knots. The breakwater provides limited protection in the northwest and southeast ends of the harbor during northeast Santa Ana winds that occasionally blow during the fall and winter.

(68) A large white circular building, brilliantly illuminated for about half the night during summer, is on Casino Point.

(69) **Avalon**, an incorporated city and part of Los Angeles County, is an extensive resort and the principal settlement of the island. Daily ferry and helicopter service is maintained year round to San Pedro, Long Beach, Newport Beach, Marina del Rey and Dana Point. A road along the beach extends some distance on each side of the cove, and at night the lights along this road are conspicuous from San Pedro Channel.

(70) The bay is extremely popular as a yacht haven and vacation resort during the summer. Yachting and fishboat supplies, limited engine and underwater repair facilities and towing service are available at Avalon.

(71) A pleasure pier with various loading floats, concessions, equipment rental firms and a 2-ton hoist are in the south part of Avalon Bay. There are three 100-foot floating docks, with reported depths of 30 feet alongside, on the east side of the **Cabrillo Mole** (Cabrillo Peninsula.) The Cabrillo Mole floats are used by passenger vessels that operate to the mainland and are available to any vessel through prior arrangement with the harbormaster.

(72) Yachts and other small craft moor to buoys in the bay; there are no alongside berths. The mooring buoys in the bay are privately owned. The harbormaster will rent mooring buoys that are not reserved by the owner to vessels on a daily basis. The **harbormaster**, located on the pleasure pier, offers 24-hour service year round and can be reached on VHF-FM channel 12 and 16 or call 310–510–0535. A harbor patrol boat will meet visiting yachts at the harbor entrance upon arrival and will assign them to a mooring if desired; a fee is collected for the daily use of moorings. Shoreboats can be reached on VHF-FM channel 9.

(73) Emergency rescue services are available at Avalon. The fire and rescue boat can be contacted through the Coast Guard or the harbormaster at Avalon on VHF-FM channel 16, 24 hours a day; the call sign is "Baywatch Avalon."

(74) Weather information for Avalon is broadcast by NOAA weather radio Channel 1.

(75)

Anchorage

(76) A **small-craft anchorage** is in Descanso Bay, just north of Casino Point. Three **anchorage areas**, used for large passenger vessels and assigned by VTS Los Angeles/Long Beach, are just outside Avalon Bay. (See **33 CFR 110.1** and **110.216**, chapter 2, for limits and regulations.) In 1978, it was reported that the holding ground was poor and that heavy concentrations of kelp made anchoring difficult in the Descano Bay anchorage.

(77) **Isthmus Cove**, on the north shore 6 miles from the west end of the island, affords shelter for small vessels in south and west weather but is dangerous in north and northeast weather. Several prominent buildings are on shore. Isthmus Cove and Avalon are connected by a road, and during the tourist season launch service is maintained between the two points. Two Harbors Enterprises manages and leases all coves and moorings outside the City of Avalon. Isthmus Harbor Base can be reached on VHF-FM channel 9 or call 310–510–4254.

(78) A pier at the head of the cove extends out to a depth of about 12 feet; a fuel dock is on the east side of the pier. Water, ice, marine supplies and limited repairs are available; a general store and restaurant are ashore.

(79) Emergency rescue service is available at Two Harbors. The fire and rescue boat can be contacted through the Coast Guard or on VHF-FM channel 16 from 0900 to 1700 daily; the call sign is "Baywatch Isthmus."

(80) **Fourth of July Cove** and **Cherry Cove**, just northwest of Isthmus Cove, are popular overnight mooring destinations for yachts using the facilities at Two Harbors. There are a number of leased moorings in both coves. The shore areas are leased by camps or yacht clubs with restricted shore access.

(81)

Anchorage

(82) A **restricted** and **nonrestricted anchorage** area is in Isthmus Cove. (See **33 CFR 110.1** and **110.216**, chapter 2, for limits and regulations.)

(83) The approach to Isthmus Cove alongshore from the east is clear, but west of the entrance is **Eagle Reef**, covered 3 feet. The reef is marked by growing kelp and by a buoy about 100 yards to the east. In the approach from the north, **Ship Rock**, about 1 mile north of the cove, is the guide. A light is shown from a pole on the rock. From the channel the rock resembles a black haystack; the top is mostly white because of bird droppings. A reef extends about 120 yards south of Ship Rock, ending in a rock that uncovers 3 feet.

(84) **Bird Rock**, 37 feet high and about 150 yards long, is about 500 yards off the beach north from the east part of the cove entrance. The rock is covered with sand and grass. In places, reefs extend off the rock more than 100 yards, but it may be approached close-to on the east side.

(85) **Harbor Reefs**, about 400 yards southwest of Bird Rock, are about 450 yards long, oriented in a northwest direction, and about 250 yards wide. They are usually

well marked by kelp. A rock near the southeast end uncovers about 2 feet. The reef is marked by a light on the east side and a lighted buoy on the west side.

(86) **Fisherman Cove**, in the east part of Isthmus Cove, is small but is said to be the only shelter against Santa Ana winds on the north shore of Santa Catalina Island. The cove is privately operated by the USC Marine Science Center with restricted access for visiting boaters.

(87) **Catalina Harbor**, on the south side of the isthmus separating it from Isthmus Cove, affords excellent shelter for small vessels in all but south weather. **Catalina Harbor Light** (33°25'24"N., 118°30'50"W.), 400 feet above the water, is shown from a pole on **Catalina Head**, on the west side of the harbor entrance. The harbor, a popular yacht anchorage, is funnel-shaped, open to the south and easy of access. Small and bare **Pin Rock**, close inside the east head of the harbor, is 150 yards offshore and has deep water around it. The anchorage is in 4 to 5 fathoms, soft bottom, abreast **Ballast Point**, the long low point on the east shore. The head of the harbor is shoal. The 3-fathom curve is marked by kelp, and vessels entering should give the shores a berth of 150 yards. The facilities on Ballast Point are leased by a yacht club. From the head of the harbor it is only about 0.3 mile overland to Two Harbors.

(88)

ENC - US3CA70M
Chart - 18740

(89) **San Pedro Channel** is about 17 miles wide between the mainland, Point Fermin to Point Vicente, and Santa Catalina Island. Current observations have been made 7 miles south of San Pedro Breakwater. Two periodic currents occur at this location: a tidal current and a daily current apparently due to a land and sea breeze. Both are rotary, turning clockwise, and each is weak, having a velocity of 0.2 knot. The tidal current is very complicated, but the daily current is simple, maintaining on the average an approximately constant velocity and shifting direction to the right about 15° each hour. It sets north about 0900, east at 1500, south at 2100 and west at 0300.

(90)

Currents

(91) Currents due to winds and oceanic drifts vary in velocity and direction. The average current for the period of observations sets 112° with a velocity of 0.1 knot. Currents greater than 1 knot occur infrequently. The greatest velocity during 5 months of observations was 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.

(92)

San Nicolas Island

(93) **San Nicolas Island**, the outermost of the group off southern California, is 53 miles off the nearest point of the mainland, 43 miles west-northwest of San Clemente Island and 24 miles southwest of Santa Barbara Island. The island is a military reservation and off limits to the public.

(94) A **naval restricted area** extends 3 miles from the shoreline around the island. (See **33 CFR 334.980**, chapter 2, for limits and regulations.)

(95) The island is 8 miles long in an east direction, 3 miles wide, and 907 feet high at its highest point; it is visible about 38 miles. The island has a gently rounding profile from a distance. The west part is covered with sand, some of which has drifted to the middle north shore. The rest of the island is cut by deep arroyos, and the top of the mesa is spotted with patches of burr clover and bunch grass. With the exception of the rocky points, the beaches are all sand. The island is practically surrounded by kelp. At the west end the kelp extends west about 3 miles over very irregular bottom. Two reefs in the kelp extend 1.6 miles west from the west extremity of the island. In thick weather great caution must be exercised in approaching from west and vessels should in no case pass inside the kelp. No dangers are known to exist outside the kelp.

(96) An aerolight, 981 feet above the water, is near the center of San Nicholas Island. A light is on the east side of the island.

(97) **Begg Rock**, 15 feet high, is 8 miles northwest of the west point of San Nicolas Island. A reef extends north and south of the rock over 100 yards in each direction. The rock rises abruptly from depths of 50 fathoms.

(98) A bank covered 30 to 50 fathoms extends 7.8 miles east from the east point of San Nicolas. From the 50-fathom curve the depths increase rapidly to the east and south.

(99) A **restricted anchorage area** surrounds the east end of San Nicolas Island. (See **33 CFR 110.1** and **110.220**, chapter 2, for limits and regulations.) Upon approval by naval authorities, indifferent anchorage may be had on the south side of the 0.6-mile-long sandspit on the east end of the island. Small craft anchor in 8 fathoms, hard sand bottom, near the inshore edge of the kelp. Larger vessels anchor farther offshore in 10 to 17 fathoms, hard sand bottom. The anchorage is often uncomfortable because the island tends to split the west seas and they break with equal force on both sides and meet off the end of the spit in a maelstrom of breakers. This condition tends to move the sand from the west end of the island and builds up the sandspit. After sunset a strong wind frequently blows off the mesa, making holding difficult. In a blow, local fishermen usually leave this anchorage, preferring the one at Santa Barbara Island. A landing can usually be made at the east end on the south side of the island during the summer without difficulty.

(100)

ENC - US3CA70M
Chart - 18740

(101) **Osborn Bank**, about 22 miles east-northeast of San Nicolas Island and 6.5 miles south of Santa Barbara Island, is 5 miles long in a west northwest/east southeast direction and has an average width of 1 mile. The least depth found over it is 19 fathoms.

(102) A submerged pinnacle rock of very small area covered by at least 17 fathoms is 16 miles north-northwest of Santa Barbara Island.

(103)

Channel Islands National Park

(104) Santa Barbara Island, Anacapa Island, Santa Cruz Island, Santa Rosa Island, San Miguel Island and areas within 1 mile of the shoreline of these islands, except for certain described parcels of land, have been reserved as Channel Islands National Park and are subject to rules and regulations prescribed by the Secretary of the Interior and administered by the National Park Service. Landing on rocks and islets is prohibited. Additional information may be obtained from Channel Islands National Park, 1901 Spinnaker Drive, Ventura, CA 93001.

(105)

Santa Barbara Island to Sutil Island

(106) **Santa Barbara Island**, 33 miles south-southwest of Point Dume and 21 miles west from the west end of Santa Catalina Island, is 1.5 miles long in a north direction and has a greatest width of 1 mile. The profile of the island is saddle shaped, and at a considerable distance it appears to be two islands. The greatest elevation is 635 feet on the south side of the saddle, and the island is visible for over 25 miles in clear weather. The shores are bold and precipitous and well marked by kelp extending to about 10 fathoms at irregular distances from the shore. West of the island the kelp makes out more than a mile over very irregular bottom; a rock that breaks in moderate swells is 0.7 mile west of the point. This rock may not break in a calm sea and is dangerous, even for small craft. The water around the island is deep except where the kelp indicates foul or rocky bottom.

(107) **Santa Barbara Island Light** (33°29'15"N., 119°01'49"W.), 195 feet above the water, is shown from a post located on the northeast point of the island.

(108) **Sutil Island**, a rocky islet 300 feet high and surrounded by kelp, is 0.4 mile west from the south point of Santa Barbara Island; its north face is steep. A smaller 145-foot-high rock islet is 200 yards offshore about 0.2 mile west from the north point of Santa Barbara Island.

(109)

Anchorage

(110) A **general anchorage area** extends 2 miles off the east coast of Santa Barbara Island. (See **33 CFR 110.1** and **110.222**, chapter 2, for limits and regulations.) For yachtsmen desiring to go ashore, an anchorage reported to give fair protection for small craft in the prevailing west weather is in the small cove about 700 yards south of Santa Barbara Island Light. If the water is too deep or too rough to anchor off the cove, anchor inside, but maintain an anchor watch. Swinging room on a single anchor is restricted in the cove. The cove affords no landing beach; yachtsmen can debark from a dinghy onto rock steps in the side of the cliff. Large vessels can anchor within the 30-fathom curve with hard gray sand bottom.

(111)

ENC - US5CA67M
Chart - 18729

(112) **Anacapa Island**, 11 miles southwest of Point Hueneme, is the easternmost of the northern group of Channel Islands and consists of three islands separated by two very narrow openings that cannot be used as passages. The east opening is filled with rocks and is bare. The west opening is only 50 feet wide and is blocked by sand. **Anacapa Island Light** (34°00'57"N., 119°21'34"W.) is shown from a 40-foot white cylindrical tower on the east end of the island.

(113) From its east point the island extends 4.5 miles in a general west direction. The east and lowest island of the Anacapa group is 1 mile long, 0.2 mile wide, 250 feet high and rather level on top. The middle one is 1.5 miles long, 0.2 mile wide, and 325 feet high. The west and largest island is 2 miles long and 0.6 mile wide and rises to a 930-foot peak. The westernmost island is visible at a distance of 35 miles in clear weather; the other two at 15 to 20 miles. The shores of Anacapa Island are perpendicular and filled with numerous caves. The east extremity terminates in 80-foot **Arch Rock**, with a 49-foot arch and a pyramidal rock just south of its east end. The island is surrounded by kelp except in a few small places.

(114) The National Park Service rangers are on Anacapa Island. Seals and pelicans are present in large numbers. The cream-colored houses with tile roofs of the park service rangers are 300 to 400 yards west of the light. A single large white building is 100 yards farther to the west.

(115)

Anchorages

(116) The best anchorage in southeast storms is on the north side about 0.2 mile north of the center of the middle island in depths of 9 to 12 fathoms. In northwest weather the best anchorage is 0.3 mile south of the east opening in depths of 8 to 12 fathoms. However, it is best for larger vessels to lie at Smugglers Cove, on the east side of Santa Cruz Island, where the bottom is not so steep-to. Small boats anchor in 5 to 7 fathoms in **East Fish Camp**, a bight about 0.4 mile southwest of the east opening. About the only protection from northeasters is to anchor as close as possible in the bight immediately west of **Cat Rock**, on the south side of the west island, taking care to avoid the

2-fathom spot west-southwest of Cat Rock. The National Park Service maintains a boat landing and kayak hoist on the north side near the east extremity. Landings can also be made on either side of the island near the west opening and at East Fish Camp. In thick weather, vessels in the area should stay in 50 fathoms or more, because the island rises abruptly from deep water.

(117) **Anacapa Passage**, between Anacapa and Santa Cruz Islands, is 4 miles wide and free of dangers. It is steep-to on the Anacapa Island side and has a gradual slope to the shore of Santa Cruz Island. The passage is seldom used and should not be attempted in thick weather as soundings give no warning of a close approach to the islands. Tide rips are strong under certain conditions of wind and current, especially during southeast storms and northeasters.

(118)

ENCs - US5CA67M, US5CA66M
Charts - 18729, 18728

(119) **Santa Cruz Island**, 17 miles west-southwest of Point Hueneme, is the largest of the Channel Islands. The Nature Conservancy, a private, non-profit organization dedicated to preserving unique islands, owns most of Santa Cruz Island. It is considered an inholding within the National Park. Landing permits may be obtained from Santa Cruz Island Preserve, 213 Sterns Wharf, Santa Barbara, CA 93101 (telephone 805–964–7839). The eastern quarter of the island is public land administered by the National Park Service.

(120) The island is about 21 miles long in a west direction and has an average width of 5 miles. The highest peak, in the west part of the island, rises to 2,434 feet; in the east part the land attains an elevation of about 1,800 feet. The east part is very irregular and barren; the west part has a few trees, is well covered with grass, and has several springs. The shores are high, steep and rugged, with deep water close inshore, and there is considerably less kelp than around the other islands. The reefs, extending a mile offshore on the south coast at Gull Island, are the only outlying dangers.

(121) **San Pedro Point** is the east extremity of the island. There is a small-boat landing in **Scorpion Anchorage**, a shallow bight 1.8 miles northwest of San Pedro Point; it consists of a cribbed area with a float and gangway at the end of the roadway. Several large buildings are along the roadway. Large clumps of trees are near the houses. A rock covered 8 feet is located at 34°02'53"N., 119°32'59"W., 300 feet southeast of the 10-foot pinnacle rock in Scorpion Anchorage.

(122) **Chinese Harbor**, in the east part of the broad bight on the north shore, 4.5 miles west of San Pedro Point, affords anchorage in the kelp in 5 to 6 fathoms. The northeast part of the harbor is an excellent anchorage in southeast to southwest weather in 9 to 10 fathoms. This harbor affords the best shelter on the island from northeast winds.

(123) **Prisoners Harbor**, in the west part of the bight on the north shore 8 miles west of San Pedro Point, affords shelter from all winds except from northeast to west. Some protection from northwest weather is afforded by the kelp, but a heavy swell rolls in. In northeast weather the anchorage is unprotected and dangerous. A wharf with 16 feet at its face is in the harbor. There are buildings back of the wharf. The best anchorage is in 12 to 15 fathoms, sandy bottom, abreast a distinct rock on the west shore of the bight that is angled, solid and smooth, and the outer end of the wharf in range with the buildings at the inner end.

(124) **Pelican Bay**, a small indentation in the north shore of Santa Cruz Island, 1 mile west-northwest of Prisoners Harbor, is used as a yacht anchorage during the summer. In northwest weather small boats anchor close to the cliff that forms the west shore of the bay.

(125) **Painted Cave**, 3 miles east of **West Point**, the northwest extremity of the island, is a large cave into which dinghies may be rowed for a considerable distance. The entrance is over 150 feet high. The inner end of the first chamber, 600 feet from the entrance, has depths of more than 2 fathoms.

(126) **Forney Cove**, 1 mile east of **Fraser Point** at the west end of the island, affords shelter in north weather in 7 to 8 fathoms. The surf is heavy on the beach, but the rocky islet west and the reef connecting it with the shore lessen the swell at the anchorage.

(127) **Gull Island**, 65 feet high and about 0.2 mile in extent, is the largest and outermost of a group of small rocky islets, 0.7 mile south of **Punta Arena**, on the south side of Santa Cruz Island. Kelp surrounds Gull Island, and the bottom in the vicinity of the group is foul.

(128) **Willows Anchorage**, on the south shore 3.6 miles east of Gull Island, can be used by small craft in northwest weather and affords a good boat landing.

(129) **Smugglers Cove**, 1.2 miles southwest of San Pedro Point, affords shelter in northwest weather in 5 fathoms, sandy bottom.

(130)

ENC - US5CA66M
Chart - 18728

(131) **Santa Rosa Island**, 24.5 miles southwest of Goleta Point on the mainland, is 15 miles long in a west direction and has a greatest width of nearly 10 miles. No landing fee or permit is required.

(132) The highest point, near the middle of the island, is 1,589 feet high and visible over 40 miles. The island has some water and is partially covered with vegetation. The shores are bold, high and rocky; kelp surrounds most of the island. Depths in the approaches to the island shoal more abruptly from south than from north, where the 100-fathom curve is over 5 miles and the 20-fathom curve about 2 miles from the beach.

(133) There are no harbors, but anchorage may be made in Bechers Bay and Johnsons Lee. There are several good boat landings and a pier near Northwest Anchorage.

(134) **East Point**, the east extremity of Santa Rosa Island, is moderately high, sharp and bold. A rock covered 2¾ fathoms is in the kelp 0.7 mile north from the point, and a shoal with a least depth of 2¾ fathoms is 2 miles north of the point.

(135) **Skunk Point**, 2.5 miles north of East Point, is formed of drifts of sand; it is difficult to see on dark nights. There are sand beaches west and south, and the sand dunes behind the point are as much as 300 feet high. Care should be taken to avoid the sandspit off the point where the sea breaks heavily in bad weather. The current is sometimes strong in the vicinity of the point.

(136) **Bechers Bay**, a broad semicircular bight on the northeast side of Santa Rosa Island, is 4.5 miles wide between Skunk and Carrington Points and 1.5 miles in depth. **Southeast Anchorage**, 1.3 miles west of Skunk Point, affords protection in southeast weather in about 6 fathoms, sandy bottom. **Northwest Anchorage**, in the west part of the bight and 1.5 miles south from Carrington Point, affords fair shelter in northwest weather.

(137) A **naval operating area** is in Bechers Bay bounded by the following:

(138) 34°02'12"N., 120°01'34"W.,

(139) 34°00'58"N., 120°02'17"W.,

(140) 34°00'04"N., 120°02'02"W.,

(141) 33°59'18"N., 120°00'32"W.,

(142) 33°59'33"N., 119°59'02"W.,

(143) 34°00'32"N., 119°59'05"W.,

(144) 34°01'40"N., 120°00'25"W.

(145) Anti-ship mining operations take place at frequent and irregular intervals, including weekends, throughout the year. They are conducted as air drops from low-flying aircraft or released from submarines. Submerged metallic remains from these operations may pose a hazard to fishing operations conducted along the seabed. Particular operations are published in Eleventh Coast Guard District Local Notices to Mariners. Announcements are also made locally on VHF-FM channel 16, at 0800 local time, 1200 local time, and/or 1 hour prior to mining operations. Status of the zone and/or permission to enter may be requested by calling PLEAD CONTROL on VHF-FM channel 16, or by telephone to the Pacific Marine Test Center at 805–989–8280/8841, or 805–816–0792 RODO (Range Operation Duty Officer) after 1800; fax 805–989–0102.

(146) **Carrington Point**, the north point of the island, has a seaward face 0.8 mile in length. It is bold and rocky and rises rapidly to an elevation of 452 feet.

(147) Foul ground extends about 0.3 mile north from Carrington Point and terminates in **Beacon Reef**, which covers 2¼ fathoms. The reef rarely breaks, and there is no safe passage behind it.

(148) **Brockway Point**, high, bold and rounding, is about midway along the north shore of Santa Rosa Island. **Rodes Reef**, marked by kelp, is a submerged reef with three high points, 1.7 miles east-northeast from Brockway Point and 0.8 mile offshore. It breaks in nearly all weather.

(149) **Sandy Point**, the west extremity of the island, is moderately bold and rocky, with a detached rock lying close inshore and sand dunes more than 400 feet high extending inland. These white dunes are prominent when approaching from south or west. Shallow water extends off the point. During the general northwest weather, swells form at a considerable distance from the shore. The swell also reaches the point from the southwest direction.

(150) **Talcott Shoal** lies near the edge of the kelp, 1.5 miles north-northeast of Sandy Point, and has a least depth of 1¾ fathoms. Depths surrounding the shoal range from 2 to 10 fathoms. The shoal breaks only in heavy weather. In calm weather there is little indication of the shoal's location, as the kelp is light and there is very little lumping of the water. A detached kelp patch is 1 mile north of the shoal.

(151) **Bee Rock**, 0.8 mile offshore 3.6 miles south-southeast of Sandy Point, is 5 feet high but is not easily seen. It is surrounded by kelp that stretches from South Point to Sandy Point. A rock with a height of 10 feet is about 100 yards southeast of Bee Rock. A submerged rock, covered 1¼ fathoms, is 0.3 mile northwest of Bee Rock and occasionally breaks in ordinary weather. Two other submerged rocks are close south of Bee Rock, covered 1¼ fathoms, and southeast of Bee Rock, covered 2¼ fathoms. Several other rocks and shoals exist inside the kelp—vessels should not go inside the kelp in this area.

(152) **South Point**, the south point of Santa Rosa Island, terminates in a rocky bluff 100 feet high and rises rapidly to a height of 460 feet, then to 603 feet. Cliffs, several hundred feet high and about 0.5 mile in extent, form the southwest face of the point. **South Point Light** (33°53'50"N., 120°07'08"W.), 530 feet above the water, is shown from a small white house on the point.

(153) **Johnsons Lee**, an open roadstead immediately east of South Point, affords fair shelter from west and northwest winds with good holding ground but is dangerous in south weather. The Coast Guard makes landings on the west shore of Johnsons Lee with supplies for South Point Light.

(154) **San Miguel Passage**, between Santa Rosa and San Miguel Islands, is 1.7 miles wide between the ledges that project from Sandy Point and Cardwell Point, the closest points between the two islands. There is much broken water with many current rips near these ledges. To avoid Talcott Shoal, vessels making the passage from the southwest should not allow the outer rock off the west point of Santa Rosa Island to bear west of south until clear of the shoal. Sailing vessels should avoid this passage as the light airs and calms under the lee of San Miguel Island and the currents frequently combine to set a vessel toward Talcott Shoal.

(155)

Danger zone

(156) A **naval danger zone** surrounds the eastern half of San Miguel Island and extends into San Miguel Passage. (See **33 CFR 334.1140**, chapter 2, for limits and regulations.)

(157)

San Miguel Island to Crook Point

(158) **San Miguel Island**, 23 miles south-southeast of Point Conception, is the westernmost of the Channel Islands and the most dangerous to approach. The island is irregular in shape and 7.6 miles long in an east-west direction, with an average width of 2 miles; the highest points, 831 and 817 feet, are near the middle of the island and are visible about 35 miles. The island is covered with grass, but there are no trees. The west part has more sand dunes on it than any of the other islands in the group. The shores are bold, broken and rocky, with a few short stretches of beach; the south shore is more precipitous than the north.

(159) San Miguel Island, although a military reservation, is administered on a day-to-day basis by the National Park Service. Cuyler Harbor is the only place landing is allowed. A permit is required for other than beach use.

(160) **Cardwell Point** is the east extremity of the island. A low sandy area that uncovers extends 0.5 mile east of the point and a dangerous reef extends an additional 0.4 mile from the tip of the area. A detached shoal covered 21 feet is 0.9 mile east-southeast of Cardwell Point. In 1994, a shoal with breakers was reported in about 34°01'06"N., 120°17'24"W. A submerged rock and rock awash are about 400 yards south of the middle of the sandy point. During prevailing weather, breakers off this point are caused by the meeting of the seas.

(161) **Prince Island**, 296 feet high, is 2.6 miles northwest of Cardwell Point and 0.4 mile off the east head of Cuyler Harbor. The island is dark in color and rocky, with a precipitous seaward face.

(162) **Cuyler Harbor** is a bight 1.2 miles long and 0.6 mile wide on the north shore southwest of Prince Island. The anchorage is in the west part of the harbor; the east part is foul. Good shelter may be had in south weather, but the holding ground is poor. In strong northwest weather the heavy swells that sweep around the north shore and into the harbor make the anchorage dangerous. The harbor is not safe in rare north or east winds. Water may be obtained at a small spring abreast the anchorage. Prince Island and Harris Point are prominent in the approaches.

(163) **Middle Rock** is 0.5 mile west-southwest of Prince Island; foul ground surrounds the rock for a distance of 200 yards on the southeast and southwest sides and up to 350 yards northwest of the rock. **Can Rock**, 4 feet high, is 0.3 mile southwest of Prince Island; there is foul ground between the rock and the south shore of the harbor. Kelp grows all over the bight.

(164) To enter Cuyler Harbor, bring Harris Point to bear **261°**, distant 1.7 miles, and the west point of Prince Island to bear **186°**, distant 1.3 miles; thence steer **209°**, heading midway between Middle Rock and the west point at the entrance, and when the south point of Prince Island bears **084°**, anchor in 5 to 7 fathoms. The course heads for **Judge Rock**, small and black, near the west end of the sand beach. The west point at the entrance off **Bat Rock** should be given a berth of about 0.3 mile to avoid the shoal extending east for over 300 yards. Anchorage may be made about 0.2 mile south of Bat Rock where better protection is afforded in northwest weather. The passage between Prince Island and the east head should be attempted only by small craft.

(165) **Harris Point**, the north extremity of the island, is bold and precipitous, rising to a hill, 485 feet high, 1 mile south of the point.

(166) **Wilson Rock**, 2.2 miles northwest of Harris Point, is 19 feet high and black. A reef, extending about 1 mile west-northwest from the rock, uncovers in two places; foul ground is a short distance north of the reef. It breaks in any light swell from the northwest. There is foul ground south and southwest of the rock. The covered rock 0.3 mile south of Wilson Rock breaks. This locality should not be approached in thick weather, as the dangers rise abruptly from deep water and are not marked by kelp; soundings give no positive warning of their proximity.

(167) **Simonton Cove**, on the northwest side of San Miguel Island, is a very shallow bight 2.4 miles long and 0.6 mile wide. This cove has considerable kelp and a few covered rocks. From the southwest head of Simonton Cove, foul ground extends northwest for nearly 1 mile.

(168) **Castle Rock**, 180 feet high, is a three-headed islet 1.6 miles north-northeast from Point Bennett, in the middle of the kelp field, and 0.5 mile offshore. A shoal spot 0.5 mile west of the rock is near the edge of the kelp.

(169) **Westcott Shoal**, covered 4¾-fathoms, is 0.8 mile north from Castle Rock. A 2¾ fathom spot near an oil spring is about 0.6 mile north from the shoal.

(170) **Point Bennett**, the west point of the island, is a long, narrow, jagged bluff, 74 feet high, rising rapidly to 337 feet. High sand dunes extend from the point for 2 miles. There are two rocky islets south of and close under the point, and foul ground extends about 0.5 mile west and 1 mile north of the point but inside the limit of the kelp. Navigation in this area should not be attempted without local information.

(171) **Richardson Rock**, 6 miles northwest from Point Bennett, is 53 feet high, white-topped and small in area. Two smaller and lower rocks are close-to on the east side. Richardson Rock rises abruptly from deep water, 30 to 40 fathoms being found within 0.3 mile. The rock is prominent in clear weather, but in thick weather the locality should be avoided, as soundings give no warning of a near approach.

(172) **Tyler Bight** is on the south shore 1.8 miles east of Point Bennet and has a sand bottom. In moderate northwest weather, the winds may attain velocities up to

45 knots 0.5 mile offshore; the sea in the bight, however, is quite smooth.

(173) **Wyckoff Ledge**, 1.4 miles west from Crook Point and 0.5 mile offshore, is covered 1½ fathoms.

(174) **Crook Point**, the south point of the island, is low and irregular. Any type of landing here would be difficult and the holding ground for anchorage is not good.

(175)

ENC - US3CA69M
Chart - 18720

(176) **Santa Barbara Channel** is 63 miles long and increases gradually in width from 11 miles at the east end to 23 miles at the west end. The channel is free of dangers and has depths of 40 to more than 300 fathoms along the recommended track from San Diego and Los Angeles to northern ports.

(177) Offshore oil wells and oil drilling platforms, some privately marked by lights, buoys and sound signals, extend as much as 10 miles offshore between Point Hueneme and Point Conception.

(178)

Safety zones

(179) **Safety zones** have been established around the oil drilling platforms and an offshore storage and treatment vessel mooring area in:

(180)

34°07'02"N., 119°16'35"W.	Platform Gina (§147.1103)
34°07'30"N., 119°24'01"W.	Platform Gail (§147.1113)
34°10'56"N., 119°25'07"W.	Platform Gilda (§147.1107)
34°10'47"N., 119°28'05"W.	Platform Grace (§147.1102)
34°23'27"N., 120°07'14"W.	Platform Hondo (§147.1105)
34°24'19"N., 120°06'00"W.	Santa Ynez offshore storage and treatment vessel safety zone (§147.1106)
34°22'36"N., 120°10'03"W.	Platform Harmony (§147.1114)
34°21'01"N., 120°16'45"W.	Platform Heritage (§147.1115)
34°27'19"N., 120°38'47"W.	Platform Hermosa (§147.1109)
34°28'09.5"N., 120°40'46.1"W.	Platform Harvest (§147.1110)
34°29'42"N., 120°42'08"W.	Platform Hidalgo (§147.1112)
34°36'37.5"N., 120°43'46.0"W.	Platform Irene (§147.1116)

(181) See **33 CFR 147.1** through **147.20** for general regulations and the specific regulations listed above in chapter 2; also see **Oil Well Structures** in chapter 3 for additional information.

(182) On the north side of Santa Barbara Channel is the mainland between Point Hueneme and Point Conception. On the south side is the northern group of the Channel Islands—Anacapa, Santa Cruz, Santa Rosa and San Miguel—which break the force of the heavy westerly Pacific swell and afford a lee in winter from the full force of the southeast gales.

(183) The east entrance to Santa Barbara Channel has a clear width of 2 miles between the 100-fathom curves and lies between Anacapa Island and Point Hueneme. On the north side of this entrance is deep **Hueneme Canyon**, which extends from Point Hueneme in a south-southwest direction across the channel. The west entrance to the channel has a clear width of 10 miles between the 100-fathom curves and lies between Richardson Rock and Point Conception. (See chapter 4 for details about the **Traffic Separation Scheme** between Point Fermin and Point Conception.)

(184)

Weather, Channel Islands

(185) The prevailing winds are west and northwest and blow nearly every day, especially in the afternoon. Strong southeast winds occur in the winter, and at times the sea is too rough for several days to permit the passage of small vessels.

(186) In the summer the winds in the channel are wholly different from those outside the islands and off the coast to the northwest. Under the north shore, which is protected by the bold range of the Santa Ynez Mountains, the west winds do not reach far east of Point Conception with much strength but are felt towards the islands, a strong northwest wind and heavy swell coming in from the open ocean. The climate in the Santa Barbara Channel, because of this blocking of the winds, is much milder than to the north along the coast. However, during northwest weather boats crossing the channel from the mainland usually encounter heavier seas as the islands are approached. The belt of rough seas, locally known as **Windy Lane**, lies along the north shores of the islands and is about 6 miles (11 km) wide. This sea condition is the opposite to that experienced in the crossing from Los Angeles-Long Beach to Santa Catalina Island. Strangers are cautioned that good seamanship sometimes calls for returning to the mainland rather than attempting Windy Lane when rough seas are encountered. These west winds usually begin about 1000 and grow progressively stronger until sundown.

(187) During heavy northwest weather strong squally winds draw down the canyons between Point Conception and Capitan and pass directly offshore, causing a severe choppy sea. Heavy northwest gales are often encountered off Point Conception on coming through Santa Barbara Channel, and great changes of climatic and meteorological conditions are experienced; the transition is often remarkably sudden and well defined.

(188) In the fall and winter, stiff northeasters are occasionally experienced at and near the east end of the channel. They come up without warning, usually at night in clear dry weather, and when the barometer is either high or rising rapidly. At such times small boats should be prepared to seek shelter at a moment's notice.

(189) During the summer heavy fogs are a common occurrence in the Santa Barbara Channel and envelop the main shore, channel and islands. Sometimes the mainland and channel are clear while the islands alone are hidden. At other times all are clear during the day but wrapped in dense wet fog nights and mornings. This condition, the

fog lying offshore during the day and enveloping the land at night, is characteristic of the whole southern California coast. The fogs occur mostly during calm weather and light winds and are generally dissipated by the strong northwest winds.

(190) Winds at **San Nicolas Island**, located about 75 miles (140 km) southwest of Los Angeles, average 12 knots from the northwest on an annual basis. A peak wind of 57 knots was recorded in both July and August 1979. The average annual temperature for San Nicolas is 61°F (16.1°C). The average maximum is 66°F (18.9°C) and the average minimum is 55°F (12.8°C). An extreme maximum temperature of 103°F (39.4°C) was recorded in August 1976, and an extreme minimum of 30°F (-1.1°C) was recorded in January 1978. San Nicolas Island averages only 34 days each year with measurable precipitation. Snowfall has never been reported on the island.

(191) At **San Clemente Island**, about 60 miles (111 km) northwest of San Diego, west winds dominate at a lower average speed of only seven knots. The average annual temperature for San Clemente is 61°F (16.1°C). The average maximum temperature is 66°F (18.9°C) and the average minimum is 56°F (13.3°C). An extreme maximum temperature of 97°F (36.1°C) was recorded in April 1989 and extreme minimum of 33°F (0.6°C) was recorded in January 1976. San Clemente averages only 49 days each year with measurable precipitation. Snowfall has never been reported on the island.

(192)

Currents

(193) Currents in Santa Barbara Channel are variable, depending to a great extent upon the wind. It appears that a weak nontidal flow sets east in the spring and summer, and west in autumn and winter.

(194) It has been observed that a strong inshore set prevails on a rising tide in the deep waters of Hueneme Canyon. In general, there are conflicting currents, at times quite strong, around the slopes of the submarine valleys both here and off Point Mugu.

(195) The tidal current sets along the north shore of Santa Barbara Channel with velocities of 0.5 to 1 knot. In heavy northwest weather, the current and heavy swells make into the south side of the west entrance to the channel and along the north shore of San Miguel Island.

(196) The currents in the vicinity of the Channel Islands frequently follow the direction of the wind, with eddies under the lee of the islands and projecting points. Tidal currents of about 1 knot set through the passages between the islands. 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.

Chart Coverage in Coast Pilot 7—Chapter 6

NOAA's Online Interactive Chart Catalog has complete chart coverage

https://charts.noaa.gov/InteractiveCatalog/nrnc.shtml

Point Arguello to San Francisco Bay, California

(1) This chapter describes the waters of San Luis Obispo, Estero, Morro, Monterey and Half Moon Bays; also, the port of Port San Luis, and the small-craft and commercial fishing harbors of Morro Bay, Monterey, Moss Landing, Santa Cruz and Pillar Point. The coast, except for the bays, is rugged with many detached rocks close inshore and other dangers extending no more than 2 miles offshore. However, in 1975, shoaling to 10 fathoms was reported in 37°00.0'N., 122°30.1'W., about 12 miles southwest of Pigeon Point. The area is well marked with navigational aids.

(2)

COLREGS Demarcation Lines

(3) The lines established for this part of the coast are described in **33 CFR 80.1130** through **80.1140**, chapter 2.

(4)

Blue, fin and humpback whales

(5) All whales are protected under the Marine Mammal Protection Act (MMPA) and, when in Sanctuary waters, under the National Marine Sanctuaries Act (NMSA). Certain large whales, including blue, fin and humpback whales, are also listed as endangered under the Endangered Species Act (ESA). See chapter 3 for more information.

(6)

Sea otter refuge

(7) The State of California Fish and Game Code prohibits the discharge of firearms or bows and the trapping of birds or mammals in the California Sea Otter Game Refuge. The refuge extends as a continuous band between the coastline and the three nautical mile limit for the state of California extending offshore from the mouth of the Santa Rosa Creek (35°34'N.) in the north. Additional information may be obtained by writing the Department of Fish and Game, Marine Region, 20 Lower Ragsdale Drive, Suite 100, Monterey, CA 93940, telephone 831–649–2870.

(8)

Weather, Point Arguello to San Francisco Bay

(9) The weather along this coast is mostly cool, damp and foggy in the summer, becoming mild and wet in winter. Summer afternoons on the coast are often clear and pleasant. The dominant weather feature is the semipermanent Pacific high. In summer, it is big and strong and covers the entire region. Storms and fronts are forced to move along the north side, so few affect this coast. In winter, the high weakens and retreats southeast. This allows storms or frontal systems to pass through the area about every 7 to 10 days, on the average. Sometimes a series of these systems may result in a prolonged period of strong winds and heavy rains along the central and southern California coast. This situation is rare and occurs about every 2 to 3 years.

(10) The clockwise flow around the highs results in a northwest flow along the coast in summer. These winds are enhanced by the formation of a thermal low over land, to the southeast. The combination of these two features results in a sea breeze that can reach 20 knots during the afternoon and persist, at lower speeds, until midnight. Daytime temperatures often climb to near 70°F (21.1°C); nighttime lows drop to the low fifties (10.6° to 11.7°C) in summer. Occasionally a hot flow from the land will push temperatures into the nineties (32.8° to 37.2°C). This is as likely in early fall as it is in summer. The winds blowing across the cool **California Current** produce low clouds and sea fog. These conditions are prevalent close to the coast in the early morning hours. They improve during the day, particularly close to and on the shore. August and September are the worst months; fog reduces visibilities to below 0.5 mile (0.9 km) on more than 15 days per month at some locations.

(11) Winds are more variable, but often northwest, in winter, becoming west-northwest in midwinter. Weak east winds often occur when a warm-type high centers itself over the **Great Basin** to the northeast. (The Great Basin is the desert plateau comprising most of Nevada, western Utah and portions of northern Arizona.) This warm high pressure system produces clear skies and ideal conditions for land fog, which may drift out over coastal waters. This fog, while often dense, is shallow and usually burns off during the morning hours. Occasionally following a passage of a cold front, a cold-type high will move into the Great Basin. This can result in a foehn wind, over central and southern California, known as a **Santa Ana**. This northeast wind flows down the canyons and into certain coastal basins. Its effect varies from place to place, but speeds may reach 50 knots. In some areas, an intensified sea breeze counterflow is observed. The most severe conditions are normally observed in late fall, but may occur from fall through spring, which is also considered the rainy season. From about November through April, precipitation occurs on about 6 to 12 days per month. Average maximum temperatures in winter range from the middle fifties (11.7° to 13.9°C) around San Francisco, to the low sixties (16.1° to 17.2°C) at Point Arguello, while nighttime lows drop to the low to middle forties (5.0° to 8.3°C). Occasionally a cold outbreak will send temperatures below freezing (<0°C).

(12)

ENC - US3CA85M
Chart - 18700

(13) From Point Arguello to Point Sal, the coast trends north for 19.5 miles in two shallow bights separated by Purisima Point. From Point Sal the coast continues north for 14 miles, then bends sharply west for 6 miles to Point San Luis, forming San Luis Obispo Bay. Soundings are useful along this stretch of the coast, and between Point Arguello and Point San Luis the 20-fathom curve can be followed with safety in thick weather. In clear weather, the headlands and other natural features can be easily recognized.

(14) **Danger and restricted areas** extend 3.5 miles offshore from south of Point Arguello to Point Sal. (See **33 CFR 334.1130**, chapter 2, for limits and regulations.)

(15) **Point Pedernales**, 1.5 miles north of Point Arguello, and the largest of the numerous rocks as far as 300 yards offshore, are very dark and conspicuous alongside the sand dunes immediately north of the point.

(16) **La Honda Canyon**, 2 miles north of Point Arguello, is a deep gulch crossed by a railroad trestle easily distinguished when abreast the mouth. From here the coast to Purisima Point consists of a low tableland and sand dunes that contrast strongly with the dark cliffs south.

(17) **Surf**, 7 miles north of Point Arguello, is a station along the railroad. The yellow station house and a black tank are conspicuous. A white elevated water tank, 1.3 miles northeast of the station house, and several launching gantries at the Vandenberg Air Force Base are conspicuous along this section of the coast.

(18)

ENC - US3CA85M
Chart - 18700

(19) **Purisima Point**, 10.6 miles north of Point Arguello, is low and rocky, with reefs extending southeast for 0.3 mile. The north side of the point is bare sand. It has been reported that an inshore set is experienced off the coast in the vicinity of the point. From Purisima Point to Point Sal, the coast is sandy and lower than that south.

(20) **Point Sal**, 19.5 miles north of Point Arguello, is a bold dark headland marked by stretches of yellow sandstone. From the northwest the headland looks like a low conical hill with two higher conical hills immediately behind it. It rises gradually to a ridge, 1,640 feet high, 3 miles to the east. From the south the hills are not so well defined. **Lion Rock**, 54 feet high, is a rocky islet 200 yards off the south face of Point Sal. A small rock is close to the point. Breakers and reefs extend nearly 600 yards south and west from Point Sal and 200 yards southwest of Lion Rock.

(21) Anchorage under Point Sal affords some protection from northwest winds in 7 to 9 fathoms, sandy bottom, but is subject to swells. Shoal water extends nearly 0.5 mile west from the southeast point of the anchorage. The best anchorage is in 7 fathoms 500 yards 123° from Lion Rock and with the northern end of the rock just open of the extremity of Point Sal.

(22) From Point Sal north the coast is a sand beach backed by low dunes for 14 miles and then changes to bold rocky cliffs that curve sharply west to Point San Luis and form the north shore of San Luis Obispo Bay.

(23) **Oceano** is a small resort 12 miles north of Point Sal. The county airport is here.

(24) **Pismo Beach** is a resort 14 miles north of Point Sal. The pleasure pier is 1,200 feet long and has 12 feet at the outer end. In 1983, the pier was partially destroyed by storms, and submerged pilings are reported to exist at the outer end. Caution is advised in the area near the pier. **Shell Beach** is a small residential settlement, 1.5 miles northwest of Pismo Beach. An aerolight, 6 miles north of Pismo Beach, is visible from seaward.

(25)

ENC - US5CA81M
Chart - 18703

(26) **San Luis Obispo Bay**, 35 miles north of Point Arguello, is a broad bight that affords good shelter in north or west weather. South gales occur several times during the winter. The east shore is a narrow tableland that ends in cliffs 40 to 100 feet high to within 0.5 mile of **San Luis Obispo Creek** where a sand beach fronts **Avila Beach**. West of the creek the shore is high with rocky bluffs extending to **Point San Luis.**

(27) **Port San Luis**, on the west shore of the bay, is the seaport for San Luis Obispo, which is 10 miles inland. The port is primarily a base for commercial fishing boats, sport-fishing boats and recreational craft.

(28)

Prominent features

(29) Point San Luis, a bold prominent headland, and the pier in about 35°10'13"N., 120°44'27"W., are reported to be useful radar targets.

(30) **San Luis Obispo Light** (35°09'37"N., 120°45'38"W.), 116 feet above the water, is shown from a cylindrical structure on Point San Luis. **San Luis Hill**,.0.5 mile northwest of the light, is prominent from the south.

(31)

COLREGS Demarcation Lines

(32) The lines established for San Luis Obispo Bay are described in **33 CFR 80.1130**, chapter 2.

(33)

Anchorage

(34) The general anchorage is inside a line extending southwest from Fossil Point to the outer end of a breakwater that extends southeast from Whaler Island. Mariners should contact the harbormaster's office for anchorage information.

(35) **Special anchorages** are east of Avila Pier 1 (County Wharf) and in the west end of the harbor. (See **33 CFR 110.1** and **110.120**, chapter 2, for limits and regulations.) All anchorages are exposed to weather from the south and southeast, which causes heavy swells.

(36) The dangers off the entrance to San Luis Obispo Bay are buoyed; the east part of the bay has many rocks and heavy growths of kelp. **Souza Rock**, 2.1 miles southeast of San Luis Obispo Light, is covered 16 feet and rises abruptly from 19 fathoms. **Westdahl Rock**, 1.3 miles southwest of the light, is covered 18 feet and rises abruptly from 10 fathoms. **Howell Rock**, 1.6 miles east of the light, is covered 13 feet. **Lansing Rock** covered 18 feet and **Atlas Rock** covered 13 feet are 0.7 and 0.5 mile east of the light, respectively.

(37) A 2,400-foot breakwater, extending southeast from Point San Luis through **Whalers Island** to a ledge partly bare at low water, provides some protection to vessels at anchor or at the wharves. **Smith Island**, 44 feet high and about 90 yards wide, is 0.2 mile north of Whalers Island.

(38)

Routes

(39) San Luis Obispo Bay may be entered from south by passing 100 yards west of the lighted gong buoy marking Souza Rock, thence a **000°** course for about 2 miles until past Lansing Rock, and thence to anchorage or to the wharves. From north stay outside the lighted bell buoy marking Westdahl Rock and the lighted whistle buoy off Point San Luis breakwater, then head into the bay as previously mentioned.

(40)

Quarantine, customs, immigration and agricultural quarantine

(41) Vessels subject to inspection are requested to contact the harbormaster's office. (See Vessel Arrival Inspections, chapter 3.)

(42) **Quarantine** is enforced in accordance with the regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(43)

Harbor regulations

(44) The port of Port San Luis is administered by the Port San Luis Harbor District and under the control of a harbormaster. The office is at the foot of Harford Pier 3. The harbormaster monitors VHF-FM channel 16 and can be contacted by phone at 805–595–5435. Transients should report to the harbormaster for guest mooring assignments.

(45)

Wharves

(46) Harford Pier 3, 0.5 mile north of Point San Luis, is used by commercial and sport fisherman. The berthing space at the end has 17 to 20 feet alongside. In 1990, shoaling to an unknown extent was reported along the pier. The pier is lighted at night. A fuel dock is at the bulkhead just north of the pier. The pier is operated by the Port San Luis Harbor District.

(47) The California Polytechnic State University Pier, 1 mile northeast of Point San Luis, has 31 feet along both sides. The entire length of the pier is lighted at night. It is not safe to moor alongside in strong south to southeast weather; vessels usually leave the pier on the approach of a storm and anchor until it moderates.

(48) Avila Pier 1 (County Wharf), 1.4 miles northeast of Point San Luis, was damaged by a winter storm in 1983. Submerged obstructions are reported to be in the area near the pier. A submarine sewer line is about 40 feet east and parallel to the pier.

(49)

Supplies and repairs

(50) Gasoline, diesel fuel, water, marine supplies, a launching ramp and a 50-ton mobile hoist are available. Some repairs can be made.

(51)

Communications

(52) Transportation is by automobile to San Luis Obispo where rail, bus and air connections can be made.

(53)

ENCs - US5CA81M, US3CA85M
Charts - 18703, 18700

(54) From Point San Luis to Point Buchon, the coast trends northwest for 9 miles and consists of cliffs 40 to 60 feet high. The land rises rapidly from the cliffs to Mount Buchon. There are numerous outlying rocks and submerged ledges that extend more than a mile from the shore in some places.

(55) Point San Luis and Point Buchon, both bold prominent headlands, are reported to be useful radar targets when navigating this section of the coast.

(56) **Mount Buchon**, a rugged mountain mass between San Luis Obispo Bay, Estero Bay and the valley of San Luis Obispo, is prominent from either north or south. **Saddle Peak**, 4.1 miles north-northwest of San Luis Obispo Light, is visible for over 40 miles.

(57) **Santa Rosa Reef**, 1.4 miles west-southwest from San Luis Obispo Light, is covered 2¾ fathoms and rises abruptly from 13 fathoms. **Lone Black Rock**, 2 feet high and of small extent, is 0.5 mile west from the light and 0.2 mile offshore.

(58) **Pecho Rock**, 40 feet high, is 3 miles west-northwest from the light and 0.5 mile offshore. Two smaller rocks, 0.3 mile east (2 feet high) and 0.4 mile southeast, are in the vicinity of Pecho Rock. Foul ground, marked by kelp, is between the rocks and shore.

(59) A fish haven with a least depth of 9 fathoms is about 0.7 mile northwest of Pecho Rock.

(60) **Diablo Canyon**, 5.8 miles northwest of San Luis Obispo Light, is the site of a large nuclear power plant. The two concrete dome-shaped structures and other large buildings are conspicuous from well offshore. A **security zone** has been established in the waters of the Pacific Ocean off Diablo Canyon. (See **33 CFR 165.1155**, chapter 2, for limits and regulations.)

(61) A sharp prominent dark gray rock, 111 feet high, is 0.1 mile offshore from the powerplant.

(62) **Lion Rock**, 0.9 mile northwest from the power plant and 0.2 mile offshore, is 240 yards long in a northwest direction and 136 feet high. A high rock lies between it and the shore, and a small low rock is 200 yards west.

(63) **Point Buchon** ends in an overhanging cliff 40 feet high, with a low tableland behind that rises rapidly to a bare hill a mile to the east. There are a few detached rocks close under the cliffs. A lighted whistle buoy is 1 mile southwest of the point and about 400 yards west-southwest of a rock covered 3¾ fathoms.

(64) **Estero Bay** is formed by a curve in the coast between Point Buchon and **Point Estero**, 13.5 miles north-northwest. The shore of the bay follows a general north direction from Point Buchon for 11 miles, then turns sharply west for 5 miles to Point Estero. The north part of Estero Bay is fringed with covered rocks and scattered kelp. The seaward faces of Cayucos Point and Point Estero are cliffs 50 to 90 feet high.

(65) The coast drops abruptly from bold Mount Buchon to a sandy spit bordering Morro Bay and then rises to a bluff-bordered treeless country of rolling hills.

(66) Point Estero, Morro Rock and Cayucos Point are reported to be useful radar targets in the vicinity of Estero and Morro Bays.

(67) **Morro Bay**, 6 miles north of Point Buchon, is a shallow lagoon separated from Estero Bay by a narrow strip of sand beach. The port facilities at the city of Morro Bay, a mile inside the entrance, are used by commercial fishing, sport-fishing and recreational craft.

(68) **Morro Rock**, the tall cone-shaped mound on the north side of the entrance to Morro Bay, is the dominant landmark in this area. A breakwater, extending 600 yards south from the rock, is marked at its outer end by **Morro Bay West Breakwater Light** (35°21'46"N., 120°52'11"W.), 36 feet above the water and shown from a white column. A sound signal is at the light. Sections of the south end of the breakwater are reported to be frequently awash under heavy seas and high tides but have never been observed completely submerged.

(69) The three 450-foot power plant stacks 0.5 mile east of Morro Rock are visible from far offshore. The standpipe about 500 yards east of the stacks is prominent from close in. **Hollister Peak**, 4.2 miles east-southeast of Morro Rock, is the most prominent of a row of peaks behind Morro Bay because of its jagged outline.

(70)

COLREGS Demarcation Lines

(71) The lines established for Estero-Morro Bay are described in **33 CFR 80.1132**, chapter 2.

(72)

Channels

(73) The entrance to Morro Bay is through a buoyed channel between the protective breakwaters. Due to continual shifting of the channel, buoy positions are frequently shifted to mark the best water.

(74) Mariners are advised to use extreme caution when entering the bay and to contact the harbormaster or Coast Guard Sector Los Angeles/Long Beach on VHF-FM channel 16 for current entrance and channel conditions. Morro Bay Rough Bar Warning Light is on the north end of the USCG and Harbormasters Office pier. The light will flash when seas exceed four feet in height. The light is extinguished for lesser bar conditions, but with no guarantee that bar is safe.

(75) From Fairbank Point, on the east side of the bay, a privately maintained channel leads south to the Morro Bay State Park Basin at **White Point**. Vessels heading for the basin should approach White Point close inshore as the channel narrows at this point. Swells from North Pacific winter storms sometimes break across the entire entrance.

(76)

Anchorages

(77) **Special anchorages** are in Morro Bay, 1 and 2 miles above the entrance. (See **33 CFR 110.1** and **110.125**, chapter 2, for limits and regulations.)

(78) Extremely high waves created by the sandbars in the entrance to Morro Bay make dangerous navigation conditions.

(79)

Currents

(80) Currents in the entrance channel and around the breakwaters are strong at times. It is advisable to approach the entrance from the southwest because of the currents and sea conditions. Sharp turns should be avoided in the vicinity of the breakwaters, especially in heavy weather. It is reported that currents in the north part of the bay, especially flood currents, have a tendency to set vessels toward the USCG and Harbormasters Office pier.

(81)

Weather, Estero Bay

(82) Estero Bay is one of the foggiest areas along the Pacific Coast. The fog is most common in the mornings and evenings. (See Weather, West Coast and Hawaii, indexed as such, chapter 3, for further information.)

(83)

Coast Guard

(84) Morro Bay Coast Guard Station is at the foot of the north T-pier in Morro Bay. The station maintains motor lifeboats and monitors VHF-FM channel 16. Station Morro Bay is participating in the Coastal Weather Display Program. A 35-foot flag pole is located near the north end of the pier, visible to mariners entering and exiting the harbor. Coastal warning flags will be flown from one hour before sunrise to one hour after sunset—see illustration in chapter 1.

(85) Weather flags are flown only at select Coast Guard stations to supplement other weather notification sources. Light signals corresponding to these flags are not displayed at night. In all cases, mariners should rely upon National Weather Service broadcasts as their primary source of government provided weather information.

(86)

Harbor regulations

(87) Morro Bay Harbor is owned by the city of Morro Bay and is under the control of a **harbormaster**, who maintains an office at the foot of the city north T-pier. The harbormaster monitors VHF-FM channels 16 and 12 and can be reached by telephone at 805–772–6254. Harbor patrol boats operate from the city north T-pier and monitor VHF-FM channel 16. The boats are manned during daylight, and a patrolman is on call at all other times.

(88) Yachts and small craft may tie up to the yacht club dock; otherwise they must either anchor in the bay or check with the harbormaster for other accommodations

(89)

Wharves

(90) The USCG and Harbormasters Office pier, at the city of Morro Bay, is on the north side of the harbor about 0.8 mile above the entrance; depths alongside are about 22 feet. The pier is owned and operated by the city of Morro Bay.

(91) The city south T-pier, southeast of the USCG and Harbormasters Office pier, is owned and operated by the city. It has about 20 feet alongside.

(92)

Supplies and repairs

(93) Gasoline, diesel fuel, water, ice, a launching ramp and marine supplies are available in the port.

(94) A boat works has a crane that can handle craft up to 20 tons and 50 feet long; hull, engine and rigging repairs can be made.

(95) For 3 miles north of Morro Rock, submerged pipelines extend up to 0.6 mile offshore in Estero Bay. A rock covered 5¼ fathoms, 1.3 miles northwest of Morro Rock, is marked by a gong buoy. An unmarked fish haven, covered 6¾ fathoms, is about 1.4 miles north-northwest of Morro Rock in about 35°23'36"N., 120°52'32"W.

(96) **Cayucos**, 4.5 miles north of Morro Rock and in the northeast part of Estero Bay, has a fishing and pleasure pier; a depth of 12 feet is at the outer end.

(97) Anchorage with fair shelter from the north and northwest may be had in 11 fathoms, sandy bottom, with the prominent white concrete tank on a hill west of Cayucos bearing 017°.

(98) **Mouse Rock**, 0.7 mile west of Cayucos, is covered ½ fathom and breaks heavily in all but smooth weather; it is marked by a bell buoy.

(99) **Cayucos Point**, 2 miles west of Cayucos, is a low rocky promontory. **Constantine Rock**, 0.5 mile south of the point, is covered 1 fathom and breaks heavily in a moderate swell; it is marked on the south side by a buoy.

(100)

ENC - US3CA85M
Chart - 18700

(101) From Point Estero north for 8 miles to the village of Cambria, the bluffs increase in height and the range of grassy hills is close to shore. The shore is well fringed with kelp; several rocks are close inshore. **White Rock**, 6 miles northwest of Point Estero, is the most prominent. A pinnacle rock, 0.7 mile southwest of White Rock, is covered 5½ fathoms.

(102) **Von Helm Rock**, 7.2 miles northwest of Point Estero and nearly a mile offshore, is covered 2½ fathoms. The rock is very sharp and breaks only in the roughest weather.

(103) **Cambria** is about 1 mile inland in a grove of pine trees. Some of the streets and buildings are visible from seaward. No landing or anchorage is recommended.

(104) From Cambria for 6.5 miles to San Simeon, rocks continue close inshore, but the bluffs decrease in height and the hills recede from the shoreline. Thick groves of pine trees scatter the hillsides. Of the several rocks offshore, **Cambria Rock**, 10 feet high, and **Pico Rock**, 12 feet high, are the largest, but they are not prominent from seaward. Shoal patches up to 360 yards surround Cambria Rock, and there is foul ground northwest and south of Pico Rock. A shoal, 580 yards southwest of Pico Rock, is covered 3¾ fathoms.

(105) **San Simeon Bay**, 14 miles northwest of Point Estero, is formed by the shoreline curving sharply to the west and on the west side by **San Simeon Point**, a low wooded projection extending southeast. The trees show well from west, but from south the warehouses and buildings in San Simeon are more prominent. From west the point itself is not easily recognized by those not familiar with it.

(106) San Simeon Bay offers good shelter in north weather but is exposed to south gales in winter. The best anchorage is in the middle of the bight in 5 to 8 fathoms, hard sand bottom. A small ravine due west of the anchorage can be used to go ashore.

(107) **San Simeon**, 1.7 miles east-southeast of San Simeon Point, is a small town with a 995-foot sport fishing pier. A number of motels are in the town to handle the many tourists that visit Hearst Castle.

(108) Prominent **Hearst Castle**, 2.7 miles northeast of San Simeon, is the former palace of the late William Randolph Hearst; it is now a State Historical Monument. The structure is lighted at night.

(109) The coast from San Simeon Point for 5 miles northwest to Point Piedras Blancas is low, with numerous detached rocks lying in some cases over 0.5 mile offshore and usually well marked by kelp.

(110) **Point Piedras Blancas** is a low rocky point projecting about 0.5 mile from the general trend of the coast. **Piedras Blancas Light** (35°39'56"N., 121°17'04"W.), 142 feet above the water, is shown from a white conical tower with a flat top at the point.

(111) **Piedras Blancas** are two large white rocks, 74 and 31 feet high, 500 yards offshore and about 0.8 mile east of the point. From the south they look like one rock.

(112) **Outer Islet**, a large and prominent white rock 110 feet high, is 0.25 mile west of the point. In hazy weather this rock is sometimes visible from the northwest and west when the light cannot be seen.

(113) Anchorage for a small vessel, with protection from northwest winds, may be had under Point Piedras Blancas in 4 to 5 fathoms, sandy bottom, with the light about 0.2 mile bearing 280°.

(114) A bank covered 11 fathoms, 3 miles west-northwest from Piedras Blancas Light, has been reported breaking in a heavy west swell.

(115) From Point Piedras Blancas for 6 miles north-northwest to the mouth of the San Carpoforo Valley, the coast is low, with small bluffs and rolling treeless hills. Numerous rocks, fringed with kelp, extend well offshore. **Harlech Castle Rock**, 0.7 mile offshore and 1.5 miles northwest of Piedras Blancas Light, is the outermost rock and uncovers 1 foot; it is not usually marked by kelp. A shoal covered 2¾ fathoms, 0.5 mile northwest of this rock, is surrounded by 10 to 12 fathoms.

(116) **La Cruz Rock**, 48 feet high and fairly prominent, is 3 miles north-northwest of Piedras Blancas Light and just south of Point Sierra Nevada. A sandy beach inshore from the rock is a fair landing place in heavy northwest weather. This stretch of beach is relatively free from breakers in northwest weather. There is a suitable anchorage for small boats east of the north limits of the rock in heavy northwest or light south weather.

(117) **Point Sierra Nevada**, a low inconspicuous bluff, is named for the steamship SIERRA NEVADA, which stranded on the rock 400 yards northwest of the point.

(118) About 1.8 miles north of Point Sierra Nevada is a group of isolated buildings inland from **Breaker Point**; the point is not prominent nor easily identified.

(119) **Ragged Point**, 6 miles north of Point Piedras Blancas, is a low projection readily identified, being the first point south of prominent San Carpoforo Valley; visible rocks and ledges extend about 0.3 mile west of the point.

(120) From Ragged Point northwest for 41 miles to the Big Sur River, the coast is very bold and rugged. The cliffs are 200 to 500 feet high, and the land rises rapidly to elevations of 2,500 to 5,000 feet within 2 to 3 miles from the coast. There are few beaches and few outlying rocks. The highway along the coast is plainly visible from seaward.

(121) Two conspicuous landmarks lie between Ragged Point and Cape San Martin. **White Rock No. 1**, 39 feet high and rather sharp, is 0.5 mile offshore and 3.8 miles northwest of Ragged Point. About 200 yards west of White Rock No. 1 is a rock awash. **White Rock No. 2**, 64 feet high and with a rounded top, is 0.2 mile offshore and 5.8 miles northwest of Ragged Point.

(122) **Salmon Cone**, 500 feet high, is a rocky butte close to the shore and 0.5 mile northeast of White Rock No. 1. The cone is not conspicuous as it blends into the background.

(123) Several deep narrow gulches indent the coast between Salmon Cone and Cape San Martin. Two of the most prominent are **Villa Creek** and **Alder Creek**. Villa Creek is crossed by a conspicuous white bridge.

(124) A pinnacle rock, covered 1¾ fathoms, is 1.7 miles southeast of Cape San Martin and 0.5 mile offshore.

(125) **Whaleboat Rock**, which uncovers 5 feet, and **Bird Rock,** 5 feet high, are about a mile southeast of Cape San Martin; they are conspicuous only when close inshore. A group of buildings is on the bluff just north of these rocks.

(126) **Cape San Martin,** 16 miles northwest of Point Piedras Blancas, has a ragged precipitous seaward face and is readily identified by the **San Martin Rocks**. From south, the inner rock, which is 100 yards offshore, is the most prominent, being 144 feet high and white in appearance. The middle rock is 34 feet high and triangular. The outer and northernmost rock is cone-shaped, 44 feet high, and 0.5 mile offshore.

(127) **Willow Creek** bridge, about 0.3 mile north of Cape San Martin, is prominent from west.

(128) From Cape San Martin for 9.5 miles to Lopez Point, the coast forms an open bight with rugged shores intersected occasionally by deep narrow valleys. There are a few detached rocks, but only two extend far from the shoreline.

(129) **Plaskett Rock** is a large prominent white rock, 110 feet high, 2 miles north of Cape San Martin and 0.3 mile offshore.

(130) **Tide Rock**, 4 miles north of Cape San Martin and 0.7 mile offshore, is awash and quite sharp; it is a menace in smooth weather as there is no breaker to indicate its position.

(131) **Lopez Point**, 9.5 miles northwest of Cape San Martin, is a narrow tableland, 100 feet high, projecting a short distance from the highland. **Lopez Rock**, 51 feet high with a prominent cleft in the middle, is 0.3 mile offshore and 0.8 mile northwest of Lopez Point. A shoal covered 6 fathoms is 0.3 mile southwest of Lopez Rock.

(132) An open anchorage affording some protection from northwest weather may be had about 1 mile southeast of Lopez Point in 10 fathoms, sandy bottom. Smaller vessels may obtain better shelter by anchoring inside the kelp bed in about 5 fathoms, sandy bottom, with Lopez Point bearing about 287°. A rock covered 1¾ fathoms is in the kelp beds 0.5 mile southeast of Lopez Point.

(133) **Harlan Rock**, 10 feet high, is 0.3 mile offshore and 1.7 miles east-southeast of Lopez Point. The rock is conspicuous only when approaching the anchorage. A shoal covered ¾ fathom is 680 yards southeast of Harlan Rock.

(134) Several peaks are prominent behind Lopez Point. **Junipero Serra Peak**, 10 miles northeast of Lopez Point, has pines on and near the summit. **Twin Peak** and **Cone Peak**, 4 miles northeast of Lopez Point, are known as the twin peaks; they have scattered trees on their summits and

are good landmarks even at night. An observation tower on the summit of Cone Peak is lighted when occupied.

(135) From Lopez Point for 17.5 miles to Pfeiffer Point, the coast is rugged, and high mountains rise precipitously from the shore. The coastline makes in slightly, forming a shallow bight. Several hundred feet above the beach, the slopes are marked by numerous highway cuts, and the highway bridges over these are conspicuous from offshore.

(136) **Square Black Rock**, 4 miles north-northwest of Lopez Point, is 62 feet high.

(137) **Dolan Cone**, 4.5 miles north-northwest of Lopez Point, is white in appearance and 77 feet above the water.

(138) **Little Slate Rock**, 7.5 miles north-northwest of Lopez Point, is 4 feet high; **Slate Rock** is 18 feet high. Both rocks are discernible only when close inshore.

(139) Two major landslides are prominent in the vicinity of **Partington Point**, about 6.5 miles east-southeast of Pfeiffer Point.

(140) A prominent dwelling, visible from the west and north, is on a bluff 5.5 miles east-southeast of Pfeiffer Point. Several conspicuous highway bridges cross the canyons. The highway leaves the coast about 3.5 miles east-southeast of Pfeiffer Point and does not appear again until north of Point Sur.

(141) A deep submarine valley makes in from the south in the bight 13.5 miles northwest of Lopez Point and 4.5 miles southeast of Pfeiffer Point. The head of the canyon parallels the shore for about a mile and the 100-fathom curve lies only 500 yards from the shore.

(142)

Pfeiffer Point to Sur Rock

(143) **Pfeiffer Point**, 17.5 miles northwest of Lopez Point and 6 miles southeast of Point Sur, is 400 to 500 feet high; it is the seaward end of a long ridge 2,000 feet high, 1.5 miles northeast of the point. The point presents a bold, precipitous, light-colored face to seaward. It is distinguished from the south by its color, and from north the pointed summit stands out. The point is more prominent from north than from south. **Sycamore Canyon** is immediately northwest of the point.

(144)

Anchorage

(145) Anchorage, affording fair protection in north and northwest weather, may be had for small vessels about 0.9 mile east-southeast of Pfeiffer Point and 500 yards offshore in 8 fathoms, sandy bottom, with chain sufficient to clear the kelp line. This anchorage is used extensively by local fishermen. Access by land is difficult as the road is poor.

(146) **Cooper Point**, 1.5 miles northwest of Pfeiffer Point, is marked by a prominent pinnacle 172 feet high and an off-lying rock 18 feet high.

(147) From the mouth of **Big Sur River**, 3.5 miles northwest of Pfeiffer Point, to Point Sur, the shore is low, with sand beaches and dunes extending east. Submerged rocks and ledges extend 1 mile or more offshore in some places between Cooper Point and Point Sur.

(148) **False Sur**, 1.2 miles southeast of Point Sur Light, is a 209-foot rounded hillock of somewhat similar appearance to Point Sur and during fog and low visibility may be mistaken for it.

(149) **Point Sur**, 121 miles northwest of Point Arguello and 96 miles south-southeast of San Francisco Bay entrance, is a black rocky butte 361 feet high with low sand dunes extending east from it for over 0.5 mile. From north or south, it looks like an island and in clear weather is visible about 25 miles. The buildings on the summit of Point Sur may confuse the stranger. **Point Sur Light** (36°18'23"N., 121°54'06"W.), 250 feet above the water, is shown from a white tower on a gray stone building on the seaward face of the point. The buildings of a U.S. Naval Facility for oceanographic research are about 0.5 mile east from the light.

(150) **Pico Blanco**, 4.5 miles east of Point Sur, rises from the long ridge bordering the south side of Little Sur River. The pointed and white-topped peak is prominent in clear weather.

(151) **Sur Rock**, 1.8 miles south-southeast from Point Sur Light and nearly 0.8 mile offshore, is awash. A shoal covered 2 fathoms, 0.3 mile west of Point Sur, breaks heavily in all but very smooth weather. About 0.5 mile southwest from Sur Rock is a shoal covered 4½ fathoms that breaks in heavy weather. Extending 0.9 mile from Sur Rock toward Point Sur are many covered rocks that show breakers in moderately smooth weather. Foul ground lies between the rocks and the beach. These dangers are usually well marked by kelp, but it is a dangerous locality in thick or foggy weather, and vessels should stay in depths greater than 30 fathoms.

(152)

ENC - US3CA52M
Chart - 18680

(153) The coast trends north-northwest from Point Sur for 17 miles to Cypress Point, then northeast for 4 miles to Point Pinos.

(154) Monterey Bay is a broad open bight 20 miles wide between Point Pinos and Point Santa Cruz. The shores decrease in height and boldness as Point Pinos is approached, while those of Monterey Bay are, as a rule, low and sandy. The valleys of Salinas and Pajaro Rivers, which empty into the east part of Monterey Bay, are marked depressions in the coastal mountain range and are prominent as such from a considerable distance seaward. From Point Santa Cruz the coast curves west and north for 23 miles to Pigeon Point, and then extends for 25 miles in a general north-northwest direction to Point San Pedro, the south headland of the Gulf of the Farallones.

(155) Between Cypress Point and Point Pinos the coast is bold and the 30-fathom curve is less than 1 mile from shore in many places; deep submarine valleys extend into

Carmel Bay and Monterey Bay. North of Monterey Bay, depths are more regular and the few dangers extend less than 1 mile from shore.

(156) **Monterey Bay National Marine Sanctuary** was established to protect and manage the conservation, ecological, recreational, research, educational, historical and esthetic resources and qualities of the coastal and ocean waters and submerged lands in and surrounding Monterey Bay. (See **15 CFR 922**, chapter 2, for limits and regulations.)

(157)

Routes

(158) Vessels **300 gross tons and higher** transiting the vicinity of Monterey Bay National Marine Sanctuary, the **routes** or **recommended tracks** for north-bound vessels are from a position (36°18.31'N., 122°12.79'W.) 15 miles off Point Sur to a position (37°10.86'N., 122°39.74'W.) 12.7 miles off Pigeon Point. For south-bound vessels, from a position (37°10.85'N., 122°43.87'W.) 16 miles off Pigeon Point to a position (36°18.29'N., 122°18.98'W.) 20 miles off Point Sur.

(159) Recommended tracks are further offshore for vessels carrying **hazardous bulk cargo**. For north-bound vessels, beginning at a position (36°18.27'N., 122°25.16'W.) 25 miles off Point Sur, to a position (37°10.81'N., 122°55.14'W.) 25 miles off Pigeon Point. For south-bound vessels, beginning at a position (37°10.78'N., 123°01.39'W.) 30 miles off Pigeon Point, to a position (36°18.24'N., 122°31.35'W.) 30 miles off Point Sur.

(160) **Tank vessels** are recommended to transit the Monterey Bay National Marine Sanctuary area well offshore (at least 50 miles). Tank vessels and vessels **carrying hazardous cargo** transiting San Francisco Golden Gate are recommended to use the Main (west) Traffic Lanes when proceeding to and from south of San Francisco Traffic Separation Scheme.

(161)

Little Sur River to Cypress Point

(162) Just north of Point Sur (36°18.4'N., 121°54.0'W.), a sandy beach and bluff continue for 1.8 miles to **Little Sur River**, where the coast becomes bold, the 30-fathom curve lying in many cases less than 1 mile from shore. The highway returns to the coast just north of Point Sur and is visible from seaward until it reaches Pinnacle Point. It is marked by several bridges.

(163) **Ventura Rocks**, 2.2 miles north of Point Sur, are two rocks close together about 0.6 mile offshore. The north rock is conical shaped and 12 feet high. It is fairly conspicuous when seen from the north with the sand bluff north of Point Sur as a background, but when seen from the south it is confused with the rocks near the beach and to the north. The south rock uncovers.

(164) From the conspicuous valley of the Little Sur River for more than 7 miles to Soberanes Point, the coast, although moderately straight, is bold, rugged and broken, with numerous detached rocks and covered ledges close inshore.

(165) **Bixby Landing**, 4 miles north of Point Sur, is identified by a prominent concrete arch bridge across Bixby Creek; the bridge shows well to the west but is obscured to the north. Less prominent is another concrete arch bridge across Rocky Creek, which is just north of Bixby Creek.

(166) **Soberanes Point** projects slightly from the general trend of the coast. An isolated 200-foot grassy hillock lies immediately back of the point, and a grassy ridge extends inland to heights of 1,600 feet.

(167) The 4.6-mile coastline from Soberanes Point to Pinnacle Point is rugged and broken but becomes less precipitous and the mountain ridges lessen in height as Pinnacle Point is approached. Innumerable rocks and ledges extend in some cases over 0.3 mile offshore.

(168) **Lobos Rocks**, a group of small rocky islets, are nearly 0.5 mile west of Soberanes Point. The two larger islets are white-topped, and each is about 40 feet high. From seaward they rise abruptly from 20 fathoms, but there is foul ground between them.

(169) **Mount Carmel**, 7.3 miles northeast of Point Sur, is round and bare on the summit. This peak and **Pico Blanco**, 4.5 miles east of Point Sur, sometimes can be seen when the lower land is covered by fog or haze.

(170) **Yankee Point**, 2.5 miles north of Soberanes Point, projects 0.3 mile from the general trend of the coast. The seaward face is irregular and broken, with numerous detached rocks. **Yankee Point Rock**, 6 feet high, is 125 yards west of the point. A covered rock that generally breaks is 0.4 mile south of the point and the same distance offshore.

(171) **Pinnacle (Carmel) Point**, the outer tip of **Point Lobos** and the south point at the entrance to Carmel Bay, is an irregular, jagged, rocky point 100 feet high. **Whalers Knoll**, the 200-foot-high hill 0.5 mile east-southeast of Pinnacle Point, is one of the prominent knobs on Point Lobos. **Sea Lion Rocks** are a group of rocks off the point. A rock, formerly known as Whalers Rock, is the farthest offshore of the group and is 0.5 mile southwest of the point. It is 12 feet high, the most conspicuous of the group, and more prominent from the north than from the south.

(172) The entire Point Lobos area is included in a state ecological reserve. Regulations prohibit landing anywhere within its boundaries. **Whalers Cove**, the bight on the north shore 0.8 mile east-southeast of Pinacle Point, may be used as a harbor of refuge only. Kelp growth is quite heavy in the cove.

(173) **Carmel Bay** is a 2.8-mile-wide open bight between Pinnacle Point and Cypress Point. The beach in front of the city of Carmel is low, but the land on the south side of the bay is bare and mountainous, and the north side is hilly and heavily wooded.

(174) Carmel Bay affords shelter in north and south weather to small craft having local knowledge. In north weather anchorage may be had in two coves on the north

(182)

METEOROLOGICAL TABLE – COASTAL AREA OFF MONTEREY BAY
Between 36°N to 38°N and 121°W to 126°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	2.2	2.2	2.9	2.9	2.9	2.4	1.1	0.8	1.0	1.5	1.9	2.9	2.1
Wave Height > 9 feet [1]	6.2	5.9	7.8	9.1	9.8	7.4	5.8	4.8	4.2	3.8	5.3	7.1	6.5
Visibility < 2 nautical miles [1]	7.8	7.3	4.6	3.4	4.7	6.2	7.9	7.6	8.2	8.9	8.8	8.1	6.9
Precipitation [1]	9.4	7.4	6.9	3.8	2.7	2.6	2.0	2.1	2.0	2.6	5.2	7.7	4.4
Temperature > 69° F	0.2	0.1	0.2	0.2	0.4	0.7	1.1	2.0	2.4	1.3	0.5	0.3	0.8
Mean Temperature (°F)	53.7	53.9	54.1	54.2	55.6	57.6	59.2	60.5	61	59.7	57.4	55.2	56.9
Temperature < 33° F [1]	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mean RH (%)	82	83	81	81	83	85	86	87	85	85	83	81	84
Overcast or Obscured [1]	30.2	30.6	28.9	25.7	31.8	38.4	49.8	46.9	35.9	30.3	25.3	27.4	33.7
Mean Cloud Cover (8ths)	4.8	4.8	4.8	4.4	4.7	4.7	5.3	5.1	4.5	4.3	4.3	4.5	4.7
Mean SLP (mbs)	1019	1019	1018	1018	1017	1016	1016	1016	1015	1017	1019	1019	1017
Ext. Max. SLP (mbs)	1050	1051	1049	1041	1040	1042	1032	1031	1039	1033	1044	1042	1051
Ext. Min. SLP (mbs)	984	985	983	989	994	995	999	998	1000	997	996	989	983
Prevailing Wind Direction	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	N	NW
Thunder and Lightning [1]	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1

[1] Percentage Frequency

shore, **Pebble Beach** on the west and **Stillwater Cove** on the east. These are shallow kelp-filled bights, with rock and gravel bottom. Anchorage is in 1 to 3 fathoms, but local knowledge is necessary to avoid the dangers. In south weather, anchorage may be had in Whalers Cove in 3 to 4 fathoms, rock or gravel bottom, but there is a rock covered 1¾ fathoms near the middle of the cove.

(175) **Carmel Canyon**, a deep submarine valley, heads in the southeast part of Carmel Bay and has depths of 50 fathoms less than 0.2 mile from the beach. The bay is not recommended for strangers.

(176) On the northeast shore of Carmel Bay, and north of **Carmel River**, is the city of **Carmel**. The lights of Carmel are prominent on a clear night. The tower of Carmelite Monastery, 1.5 mile east of Pinnacle Point, is a conspicuous structure.

(177) **Cypress Point**, on the north side of the entrance to Carmel Bay, is comparatively low and extends about 2 miles beyond the general trend of the coast. The cliffs are steep, and numerous detached rocks are close under them. The point is heavily wooded to within 400 yards of its tip. **Cypress Point Rock**, 12 feet high, is 450 yards northwest of Cypress Point and is prominent from either north or south. A lighted gong buoy is northwest of the point.

(178)

ENC - US5CA50M
Chart - 18685

(179) From Cypress Point to Point Pinos, the coast trends northeast for 4 miles. Numerous small rocks and ledges closely border the shoreline. The land is low, with the height of the cliff decreasing toward **Point Joe**, a rocky extension of the shoreline where the surf breaks heavily. From this point to Point Pinos, white sand dunes are conspicuous against the dark trees behind them, even in moonlight.

(180) **Point Pinos**, on the south side of Monterey Bay, is low, rocky, and rounding with visible rocks extending offshore for less than 0.3 mile. The point is bare for about 0.2 mile back from the beach and beyond that is covered with pines. **Point Pinos Light** (36°38'00"N., 121°56'01"W.), 89 feet above the water, is shown from a 43-foot white tower on a dwelling near the north end of the point. A lighted bell buoy is about 0.7 mile off the point.

(181) **Monterey Bay**, between Point Pinos and Point Santa Cruz, is a broad 20-mile-wide open roadstead. The shores are low with sand beaches backed by dunes or low sandy bluffs. **Salinas Valley**, the lowland extending east from about the middle of the bay, is prominent from seaward as it forms the break between the Santa Lucia Range south and the high land of the Santa Cruz Mountains north. The bay is free of dangers, the 10-fathom curve lying at an average distance of 0.7 mile offshore. The submarine **Monterey Canyon** heads near the middle of the bay with a depth of over 50 fathoms about 0.5 mile from the beach near Moss Landing. Shelter from northwest winds is afforded at Santa Cruz Anchorage and Soquel Cove, off the north shore of the bay, and from southwest winds at Monterey Harbor, off the south shore. The tidal currents are reported to be generally weak except at the deep-draft mooring facility about 0.8 mile northwest from Moss Landing harbor entrance.

(183)

Weather, Monterey Bay

(184) Sea fog is a problem on the bay from about July through September. It is worse over open waters and along the exposed east shore. Around Monterey Harbor in the south and Santa Cruz Anchorage in the north, fog reduces visibility to less than 0.5 mile (0.9 km) on 4 to 8 days per month during the worst period. Close to shore,

cloudiness begins to increase and descend in the evening by 2100 or 2200. Low clouds or fog cast a pall over the east shore. Around sunrise, conditions begin to improve, and, by 0900, visibilities are usually better than 0.5 mile (0.9 km). The best conditions occur in the early afternoon, when visibilities are less than 3 miles (6 km) and cloud ceiling are less than 1,500 feet (458 m) only 10 to 20 percent of the time. Clear skies and excellent visibility occur 15 to 20 percent of the time. Poor conditions can be expected over the bay and along exposed coasts on 10 to 15 days per month during July, August, and September. Moss Landing is an exposed location, and sound signals operate about 25 percent of the time in August. Radiation fog occurs infrequently from the fall through spring.

(185) Gales are rare over Monterey Bay; extreme gusts have been reported at 40 to 50 knots from October through May. The maximum gust for Monterey Peninsula was a gust of 60 knots from the northeast in January 1989. Winds of 17 knots or more occur 1 to 4 percent of the time from November through March; they are rare during July, August and September. Prevailing winds are west averaging seven knots, except in late fall and early winter, when east winds are as frequent. West through northwest winds remain the predominant directions into October, when winds become more variable again.

(186) Winter winds over the bay are variable. Winds from the east-southeast are as common as winds from the west-northwest, and, along the shore, calms occur more than 20 percent of the time. In late winter, west-northwest winds prevail. Strongest winter winds are often out of the south. During spring and summer, they are most likely from the northwest.

(187) The average annual temperature at Monterey is 57°F (13.9°C). The average maximum is 65°F (18.3°C) and the average minimum is 48°F (8.9°C). The all-time warmest temperature is 104°F (40°C) recorded in October of 1987. The coolest thermometer reading is 20°F (-6.7°C), recorded in December 1990. The average annual precipitation for Monterey is 18.6 inches (472 mm). Trace amounts of snow have fallen during February in Monterey.

(188)

Pilotage, Monterey Bay

(189) Pilotage in and out of Monterey Bay is compulsory for all vessels of foreign registry and U.S. vessels under enrollment not having a federal licensed pilot onboard. Pilotage is required in Monterey Bay east of the Territorial Sea line between Point Santa Cruz and Point Pinos. The San Francisco Bar Pilots provide pilotage to harbors in Monterey Bay and can be contacted by telephone 415–393–0457, telex (SF Pilot 415–371–5595), fax messages 415–982–4721, or cable (BARPILOTS, San Francisco). The pilot boarding area is within a 1-mile radius centered around a point located at 36°40'00"N., 121°58'00"W., about 2.5 miles northwest of Point Pinos Light. For additional details, including pilot boat description, see Pilotage, San Francisco, chapter 7.

(190) A **restricted and a prohibited area** for an army firing range is in the southeast part of the bay, and a naval operating area is in the northeast part of the bay. (See **33 CFR 334.1150**, chapter 2, for limits and regulations.)

(191) **Pacific Grove**, a summer resort just southeast of Point Pinos, has no commercial wharves, but a small solid-concrete jetty with low-level landing usable only on a seasonal basis is just south of **Lovers Point**.

(192) **Monterey Harbor**, 3 miles southeast of Point Pinos, is a compact resort harbor with some commercial activity and fishing. The harbor can accommodate over 800 vessels.

(193) Depths of more than 20 feet are available in the outer harbor and entrance and 12 to 6 feet in the small-boat basin. There are many sport-fishing landings, and the small-craft basin provides good shelter for over 500 boats. There are four public launch ramps available in the harbor. The municipal marina has transient berths available and can provide electricity, pump-out, ice and marine supplies; a 3-ton and 70-ton lift is available for hull, engine and electrical repairs. The marina monitors VHF-FM channels 16 and 5. The boat yard, located just inside the breakwater has a 70-ton travel lift.

(194) **Monterey**, a colorful and picturesque city on the west side of the harbor, was the capital of California under Mexican rule and for sometime after it became a state. The old adobe custom house is still standing near the waterfront and is now used as a historical museum.

(195)

Prominent features

(196) Prominent features include the granite **Presidio Monument** on the brow of a hill on the west side of the harbor and a radio tower 0.6 mile north of the monument.

(197) Two radio towers just inshore from the sand dunes at **Marina**, 6.5 miles northeast from the breakwater, are conspicuous in the south part of Monterey Bay. An aerolight at Monterey Peninsula Airport is 1.9 miles east-southeast of Monterey Harbor Light 6. Another aerolight is 7.3 miles northeast of Light 6.

(198)

COLREGS Demarcation Lines

(199) The lines established for Monterey Harbor are described in **33 CFR 80.1134**, chapter 2.

(200) Monterey Harbor breakwater is on the north side of the entrance to Monterey Harbor. The breakwater extends seaward from the Coast Guard pier for a combined length of about 1,700 feet. This affords excellent protection in northwest weather. However, in heavy weather there may be a strong surge in the harbor. The outer end of the breakwater is marked by a light. A sound signal is at the light. The outer harbor is marked by a private lighted junction buoy. The north channel at the junction buoy leads to a private marina and fuel dock. Loud-barking sea lions occupy the breakwater during the day and should not unnecessarily be disturbed.

(221)

(201)

Anchorages

(202) A **special anchorage** is just south of the breakwater. (See **33 CFR 110.1** and **110.126**, chapter 2, for limits and regulations.) A **seasonal special anchorage and mooring area** is just east of Municipal Wharf No. 2. Mariners operating in the vicinity of Monterey Harbor are requested to avoid transiting through this area. Mooring or anchoring is restricted based on current weather conditions. Permission to moor or anchor may be obtained through the Office of the Harbormaster.

(203)

Currents

(204) A very strong current is reported to exist at the small-boat basin entrance when swells run following winter storms. The current runs mainly from the breakwater towards Municipal Wharf No. 1; caution is advised. 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.

(205)

Quarantine, customs, immigration and agricultural quarantine

(206) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, Chapter 1.)

(207)

Coast Guard

(208) Monterey Coast Guard Station is at the foot of the Coast Guard pier.

(209)

Harbor regulations

(210) The harbor is owned by the city of Monterey and under the control of a harbormaster. His office is in a building on shore about midway between the two municipal wharves. Transients requesting berth assignments should contact either the harbormaster's office or the privately owned Monterey Bay Boatworks Company on VHF-FM channel 16. The harbormaster can be contacted by phone at 831–646–3950 or at *monterey.org*.

(211) The **speed limit** in the harbor is 3 knots.

(212)

Wharves

(213) Municipal Wharf No. 2, the most easterly pier, is 1,600 feet long and 86 feet wide at the outer end; depths alongside the outer east and west sides are 24 feet. Freight

and supplies are handled by trucks directly to the pier; a 3-ton hoist is at the pier on the marina side.

(214) Municipal Wharf No. 1, frequently called Fishermans Wharf, is 300 yards west of Wharf 2. It is lined with restaurants and shops.

(215) A marina is just south of the foot of the Coast Guard dock. A 60-ton boat lift is available; complete hull, electrical and electronic repairs are available.

(216)

Supplies

(217) Gasoline and diesel fuel are available at Municipal Wharf No. 2. Water, ice and marine supplies are available at the marina south of the Coast Guard dock and Municipal Wharf No. 2.

(218)

Communications

(219) Monterey has good air and highway connections with San Francisco and points south.

(220) **Moss Landing Harbor**, on the east shore of Monterey Bay 12.5 miles northeast of Point Pinos and just north of the small town of **Moss Landing**, is a good harbor of refuge. The harbor is used by pleasure craft and a fishing fleet of about 300 boats. The harbor has 500 berths.

(222)

Prominent features

(223) The two huge stacks at a large power plant near the harbor are the dominating landmarks on Monterey Bay. The stacks are 528 feet high and are marked by flashing red lights. Other stacks at the power plant and at the nearby mineral processing plant are less conspicuous.

(224) An area of turbulent water, caused by water discharge from the power plant, is about 250 yards southwest of the south jetty light; the turbulence may be dangerous to small craft.

(225)

COLREGS Demarcation Lines

(226) The lines established for Moss Landing Harbor are described in **33 CFR 80.1136**, chapter 2.

(227)

Channels

(228) A jettied entrance channel leads northeast to an outer turning basin, thence an inner channel leads south to an inner turning basin about 0.8 mile above the entrance. (See Notice to Mariners and latest editions of charts for controlling depths.) The approach to the harbor is marked by a lighted bell buoy. The entrance channel is marked by a buoy, lights and a **052.5°** lighted range. The jetties are marked by lights on their outer ends and the inner channel is marked by lights, buoys and a daybeacon. A sound signal is at the south jetty light. Shoaling usually occurs on the south side of the entrance between the jetties; vessels should favor the north side of the channel when entering.

(229) A channel, marked by private buoys, leads north from the outer turning basin to Moss Landing Harbor's North Harbor basin; a private yacht club is adjacent to the basin. In 2004, the reported controlling depth was 10 feet, thence the North Harbor basin had depths of 10 to 16 feet. Because of frequent shoaling, local knowledge is advised prior to entering the channel. A surfaced launching ramp is on the east side of the channel, south of the North Harbor basin.

(230)

Anchorage

(231) The anchorage off Moss Landing Harbor is unprotected, but the holding ground is good for larger vessels in fair weather.

(232)

Weather, Moss Landing

(233) The prevailing winds are northwest, but there are a few southeast winds and north gales during the winter. Mariners in the area should be aware of reported unique environmental conditions. Vessels have experienced sudden wind shifts during the late morning to early afternoon hours. At this time the new wind begins to generate its own waves from the west and northwest, dissipating existing swells, and creating a cross pattern of waves, giving the sea a "choppy" or confused appearance. During the first few hours following the wind shift, the appearance of the sea surface may not provide a reliable indication of the wind speed. This condition has affected ship handling by setting deep-draft vessels. Occasionally, when there is a southwesterly wind during an ebb tide, slight breaking seas cross the harbor entrance. (See Weather and West Coast, indexed as such, chapter 3, for further information.)

(234)

Harbor regulations

(235) The harbor is administered by the Moss Landing Harbor District and is under the control of a harbormaster. The office is near the inner turning basin. Transients should report to the harbormaster for mooring assignments. Contact the harbormaster on VHF-FM channel 9 or 16 or telephone 831–633–2461 for local weather conditions.

(236)

Supplies and repairs

(237) Gasoline, diesel fuel, water, ice and some marine supplies can be obtained; bilge and sewage pumpout is available; a 70-ton mobile hoist is available for repair work.

(238) The great mountain barriers north and south of Monterey Bay and the receding shoreline to the east offer a broad entrance to the cold foggy northwest winds of the summer, and they drive over the bay and well into Salinas Valley to the south.

(239) **Soquel Cove** is in the northeast part of Monterey Bay, east of Santa Cruz Anchorage. Fair shelter is afforded in northwest weather, but the cove is open to south weather. The best anchorage is southeast of the mouth of **Soquel Creek** in 5 to 6 fathoms, sandy bottom.

(240) At **Seacliff Beach**, 0.5 mile west of **Aptos Creek**, a concrete ship has been beached and filled with sand. The

pleasure pier for sport fishing extends from ship to the shore.

(241) A small fishing and pleasure wharf at **Capitola**, on the northwest side of Soquel Cove, has 11 feet alongside the landing at the outer end. There are facilities to hoist out small boats. Houses on the bluffs about 1.5 miles east of Capitola are prominent. Three radio towers 0.6 mile northwest of **Soquel Point** are conspicuous from the east and south.

(242) **Point Santa Cruz**, 20 miles north of Point Pinos and 2.5 miles west of Soquel Point, consists of cliff heads about 40 feet above the water. The area back of the point is flat but rises in terraces to higher land. There are two flat rocks close under the point; the outer one is the higher. A lighted whistle buoy is 1.1 miles southeast of the point.

(243) The city of **Santa Cruz** is on the northwest shore of the bay. **Seabright, Twin Lakes** and **Soquel**, suburbs of Santa Cruz, are along the beach to the east.

(244) **Santa Cruz Anchorage**, on the northwest shore of Monterey Bay between Point Santa Cruz and Soquel Point, has a municipal pier and small-craft harbor.

(245) The Santa Cruz small-craft harbor is just east of Seabright and has slips and end-ties for about 1,200 small craft.

(246)

Prominent features

(247) The Casino building and the roller coaster immediately east of the town are prominent.

(248)

COLREGS Demarcation Lines

(249) The lines established for Santa Cruz Anchorage (Santa Cruz Harbor) are described in **33 CFR 80.1138**, chapter 2.

(250)

Channels

(251) The entrance to the small-craft harbor is protected by jetties; a light and sound signal are at the end of the west jetty. The least clearance for the bridges between the north and south basins is 18 feet.

(252) The Santa Cruz harbormaster advises that extensive shoaling occurs at the harbor entrance from November through May. Persons unfamiliar with the area should contact the harbormaster's office prior to entering the harbor; a radio guard on VHF-FM channel 16 is maintained 24 hours a day or telephone 831–475–6161 between 0830 and 1700 daily. The Santa Cruz harbormaster further recommends that mariners without local knowledge should not attempt to enter the harbor during periods of high ground swells.

(253)

Anchorage

(254) Good anchorage can be had anywhere off the pier in 5 fathoms, sand bottom. Santa Cruz Anchorage provides good shelter in north weather, but in northwest weather a heavy swell is likely to sweep into the anchorage. In south weather there is no protection in the harbor; vessels must run for Monterey or Moss Landing Harbor or take refuge in Santa Cruz Municipal small-craft harbor.

(255)

Harbor regulations

(256) The harbor is administered by the Santa Cruz Port District Commission. Transient vessels should report to the harbor office at the southeast corner of the small-craft harbor, for berth assignments.

(257) A patrol boat operates in the harbor and monitors VHF-FM channel 16. The patrol boat will guide vessels into the harbor on request.

(258)

Wharves

(259) The municipal pier, 0.8 mile west of the entrance to the small-craft harbor, is over 0.4 mile long with 26 feet alongside at its outer end; a private seasonal sound signal is on the outer end of the pier. Landings can be made in all but heavy south weather, but few vessels land except fishing boats. Due to the ocean swell sweeping around the point, there is usually considerable surge. The pier is lined with restaurants and stores. A small-boat hoist is on the pier.

(260)

Supplies

(261) Gasoline, diesel fuel and marine supplies are available. A launching ramp and a yacht club are in the harbor.

(262)

Repairs

(263) A repair yard at the harbor has a 40-ton mobile lift that can handle vessels for hull and engine repairs. Electronic repairs are also available.

(264)

Communications

(265) Santa Cruz has highway and rail connections with San Francisco and the interior.

(266)

ENC - US3CA52M
Chart - 18680

(267) From Point Santa Cruz the coast trends west about 4 miles to Needle Rock Point and thence northwest to Point Ano Nuevo. The shoreline rises from high bluffs, with a few intervening beaches, to a low flat tree-covered mountain range.

(268) **Needle Rock Point** is 4 miles west of Point Santa Cruz. A slender pillar of rock stands a short distance seaward from the face of the cliffs and another lower pinnacle is about 200 yards east; neither is distinguishable once abreast.

(269) **Sand Hill Bluff**, 6.5 miles west of Santa Cruz Light, is composed of sandstone cliffs about 50 feet high with a rounding irregular hillock of white sand near the edge of the cliffs; this hillock is white on the northwest side, and is covered with brush and grass on the southeast

side. Neither this bluff nor Needle Rock Point is a good landmark.

(270) The buildings of a large cement works at **Davenport**, 9 miles northwest of Point Santa Cruz, are conspicuous. A steel tower is prominent by day, and many lights are visible at night. The ruins of an old cement loading wharf are at the plant.

(271) In 1975, shoaling to 10 fathoms was reported in 37°00.0'N., 122°30.1'W., about 14.5 miles west of Davenport.

(272) **Loma Prieta**, a prominent flat-topped peak surmounting the high mountainous ridge 13 miles northeast of Point Santa Cruz, is the predominating mountain feature of this section. A fire observation tower is on the top of the peak.

(273) **Waddell Creek**, 14.5 miles northwest of Point Santa Cruz, is in a narrow steep-sided valley. The high whitish bluffs, immediately north, are quite prominent.

(274) **Point Ano Nuevo**, 18 miles northwest of Point Santa Cruz, is formed by sand dunes 20 to 100 feet high. A low black rocky islet is 0.3 mile off the point. Foul ground extends northwest and southeast from the islet. A group of white houses on the islet is conspicuous. A lighted whistle buoy is about 0.8 mile south of the tower.

(275) Anchorage with protection from north and northwest winds can be had in the bight south of the point. The kelp bed and reef, extending a little over 0.5 mile southeast from the islet, break the force of the swell.

(276) The 5-mile coast between Point Ano Nuevo and Pigeon Point is low and rocky. **Pigeon Point**, 22.5 miles northwest of Point Santa Cruz, is 50 feet high and rises in a gentle slope to the coastal hills. Several moderately large detached rocks extend 350 yards southwest. Pigeon Point was named from the wreck at this place of the clipper ship CARRIER PIGEON.

(277) **Pigeon Point Light** (37°10'54"N., 122°23'38"W.), 148 feet above the water, is shown from a 110-foot cylindrical tower on the end of the point. The light cannot be seen in the bight east of a line joining Pigeon Point and Pillar Point, 20 miles to the north. The light station buildings on Pigeon Point are white with red roofs. A group of farm buildings is about 0.5 mile east. A row of trees conspicuous against a background of barren hills is about 500 yards northeast of the light.

(278) From Pigeon Point for 4 miles to **Pescadero Point,** the coast is nearly straight and is composed of reddish cliffs with numerous outlying submerged and visible rocks. A rocky patch covered 3 feet is about 0.8 mile south of Pescadero Point; a 6¼-fathom rocky patch is about 0.7 mile west-southwest of the point.

(279) From **Pescadero Creek**, 1.5 miles north of Pescadero Point, the coast for 8 miles north becomes more broken and rugged, with yellow or white vertical cliffs. A prominent whitish cliff over 100 feet high is 7.5 miles north of Pescadero Point. About 9 miles north of the point is a pale yellow building surrounded by numerous antenna poles.

(280) The coast is broken by several small streams in deep steep-sided valleys. North of the high cliff, a low flat tableland extends north for 9 miles and then bends sharply west to Pillar Point, forming Half Moon Bay. The land consists generally of grass-covered rolling hills with ranch houses and cultivated ground in the foreground.

(281)

Pillar Point to Southeast Reef

(282) **Pillar Point**, 18 miles south of San Francisco entrance, is the south extremity of a 2.5-mile low ridge. Several black rocks extend over 300 yards south of the point; from north these appear as three or four, but from south as only one. **Half Moon Bay** comprises the bight from **Miramontes Point** on the south to Pillar Point on the north.

(283) **Pillar Point Harbor**, in the north part of Half Moon Bay east of Pillar Point, is used by fishing vessels and pleasure craft. The harbor is well protected by breakwaters. The entrance, 200 yards wide, is between the east and west breakwaters. A light marks the end of the east breakwater, and a light and sound signal are on the end of the west breakwater. The entrance has a depth of about 20 feet with depths of 2 to 17 feet inside the harbor. Shoaling has been reported along, north side of the breakwaters inside the harbor. The harbor provides good holding ground for anchored and moored vessels. Two breakwaters and a detached breakwater protect a marina on the north side of the harbor. The detached breakwater is marked by lights on the east and west ends.

(284)

Prominent features

(285) Several buildings and a white radar antenna at the U.S. Air Force radar site about 0.2 mile north of Pillar Point are conspicuous when approaching the harbor. The lights of the radar site are conspicuous at night. A rotating aero beacon located 1 mile northwest of the marina is visible from the south.

(286) **Caution** is necessary in approaching Pillar Point Harbor because of the foul ground off the entrance. Rocks and reefs, marked by kelp and a lighted bell buoy, extend southeast for over 1 mile from Pillar Point. **Southeast Reef**, extending from 1.5 to over 2 miles southeast of Pillar Point, is covered 4 to 20 feet and has a pinnacle rock awash at extreme low water at the southeast end. Mariners are advised to exercise caution in the vicinity of Pillar Point in dense fog.

(287)

COLREGS Demarcation Lines

(288) The lines established for Pillar Point Harbor are described in **33 CFR 80.1140**, chapter 2.

(289)

Routes

(290) Vessels from the south approach the harbor east of the lighted gong buoy marking Southeast Reef; vessels

from the north use the buoyed opening between the Pillar Point foul ground and Southeast Reef.

(291)

Harbor regulations

(292) Pillar Point Harbor is administered by the San Mateo County Harbor District and under the control of a harbormaster. The harbormaster's office is at the head of the L-shaped pier in the marina. The harbormaster can be contacted on VHF-FM channel 16 or telephone 650–726–4382.

(293) There are only private mooring floats in the harbor so transients must anchor. The harbormaster should be consulted before tying alongside piers.

(294)

Wharves

(295) An L-shaped pier, 590 feet long with 13 feet alongside the 275-foot outer face, is on the north side of Pillar Point Harbor. Water, ice and electricity are at the pier, and gasoline and diesel fuel are pumped at the landing. A skiff hoist is on the end of the pier. Marine railways are in the harbor west of the marina and are capable of hauling vessels up to 50 tons.

(296) The 660-foot pier west of the L-shaped pier has about 5 feet at the outer end. A surfaced launching ramp and parking area are near the inshore end of the east breakwater.

(297)

ENC - US3CA52M
Chart - 18680

(298) **Montara Mountain**, 4 miles north of Pillar Point and 2.5 miles inland, is covered with grass and bare trees. From south it shows as a long ridge with several small elevations upon it, but from northwest it appears as a flat-topped mountain with four knobs on the summit. It is a prominent feature in approaching the entrance to San Francisco Bay.

(299) **Point Montara**, 2.8 miles north of Pillar Point, is the seaward end of a spur from Montara Mountain and the northwest extremity of the ridge forming Pillar Point. It terminates in cliffs about 60 feet high with numerous outlying rocks. Covered rocks and ledges lie 0.8 mile west of the point and extend in a northwest direction for about 1.5 miles. This is a dangerous locality in thick weather, and extreme caution should be used when inside the 30-fathom curve.

(300) **Point Montara Light** (37°32'11"N., 122°31'09"W.), 70 feet above the water, is shown from a 30-foot white conical tower on the point. A group of white buildings with red roofs is prominent on the point.

(301) From Point Montara for 2.5 miles to Point San Pedro the coast is bold and rugged, rising sharply from the sea to the spurs extending from Montara Mountain. **Devils Slide** is light colored and is the highest bluff in this locality. The highway cuts are distinctive features in the bluffs. There are no outlying rocks or dangers other than those off Point Montara.

(302) **Point San Pedro** is a dark, bold rocky promontory, 640 feet high. It is the seaward termination of Montara Mountain and is an excellent mark in clear weather from either north or south. A large triple-headed rock, about 100 feet high and white on its south face, projects 0.3 mile west from the point. A rocky area, which breaks in a heavy swell, is reported to exist about 1 mile north of the point.

(303) A 200-yard-long municipal fishing pier is about 2.5 miles northeast of Point San Pedro.

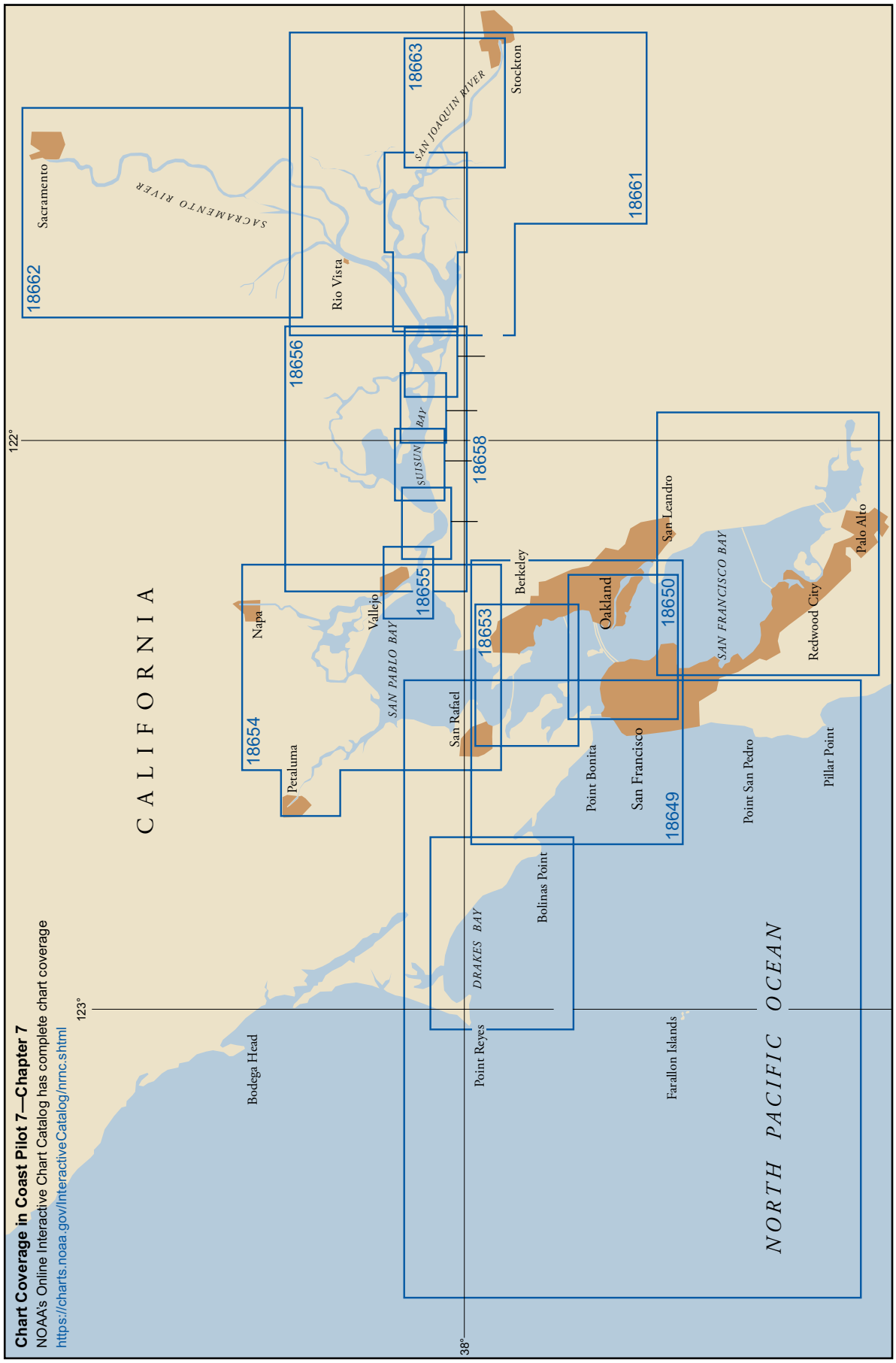


Chart Coverage in Coast Pilot 7—Chapter 7
NOAA's Online Interactive Chart Catalog has complete chart coverage
https://charts.noaa.gov/InteractiveCatalog/nrnc.shtml
CALIFORNIA
NORTH PACIFIC OCEAN
SACRAMENTO RIVER
SAN JOAQUIN RIVER
SUISUN BAY
SAN PABLO BAY
DRAKES BAY
SAN FRANCISCO BAY
18662
18663
18661
18656
18658
18655
18654
18653
18650
18649
Sacramento
Rio Vista
Stockton
Napa
Vallejo
Petaluma
Berkeley
Oakland
San Leandro
San Rafael
Point Bonita
San Francisco
Point San Pedro
Redwood City
Palo Alto
Pillar Point
Bolinas Point
Point Reyes
Farallon Islands
Bodega Head
122°
123°
38°

San Francisco Bay, California

(1)

ENC - US3CA14M
Chart - 18640

(2) **San Francisco Bay**, the largest harbor on the Pacific coast of the United States, is more properly described as a series of connecting bays and harbors of which San Francisco Bay proper, San Pablo Bay and Suisun Bay are the largest. Depths of 29 to 40 feet are available for deep-draft vessels to San Francisco, Oakland, Alameda, Richmond and Redwood City in San Francisco Bay proper; to Stockton on the San Joaquin River; and to Sacramento through the lower Sacramento River and a deepwater channel. Much of the local navigation is by light-draft vessels and barges.

(3) The extensive foreign and domestic commerce of San Francisco Bay is handled through the several large ports that are the terminals for many transpacific steamship lines, airlines and transcontinental railroads.

(4) The east shore of San Francisco Bay proper is low except for rolling grassy hills in the north part and extensive marshes intersected by numerous winding sloughs in the south part. The west shore north of the entrance is much bolder than the east shore where there are only a few stretches of low marsh. Below San Francisco, marshes and flats intersected by numerous sloughs extend to the south end of the bay.

(5) The Coast Guard Captain of the Port, San Francisco, has ordered that all ships greater than 300 gross tons anchored in San Francisco Bay maintain a radio listening watch on VHF-FM channels 13 and 14 when the wind is 25 knots or greater. Any ship not equipped with channel 13 shall maintain a listening watch on VHF-FM channel 16. This radio watch must be maintained by a person who can speak the English language.

(7)

COLREGS Demarcation Lines

(8) The lines established for San Francisco Bay are described in **33 CFR 80.1142**, chapter 2.

(9)

Blue, fin and humpback whales

(10) All whales are protected under the Marine Mammal Protection Act (MMPA) and, when in Sanctuary waters, under the National Marine Sanctuaries Act (NMSA). Certain large whales, including blue, fin and humpback whales, are also listed as endangered under the Endangered Species Act (ESA). See chapter 3 for more information.

(11)

Gulf of the Farallones to Cordell Bank

(12) The entrance to San Francisco Bay is through **Gulf of the Farallones** and the narrow Golden Gate. The gulf extends from Point San Pedro on the south for 34 miles to Point Reyes on the north and has a greatest width of 23 miles from Farallon Islands on the west to the mainland.

(13) In clear weather many prominent features are available for use in making San Francisco Bay, but in thick weather the heavy traffic and the currents, variable in direction and velocity, render the approaches difficult and dangerous. Point San Pedro, Montara Mountain, Farallon Islands, Mount Tamalpais and Point Reyes are prominent in clear weather and frequently can be seen when the land near the beach is shut in by low fog or haze. Radar navigation on the approach to San Francisco Bay is not difficult because of the numerous distinctive and high relief of targets available. Southeast Farallon Island, Point Reyes, Double Point, Bolinas Point, Duxbury Point, Rocky Point, Point Bonita, San Pedro Rock and Point and Pillar Point are good radar targets.

(14) The first 8 miles of coast from Point San Pedro to San Francisco Bay entrance consists of whitish bluffs that reach a height of 600 feet, then a 3-mile sand beach extends to the entrance. **Shelter Cove**, on the north side of Point San Pedro, provides shelter from the east storms with good holding ground in gray sand bottom. **San Pedro Rock**, close to the point and 100 feet high, also gives some protection in south weather.

(15) The **Greater Farallones National Marine Sanctuary** has been established to protect and preserve the natural, cultural and historical resources in the waters surrounding the Farallon Islands, including offshore of the Marin and Sonoma county coasts to Bodega Head. The sanctuary boundary includes the estuarine waters of Bolinas Lagoon, Tomales Bay, Estero Americano, Estero de San Antonio and Bodega Bay but not Bodega Harbor. Visitor use is encouraged for boating, diving, snorkeling, fishing, swimming, kayaking and wildlife viewing. (See **15 CFR 922.80** through **922.85**, chapter 2, for limits and regulations.)

(16) **Farallon Islands**, 23 miles west of San Francisco Bay entrance, are rocky islets extending northwest for 7 miles. **Southeast Farallon**, the largest of the group, actually consists of two islands separated by a narrow impassable gorge. The larger east island is pyramidal in shape and 350 feet high; a small-boat landing is on the south side. **Farallon Light** (37°41'57"N., 123°00'07"W.),

(6)

Enforcement of Navigation Rules in San Francisco Bay

For any vessel operating within a narrow channel or fairway east of the COLREGS Demarcation Line, Rule 9 of the Inland Navigation Rules (33 CFR §83), Narrow Channels, applies.

The following locations are designated as *narrow channels or fairways* for the purpose of enforcing the Inland Navigation Rules (33 CFR §83) within San Francisco Bay. This list is not all-inclusive, but identifies areas where deep draft commercial and public vessels routinely operate.

1	All traffic lanes, separation zones and precautionary areas within the San Francisco Bay Region's Regulated Navigation Area (RNA) defined in 33 CFR §165.1181 including: • Golden Gate Traffic Lanes Golden Gate Precautionary Area • Central Bay Traffic Lanes • Central Bay Precautionary Area • North Ship Channel RNA • San Pablo Strait Channel RNA • Pinole Shoal Channel RNA • Benicia-Martinez Railroad Bridge RNA • Southampton Shoal Channel/Richmond Harbor RNA • Oakland Harbor RNA
2	Point Potrero Reach/Turn
3	Richmond Harbor Channel
4	Santa Fe Channel
5	Oakland Inner Harbor from Inner Harbor Channel Light 8 to, and including Brooklyn Basin South Channel
6	Oakland Outer Harbor
7	Alameda Naval Air Station Channel
8	South San Francisco Bay Channels between the Central Bay Precautionary Area and Redwood Creek Entrance Light 2
9	Redwood Creek between Redwood Creek Entrance Light 2 and Redwood Creek Light 21
10	Carquinez Strait between the Pinole Shoal Channel RNA and the Benicia-Martinez Highway Bridge
11	Mare Island Strait between Mare Island Light 2 and Mare Island Causeway Bridge
12	Suisun Bay Channels between the Benicia-Martinez Highway Bridge and Suisun Bay Light 34
13	New York Slough between Suisun Bay Lighted Buoy 30 and San Joaquin River Light 2
14	Sacramento River and Sacramento Deep Water Ship Channel from Suisun Bay Light 34 to the Port of Sacramento
15	San Joaquin River from San Joaquin River Light 2 to the Port of Stockton

For any vessel west of the COLREGS Demarcation Line operating within the Off San Francisco Traffic Separation Scheme, Rule 10 of the International Regulations for Preventing Collisions at Sea 1972 (72 COLREGS), Traffic Separation Schemes, applies.

The following areas are designated Traffic Separation Schemes per 33 CFR §167.400-406.

- Off San Francisco: Precautionary Area
- Off San Francisco: Northern Approach
- Off San Francisco: Southern Approach
- Off San Francisco: Western Approach
- Off San Francisco: Main Ship Channel
- Off San Francisco: Area to be Avoided

358 feet above the water, is shown from a white conical tower on the highest peak of the island. Dwellings are on the lowland on the south side of the island. **Fisherman Bay**, just north of Farallon Light, is somewhat protected by several rocky islets on the west side and affords anchorage in 8 fathoms in the outer part. Boats can be landed on a small sand beach on the largest islet.

(17) **Hurst Shoal**, 0.6 mile southeast of Farallon Light, is covered 22 feet and breaks only in heavy weather.

(18) **Middle Farallon**, 2.3 miles northwest of the light, is a 20-foot single black rock 50 yards in diameter; several rocks covered 5 to 7 fathoms are within 0.7 mile south and southwest of it.

(19) **North Farallon**, 6.5 miles northwest of Farallon Light, consists of two clusters of bare precipitous islets and rocks from 91 to 155 feet high, 0.9 mile in extent, and 0.3 mile wide; submerged rocks surround them.

(20) **Fanny Shoal**, 9.8 miles northwest of Farallon Light and 14 miles southwest of Point Reyes, is 2 miles in extent and covered 2 to 30 fathoms. **Noonday Rock**, covered 3 1/4 fathom, rises abruptly from 20 fathoms and is the shallowest point of the shoal; it is the principal danger in the north approach to San Francisco Bay. A lighted bell buoy is about 0.7 mile west of the rock. Noonday Rock derives its name from the clipper ship that struck it in 1862 and sank within an hour, in 40 fathoms.

(21) **Cordell Bank**, 27 miles northwest of Farallon Light and 20 miles west of Point Reyes, is about 6 miles long and 3 miles wide; the bank is covered 20 to 40 fathoms, but depths increase rapidly outside it.

(22) The **Cordell Bank National Marine Sanctuary** has been established to protect and conserve the special, discrete, highly productive marine area of Cordell Bank and its surrounding waters and to ensure the continued availability of the areas ecological, research, educational, aesthetic, historical and recreational resources. (See **15 CFR 922**, chapter 2, for limits and regulations.)

(23)

Point Reyes to Duxbury Reef

(24) **Point Reyes**, 18 miles north of Farallon Light, is a bold, dark, rocky headland 612 feet high at the west and higher extremity of a ridge running in an east direction for 3 miles. It is an excellent radar target in thick weather. There is lowland north of the point, so that from north and south, and from seaward in hazy weather, it usually appears as an island. The point is visible for over 25 miles.

(25) **Point Reyes Light** (37°59'44"N., 123°01'23"W.), 265 feet above the water, is shown from a platform on top of a square building on the west extremity of the point. A sound signal is at the light. Two rocks, 275 yards west of the light, are covered about 3 feet and break in a moderate swell.

(26) **Drakes Bay**, named after English explorer Sir Francis Drake, who anchored here in 1579, is northeast of the 1-mile-long 200-foot-high, narrow peninsula that forms the easternmost part of Point Reyes. White cliffs commence at the southwest angle of the bay and curve round to the northeast for about 6 miles, ending at high white sand dunes. This curving shoreline forms Drakes Bay, which affords good anchorage in depths of 4 to 6 fathoms, sandy bottom, in heavy northwest weather. Several lagoons back of the north shore empty into the bay through a common channel that is navigable by shallow-draft vessels with local knowledge.

(27) **Chimney Rock** lies close under the outer end of the Drakes Bay peninsula. The area between Chimney Rock and the 5-fathom curve, 0.4 mile east and southeast, breaks in moderate weather. A lighted whistle buoy is moored 0.6 mile southeast of the rock.

(28) Drakes Bay is used extensively in heavy northwest weather, and many fishing vessels operate from here during the season. A fish wharf is about midway along the inner side of the peninsula. A visible wreck is about 100 feet east of the fish wharf in about 37°59'41"N., 122°58'19"W. Visible and submerged piles west of the fish wharf are a hazard.

(29) From the sand dunes near the east part of Drakes Bay, cliffs 100 to 200 feet high extend 5 miles southeast to **Double Point**, which has two high spurs, 0.4 mile apart, projecting 200 to 300 yards from the general coastline. A small 47-foot-high island is 300 yards off the northwest spur, and a 54-foot-high rock is close under the longer and lower southeast spur. From Double Point to Bolinas Point, about 3.5 miles southeast, the coast is bold with high cliffs behind narrow sand beaches.

(30) **Bolinas Point**, 15.3 miles southeast of Point Reyes Light, is 160 feet high and the west extremity of the comparatively level tableland extending east to Bolinas Lagoon. An aerolight and numerous radio towers are 0.6 mile north of the point.

(31) **Duxbury Point**, 16.5 miles southeast of Point Reyes Light, is 160 feet high and yellow in color. The point is the south edge of the tableland west of Bolinas Lagoon.

(32) **Duxbury Reef**, extending 1.2 miles southeast of Duxbury Point, is long, narrow and partly bare at low water. A ledge covered 9 to 36 feet extends from the reef to about 1.4 miles south of the point; a lighted buoy is about 2 miles south of the point. Great care must be exercised in passing this area.

(33)

Warning

(34) It was reported that in heavy weather strong north currents resulting from prolonged south winds may exist in the area from Duxbury Reef to Golden Gate.

(35)

ENC - US5CA12M
Chart - 18649

(36) **Bolinas Bay**, east of Duxbury Point, is an open bight 3.5 miles wide between Duxbury Point and Rocky Point. The bay affords shelter in northwest weather in 24 to 36 feet, sandy bottom. Care must be taken to avoid Duxbury Reef and the dangers extending up to 0.7 mile east of it. **Bolinas Lagoon** is separated from the bay by a narrow strip of sandy beach that is cut by a narrow shifting channel. The lagoon is shoal and entered only by small boats with local knowledge. The entrance has a depth of less than 3 feet.

(37) **Rocky Point** is 100 feet high and shelving. Numerous detached rocks are within 200 yards of the high and precipitous cliffs on the south side of the point.

(38) The 6-mile coast between Rocky Point and Point Bonita is very rugged and broken. The cliffs, which are seaward ends of spurs from Mount Tamalpais, rise to heights of over 500 feet and are cut by deep narrow valleys stretching inland.

(39) **Point Bonita**, on the north side of the entrance to Golden Gate, is a sharp black cliff 100 feet high, increasing to 300 feet on its seaward face, 0.3 mile north. From northwest it shows as three heads. **Point Bonita Light** (37°48'56"N., 122°31'46"W.), 124 feet above the water, is shown from a 33-foot white tower on the south head. A mariner-radio-activated sound signal at the light is initiated by keying the microphone five times on VHF-FM channel 81A. A tower and radar antenna operated by the San Francisco Vessel Traffic Service is prominent on the north head about 0.3 mile from the light. In summer the cliffs are white with bird droppings, but the first heavy rain restores them to their natural black color. There are a few detached rocks surrounding the point, but these do not extend over 200 yards offshore.

(40) **Bonita Cove**, east of Point Bonita, is occasionally used as an anchorage by small vessels. The anchorage is close under Point Bonita in about 36 feet.

(41) **Mount Tamalpais**, 7 miles north of Point Bonita, is visible for over 60 miles in clear weather. From south and west it shows three summits, the westernmost with two radar domes is the highest and the easternmost with a lookout tower is the sharpest. The mountain is covered with bushes and scrub trees, giving it a dark appearance that contrasts strongly with the surrounding hills, especially in summer when the hills assume a light reddish color.

(42) **San Francisco Approach Lighted Whistle Buoy SF** (37°45'00"N., 122°41'34"W.) is 9 miles west-southwest of San Francisco Bay entrance. The buoy is red and white.

(43) **San Francisco Bar**, a semicircular shoal with depths less than 36 feet, is formed by silt deposits carried to the ocean by the Sacramento and San Joaquin River systems. The bar extends from 3 miles south of Point Lobos to within 0.5 mile of Point Bonita off the southern coast of Marin Peninsula; the extreme outer part is about 5 miles west-southwest of San Francisco Bay entrance. **Potatopatch Shoal**, the north part of the bar on **Four Fathom Bank**, has depths from 24 to 28 feet.

(44)

Warning

(45) Very dangerous conditions develop over the bar whenever large swells, generated by storms far out at sea, reach the coast. A natural condition called shoaling causes the large swells to be amplified and increase in height when they move over the shallow water shoals. This piling up of the water over the shoals is worsened during times when the tidal current is flowing out (ebbing) through the Golden Gate. Outbound tidal current is strongest about 4 hours after high water at the Golden Gate Bridge and attains a velocity in excess of 6 knots at times. The incoming large swells are met by outbound tidal current causing very rough and dangerous conditions over the bar. Steep waves to 20 or 25 feet have been reported in the area. Mariners should exercise extreme caution as the bar conditions may change considerably in a relatively short period of time.

(46) The most dangerous part of the San Francisco Bar is considered to be Four Fathom Bank. Bonita Channel, between the shoal and the Marin coast, can also become very dangerous during large swell conditions. The safest part of the bar is the Main Ship Channel through the center of the bar. But even that area can be extremely dangerous when the tidal current is ebbing. 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.

(47) **Golden Gate**, the passage between the ocean and San Francisco Bay, is 2 miles wide at the west end between Point Bonita and Point Lobos, but the channel is reduced in width to 1.5 miles by Mile Rocks and to less than 0.7 mile by the Golden Gate Bridge pier. Depths in the passage vary from 108 feet to over 300 feet.

(48) **Point Lobos**, the south entrance point to the Golden Gate, is high, rocky and rounding with black rugged cliffs at its base. A large water tank is on the summit. The **Cliff House** is near the south part of the west face of the point; high and rocky **Seal Rocks** are just offshore.

(49) **Mile Rocks**, 700 yards northwest of the sharp projecting point off **Lands End** on the north face of Point Lobos, are two small 20-foot-high black rocks about 100 feet apart. **Mile Rocks Light** (37°47'34"N., 122°30'37"W.), 49 feet above the water, is shown from an orange and white horizontally banded tower on the outer and larger rock; a sound signal is at the light.

(50) Passage between Mile Rocks and Point Lobos should not be attempted because of the covered and visible rocks extending over 300 yards from shore and the rocks covered 6 and 14 feet south of Mile Rocks Light.

(51) The south shore of the Golden Gate extends in a gentle curve northeast for 2 miles to Fort Point, forming a shallow bight called **South Bay**. The cliffs rise abruptly from narrow beaches, except near the middle of the bight where a valley terminates in a sand beach 0.3 mile long. Sailing craft are sometimes obliged to anchor here when becalmed, or when meeting an ebb current, to avoid drifting onto Mile Rocks, but the anchorage is uncomfortable and it is difficult to get underway from it.

(52) **Fort Point** projects slightly from the high cliffs and is marked by a square red brick fort with a stone seawall in front. The fort, which is obscured by the south end of the Golden Gate Bridge, and 29 acres of land adjacent to the fort are part of the Fort Point National Historic Site. The fishing wharf at Fort Point is unsafe for mooring because of surge conditions.

(53) The north shore of the Golden Gate is bold and rugged, with reddish cliffs rising abruptly from the water's edge to over 600 feet.

(54) **Point Diablo**, 1.4 miles east of Point Bonita, rises abruptly from a 0.1-mile sharp projection to a height of over 200 feet with deep water on all sides. A light is shown from a white house on the end of the point; a sound signal is at the light.

(55) The mile-long shore between Point Diablo and Lime Point forms a shallow bight with steep cliffs. Near the middle of the bight the cliffs are cut by a narrow valley that ends in a low beach at the shore.

(56) **Lime Point**, 2.5 miles east of Point Bonita, is high and precipitous and rises abruptly to a height of nearly 500 feet in less than 0.3 mile. A light is shown from a pole at the end of the point.

(57) **Golden Gate Bridge**, crossing the Golden Gate from Fort Point to Lime Point, has a clearance of 225 feet at the center of the 4,028-foot-wide channel span between the 740-foot-high supporting towers; the least clearance of 211 feet at the south pier. Two scaffolds located in the main navigation channel span and one scaffold in the

southern span reduce vertical clearance by approx 12 feet and are lighted at night with red lights. The Golden Gate Bridge District will move the scaffolding upon 48 hours advance notice for the passage of vessels. Scaffolding is moved to the piers when not in use. Mariners should contact the Golden Gate Bridge at 415–923–2230. The center of the span is marked by a fixed green light with three fixed white lights in a vertical line above it and by a private sound signal and racon; a private light and sound signals are on the south pier. When approaching Golden Gate Bridge in the eastbound traffic lane in fog, channel Buoy 2 sometimes provides a radar image that indicates the location of the south pier of the bridge. Aero obstruction lights mark the tops of the bridge towers.

(58)

Traffic Separation Scheme

(59) **Traffic Separation Scheme San Francisco** is off the entrance of San Francisco Bay and inside the Golden Gate into San Francisco Bay—see **33 CFR 167.1** through **167.15** and **167.400** through **167.406**, chapter 2, for limits and regulations. These schemes are designated to aid in the prevention of collisions at the approaches to major harbors and along heavily traveled waters but are not intended in any way to supersede or to alter the applicable Navigation Rules. Separation zones are intended to separate inbound and outbound traffic and to be free of ship traffic. Separation zones should not be used except for crossing purposes. Mariners should use extreme caution when crossing traffic lanes and separation zones. Rule 10 of the Navigation Rules applies to this Traffic Separation Scheme. Note—parts of the charted Traffic Separation Scheme have been amended by the International Maritime Organization (IMO) and have not been updated in the Code of Federal Regulations. (See IMO COLREG.2/Circ.64.)

(60) Traffic Separation Scheme San Francisco is composed of directed traffic areas, each with one-way inbound and outbound traffic lanes separated by defined separation zones, a precautionary area and a pilot boat cruising area. The scheme is recommended for use by vessels approaching or departing San Francisco Bay but is not necessarily intended for tugs, tows or other small vessels that traditionally operate outside of the usual steamer lanes or close inshore.

(61) The precautionary area off the entrance to San Francisco Bay is inscribed by a circle with a radius of 6 miles centered on San Francisco Approach Lighted Whistle Buoy SF with the traffic lanes fanning out from its periphery. Extreme caution must be exercised in navigating within the precautionary area as both incoming and outgoing vessels use the area while making the transition between San Francisco Main Ship Channel and one of the established directed traffic areas as well as maneuvering to embark and disembark pilots. Vessels are advised to maintain a 1 mile closest point of approach with other vessels while transiting the precautionary area. It is recommended that all vessels in the precautionary area guard VHF-FM channels 13 and 14.

(62) A circular area to be avoided, with a 0.5 mile radius centered on the San Francisco Approach Lighted Whistle Buoy SF, is established in the precautionary area of the San Francisco Traffic Separation Scheme. This area is for the protection of the lighted whistle buoy. Mariners are cautioned that the buoy cannot be safely used as a leading mark to be passed close aboard and are requested to stay outside that area.

(63) When not calling at San Francisco mariners are urged to sail direct between Point Arguello and Point Arena so as to pass the San Francisco Bay area to the west of the Farallon Islands and clear of the San Francisco Traffic Separation Scheme. In this manner through coastwise traffic will avoid crossing the directed traffic areas and/or precautionary area.

(64) The pilot boat cruising area is about 1 mile northeast of the San Francisco Approach Lighted Whistle Buoy SF. (See pilotage for San Francisco Bay, this chapter.)

(65) An additional **Traffic Separation Scheme** has been established through the Main Ship Channel and Golden Gate into San Francisco Bay. The scheme consists of one-way **traffic lanes** separated by a **separation line** and, after entry into San Francisco Bay, includes a **precautionary area**, a **regulated navigation area** and **recreation areas**. For purposes of International Navigation Rule 10, this scheme has been adopted by IMO seaward of the demarcation line. (See Traffic Separation Schemes, chapter 1, for additional information).

(66)

Vessel Traffic Service

(67) **Vessel Traffic Service San Francisco** serves San Francisco Bay, its seaward approaches and its tributaries as far inland as Stockton and Sacramento. Participation is mandatory for certain vessels within navigable waters of the United States. (See **33 CFR 161.1** through **161.23** and **161.50**, chapter 2, for limits and regulations.)

(68) The purpose of the San Francisco Vessel Traffic Service (VTS) is to coordinate the safe, secure and efficient transit of vessels in San Francisco Bay including its approaches and tributaries in an effort to prevent accidents with the possible associated loss of life, damage to property and the environment. VTS also fully supports Coast Guard and other public service missions through its unique communications and surveillance capabilities. The Vessel Traffic Center (VTC), located on Yerba Buena Island in San Francisco, is staffed 24 hours a day, seven days a week by Coast Guard personnel.

(69) The VTS uses radar, closed-circuit television and VHF-FM radiotelephone to gather information and uses VHF-FM radiotelephone to disseminate information. Information provided by the VTS is mostly generated from vessel reports; this information can therefore be no more accurate than the reports received from mariners coupled with the ability of VTS equipment to verify those reports. The VTS may not have first hand knowledge

of hazardous circumstances existing in the VTS area. Unreported hazards may still confront mariners at any time. This service does not in any way supersede or alter applicable Navigation Rules. The owner, operator, charterer, master or person directing the movement of the 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.

(70) The VTS maintains a continuous radiotelephone watch on VHF-FM channels 12, 13, 14, and 16. The VTS is also equipped to communicate on all VHF-FM radiotelephone channels. The radio call sign is "San Francisco Traffic Service." After communications have been established, the abbreviated call sign "Traffic" may be used. Mariners may also contact VTS by cellular or land-line telephone at 415–556–2760.

(71) The VTS area is divided into two sectors: offshore and inshore. The **Offshore Sector** consists of the ocean waters within a 38-nautical mile radius of Mount Tamalpais (37°55.8'N., 122°34.6'W.) excluding the San Francisco Offshore Precautionary Area. (The San Francisco Offshore Precautionary Area is the area within a six-mile radius of the San Francisco Approach Lighted Whistle Buoy SF.) Channel 12 VHF-FM is the designated working frequency for the Offshore Sector. At minute 15 and minute 45 of each hour, VTS makes broadcasts giving the positions, courses and speeds of participating vessels in the sector.

(72) The **Inshore Sector** consists of the waters of the San Francisco Offshore Precautionary Area eastward to San Francisco Bay and its tributaries extending inland to the ports of Stockton, Sacramento and Redwood City. VHF-FM channel 14 is the designated working frequency for the Inshore Sector.

(73)

Reporting points for the San Francisco VTS area are as follows:

(74)

Offshore sector procedures

(75)

Initial check-in and sailing plan report

(76) The Offshore Sector area is formally defined as the ocean waters within a 38-nautical mile radius of Mount Tamalpais (37°55.8'N., 122°34.6'W.) excluding the San Francisco Offshore Precautionary Area (the area within a six-mile radius of the San Francisco Sea Buoy).

(77) This translates roughly to an arc starting at the shoreline near Bodega Head, crossing Cordell Bank, then circling southward to pass about 30 nautical miles west of the San Francisco Sea Buoy and curving eastward to the shoreline near Pescadero Point.

(78) The eastern boundary of the Offshore Sector is a line from Duxbury Point due south to the boundary of San Francisco Offshore Precautionary Area, then following the boundary of the Precautionary Area past the "N""W" and "S" buoys, and then due east to Mussel Rock.

(79) When approaching from sea, check in with VTS 15 minutes from the outer boundary on VHF-FM channel 12 and report your Sailing Plan.

(80)

Sailing plan

(81) Give the following information in your sailing plan:

(82) Vessel name

(83) Vessel type

(84) Position; latitude and longitude (if unable to provide coordinates then provide your bearing and range from the San Francisco Sea Buoy)

(85) ETA at next reporting point

(86) ETA at the San Francisco Sea Buoy (if inbound) or the outermost reporting point on your route (if outbound or transiting across the Offshore Sector)

(87)

Sailing Plan Amplification Reports

(88) When your vessel is at the next reporting point, call VTS. Give the following information:

(89) Vessel name and position of the Offshore reporting point you are passing

(90) Vessel's course and speed

(91) ETA at the San Francisco Sea Buoy if you are inbound

(92) ETA to the outermost reporting point if you are outbound

(93)

Other reports

(94) When conducting research, engaged in naval exercises, or conducting other special operations in the Offshore Sector, report your sailing plan to VTS and include the nature of your operation. Report any emergency on board your vessel or other vessels to VTS immediately.

(95) When you are engaged in fishing you may report this fact to VTS. However, you are not required to do so unless your vessel fits into one of the categories as described in **33 CFR 161.2**, chapter 2 of this Coast Pilot.

(96)

Transiting across the offshore sector

(97) When you are transiting across the Offshore Sector and will not enter the San Francisco Offshore Precautionary Area, call VTS on VHF-FM channel 12 and report your sailing plan when you reach the first Offshore Sector reporting point on your route. (See below list of reporting points in the Offshore Sector).

(98)

Offshore vessel traffic advisories

(99) VTS broadcasts the positions, courses, speeds and estimated times of arrivals at reporting points of all VTS users who have reported to VTS in the Offshore Sector. VTS makes these advisories at minute 15 and minute 45 each hour. VTS strongly recommends that vessels in the area of the Offshore Sector listen to these broadcasts.

(100)

Offshore reporting point inbound

(101)

North

(102) Bodega Head or Cordell Bank;

(103) Point Reyes (or entering the Traffic Separation Scheme);

(104) "N" Buoy or Duxbury Reef Buoy.

(105)

West

(106) Approximately 30 nautical miles from the San Francisco Sea Buoy or at longitude 123°20'W.;

(107) Southeast Farallon Island (entering the Traffic Separation Scheme);

(108) "W" Buoy.

(109)

South

(110) Pescadero Point or approximately 30 nautical miles from the San Francisco Sea Buoy or at latitude 37°15'N.;

(111) Pillar Point (entering the Traffic Separation Scheme);

(112) "S" Buoy or Mussel Rocks.

(113)

Inshore Sector:

(114) • Pilot Area/Point of Entry into VTS area

(115) • San Mateo Bridge

(116) • Redwood Creek Entrance Light 2

(117) • Dumbarton Bridge

(118) • Richmond-San Rafael Bridge

(119) •"E" buoy in San Pablo Bay

(120) • Petaluma Channel Daybeacon 19

(121) • Mare Island Strait Lighted Buoy 1

(122) • Mare Island Causeway Bridge (when inbound/outbound Mare Island Strait)

(123) • Carquinez Bridge

(124) • Military Ocean Terminal Concord (MOTCO)

(125) • New York Point

(126) • Antioch Bridge

(127) • Prisoners Point

(128) • Rio Vista Bridge

(129) • Sacramento Deep Water Channel Lights 51 and 65

(130) • when secured at the destination or when departing the VTS area

(131) For detailed information about the VTS, go to *uscg.mil/d11/vtssf*. The site contains links to the Users Manual, Communications Guide, Regulated Navigation Areas and other information particularly useful to commercial and recreational mariners. Vessels operating within the VTS Area defined as VTS Users are reminded of the requirement to carry a copy of the National VTS Regulations aboard their vessel and are recommended to carry a copy of the San Francisco VTS User's Manual.

(132)

Routes

(133) The routes for approaching San Francisco Bay are described in chapter 3 and at the beginning of this chapter under San Francisco Traffic Separation Scheme.

(134) Taking care to avoid the circular 0.5-mile-radius area centered on San Francisco Approach Lighted Whistle Buoy SF, steer a course to enter the charted eastbound San Francisco Bay traffic lane. The recommended route for outbound vessels is via the charted westbound San Francisco Bay traffic lane to the precautionary area of the San Francisco Traffic Separation Scheme.

(135) Vessels with a draft of 45 feet or greater bound for the deepwater anchorages south of the San Francisco-Oakland Bay Bridge or north to San Pablo Bay and Carquinez Strait should use the charted **Deep Water Route** east of the Golden Gate Bridge. Vessels intending to use the Deep Water Route should notify San Francisco Traffic before passing Mile Rocks. Deep draft vessels will neither meet nor overtake in the Deep Water Route. Deep draft vessels bound for Anchorage 9, south of San Francisco-Oakland Bay Bridge, should pass east of Blossom Rock then through the C-D or D-E spans of the bridge.

(136) From the Golden Gate Bridge, vessels with drafts less than 45 feet bound for San Pablo Bay and Carquinez Strait set a course to follow the charted Traffic Separation Scheme to the precautionary area east of Alcatraz Island, thence north through the charted Traffic Separation Scheme to San Pablo Bay and Carquinez Strait.

(137) Mariners are cautioned that the traffic lanes between Angel Island and North Point are frequently crossed by tugs with barges and self-propelled dredges. These vessels normally transit to and from the dumping ground south of Alcatraz Island.

(138)

Channels

(139) The principal approach to San Francisco Bay is through the buoyed **Main Ship Channel** over the bar on bearing **070°** toward Alcatraz Light. A wreck covered 62 feet lies near the middle of the channel at 37°47'23"N., 122°33'16"W. The project depth is 55 feet in the 2,000-foot wide 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 the USACE hydrographic survey website listed in Appendix A.

(140) From north, coasters and other vessels use buoyed **Bonita Channel**, between the east end of Potatopatch Shoal and the shore north of Point Bonita. The channel is narrowed to 0.2 mile by several rocky patches including **Sears Rock**, covered 22 feet, 1.2 miles northwest of Point Bonita.

(141)

Regulated navigation areas

(142) **Security zones** have been established in the entrance to San Francisco Bay (Main Ship Channel) and Golden Gate. (See **33 CFR 165.1183** and **165.1187**, chapter 2, for limits and regulations.)

(143) A **regulated navigation area** has been established in Golden Gate and San Francisco Bay. (See **33 CFR 165.1181**, chapter 2, for limits and regulations.)

(144)

Caution

(145) Vessels departing San Francisco Bay through Bonita Channel on the ebb current must use extreme caution when crossing the tide rip off Point Bonita. When the bow passes the rip the stern is thrown to port and, unless promptly met, the vessel will head straight for the rocks off the point. Vessels favoring Potatopatch Shoal too closely have reported a set toward it.

(146) Bonita Channel should not be used by large vessels. Strangers wishing to cross the bar in thick weather should either wait for clearing or take a pilot. Fog is prevalent in the Golden Gate; radar is a great aid here.

(147) It has been reported, however, that radar targets at the entrance to San Francisco Bay may be difficult to identify at times because of ghost echoes.

(148)

Currents

(149) The currents at the entrance to San Francisco Bay are variable, uncertain and at times attain considerable velocity. Immediately outside the bar there is a slight current to the north and west, known as the **Coast Eddy Current**. The currents at San Francisco Approach Lighted Whistle Buoy SF are described in some detail in the Tidal Current Tables. The currents most affecting navigation in this vicinity are the tidal currents. Across the bar the flood current converges toward the entrance and is felt sooner around Point Lobos and Point Bonita than across the Main Ship Channel. The ebb current spreads from the entrance over the bar, but the main strength is west-southwest, parallel with the south edge of the Potatopatch Shoal, and through the Main Ship Channel. In the Bonita Channel the ebb current is weak and of short duration; the flood current begins so early that during the last half of the ebb in the Golden Gate the current in Bonita Channel forms an eddy flowing southeast around Point Bonita into Bonita Cove.

(150) In the vicinity of Mile Rocks the currents attain considerable velocity within a few minutes after slack on both flood and ebb.

(151) In the Golden Gate the flood current sets straight in, with a slight tendency toward the north shore, with heavy overfalls both at Lime Point and Fort Point when strong. It causes an eddy in the bight between Point Lobos and Fort Point. The ebb current has been observed to have a velocity of more than 6.5 knots between Lime Point and Fort Point, and it sets from inside the bay on the north side toward the latter point. Like the flood current, it causes an eddy in the bight between Fort Point and Point Lobos and a heavy rip and overfall reaching about 0.25 mile south from Point Bonita. At the Golden Gate Bridge, large current eddies near the foundation piers cause ships to shear off course. 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.

(152)

Weather, San Francisco Bay

(153) The climate of the San Francisco Bay Area is classified as a Mediterranean climate, which generally means that summers are dry, sunny and warm, and winters are wet and occasionally stormy. However, the Mediterranean climate classification is somewhat of a simplification, and in reality the Bay Area has several climate regimes, sometimes referred to as microclimates. Significant differences in temperature, winds and fog patterns over relatively short distances are due to variations in air mass between land and sea and to the complex terrain of the coastal mountain ranges. Gaps in the coastal mountain ranges further modify weather conditions on a local scale.

(154)

Spring

(155) Storms that periodically affect the region during the winter months often continue with regularity into March, but by April the storm track begins to shift north and storms rolling inland off the Pacific become less frequent. The rainy season is typically over by mid-April, and the variation in wind direction that occurs with passing storms mostly ends by May. During spring, an area of high pressure over the Pacific gradually strengthens and moves north. Meanwhile, longer days and a more direct sun angle result in increased warming over land, particularly in the interior valleys. Warming near the surface causes air to rise and air pressures near the surface to fall. The resulting difference between high pressure over the ocean and low pressure over land bring about increased west to northwest onshore winds during the spring months. In fact, spring is generally the windiest time of the year. However, springtime weather can be highly variable and onshore breezes do not blow as consistently as they do in the summer months. The region can experience several days of generally light winds before the next round of brisk west to northwest winds kick up. Wind speeds with the stronger springtime wind events sometimes reach gale force over the coastal waters outside the Golden Gate and approach Gale Force locally in northern San Francisco Bay. West to northwest winds during the spring months decrease farther inland and are generally lighter in the delta and into the Central Valley.

(156) Strong springtime winds over the coastal waters kick up rough and choppy seas with short period swells. The large, long-period swells that are common during the winter months still roll through the coastal waters quite often during the early spring but taper off significantly by late spring as the storm track across the pacific becomes less active.

(157) Persistent northwest winds along the California coast during the spring months enhance the river of surface water flowing south and parallel to the coast known as the

California current. In the northern hemisphere, oceanic currents are deflected to the right by the Coriolis force. The deflection caries surface water offshore and causes cold nutrient-rich water from the bottom of the ocean to surge up along the coast. As moist air blowing across the Pacific comes into contact with the cold waters near the coast, condensation occurs and a layer of low clouds and/or fog develops. The low clouds that form in this situation are called stratus clouds. Stratus clouds are gray with generally uniform bases. They usually do not produce precipitation, although drizzle can sometimes occur if the stratus layer is sufficiently thick. When stratus and fog are present along the coast, meteorologists often use the term "marine layer." The marine layer is a moist and cool layer near the surface that is capped by an inversion (a very stable atmospheric condition where warm air lies above cold air). The marine layer ranges in depth from just a few hundred feet to as much as 4,000 feet. The depth of the marine layer depends on the height of the inversion above the surface, and the inversion height is regulated by various atmospheric conditions as well as land-sea interaction. The marine layer can exist without low clouds and fog, but typically clouds and/or fog are present when there is a marine layer. In the spring and summer months, fog and low clouds typically form first over the coastal waters and are then swept inland with onshore breezes through the Golden Gate or other low spots in the coastal ranges. This type of fog is referred to as "advection fog." People often mistakenly refer to stratus clouds as fog or "high fog." By definition, fog is composed of tiny water droplets that are in contact with the surface, essentially a cloud in contact with the ground. The distinction between stratus clouds and fog is important because fog reduces visibility and makes marine navigation more difficult or even dangerous. Stratus clouds, on the other hand, do not by themselves reduce the visibility at the surface of the water.

(158) Dense fog is defined as a fog that reduces visibility to one-half mile or less on San Francisco Bay or to one mile or less over the coastal waters. Advection fog is not usually dense over the bays and into the Delta and Central Valley. However, this type of fog can often be dense over the coastal waters when the marine layer is shallow. Under those circumstances the fog is usually confined to the coastal waters and moves only locally into San Francisco Bay, usually around the Golden Gate. Because the marine layer typically is not as shallow in the spring months as in summer, episodes of coastal dense fog are not as common in spring as in summer. Also, the low levels of the atmosphere are more stable in summer than in spring, which is another factor contributing to a greater incidence of dense coastal fog in summer compared to the spring months.

(159) Dense fog is more common in San Francisco Bay, and especially in the delta and central valley, during the winter months. That type of fog is called "radiation fog." Radiation fog is covered in more detail in the winter section.

(160)

Summer

(161) During the months of June, July and August the Eastern Pacific high is well established offshore while a trough of low pressure is a nearly a constant feature over California's interior. The inland low pressure is often referred to as a "thermal trough" because its formation and strength is primarily driven by strong surface heating that persists throughout the great Central Valley during the dry and sunny summer months. The pressure difference between the eastern Pacific high and thermal trough over the interior maintain both northwesterly winds over the coastal waters and onshore winds through the coastal gaps and across the bays. Persistent northwest winds over the coastal waters in turn maintain cold upwelling near the coast. Meanwhile subsidence under the strengthening eastern Pacific high produces additional warming aloft and strengthens the low level inversion, effectively placing a "cap" on the marine layer. Because these meteorological conditions are in place nearly every day in the summer, the marine layer is a semi-permanent fixture along the California coast from June through August. Fog and low clouds can remain entrenched along the coast for days, sometimes weeks, at a time.

(162) Marine layer fog and low clouds generally begin to roll in off the ocean and spread into San Francisco Bay through the Golden Gate and gaps in the coastal mountains during the late afternoon or early evening hours, when surface heating by the sun diminishes. The fog and low clouds then typically travel east toward the Berkeley hills where they spread both north and south, eventually covering the bay and adjoining land areas. Fog and stratus are most widespread around the bay from late night until a few hours after sunrise. By mid morning the strong summer sun provides enough heating to begin dissipating the fog and stratus. Clearing typically occurs in the bay by midday but often remains over the coastal waters through the day.

(163) How far inland the stratus and fog develop overnight depends primarily on the depth of the marine layer but also on the strength of the onshore flow. If the marine layer is shallow (i.e., less than 1,000 feet) low clouds will spread only locally inland around San Francisco Bay but seldom reach farther inland into the Delta and never into the Central Valley. A shallow marine layer typically results in more fog and reduced visibilities, especially over the coastal waters and locally into San Francisco Bay from the Golden Gate east to Alcatraz or Angel Island.

(164) A deeper marine layer and stronger onshore flow will allow stratus to surge well inland through the delta overnight and sometimes as far inland as Sacramento and Stockton by sunrise. Inland marine surges such as these typically are characterized by low overcast conditions and lack of fog. Daytime clearing is gradual, and low clouds often persist near the Golden Gate and locally around the Bay well into the afternoon.

(165) During the summer months winds throughout the area follow a daily cycle that is most heavily influenced by inland heating during the day and cooling at night. The general tendency during the summer is for winds to blow from high pressure offshore to low pressure over land. This sea to land wind flow is referred to as "onshore flow." The magnitude of the onshore flow is regulated by the daily cycle of differential heating between land and sea. Because ocean temperatures remain nearly constant from day to night, the most important factor in driving the daily wind cycle is inland heating. Daytime heating over land causes surface air pressure to drop during the afternoon hours, and the difference between high pressure over the ocean and low pressure over land increases. Onshore winds begin to increase by early afternoon and reach a peak by late afternoon into the early evening hours. Winds then gradually subside during the evening as surface heating over land decreases. Wind speeds reach their lowest point late at night and remain relatively light through mid morning before the cycle starts over again. Wind direction is generally west to east (from sea to land), but wind direction exhibits a great deal of variation on a local scale; that variation is due primarily to mountain/valley location and orientation and gaps in the coastal mountain ranges. Of course the most prominent gap in the coastal ranges is the Golden Gate and it is here the onshore winds funnel inland with the least amount of resistance. Once the airflow moves through the Golden Gate, it fans out across the northern San Francisco Bay, deflected to the southeast toward the southern part of the bay and the warm Santa Clara Valley, to the northeast toward Carquinez Strait and delta and the heat of the Central Valley beyond, and toward the north into the Petaluma and Napa Valleys of the North Bay. The strongest afternoon and evening summer sea breezes occur along the route from the Golden Gate to the Central Valley, specifically past Alcatraz and the southern end of Angel Island, Point Blunt, east to Berkeley and then north past Pinole Point, northeast to the Carquinez Strait and finally east into the Delta and Central Valley where the airflow spreads out and diminishes. Afternoon and evening wind speeds frequently reach 20 to 25 knots (meeting small craft advisory criteria) in northern San Francisco Bay from mid afternoon through mid evening during the summer months. In fact, small craft advisory conditions occur nearly every day in summer through this area and wind speeds sometimes reach 30 knots locally. Gales are rare in summer but can occur during an unusually intense onshore push. Marine air spills inland through other gaps in the coastal ranges including the San Bruno gap just to the west-northwest of San Francisco Airport (SFO). Some of the strongest sea breezes occur on the west side of the Bay from Hunters Point south through the area around SFO, and small craft conditions are common here as well. Elsewhere in the Bay, summer sea breezes generally do not exceed 20 knots. Wind speeds gradually taper off throughout the Bay after sunset and reach a low point from the late night hours through late morning. On many days winds can be variable at less than 10 knots during this time. But once surface heating increases in the interior around midday, the daily cycle begins again and onshore winds began to increase.

(166) Over the coastal waters outside of the Golden Gate, in the Gulf of the Farallones, summer winds are predominantly from the northwest, parallel to the coast and the coastal mountain ranges. Maximum wind speeds here occur from mid afternoon to mid evening, similar to the time of maximum sea breeze winds in San Francisco Bay. Wind speeds generally range from 5 to 15 knots during the night and morning hours and increases to 10 to 20 knots in the afternoon and early evening hours but can often reach 25 knots. Strongest northwest winds over the coastal waters in summer typically occur to the south of points and capes.

(167) During the summer months seas in the coastal waters are mostly generated from local winds and therefore have a short period and tend to be choppy. Large long period swell from the open ocean contributes much less to the overall wave spectrum than in the late autumn to early spring time frame. Swell direction is predominantly from the northwest, but during the late summer swell with an south to southwest direction becomes more frequent. The southerly swells are generated from tropical storms over the Pacific. Because these swells originate a long distance from our coast, they typically have long periods, generally 15 seconds or more.

(168) Although summer time wind patterns over the coastal waters and through the Bays and into the Central Valley are consistent in their direction and diurnal patterns, occasionally the typically wind patterns are disrupted. This disruption occurs when high pressure builds inland over the Pacific Northwest and over the Great Basin. At the same time, the trough of low pressure that usually resides over the interior of California drifts to the west and sets up over the coastal waters. Under this scenario, the usual pattern of high pressure over the ocean and low pressure over land is reversed and winds then blow from land to sea. This is called offshore flow. Because these winds originate over land, they are typically hot and dry. Also, the air mass undergoes further warming as it descends mountain ranges on its journey from inland areas to the sea. Strongest winds during offshore wind events typically occur in the hills of the northern and eastern San Francisco Bay Area during the late night and morning hours, but offshore winds can sometimes reach 20 knots or more through Carquinez Strait to the Golden Gate. Even during offshore wind events, a weak late afternoon and early evening sea breeze often develops. Often too, the start of an offshore wind event is characterized by strong and gusty northerly winds down the Sacramento Valley and across the Delta. Winds over the coastal waters during offshore wind events are usually light, except locally moderate just outside the Golden Gate.

(169) Offshore flow events usually last no more than two or three days before the inland high pressure breaks down

and onshore flow returns. Often, offshore events are followed by a phenomenon known as a "southerly surge." A southerly surge occurs when surface air pressure over the coastal waters on the lee side of the coastal ranges drop. When the pressure along the northern California coast drops lower than along the southern California coast, a southerly wind develops. Usually, the onset of southerly winds is also accompanied by a fog bank that surges up along the coast in a very shallow marine layer. During southerly surge events, weather conditions over the coastal waters can change rapidly from light winds with clear skies, to 15 to 20 knots of southerly winds accompanied by thick fog reducing visibilities to less than a half mile. Once the leading edge of the southerly surge reaches the Golden Gate, the colder fog-ladden airmass surges inland across northern San Francisco Bay towards Carquinez Strait. Here too, weather conditions can change rapidly from light winds to southwest winds reaching 25 knots or greater. After several hours, the shallow marine layer deepens and onshore breezes spread out across a more widespread area, and locally strong winds gradually subside.

(170)

Autumn

(171) Weather in and around San Francisco Bay is most tranquil during the months of September, October and November. The Pacific high gradually weakens while heating over the interior subsides and weakens the inland thermal trough. Pressure gradients relax and wind speeds ease over the ocean and bays. The trend toward lighter winds starts in late summer (August) and continues through autumn. Gales are almost nonexistent from August through October. Offshore wind events are most common during the autumn months. Because of the weakened sea breezes and more frequent offshore wind events, the marine layer becomes less prominent during the autumn and low clouds and fog are less prevalent than in summer. Wave heights are also at a minimum during the autumn months. Storms over the northern Pacific become stronger and more common by late October and early November. This is when long period swells from the west and northwest begin to increase along the northern and central California coast.

(172)

Winter

(173) The storm track across the Pacific becomes increasingly active in November and also migrates to the south. By the second half of the month weather systems begin to roll through the San Francisco Bay Area. Most rainfall in the Bay Area falls between mid-November and lasts until early April, with the stormiest months being December, January and February. Late November and much of March can also have active stormy times. Some storms during the winter months can produce powerful winds and seas, conditions that can be very hazardous to the mariner.

(174) As frontal systems approach the coast, winds from the south and southeast increase in magnitude. Typically, strongest winds in the winter occur in the hours prior to a cold frontal passage. Depending on the strength of the storm, southerly winds ahead of the cold front can easily reach 20 knots across the region, often 25 knots and sometimes gale force. Although rare, storm force winds of 48 knots or greater can occur with the strongest of these winter storms. A few notable cases of storm force winds over San Francisco Bay are December 12, 1995, and January 4, 2008. Strong south winds occur on a large scale and are not as dependent on topography and microclimates as the summer sea breeze is. Gale force winds can occur anywhere from the coastal waters east through the delta and into the Central Valley.

(175) After frontal passage, winds veer to the southwest and eventually west and northwest. Generally wind speeds decrease significantly after frontal passage but can remain quite strong and gusty for several hours after frontal passage. On occasion, winds will veer from southeast to southwest after frontal passage, only to swing back to the south or southeast a few hours later before gradually veering back to the west and northwest.

(176) Winter is the season with the most significant seas, both in terms of locally driven wind waves and open ocean swells that are built by long fetches of strong winds over the eastern Pacific. Seas can be confused ahead of a front with wind waves moving from south to north on top of long period swells coming in from the west or northwest. Seas can often build enough to produce breakers across the San Francisco bar, several miles offshore of the Golden Gate. These breaking waves in the open ocean present a significant danger to mariners, especially those unfamiliar with the area. Breakers across the bar are most common with a west long period swell, during maximum ebb current through the Golden Gate.

(177) Although the strongest winds occur during the winter months, there are often long periods of tranquil weather in the winter when the storm track can shift to the north for weeks at a time. During this time, high pressure dominates the area and sets up conditions where the low levels are very stable and an inversion develops over the inland valleys. Widespread fog will develop if the surface is sufficiently moist during these times (after soaking rains), particularly in the Central Valley. This type of radiation fog can be particularly dense and persistent and is often referred to as "tule fog." Visibilities often fall to near zero in the southern Sacramento Valley, northern San Joaquin Valley and through the Delta, making marine navigation in these areas dangerous. Lowest visibilities occur late at night through the mid morning hours. Visibilities improve by late morning and often the fog layer lifts into a low overcast during the afternoon. Sometimes if there is a light offshore flow during a tule fog event, dense fog can develop west into northern San Francisco Bay and even spread south into the south part of the bay. It is during these times that San Francisco Bay realizes its worst visibility problems.

(178) Offshore winds during the winter months are generally light. However, locally strong and gusty easterly winds can occur through Carquinez Strait and also over the coastal waters below coastal canyons. On some clear winter mornings when winds are light from the east across most of the region, locally strong winds have been reported along the San Mateo and Marin county coasts.

(179) Winter can be highly variable in terms of weather. Long periods of dry weather with light winds can be followed by weeks of stormy weather with only short breaks in between individual storms. Years of studies have concluded that sea surface temperature anomalies in the equatorial Pacific can have an impact on the overall amount of precipitation and storminess across California during the winter months. When El Niño conditions exist, sea surface temperatures in the eastern tropical Pacific are above normal. Strong or moderately strong El Niño winters are characterized by higher than normal precipitation across central and southern California. However, this does not mean that individual storms with the heaviest rain and strongest winds occur during El Niño winters. In fact, two of the most powerful winter storms to pummel the region in the past 20 years occurred during non El Niño winters. The upshot is that mariners need to be prepared for the possibility of dangerous storms in any winter and not assume that navigating the open ocean and bays will be easier during non El Niño winters.

(180)

Pilotage, San Francisco

(181) Pilotage in and out of San Francisco is compulsory for all vessels of foreign registry and U.S. vessels under enrollment not having a federal licensed pilot on board. The San Francisco Bar Pilots provide pilotage to ports in San Francisco Bay and to ports on all tributaries to the bay, including Stockton and Sacramento.

(182) The San Francisco Bar Pilots keep one of two vessels on station at all times, the SAN FRANCISCO or the CALIFORNIA. The pilot boats are 85 feet long with a blue waterline band, international orange hull and white superstructure. The top of the cabin houses, the mast and after deck covers are orange. The word "PILOT" is shown on the fore part as well as the port and starboard sides of the midship house. The boat displays the standard day and night signals. The pilot vessel cruises on station 24 hours a day near the San Francisco Approach Lighted Whistle Buoy SF, or, in foul weather, seaward of it. Prior arrangements with the bar pilots' office can be made by telephone 415–393–0457, telex (SF Pilot 415–371–5595), fax messages 415–982–4721, or cable (BARPILOTS, San Francisco). If prior arrangements have not been made with the pilots' office on Pier 9, masters may give these signals upon approaching the San Francisco Approach Whistle Buoy SF:

(183) **Clear visibility:** by day, hoist code flag "G"; by night, four long flashes on the signal lamp. **Limited visibility**: four long blasts and lay to. The pilot boat monitors VHF-FM channels 10, 13 and 16. The pilot boats' radio calls are SAN FRANCISCO WYZ-8288 and CALIFORNIA WYK-4689; the pilot office call is KMG-389; cable address: BARPILOTS, San Francisco. The office monitors VHF-FM channel 10. Masters or agents are requested to advise the pilots whenever there is a change in the draft, arrival or sailing time or maneuvering or equipment limitations.

(184) The pilots board directly from the pilot boat. Pilot ladders should be rigged clear of all discharges and spouts about 10 feet from the waterline and amidship of the vessel at all times. The ladder must comply with International Maritime Organization (IMO) and IMPA recommendations and be made in one length and not consist of two lengths shackled or lashed together and should be equipped with spreaders about ten feet apart to comply with SOLAS Regulation 17, chapter 5, (not in this text). A light must be ready to illuminate the ladder if necessary. Contact pilot boat about 30 minutes prior to arrival to determine on what side the ladder should be rigged. No lines should be attached to the lower end of the ladder. A manrope, heaving line and a ring buoy with a self-igniting light must be provided; vessel speed, 6 to 8 knots.

(185) Pilot boarding is usually conducted in all but the most severe conditions. Extensive fog conditions are often experienced. Strong currents, accelerated by river freshets in the winter and spring months, often exist and greatly alter the predicted current calculations.

(186) The preferred anchorage for deep-draft vessels in the vicinity of the bar pilots pickup station (San Francisco Approach Lighted Whistle Buoy SF) is an area with a 1-mile radius centered in 37°49'N., 122°42'W. Anchoring offshore is strictly forbidden. Exceptions may be made for vessel engine casualties or severe weather preventing transit into port. Any vessel anchoring outside of established anchorages is required to notify the VTS immediately.

(187) Inbound tank vessels under escort embark pilots about 1 mile west of San Francisco Approach Lighted Whistle Buoy SF.

(188)

Coast Guard

(189) Golden Gate Coast Guard Station is about 0.4 mile north-northeast of the bridge at the entrance to Horseshoe Bay. Station Golden Gate is participating in the Coastal Weather Display Program. A 35-foot flag pole is located near the south end of the Coast Guard Station, visible to mariners exiting San Francisco Bay. Coastal warning flags will be flown from one hour before sunrise to one hour after sunset. (See illustration; chapter 1.)

(190) Weather flags are flown only at select Coast Guard stations to supplement other weather notification sources. Light signals corresponding to these flags are not displayed at night. In all cases mariners should rely upon National Weather Service broadcasts as their primary source of government-provided weather information.

(207)

San Francisco–Oakland Bay Bridge

Span	Horizontal Clearance	Vertical Clearance		Information
		Midspan	Piers	
Between San Francisco and Yerba Buena Island				
A–B	2224	204	Pier A - 174 Pier B - 217	Northeast half of Span A-B is the recommended passage for southbound vessels. Span is equipped with a RACON.
B–C	1072	220	Pier C - 220	
C–D	1078	220	Pier D - 218	Span is equipped with a RACON.
D–E	2212	204	Pier E - 175	Southwest half of Span D-E is the recommended passage for northbound vessels. Span is equipped with a RACON.
Between Yerba Buena Island and Oakland				
G–H (main navigation span)	1000	136		
H–I	413	125		
I–J	417	118		
Clearances are given in feet and vertical clearances are referenced to mean high water				

(191)

State regulations

(192) **Tank Vessel Escort Regulations** have been established by the State of California for San Francisco, San Pablo and Suisun Bays. Tank vessel masters, owners and operators are expected to be familiar and in compliance with the regulations. Failure to be in compliance may result in unsafe transit delays and fines. The regulations can be found at *wildlife.ca.gov* or may be obtained by calling the California Office of Spill Prevention and Response 24-hour Communications Center at 916–445–0045. Tank vessel masters should contact their agent or vessel manager/owner for additional information. The San Francisco Marine Exchange may also be able to provide mariners with additional information and can be contacted at 915–441–6600.

(193)

ENC - US5CA13M
Chart - 18650

(194) **San Francisco**, one of America's great cities, occupies the north portion of the peninsula forming the south entrance to the bay. The 3-mile north shore of San Francisco from the Golden Gate Bridge to the main waterfront includes the **Presidio of San Francisco**, several yacht harbors, government buildings and piers on Black Point, Aquatic Park and Fisherman's Wharf. Shoals with depths less than 10 feet extend up to 0.2 mile from the shore.

(195) The charted **recreation area** extending along this shore is intended primarily for use by recreation vessels. It should not be utilized by vessels 300 tons or more for through passage or for any other purpose, except in case of emergency or special circumstances.

(196) **Alcatraz Island**, 2.5 miles east of the Golden Gate Bridge, is one of the leading marks in entering San Francisco Bay. The small island is 148 feet high and has many buildings on it. Near the northwest end of the island is a water tower, which is reported to be usually the only landmark visible when that area is in fog. **Alcatraz Light** (37°49'34"N., 122°25'20"W.), 214 feet above the water, is shown from a gray, octagonal pyramidal tower on the southeast part of the island. A mariner radio activated sound signal, on the northwest end of the island, is initiated by keying the microphone five times on VHF-FM channel 81A.

(197) A rock awash is 125 yards west of the northwest end of Alcatraz Island. A lighted bell buoy is 150 yards west of the rock. The rocks and tide pools, which extend about 100 feet from the south tip of the island, are reported to cover at high water.

(198) Mariners are advised that surveys indicate shoaling tends to build to the northwest of the disposal area south of Alcatraz Island and caution should be used in the area. A shoal oriented southwest to northeast with a least depth of 32 feet extends off the east shore of the island.

(199) Alcatraz Island, a part of the Golden Gate National Recreation Area, is administered by the Department of Interior's National Park Service.

(200) Federal regulations require that prior permission to land at Alcatraz or to berth vessels at Fort Mason, Black Point and Aquatic Park must be obtained from the General Superintendent, Golden Gate National Recreation Area, Fort Mason, San Francisco, CA 94123.

(201) A passenger ferry, which operates frequently, uses a dock on the southeast side of the island. In 1979, 28 feet was reported off the dock.

(202) **Yerba Buena Island**, 345 feet high and 2.5 miles southeast of Alcatraz Island, is of small extent, irregular in shape, and covered with a scrubby growth of trees. On its summit is a former lookout tower and the Coast Guard operated San Francisco Vessel Traffic Service Operation Center and radar antenna site. **San Francisco Coast Guard Station** is on the east side of the island.

(203) **Treasure Island** is a low filled area north of and connected by a causeway to Yerba Buena Island. Built originally for the San Francisco International Exposition of 1939–40, Treasure Island now belongs to the city of San Francisco. A light is on the north end of the island

and a shoal, covered 15 feet, is off the north end of the island.

(204) When the prevailing west winds are blowing, deep-draft vessels proceeding to the berthing area on the east side of the island may have extreme difficulty making the 90° turn from the narrow channel between the 30-foot curves southeast of Yerba Buena Island.

(205) **Naval restricted areas** are off the north end of Treasure Island and between this island and Yerba Buena Island. (See **33 CFR 334.1070** and **334.1080**, chapter 2, for limits and regulations.) A **restricted area** surrounds the Coast Guard Station off the east side of Yerba Buena Island. (See **33 CFR 334.1065**, chapter 2, for limits and regulations.)

(206) The **San Francisco-Oakland Bay Bridge**, one of the longest bridges in the world, crosses the bay from **Rincon Point** in San Francisco to Yerba Buena Island, thence to Oakland. Clearances given in the San Francisco-Oakland Bay Bridge table are approximate; they may be reduced by several feet due to heavy traffic on the bridge and prolonged periods of extremely high temperature and as much as 10 feet under extreme conditions.

(208) The **Port of San Francisco** is the oldest on the Pacific coast. Though primarily a general cargo port, grain, bulk liquids, containers, newsprint, automobiles, bananas, copra, cotton, and other commodities are handled here. San Francisco is a popular port of call for passenger vessels on regular scheduled and special cruises.

(209)

Prominent features

(210) The skyline of the city of San Francisco is unmistakable, with several dominant landmarks: the 980-foot television tower supporting three antennas, the pyramid-shaped Transamerica Building, the Coit Tower on Telegraph Hill 3.4 miles east of the bay entrance and the Bay Bridges with their freeway elevated approaches. Inside the bay, the Bank of America Building, the Bank of America Clock Tower, the clock tower at the south end of the San Francisco-Oakland Bay Bridge, the old Ferry Building with its 240-foot clock tower on the waterfront south of Pier 1 and the U.S. Coast Guard radar tower on Yerba Buena Island are prominent.

(211) The **Ferry Building**, terminal of many ferry boats, also houses the **San Francisco Port Authority** offices, the offices of the Marine Exchange, Inc., and the many offices and exhibits of the World Trade Center.

(212)

Channels

(213) Depths of 45 feet or more are available from the Golden Gate Bridge to most of the anchorages; depths ranging from 29 to 40 feet can be taken to most of the San Francisco piers.

(214)

Anchorages

(215) General, naval and explosives anchorages are in San Francisco Bay. (See **33 CFR 110.1** and **110.224**, chapter 2, for limits and regulations.)

(216)

Warning

(217) Two submarine pipeline areas cross San Francisco Bay within General Anchorage 9; one crosses between Metropolitan Oakland International Airport and **Brisbane** and the other about 1.5 miles to the south. Mariners are cautioned not to anchor in these areas.

(218)

Dangers

(219) **Anita Rock**, 1.1 miles east of Fort Point and 300 yards from shore, is covered 3 feet and marked by a light.

(220) There are several rocky patches with depths of 33 to 35 feet west and northwest of Alcatraz Island that must be avoided by deep-draft vessels. The northwesternmost of these shoals is **Harding Rock**, marked by a lighted buoy equipped with a racon.

(221) **Blossom Rock**, covered 41 feet and marked on the west side by a lighted bell buoy, is about 1 mile southeast of Alcatraz Island. Another rock, covered 43.5 feet, is 0.3 mile south of Blossom Rock.

(222) The Trans-Bay Tube of the Bay Area Rapid Transit District crosses San Francisco Bay from the vicinity of the Ferry Tower to Oakland. Mariners are **prohibited** from dropping or dragging anchors when in the vicinity of the tunnel crossing.

(223) Heavy tide rips occur in the vicinity of Alcatraz Island.

(224)

Regulated navigation areas

(225) **Regulated navigation areas** have been established in the waters of San Francisco Bay. (See **33 CFR 165.1181** and **165.1185**, chapter 2, for limits and regulations.)

(226)

Currents

(227) Inside the Golden Gate the flood current sets into all parts of the bay and causes swirls from the Golden Gate as far east as Alcatraz and Angel Islands and through Raccoon Strait, north of Angel Island. The ebb current, inside the Golden Gate, is felt first along the south shore. In the Golden Gate, the average duration of the ebb stream is somewhat greater than that of the flood. The Sacramento and San Joaquin Rivers have weak flood currents during periods of freshets.

(228) The San Francisco-Oakland Bridge has large current eddies near the foundation piers that cause ships to sheer off course.

(229) Strong currents due to heavy spring runoffs have been reported along the San Francisco waterfront between pier 39 (37°48'36"N., 122°24'38"W.) and pier 94 (37°44'34"N., 122°22'13"W.)

(230)

Caution

(231) Oakland's Seventh Street Marine Terminal, about 1 mile east of Yerba Buena Island, forms a current lee on both the flood and the ebb current. Vessels making for Middle Harbor and Oakland Inner Harbor on a flood current will encounter a lee on the south side of the

terminal; when the bow enters the slack water, the vessel will tend to shear to the left. Similarly, vessels bound for the Outer Harbor on an ebb current will encounter slack water on the north side of the terminal, with a tendency to shear to the right. This condition may be dangerous to deep-draft, loaded vessels and should be anticipated.

(232) See the Tidal Current prediction service at *tidesandcurrents.noaa.gov* for specific information about the times, directions, and velocities of daily currents for the San Francisco Bay area. Links to a user guide for this service can be found in chapter 1 of this book.

(233)

Weather, San Francisco

(234) San Francisco enjoys a marine-type climate characterized by mild and moderately wet winters and by dry, cool summers. Winter rains (December through March) account for about three-fourths of the average annual rainfall of just over 19 inches (483 mm), and measurable precipitation occurs on an average of 13 days per month during this period. Snowfall occurs but is infrequent. The greatest amount is 1.5 inches (38 mm) recorded in January 1962. Flurries have occurred in each month, December through March. There are frequent dry periods lasting well over a week. Severe winter storms with gale winds and heavy rains occur only occasionally. December is the month most likely to experience gales followed by January. Thunderstorms average five a year and may occur in any month but are usually very mild.

(235) The summer weather is dominated by a cool sea breeze resulting in an average summer wind speed of nearly 13 knots. Winds are light in the early morning but normally reach 17 to 22 knots in the afternoon, depending on location. Where topography and man-made structures funnel the winds, higher gusts may occur in those areas.

(236) A sea fog, arriving over the station during the late evening or night as a low stratified cloud, is another persistent feature of the summer weather. This "high" fog, occasionally producing drizzle or mist, usually disappears during the late forenoon. Despite the morning overcast, summer days are remarkably sunny. On the average a total of only 15 days during the 4 months from June through September are classified as cloudy.

(237) Daytime temperatures are held down both by the morning low overcast and the afternoon strengthening sea breeze, resulting in daily maximum readings averaging in the lower- to middle seventies (21.7° to 23.9°C) from May through August. However, during these months occasional "hot" spells lasting a few days are experienced without the usual "high" fog and sea breeze. September, when the sea breeze becomes less pronounced, is the warmest month, with an average maximum of 73°F (22.8°C). Minimum temperatures during the summer are in the lower- to middle fifties (10.6° to 12.8°C). The all-time high temperature recorded at the International Airport is 106°F (41.1°C), recorded in June 1961.

(238) A strong temperature inversion with its base usually at a height of 1,500 feet (458 m) persists throughout the summer. Inversions close to the ground are infrequent in summer but rather common in fall and winter. As a consequence of these factors and the continued population and economic growth of the area, atmospheric pollution has become a problem of increasing importance.

(239) The National Weather Service maintains an office in San Francisco; barometers may be compared there or by telephone/internet—see Appendix A for addresses.

(240)

Towage

(241) Tugboats are available in sufficient quantity for the traffic in the greater harbor.

(242)

Quarantine, customs, immigration and agricultural quarantine

(243) San Francisco is a customs port of entry. (See Vessel Arrival Inspections, chapter 3.)

(244) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(245)

Coast Guard

(246) **Sector Office San Francisco** is located on Yerba Buena Island. (See Appendix A for addresses.) **San Francisco Coast Guard Air Station** is at San Francisco International Airport. A Coast Guard base and station are on the east side of Yerba Buena Island.

(247) The **Marine Exchange** of the San Francisco Bay region reports and records all Golden Gate ship arrivals and departures and conducts communications to serve the bay area commercial traffic. The station can be called 24 hours a day for relay of messages and other marine-related services on VHF-FM channels 10 and 18. The station also monitors channels 13 and 16. The ship spotting station is located in Building B, Fort Mason, about 2.5 miles east of the Golden Gate Bridge.

(248)

Harbor regulations

(249) The Port of San Francisco is under control of the city of San Francisco, and its management is vested in the San Francisco Port Commission, in direct charge of the port director of that body. The office of the **Chief Wharfinger** is in the Ferry Building.

(250) The harbor regulations are prescribed by the San Francisco Port Authority and enforced by the Chief Wharfinger.

(251) In addition to the San Francisco Port Authority regulations, the Coast Guard Captain of the Port has issued the following supplemental regulations for vessels carrying explosives and certain hazardous bulk cargoes. Vessels entering or leaving San Francisco Bay laden with explosives (Class A or Military) having a net explosive weight in excess of 100 short tons for ships and in excess of 5 short tons for barges, or carrying certain dangerous cargo as listed in **33 CFR 160.204**, may be escorted by a Coast Guard patrol craft while underway within the bay. These escorts are at the discretion of the Captain of the

(258)

Facilities in the Port of San Francisco

Name	Location	Berthing Space	Depths*	Deck Height	Mechanical Handling Facilities and Storage	Purpose	Owned/Operated by
Pier No. 45 (Sheds B and D)	37°48'36"N., 122°25'06"W.	1,200	14-25	12	• Covered storage (88,150 square feet) • Six mast-and-boom derricks	• Receipt of seafood • Mooring fishing vessels	Port of San Francisco
Pier No. 35	37°48'35"N., 122°24'23"W.	2,055	35	12	Passenger terminal (32,000 square feet)	• Mooring cruise ships • Boarding passengers	Port of San Francisco/ Metropolitan Stevedore Company
Pier No. 33	37°48'32"N., 122°24'15"W.	1,624	15	12	Covered storage (66,900 square feet)	• Receipt of seafood • Mooring fishing vessels and excursion boats	Port of San Francisco
Pier Nos. 17 and 15	37°48'09"N., 122°23'48"W.	2,085	17-35	12	• Covered storage (173,700 square feet) • Open storage (33,000 square feet)	Mooring floating equipment	Port of San Francisco/ Baydelta Maritime
Pier No. 9	37°48'05"N., 122°23'44"W.	1,754	15	12	Covered storage (61,200 square feet)	Mooring floating equipment and pilot boats	Port of San Francisco/ Blue and Gold Fleet and San Francisco Bar Pilots
Pier No. 50 Mission Rock Terminal	37°46'25"N., 122°22'54"W.	4,155	35-45	12	Covered storage (231,700 square feet)	Mooring vessels and equipment	Port of San Francisco/ Westar Marine Services and Clean Bay Cooperative
Pier No. 54	37°46'11"N., 122°23'01"W.	1550	18-20	12	Covered storage (15,000 square feet)	• Mooring vessels • Receipt of seafood	Port of San Francisco/ Crowley Maritime Corperation
Pier No. 70	37°45'43"N., 122°22'47"W.	2,480	35	12	Tank storage (404,000 barrels)	Mooring vessels	Port of San Francisco
North Container Terminal (Pier No. 80)	37°45'02"N., 122°22'33"W.	5,091	38	13	• Covered storage (393,000 square feet) • Four traveling container cranes (up to 40 long tons)	• Receipt and shipment of conventional, containerized, and roll-on/roll-off general cargo	Port of San Francisco/ Marine Terminals Corp.
Pier No. 92	37°44'50"N., 122°22'48"W.	868	35	12	• Tank storage (2.9 million gallons) • Open storage (20,000 tons of sand) • Belt conveyor	• Shipment of tallow • Receipt of sand	Port of San Francisco/ Darling International, Inc. and Mission Valley Rock
Pier Nos. 94 and 96	37°44'34"N., 122°22'13"W.	2,456	40	14	• Open storage (76 acres) • Four traveling container cranes (up to 40 long tons)	Mooring vessels	Port of San Francisco

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.

Port (COTP). Each vessel shall coordinate all movements with the Captain of the Port and ensure:

(252) (a) Speed of transit shall not exceed 12 knots.

(253) (b) No Vessel movement will occur unless visibility is a minimum of 1,000 yards, in/out or within the San Francisco Bay area.

(254) (c) A 96-hour advance notice of arrival is required.

(255) (d) Vessels shall participate in the Vessel Traffic Service (VTS) and adhere to the traffic separation scheme, except as permitted by VTS or COTP.

(256)

Wharves

(257) The general cargo and specialized terminals of the Port of San Francisco are on the bay and on Islais Creek. All of the piers listed are owned by the San Francisco Port Authority and leased to private concerns. Only the major piers are listed in the table. The alongside depths given for each facility are reported depths. (For information on the latest depths, contact the Port of San Francisco.) Cargo at the port is handled mostly by ship's tackle, but hoisting and heavy lift equipment is available in the port. Most piers have electrical shore power and water connections.

(259) The Port of San Francisco is served by a Class I railroad. The port offers wharf side intermodal transfer of containers between ship and rail at both the San Francisco Container Terminals North (Pier 50) and South (Piers 94 and 96) and has a dedicated Intermodal Container Transfer Facility located adjacent to Container Terminal South with direct access to both terminals. Most of the ports' inbound and outbound cargo moves to and from the piers by truck. The Embarcadero, a four-lane thoroughfare, provides access to most of the piers.

(260) **China Basin**, 1.1 miles south of the Ferry Building, is a canal extending about 0.6 mile southwest from San Francisco Bay. The 3rd and 4th Street bascule bridges across the canal have a least clearance of 1 foot. (See **33 CFR 117.1** through **117.59** and **117.149**, chapter 2, for drawbridge regulations.) The bridgetender monitors VHF-FM channel 9 and works on channels 13, 17 and 65A; call sign WXY–959, San Francisco Drawbridges. China Basin is a no anchorage zone.

(261) **Islais Creek Channel** is entered 2.9 miles south of the Ferry Building. Two bascule bridges, the Illinois Street Bridge and the 3rd Street Bridge, cross the creek about 0.6 mile above the mouth; both have clearances of 5 feet. (See **33 CFR 117.1** through **117.59** and **117.163**, chapter 2, for drawbridge regulations.) The 3rd Street Bridge is inoperable.

(262)

Supplies

(263) Fuel oils, gasoline and all other marine supplies and services may be had in any desired quantity. Fuel oil is usually delivered by barge. Water can be obtained on the piers or by barge.

(264)

Repairs

(265) San Francisco, Oakland, Richmond and Alameda have facilities for making repairs to vessels and machinery of all kinds and sizes. The largest commercial floating drydock in San Francisco has a length of 900 feet, width of 148 feet and a lifting capacity of 65,000 tons. There are several small drydocks on the San Francisco side and several marine railways and floating docks on the Oakland side.

(266)

Ferries

(267) High speed and traditional ferries frequently operate in central/south San Francisco Bay and San Pablo Bay. Concentrations of these ferries are highest around the San Francisco Ferry Building (37°47'45"N., 122°23'35"W.) where most central bay routes terminate. Mariners are cautioned when transiting these waters that ferries may maneuver quickly when approaching and departing the dock. Departing ferries from the Ferry Building often back away from the dock. Charted ferry routes can be seen on applicable charts of the area; however, mariners are cautioned that these ferries may deviate from their routes due to inclement weather, traffic conditions, navigational hazards or other emergency conditions.

(268) In San Francisco Bay charted ferry routes run north and south in North Channel (east of Angel Island) and in the Precautionary Area just east of Alcatraz Island. They generally run east and west in the waters between Alcatraz Island and Angel Island. The routes cross each other in the Precautionary Area (37°49'30"N., 122°24'10"W.) and about 1.2 miles south of the Richmond-San Rafael Bridge. In these areas all vessels should maintain a close watch for ferries. In San Pablo Bay, ferry routes run in both directions just south of Pinole Shoal Channel between the Richmond-San Rafael Bridge and Mare Island; one route runs east of East Brothers Island. Many ferries also operate between San Francisco's north shore, Alcatraz and Sausalito/Tiburon. These ferries do not run along charted ferry routes. They too may back away when departing San Francisco docks and may maneuver rapidly when approaching San Francisco.

(269) The **San Francisco Harbor Safety Committee**, in conjunction with the Coast Guard, has established a **Ferry Traffic Routing Protocol** for the area surrounding the Ferry Building terminal along the waterfront of San Francisco, the waters of central San Francisco Bay and the waters of San Pablo Bay. The protocol is intended to increase safety in the area by reducing traffic conflicts and, while not compulsory, the guidelines set forth in the protocol are strongly recommended. The Harbor Safety Committee also recommends that recreational and fishing vessels keep a close lookout when near ferry routes and avoid ferry routes whenever possible. For additional information, see the San Francisco Vessel Traffic Service site *uscg.mil/d11/vtssf* and San Francisco Marine Exchange site *www.sfmx.org*.

(270)

Communications

(271) San Francisco is the terminus of several trans-pacific steamship lines and the port of call for numerous lines of foreign, coastal and intercoastal vessels. It is served directly by a major highway and is connected by the Bay Bridge to several others. The city is served by three transcontinental railroads; connections to two of the railroads are by barge, while one has tracks extending south and east around the south bay. San Francisco International Airport is on the west shore of the bay about 5 miles south of the city; it is served by many airlines.

(272)

Small-craft facilities

(273) San Francisco Municipal Yacht Harbor, 1.8 miles east of the Golden Gate Bridge with a west and east basin about 0.3 mile apart, has depths of 8 to 12 feet to the berths. A light near the end of a point marks the north side of the entrance to west basin; a prominent stone tower is 0.2 mile west of the light. The east basin is protected on the north by a breakwater extending east from the west shore and on the east by a pier of **Fort Mason**. The seaward end of the breakwater is marked by a light. East basin is entered between the breakwater light and the pier. The harbor accommodates about 700 boats in the west and east basins. Guest berths are available; transients should report to the harbormaster's office on the south side of the west basin for berth assignment.

(274) **Aquatic Park Cove**, 2.6 miles east of the Golden Gate Bridge, is a recreation area protected on the west by a curved pier extending out from Black Point and on the east by a pier that berths historic ships of the National Maritime Museum. The basin is closed to power vessels, and other vessels must stay offshore away from buoys marking a swimming area. The **speed limit** is 3 knots. Depths of 9 to 16 feet are inside the basin. Small craft can find anchorage in about 13 feet. Boats entering the cove should contact the park permit officer on VHF-FM channel 83A, call sign Aquatic Park NPS. Anchoring overnight is authorized by permit only online at recreation.gov.

(284)

Facilities in the Port of Redwood City

Name	Location	Berthing Space	Depths*	Mechanical Handling Facilities and Storage**	Purpose	Owned/Operated
Port of Redwood City Wharves 1 and 2	37°30'50"N., 122°12'27"W.	855	34	• Unloading conveyor (800/1000 tons per hour) • Bulk cement pipeline and hoppers • Adjacent to 30,000-square foot transit shed	Bulk cement and general cargo	Port of Redwood City
Port of Redwood City Wharves 3 and 4	37°30'42"N., 122°12'42"W.	730	34	• Unloading conveyor (300 tons/hour) • Open storage area	Scrap metal and dry bulk cargo	Port of Redwood City
Port of Redwood City Wharf 5	37°30'20"N., 122°12'40"W.	500	34	• Petroleum pipeline • Adjacent to paved area and storage tanks	Petroleum and liquid bulk products	Port of Redwood City

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.
** Handling equipment: 25-ton mobile crane, tractors and forklifts.

Wharves lighted for 24-hour operation and have electric, telephone and water hookups.
USCG certified oil waste reception facility.

(275)

Point Avisadero to Calaveras Point

(276) South of San Francisco, **Point Avisadero**, which is the east extremity of Hunters Point, **Sierra Point**, Oyster Point, **Point San Bruno** and Coyote Point, all on the west shore of the bay, are prominent natural features. The Bayshore Freeway extends south on a filled area from the vicinity of **Candlestick Point** and cuts back inland at Sierra Point. Sierra Point is the site of a small-boat harbor that can accommodate about 500 boats. **Oyster Point Channel** is marked by private lights and leads to a small basin. A spur channel, marked by private lights, branches off the north side of Oyster Point Channel and leads to the entrance to the small-boat harbor at Sierra Point. The basin at the end of Oyster Point Channel has two private wharves in ruins and sheds on the west side; a marina that can accommodate about 200 boats is on the south side.

(277) **Oyster Point**, a low filled area, is the site of a small-boat harbor accommodating about 570 boats. An entrance channel east of the harbor is marked by private lights. Transients should report to the harbormaster's office for berth assignment. A prominent sculptured tower is on the hill 0.7 mile south of Oyster Point; the tower is floodlighted.

(278) The area between Point San Bruno and Coyote Point is occupied by **San Francisco International Airport**. A **security zone** has been established in the waters surrounding the airport. (See **33 CFR 165.1192**, chapter 2, for limits and regulations.)

(279) **Coyote Point** is covered by a heavy growth of trees and is raised as an island. It is the most prominent point on the south bay. A small-craft harbor accommodating about 580 boats is on the east side of the point. The approach channel is marked by two private lights. The harbor, operated by San Mateo County, is composed of two basins with depths of 6 to 8 feet. Transients should report to the harbormaster's office on the northwest side of the harbor for berth assignment; guest berths are usually available and a harbor patrol boat is maintained.

(280) The **San Mateo-Hayward Bridge** crossing the lower part of San Francisco Bay near **San Mateo** has a fixed span with a clearance of 135 feet over the main channel. The bridge is marked at mid span by a racon. An overhead power cable with a clearance of 160 feet over the main channel crosses the bay just south of the bridge.

(281) A section of the old San Mateo lift bridge, now used as a fishing pier, extends 4,135 feet from the San Mateo shore just south of the new bridge. A part of the fishing pier extends into the west part of the main channel.

(282) **Redwood Creek**, 4 miles southeast of San Mateo Bridge, is entered through a marked channel that leads to the municipal wharves at the **Port of Redwood City**, 2.5 miles above the mouth. Turning basins are to the north and south of the wharves. Federal project depths are 30 feet in the channel and basins. 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.

(283) Traffic in the waterway is in bulk cement, gypsum, rock salt, sand and scrap metal. Overhead power cables across the waterway have a clearance of 155 feet. Prominent silos of a cement plant are at the junction with **Westpoint Slough**, just north of the port.

(285) **Redwood City** is 2 miles south of the port facilities. Redwood City Municipal Marina, just south of the port in about 37°30'08"N., 122°12'45"W., can accommodate about 225 small craft. Other small-craft facilities are further upstream in Redwood Creek. A full-service marina on the south side of Westpoint Slough can accommodate vessels up to 120 feet.

(286) **Ravenswood Point** and **Dumbarton Point** are at the head of the bay and the mouth of Coyote Creek. Two bridges and an aqueduct cross the bay at this point. The **Dumbarton Highway Bridge**, the northwest bridge, has

a fixed span with a clearance of 85 feet. About 1,100 yards southeast of the Dumbarton bridge, an aqueduct, used to supply the city of San Francisco with water, crosses the bay. On the west shore, the aqueduct is carried on a trestle to a concrete building (charted) where it tunnels the channel to the east shore. The **Dumbarton Railroad Bridge**, just south, has a swing span with a clearance of 13 feet. The bridge is maintained in the open position. (See **33 CFR 117.1** through **117.49**, chapter 2, for drawbridge regulations.)

(287) **Coyote Creek** has many tributary sloughs. The main channel is marked as far as **Calaveras Point**, about 4 miles above the railroad bridge at Dumbarton Point. The power cables, 1.3 miles above Calaveras Point, have a clearance of 65 feet.

(288) Just south of the Metropolitan Oakland International Airport, a dredged channel leads to a small-craft harbor operated by the city of San Leandro. The channel is marked by lights and daybeacons; a seasonal sound signal is at the entrance.

(289) The harbor accommodates about 500 small craft and 15 guest slips are maintained. The harbormaster's office is on the southeast side of the basin.

(290)

ENC - US5CA13M
Chart - 18650

(291) **Alameda** is on an island separated from the mainland by **San Leandro Bay** on the east and Oakland Inner Harbor and Tidal Canal on the north. A ferry terminal owned by the City of Alameda and operated by the Blue and Gold Fleet LP, is at Alameda (37°47'28"N., 122°17'38"W.). The ferry service operates daily to Oakland and San Francisco.

(292)

Coast Guard

(293) The Coast Guard Shore Infrastructure Logistics Center is on **Coast Guard Island** (Government Island). A **security zone** has been established along the southwest side of the island surrounding the Coast Guard pier. The security zone extends into the navigation channel about 10 to 20 yards at each end. (See **33 CFR 165.1190**, chapter 2, for limits and regulations.)

(294) **Ballena Bay Yacht Harbor**, a large small-craft harbor, is on the east side of an island along the south shore of Alameda. The harbor offers safe refuge in storms. A depth of 9 to 10 feet is available in the channel between the island and Alameda. A fixed bridge, with a clearance of 5 feet, crosses the channel about midway along the north shore of the island.

(295) **Oakland**, on the east or mainland shore opposite San Francisco, is the second largest city on San Francisco Bay. It is the main-line terminus of the transcontinental railroads entering the San Francisco Bay area.

(296) The Port of Oakland encompasses two areas: Outer and Inner Harbors. **Oakland Outer Harbor** is between the Ben E. Nutter Container Terminal (Seventh Street Marine Terminal) on the south and the San Francisco-Oakland Bay Bridge approach on the north. A **restricted area** is in the north end of Oakland Outer Harbor adjacent to the Oakland Army Base. (See **33 CFR 334.1050** and **334.1060**, chapter 2, for limits and regulations.)

(297) **Oakland Inner Harbor** is that part of Inner Harbor Channel extending east from San Francisco Bay to **Tidal Canal**. It is adjacent to the most highly developed section of the city, bordering Oakland to the north and Alameda to the south. At the east end of the harbor, the artificial Tidal Canal leads to San Leandro Bay where a channel continues to the Metropolitan Oakland International Airport. Mariners should exercise caution when transiting Oakland Inner Harbor to prevent wake damage to boats moored at marinas along the waterway.

(298) A **restricted area** is in Oakland Inner Harbor from the entrance to the east boundary of the Naval Air Station. (See **33 CFR 334.1020** and **334.1030** chapter 2, for limits and regulations.)

(299)

Channels

(300) A federal project provides for a depth of 50 feet from the Bar Channel to and including the Oakland Outer Harbor, 50 feet in the Inner Harbor Reach, thence 35 feet from the Grove Street Pier to the Park Street Bridge Reach, thence 18 feet to Tidal Canal. 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.

(301)

Caution

(302) Due to the projection of the Seventh Street Terminal, areas of slack water develop on the south side of the terminal on the flood tide and on the north side on the ebb tide. Deep-draft vessels entering the Inner Harbor on the flood tide may tend to shear to port when the bow enters the slack water. Similarly, vessels entering the Outer Harbor on the ebb tide may tend to shear starboard.

(303)

Bridges

(304) The fixed highway bridge across Brooklyn Basin at the east end of Coast Guard Island has a clearance of 11 feet. The three highway drawbridges across Tidal Canal have a least clearance of 15 feet. The vertical lift railroad bridge across Tidal Canal has a clearance of 13 feet down, 80 feet partially open and 135 feet fully open. The bridgetenders monitor VHF-FM channel 16 and work channel 9. (See **33 CFR 117.1** through **117.59** and **117.181**, chapter 2, for drawbridge regulations.)

(305)

Quarantine, customs, immigration and agricultural quarantine

(306) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(311)

Facilities in the Port of Oakland

Name	Location	Berthing Space	Depths*	Deck Height (feet)	Mechanical Handling Facilities and Storage	Purpose	Owned/ Operated by:
Port of Oakland (Berths 20 and 21)	37°49'09"N., 122°18'39"W.	1,355	42	14	• Open storage (166 acres) • Three container cranes (30 long tons)	Receipt and shipment of containerized cargo	Port of Oakland
Port of Oakland Oakland(Berths 22-24)	37°49'02"N., 122°18'56"W.	2,870	50	14	• Open storage (166 acres) • Four container cranes (50 long tons)	Receipt and shipment of containerized cargo	Port of Oakland
TraPacTerminal (Berths 25-33)	37°48'37"N., 122°19'41"W.	4,263	50	14	• Open storage (66 acres) • Four container cranes (65 long tons)	Receipt and shipment of containerized cargo	Port of Oakland/ TraPac, Inc.
Seventh Street Container Terminal (Berth 34)	37°48'39"N., 122°19'53"W.	720	37	14	• Open storage (19 acres)	Receipt and shipment of bulk cargo	Port of Oakland/ TraPac, Inc.
Ben E. Nutter Terminal (Berths 35-38)	37°48'26"N., 122°20'23"W.	2,157	50	14	• Open storage (74 acres) • Four container cranes (50 long tons)	Receipt and shipment of containerized cargo	Port of Oakland/ Seaside Transportation Services
Oakland International Container Terminal (Berths 55 and 56)	37°47'52"N., 122°19'15"W.	2,400	50	14.5	• Open storage (120 acres) • Four container cranes (65 long tons)	Receipt and shipment of containerized cargo	Port of Oakland
Oakland International Container Terminal (Berths 57-59)	37°47'42"N., 122°18'38"W.	3,600	50	14.5	• Open storage (150 acres) • Six container cranes (65 long tons)	Receipt and shipment of containerized cargo	Port of Oakland
Matson Terminal (Berths 60-63)	37°47'37"N., 122°18'01"W.	2,743	42	13.7	• Open storage (80 acres) • Four container cranes (50 long tons)	Receipt and shipment of containerized cargo	Port of Oakland
Schnitzer Steel (Berth 65)	37°47'38"N., 122°17'33"W.	875	38	12	• Open storage (33 acres) • One traveling container crane (30 long tons)	Shipment of ferrous scrap metal	Schnitzer Steel Products Co.
Charles P. Howard Terminal (Berths 67 and 68)	37°47'41"N., 122°17'03"W.	1,946	42	13	• Open storage (50 acres) • Four container crane (50 long tons)	Receipt and shipment of containerized cargo and automobiles	Port of Oakland/ Stevedoring Services of America Terminals

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.

(307)

Harbor regulations

(308) The Port of Oakland is under the jurisdiction of the Board of Port Commissioners of the City of Oakland and is managed by an executive director. The port's general offices are at 530 Water Street, Oakland, CA 94607.

(309)

Wharves

(310) The Port of Oakland owns the facilities engaged in handling general cargo in the port, and their operation is carried out through private companies. The port also has a number of smaller piers and wharves that are used for mooring small vessels and repair work and for other purposes. Most major deep-draft facilities are listed in the table. The alongside depths given for each facility are reported depths. (For information on the latest depths contact the Port of Oakland or the facility operator.) 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 with lifting capacities to 350 tons are available.

(312) The port is served by two transcontinental Class I railroads. Truck connections are also available to the city's freeway system.

(313)

Supplies

(314) Bunker fuel, diesel oil, gasoline, water and most other marine supplies and services are available in Oakland. Bunker fuel is usually delivered by barge.

(315)

Repairs

(316) A drydock and repair firm in Oakland has a maximum drydock capacity of 2,800 tons; marine railways here are capable of hauling out to 500 tons. All kinds of repairs are made to both hulls and engines.

(317)

Small-craft facilities

(318) There are many small-craft facilities on both sides of the channel from Oakland Inner Harbor entrance to the airport at the south end of San Leandro Bay. Mariners should exercise caution when transiting Oakland Inner Harbor to prevent wake damage to boats moored at marinas along the waterway.

(319)

Communications

(320) Oakland is served directly by three major highways, with connections to several others. The city is the main-line terminus of three transcontinental railroads. Metropolitan Oakland International Airport, on the bay

(338)

Facilities in the Port of Richmond

Name	Location	Berthing Space	Depths*	Deck Height	Mechanical Handling Facilities and Storage	Purpose	Owned/Operated
Port of Richmond Terminal No. 4 Wharf	37°57'47"N., 122°25'46"W.	1,047	32-35	14	• Tank storage (504,500 barrels) • One 5-ton mobile crane	Receipt and shipment of liquid bulk products (petroleum products, petrochemicals, chemicals, vegetable oils)	City of Richmond/ Paktank Corp.
Chevron Products Richmond Long Wharf	37°55'19"N., 122°24'39"W.	3,065	40-50	15	• Tank storage (20.2 million barrels) • Pipelines extend from wharf to refinery	• Receipt of crude oil • Receipt and shipment of petroleum products	Chevron Products Co.
Port of Richmond Point Potrero Marine Terminal No. 7 Wharf	37°54'27"N., 122°21'50"W.	1,615	38	12	• Open storage (40 acres with an additional 50 acres available if needed)	Occasional receipt and shipment of general cargo	City of Richmond/ Pasha Group
ARCO Products Richmond Tanker Wharf	37°54'43"N., 122°21'53"W.	710	38	12	• Tank storage (737,000 barrels) • Pipelines extend from wharf to tanks	Receipt and occasional shipment of petroleum products	ARCO Products Co.
Tosco Refining Richmond Tanker Wharf	37°54'54"N., 122°21'55"W.	836	37	12	• Tank storage (857,300 barrels) • Pipelines extend from wharf to tanks	Receipt and shipment of petroleum products and liquid bulk products (solvents, vegtable oils, coconut oil, caustic soda)	Tosco Refining Co./ Tosco Refining Co. and GATX Terminals Corp.
Tosco Refining Richmond Barge Wharf	37°54'58"N., 122°21'56"W.	836	37	12	• Tank storage (5,000 barrels) • Pipelines extend from wharf to tanks in Ref. No 5	Shipment and occasional receipt of petroleum products	Tosco Refining Co.
National Gypsum Richmond Dock	37°55'10"N., 122°22'06"W.	600	38	9-11	• Covered storage (40,000 tons of gypsum) • Belt conveyor (1,400 tons per hour)	Receipt of gypsum rock	National Gypsum Co., Gold Bond Building Products
Castrol North America Richmond Wharf	37°55'21"N., 122°22'26"W.	700	32	7	• Tank storage (85,000 barrels) • Pipelines extend from wharf to tanks	Receipt and shipment of petroleum products	Castrol North America, Incorperated
IMTT-Richmond Richmond Wharf	37°55'16"N., 122°22'09"W.	650	38	8	Tank storage: (441,200 barrels petroleum products) (4.2 million gal. caustic soda) (2.5 million gal. paraffin wax)	• Receipt and shipment of petroleum products • Receipt of caustic soda and paraffin wax	IMTT-Richmond-CA
Levin-Richmond Terminal Richmond Wharf (Berths A, B and C)	37°55'16"N., 122°22'01"W.	1,450	34-37	13	• Open storage (15 acres) • Five gantry cranes (25-50 tons) • Belt-conveyors (600 tons per hour)	• Shipment of scrap metal and petroleum coke • Receipt of miscellaneous dry bulk commodities	Levin-Richmond Terminal Corperation
Shore Terminals Richmond Wharf	37°55'05"N., 122°21'51"W.	700	33	12	• Tank storage (618,000 barrels) • Pipelines extend from wharf to tanks	Receipt and shipment of petroleum products	Shore Terminals LLC
Port of Richmond Terminal No. 2 Upper Wharf	37°54'59"N., 122°21'44"W.	300	38	13	• Tank storage (2 million gallons) • Pipelines extend from wharf to tanks	Receipt and shipment of edible oils	City of Richmond/ California Oils Corp.
Port of Richmond Terminal No. 3 Wharf	37°54'47"N., 122°21'42"W.	1,109	38	13	• Open storage (18 acres) • Two traveling container cranes (37 ton)	Receipt and shipment of conventional general cargo (steel, wood products and heavy lift items)	City of Richmond/ Stevedoring Services of America

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.

about 5 miles southeast of the city, is served by many airlines.

(321) **San Leandro Channel** connects San Leandro Bay with San Francisco Bay. The channel is very narrow with shallow uneven depths at the east end. Mariners should seek local knowledge before transiting the channel. Three bascule bridges, operating simultaneously, with a minimum clearance of 20 feet at the south side of the draw, cross the channel at its east end. The bridgetender for the San Leandro Bay bridges at Alameda monitors VHF-FM channel 16 and works on channel 9; call sign: WHX 870, Bay Farm Island Bridge. (See **33 CFR 117.1** through **117.59** and **117.193**, chapter 2, for drawbridge regulations.)

(322)

ENCs - US5CA12M, US5CA21M
Charts - 18649, 18653

(323) **Berkeley**, the site of the University of California, adjoins Oakland and **Emeryville** to the north. The long pier extending into the bay is marked by a light; the

outer 1.7 miles of the pier is in ruins. In clear weather the Campanile (bell tower) at the university shows prominently from the bay.

(324) **Berkeley Marina**, on the north side of the long pier, is protected at the entrance by two detached breakwaters. The south breakwater is marked by a light in the center and at each end. The north breakwater is marked by lights on each end. The north side of the entrance into the harbor is marked by a private light and the south side by a private light and sound signal. **Berkeley Reef**, awash, is 0.9 mile northwest from the harbor entrance and marked by a light. The best water for entering the harbor is reported to be in the south entrance. Occasionally, there are reports of vessels grounding in the northern approach. The marina accommodates 1,100 boats and can provide electricity, gasoline, diesel fuel, pumpout facility and launching ramp. All vessels entering the harbor must contact the harbormaster's office on the south side of the harbor.

(325) Two marinas are at Emeryville, about 1.5 miles south of Berkeley Marina and can provide transient berths, gasoline, diesel fuel, electricity, water, pump-out facility and launch ramp.

(326) **Southampton Shoal Light** (37°52'55"N., 122°24'01"W.), 32 feet above the water, is shown from a white cylindrical tower near the south end of the 1.6-mile-long shoal. A sound signal (bell) is at the light. A wreck covered 4 feet lies 0.6 mile to the northeast at 37°53'16"N., 122°23'18"W.

(327) Vessels going from San Francisco Bay proper bound for Richmond usually use the 45-foot project channel through the shoal area northwest of Southampton Shoal Light.

(328) **Red Rock**, 3.2 miles north-northwest of Southampton Shoal Light, is 169 feet high and prominent in the south approach. Buoyed **Castro Rocks**, 0.6 mile east-northeast of Red Rock, are small and low.

(329) **Richmond Harbor**, on the east shore of San Francisco Bay 1.5 miles north of Southampton Shoal Light, includes the port facilities to Point San Pablo. The harbor is served by two Class I railroads and is an important oil refining center and oil shipping port.

(330)

Channels

(331) A federal project provides for a depth of 45 feet in Southampton Shoal Channel and in the maneuvering area off Richmond Long Wharf, thence 38 feet in the channels leading to the port facilities at the Port of Richmond, to a point about 2,000 feet in Sante Fe Channel, thence 30 feet in the remainder of Sante Fe Channel and the turning basin. The channel is well marked by navigational aids. 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 10,000-foot training wall is south of the dredged channel and extends west from Brooks Island.

(332)

Regulated navigation areas

(333) A **security zone** has been established around the Chevron Long Wharf. (See **33 CFR 165.1197**, chapter 2, for limits and regulations.) A **restricted area** extends 0.3 mile offshore at Point Molate, site of a Navy fuel depot 0.8 mile north of Richmond-San Rafael Bridge. (See **33 CFR 334.1090**, chapter 2, for limits and regulations.) **Regulated navigation areas** are in the entrance channel and between Point Richmond and Point Potrero. (See **33 CFR 165.1181**, chapter 2, for limits and regulations.)

(334)

Quarantine, customs, immigration and agricultural quarantine

(335) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(336)

Wharves

(337) Liquid bulk commodities handled at the Port of Richmond consist primarily of petroleum, petroleum products, chemicals, petro-chemicals, coconut oil, tallow and molasses. Dry bulk commodities consist of coal, bauxite, gypsum, iron ore, vehicles, iron/steel products, scrap metals and containerized cargo. All major deep-draft facilities are listed in the table. The alongside depths given for each facility are reported; the operators of the wharves should be contacted for information on the latest depths. Most of the large oil wharves have hose-handling cranes. Of the facilities listed, all have truck access and most have rail connections to Class I railroads. Water and electrical shore power are available at most piers.

(339) 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 Facilities*.

(340)

Repairs

(341) Repairs to fishing boats, recreational craft and other types of small vessels can be made at three marine repair yards on the Santa Fe Channel. A marine railway at one of the yards has a 20-ton hauling capacity, and boat lifts to 88 tons are also available. There are five drydocks at Point Potrero, the largest having a length of 750 feet. Floating cranes here have maximum capacity of 350 tons.

(342)

Small-craft facilities

(343) A marina and yacht club are in **Richmond Marina Bay** and a private yacht harbor is on the east side of Point Richmond. Available services include transient berths, gasoline, diesel fuel, electricity, water, ice, pump-out and a launching ramp.

(344)

Bridge

(345) The 21,343-foot **Richmond-San Rafael Highway Bridge**, 8.8 miles above the Golden Gate Bridge, is

one of the longest fixed high-level double-deck bridges. The east 970-foot fixed channel span clearance is 135 feet; the west fixed span has a 1,000-foot opening with a clearance of 185 feet. The centerline of both channels through the bridge spans is marked by a racon. The bridge is well lit, and the channels leading to it are marked with navigational aids.

(346) **Invincible Rock**, 1.3 miles north of Richmond-San Rafael Bridge, is covered 7 feet. **Whiting Rock**, covered 13 feet, is 0.2 mile north-northeast of Invincible Rock. Both rocks are buoyed. The buoy marking Whiting Rock is reported to submerge during strong ebb currents caused by the heavy spring runoffs in the area. Large vessels changing course and other craft in this area are advised to use caution.

(347) **The Brothers,** 1.7 miles north of Richmond-San Rafael Bridge, are two small low flat-topped islands. **East Brother Light** (37°57'48"N., 122°26'01"W.), 61 feet above the water, is shown from a buff square tower on the east island; a seasonal sound signal is at the station.

(348) **Point San Pablo**, 0.3 mile northeast of East Brother Island Light, is the northwest extremity of a low ridge of hills on the east shore of San Francisco Bay at its junction with San Pablo Bay. The point rises abruptly to a height of 140 feet. A dredged channel off the northeast shore of the point is used to access the Point San Pablo Yacht Harbor and is reported to have significant shoaling.

(349) A small-boat basin used by commercial and sport fishermen is 0.5 mile southeast from Point San Pablo.

(350) A private yacht basin is 1 mile southeast from Point San Pablo. A channel leading to the basin has reported depths of about 2 feet.

(351) **Point Cavallo**, on the west side of San Francisco Bay 0.5 mile northeast of the Golden Gate Bridge, is sharp and rocky with some visible and covered rocks under its face. **Horseshoe Bay** is a shallow bight west of the point.

(352)

Coast Guard

(353) Golden Gate Coast Guard Station is located at the entrance to Horseshoe Bay.

(354) From Point Cavallo the steep rocky shore tends north for 0.3 mile to **Yellow Bluff**, thence northwest for 1 mile to Sausalito. A rock, covered 5 feet, is about 100 yards east-southeast of Yellow Bluff in about 37°50.2'N., 122°28.2'W.

(355) **Richardson Bay**, 2 miles north of the Golden Gate Bridge, is shoal except for the south part fronting Sausalito. In the north part of Richardson Bay, a wildlife sanctuary, established by the National Audubon Society, provides safe refuge for migratory fowl that arrive each fall. The sanctuary is closed to marine traffic from October to March. The southern edge of the sanctuary, marked by three concrete piles topped by white cones, is on a line approximately **097°**True from Strawberry Point to Belvedere. A special anchorage is in Richardson Bay. Local authorities control the anchoring of vessels and placement of moorings in Richardson Bay. Mariners should contact the Richardson Bay Regional Agency at 415–971-3919 for specific information. Richardson Bay is a no-discharge zone; it is illegal for vessels to discharge any form of waste into the bay. (See **33 CFR 110.1** and **110.126a**, chapter 2, for limits and regulations.) A channel leading northwest through Richardson Bay to facilities at Sausalito is marked by lights and daybeacons.

(356) A **no-wake speed limit** is in all channels in Richardson Bay.

(357) **Sausalito** harbors some commercial fishing boats and many pleasure craft. Several boatbuilding and repair yards have marine ways, the largest of which can handle craft up to 350 tons.

(358) The Corps of Engineers has an operations base and model current-flow basin at Sausalito.

(359) **Belvedere Cove,** 3 miles north-northeast of the Golden Gate Bridge, is entered between **Peninsula Point** on the south and **Point Tiburon** on the north. Two private yacht clubs are in the cove. There are several small piers used by ferry boats about 0.2 mile west of Point Tiburon. Passenger ferry service is available between Tiburon and San Francisco and between Tiburon and Angel Island. The ruins of an abandoned railroad ferry slip is just west of Point Tiburon.

(360) **Angel Island**, 3 miles northeast of the Golden Gate Bridge, is partially wooded and level on top. The irregular-shaped island is separated from the mainland by Raccoon Strait. The island, formerly an immigration detention station, is now a state park. A ferry operates from the island to Tiburon and just south of Pier 1 in San Francisco.

(361) **Point Blunt**, the southeast extremity of Angel Island, terminates in a 60-foot high knob and is connected with the island by a low neck of land. **Point Blunt Light** (37°51'12"N., 122°25'09"W.), 60 feet above the water, is shown from a white house on the point; a sound signal is at the station. A shoal with visible and covered rocks extends south-southeast for 0.1 mile. Tide rips and swirls are heavy around the point, especially with a large falling tide.

(362) **Quarry Point**, the east end of Angel Island, is a bold bluff with deepwater close-to. The wharf 0.6 mile north of the point is in ruins. The point is marked by a light.

(363) A lighted buoy is off **Point Stuart**, the west extremity of Angel Island. A shoal area covered 14 to 30 feet, extending southwest from **Point Knox**, is marked by a lighted buoy.

(364) **Ayala Cove**, indenting the north side of Angel Island, about 0.6 mile northeast of Point Stuart, is reported to afford good anchorage in depths of 10 to 12 feet, mud bottom, and protection from south and west winds. Slips are available for day use only; mooring buoys are available for overnight stays. A pier at the state park facility in the cove is used by ferries and state park personnel.

(365) **Raccoon Strait**, nearly 0.5 mile wide between Angel Island and the mainland, is used by ferry boats and pleasure craft. The tidal currents in the strait have

considerable velocity, and rips and swirls are heavy at times. A midchannel course can be followed. **Raccoon Shoal**, covered 29 feet, is 500 yards north of Raccoon Strait Lighted Buoy 4. A strong ebb current sets directly across the channel at the east entrance.

(366) The charted **recreation area** extending southwest of Angel Island and including all of Raccoon Strait and Richardson Bay is intended primarily for use by recreation vessels. It should not be utilized by vessels 300 tons or more for through passage or for any other purpose, except in case of emergency or special circumstances.

(367) **Bluff Point**, on the mainland and marked by a light, is the east extremity of Tiburon Peninsula 1.2 miles north of Point Stuart. Point Chauncey, 0.8 miles northwest of Bluff Point, is the site of the University of San Francisco Romberg Fisheries Laboratory. Pier ruins at the site are marked by lights.

(368) **Paradise Cay**, a filled real estate project 2.6 miles northwest of Bluff Point, has a small-boat harbor that accommodates about 200 boats. The harbor is on the north side of the project.

(369) **Corte Madera Creek**, at the head of a marshy bight about 2 miles northwest of Paradise Cay, is the site of a ferry terminal with frequent service to and from San Francisco. **Corte Madera Channel** leads northwest from deep water in the bay over the flats to a turning basin at the mouth of the creek. The channel and turning basin are marked by lights.

(370) A railroad bridge, 0.4 mile above the turning basin, has a 38-foot bascule span with a clearance of 10 feet. (See **33 CFR 117.1** through **117.59** and **117.153**, chapter 2, for drawbridge regulations.) The bridge remains in the open position except when trains or rail maintenance equipment are crossing the creek. The fixed highway bridges, 0.1 mile above the railroad bridge, have 35-foot channel spans with a clearance of 21 feet. Submerged obstructions that protrude 3 to 4 feet from the bottom are under the fixed bridges. The obstructions are marked by signs on either side of the bridges. In 1984, a submerged obstruction was reported on the north edge of the channel about 400 yards west of the fixed bridges. The power cables over the turning basin and creek have a least clearance of 120 feet.

(371) **Point San Quentin**, at the west end of the Richmond-San Rafael Bridge, has low land on either side. The buildings of the state prison south of the bridge and the long wharf north of it are prominent. A state **security zone** extends off the southeast side of Point San Quentin. The buoys are orange and white and display the words "San Quentin Prison."

(372) **San Rafael Creek**, 1.8 miles northwest of Point San Quentin, is used by many small craft basing at the city of **San Rafael**. A dredged channel leads across the flats of **San Rafael Bay** into San Rafael Creek to the Grand Avenue bridges, about 1.2 miles above the mouth; a turning basin is on the south side of the channel just below the bridges. The channel entrance is marked by lights and a **293.2°** lighted range. The overhead power cables near the entrance to the creek have a clearance of 125 feet. The Grand Avenue Pedestrian bridge has a 105-foot fixed span with a clearance of 4 feet. The Grand Avenue bridge, just west of the pedestrian bridge, has a 30-foot fixed span with a clearance of 4 feet.

(373) The municipal yacht harbor is on the south side of San Rafael Creek, about 400 yards east of the turning basin, and there are numerous small-craft facilities elsewhere along the creek.

(374) **Point San Pedro**, 3 miles north of Point San Quentin at the west entrance to San Pablo Bay, extends 100 yards east of 356-foot-high **San Pedro Hill**. Three charted brick stacks are just south from the point. There is a large quarry just north from the point.

(375)

ENC - US5CA31M
Chart - 18654

(376) **San Pablo Bay**, is nearly circular, 10 miles long in a northeast direction, with a greatest width of 8 miles. The north part consists of low marshes intersected by numerous sloughs and a large area of shoal water and mudflats that bare at extreme low water. The south shore is bolder, except between Point San Pablo and Pinole Point, where it is low and marshy for about 3 miles. Carquinez Strait joins San Pablo Bay with Mare Island Strait and Suisun Bay at its east extremity. There is considerable traffic through the bay. Deep-draft oil tankers and sugar-laden vessels pass through the bay bound for Crockett and Martinez. Lighter draft vessels pass through bound for points on Suisun Bay, and the Sacramento River to Sacramento, and on the San Joaquin River to Stockton.

(377) Mariners are advised that winds and currents in San Pablo Bay may be particularly strong and must be taken into consideration by tankers bound for the oil terminals. Vessels transiting the Pinole Shoal Regulated Navigation Area westbound on an ebb current should use extra caution to avoid being set down on the aids to navigation following the turn at San Pablo Bay Channel Light 11.

(378) The marked channel through San Pablo Bay extends in a gentle curve north and east from the entrance to the east end. The federal project depth is 35 feet across Pinole Shoal. 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.

(379) A regulated navigation area has been established in Pinole Shoal Channel. (See **33 CFR 165.1181(e)(2)**, chapter 2, for limits and regulations.) Vessels that do not meet the tonnage requirements to transit the Pinole Shoal Regulated Navigation Area follow an informal transit pattern along the 25-foot curve just to the south of Pinole Shoal between the entrance to Pinole Shoal Channel (38°00'00"N., 122°25'00"W.) and the entrance to Carquinez Strait.

(389)

Structures across Petaluma River

Name	Type	Location	Miles*	Clearances (feet)		Information
				Horizontal	Vertical**	
Overhead power cable		38°06'39"N., 122°29'30"W.	0.4		125	
SMART Blackpoint railroad bridge	swing	38°06'44"N., 122°30'06"W.	0.8	110	7	Notes 1 and 2
State Route 37 bridge	fixed	38°06'55"N., 122°30'18"W.	1.0	140	70	
Overhead power cable		38°06'57"N., 122°30'20"W.	1.1		100	
Overhead power cable		38°07'14"N., 122°30'32"W.	1.3		96	
Overhead power cable		38°08'09"N., 122°30'50"W.	2.2		140	
Overhead power cable		38°13'38"N., 122°36'36"W.	12.2		100	
SMART Haystack Landing railroad bridge	bascule	38°13'42"N., 122°36'50"W.	12.4	87	3	Note 1
U.S. 101 Bridge	fixed	38°13'43"N., 122°36'55"W.	12.5	100	70	
Overhead power cable		38°14'05"N., 122°38'06"W.	13.7		100	
D Street bridge	bascule	38°14'05"N., 122°38'08"W.	13.7	52	5	Notes 1 and 3
Washington Street bridge	fixed	38°14'10"N., 122°38'25"W.	14.2	30	8	

* Distance is in nautical miles above the mouth
** Clearance above Mean High Water
Note 1 – See 33 CFR 117.1 through 117.59 and 117.187, chapter 2, for drawbridge regulations.
Note 2 – When not in use, the drawspans are maintained in the open to navigation position.
Note 3 – Bridgetender monitors VHF-FM channel 16 and works channel 9, call sign WQX–644.

(380) A **safety zone** has been established in San Pablo Bay north of the Pinole Shoal Channel. (See **33 CFR 165.1184**, chapter 2, for limits and regulations.)

(381) **General and naval anchorages** are in San Pablo Bay. (See **33 CFR 110.1** and **110.224**, chapter 2, for limits and regulations.)

(382) Shoals and flats, which uncover, extend from Point San Pablo to Pinole Point, thence northeast to Lone Tree Point.

(383) **Pinole Point** is a moderately high, rocky bluff, projecting about 1 mile from the southeast shore of San Pablo Bay. A T-head fishing pier extends northwest from the east side of the point. Piles and a light are off the face of the pier. The ruins of a former wharf extend from the east side of the point, and numerous oil tanks are on the hills about 2 miles in back of it. About 3.5 miles east of Pinole Point, the black and white tank at a chemical fertilizer plant is prominent. A pleasure fishing pier and a small-craft harbor are at **Lone Tree Point**, 4.6 miles east from Pinole Point. A steel skeleton tower is 0.6 mile south of Lone Tree Point. **Oleum**, on **Davis Point**, is an oil town. There are many prominent oil tanks, painted in pastel colors, on the hills back of the town. Six stacks in a line southeast of Davis Point are also prominent.

(384) The Conoco-Phillips Wharf, a T-shaped wharf, extends out from the Oleum refinery on Davis Point. In 2005, a least depth of 40 feet was alongside the 1,250-foot wharf; 1,375 feet of berthing space is available with dolphins. All four corners of the wharf are marked by private lights, and a private sound signal is at the east end; the trestle leading to the wharf is lighted at night. The deck height is 17 feet. Pipelines extend from the wharf to nearby storage tanks. The wharf is used for receipt and shipment of petroleum products and for bunkering vessels. A **security zone** has been established surrounding the wharf. (See **33 CFR 165.1197**, chapter 2, for limits and regulations.)

(385) Shore Oil Terminal Wharf, about 1 mile east of the Conoco-Phillips wharf, has a 72-foot face with 980 feet of berthing space with dolphins and 40 to 45 feet alongside; deck height, 20 feet. The wharf is used for receipt of petroleum products

(386) **Gallinas Creek** enters San Pablo Bay about 1.5 miles northwest of Point San Pedro. The entrance channel, marked by private markers on the north side, leads across flats to the mouth of the creek. In 1983, the channel had a controlling depth of 2 feet. Local knowledge is advised. Overhead cables crossing the creek have a minimum clearance of 65 feet.

(387) A dredge offloading facility and booster pump facility are about 1.43 miles northeast of Point San Pedro in about 38°00'22"N., 122°25'53"W. and 38°01'15"N., 122°27'04"W., respectively. The two facilities consist of several pilings with permanently moored barges. A marked, submerged pipeline and power cables connect the two facilities, thence runs northwest to the shoreline in about 38°02'47"N., 122°29'36"W. Mariners are advised to use caution when transiting the area.

(388) **Petaluma River** enters San Pablo Bay on the northwest side. The city of **Petaluma**, 12 miles above the mouth, is the center of an extensive dairy and egg industry. The river is used by pleasure craft and by barges handling gravel, oyster shell, heavy construction equipment and prestressed concrete products. A dredged channel leads from deep water in San Pablo Bay to the mouth of the Petaluma River and continues upstream to the city of Petaluma.

(390) A privately dredged channel with private markers leads south-southwest from the dredged entrance channel to Petaluma River just below the entrance to the river and

thence to **Novato Creek**. In 1985, the reported controlling depth was 2 feet.

(391)

Danger zones

(392) Danger zones are in the east part of San Pablo Bay adjacent to the west shore of Mare Island and in the north central part of the bay. (See **33 CFR 334.1160** and **334.1170**, chapter 2, for limits and regulations.)

(393)

ENC - US5CA32M
Chart - 18655

(394) **Mare Island Strait**, at the mouth of the Napa River, is between the mainland and **Mare Island**. The project depth for the Mare Island Strait Channel, from the entrance to just south of the Vallejo-Mare Island Causeway Bridge, about 2.9 miles above the entrance, is 30 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 the USACE hydrographic survey website listed in Appendix A.

(395) The waters around Mare Island are included in a **restricted area.** (See **33 CFR 334.1100**, chapter 2, for limits and regulations.)

(396) A power cable crossing lower Mare Island Strait between Vallejo and Mare Island has a clearance of 206 feet. If the clearance between the masthead and the cable is less than 10 feet or if the clearance is not known, vessels shall not move under the cable without authority.

(397) The entrance to Mare Island Strait is between two dikes. On the east side of the entrance, Dike No. 9 extends about 700 yards southwest from the mainland and on the west side, Dike No. 14 extends about 500 yards southeast from Mare Island; both dikes have submerged outer sections. Dike No. 9 is marked at the outer end by a light and Dike No. 14 is marked at the outer end by a lighted buoy.

(398)

Coast Guard

(399) **Coast Guard Station Vallejo**, about 2.5 miles above the entrance to Mare Island Strait just below the Vallejo-Mare Island causeway lift bridge, is on the east side of the strait.

(400) **Vallejo**, on the east shore of Mare Island Strait, is the terminus of a railroad. A large flour mill is prominent south of the railroad yard. A passenger ferry operates between Vallejo and San Francisco. Two small-craft facilities are on the east side of the Mare Island Strait.

(401) The Vallejo-Mare Island causeway and lift bridge connects Mare Island with the city of Vallejo. It has a lift span with a clearance of 100 feet up and 13 feet down. (See **33 CFR 117.1** through **117.59** and **117.169**, chapter 2, for drawbridge regulations.) The bridge is equipped with radiotelephone. The bridgetender monitors VHF-FM channel 16 and works on channel 13; voice call, Mare Island Causeway Bridge. Just above **Sears Point**, 1 mile above Vallejo, a fixed highway bridge with a clearance of 100 feet crosses the strait. A public fishing pier is close south of this bridge and extends about 350 yards from the east side of the strait. A Navy reserve fleet pier is on the west side of the strait between Vallejo-Mare Island causeway lift bridge and the fixed bridge just above Sears Point. If practical, approach the bridges only when running against the current. No passage should be attempted during the periods of peak flood or ebb current.

(402)

ENC - US5CA31M
Chart - 18654

(403) **Napa River**, the continuation of Mare Island Strait above the Vallejo-Mare Island Causeway Bridge, is used by barges and pleasure boats. Barge traffic on the river is in crushed rock, salt, and steel. A dredged channel leads from the causeway bridge to a turning basin at **Jacks Bend**, thence to the head of navigation at the 3rd Street Bridge in **Napa**, 13 miles above the causeway bridge. A federal project provides a depth of 10 feet from **Horseshoe Bend** to the upstream limit of the channel. Napa River is marked to Horeshoe Bend by lights and a daybeacon; above Horseshoe Bend, the river is marked by lights and daybeacons to the 3rd Street Bridge in Napa. A visible wreck, marked by a buoy, is on the east side of the channel just north of Slaughterhouse Point. In 2004, a submerged obstruction was reported in the channel east of Knight Island in about 38°08'16.5"N., 122°16'57.2"W.

(404) The railroad bridge across Napa River at **Brazos**, about 6.8 miles above the Vallejo-Mare Island Causeway, has a vertical lift span with a clearance of 2 feet down and 97 feet up. When not in use, the drawspan is maintained in the open to navigation position. (See **33 CFR 117.1** through **117.59** and **117.169**, chapter 2, for drawbridge regulations.) The channel through the bridge crosses from one bank to the other causing a hazardous condition, particularly for downbound loaded barges, because the direction of the ebb current is as much as 50° from the axis of the channel.

(405) A fixed highway bridge with a clearance of 107 feet crosses the Napa River at Suscol, about 9.7 miles above the Vallejo-Mare Island Causeway.

(406) Near **Imola**, 12 miles above Vallejo-Mare Island Causeway bridge, a fixed highway bridge crosses the river with a clearance of 60 feet. The three fixed bridges in Napa have a minimum width of 47 feet and a clearance of 3.7 feet. The minimum clearance of the power cables crossing the river below Napa is 125 feet, and in Napa, 40 feet.

(407) A small-craft basin is on the west side of Napa River opposite **Bull Island**, 8 miles above the Vallejo-Mare Island Causeway, and several other small-craft facilities are elsewhere on the river.

(408)

ENC - US5CA42M
Chart - 18656

(409) Six-mile-long **Carquinez Strait** connects San Pablo and Suisun Bays. For the first 3.5 miles it is a little less than 0.5 mile wide, and then widens to about 1 mile. It is deep throughout with the exception of a small stretch of flats on the north shore, and a small shoal area in the bight on the south shore near the east end.

(410)

Anchorages

(411) **General anchorages** are in Carquinez Strait. (See **33 CFR 110.1** and **110.224**, chapter 2, for limits and regulations.) Mariners should take note of the cable area that runs through Anchorages 22 and 23, south of Benicia. Also of note are the shallow depths from the disposal area encroaching into Anchorage 21, southwest of the entrance to Mare Island Strait.

(412)

ENC - US5CA32M
Chart - 18655

(413) The **California State Maritime Academy** and pier are in **Morrow Cove**, on the north shore of the west entrance to Carquinez Strait.

(414) Interstate Route 80 fixed highway bridges cross Carquinez Strait near its west entrance at **Semple Point**. The channel on each side of the center pier is 998 feet wide; the least clearance is 146 feet through the north span and 132 feet through the south span. Private sound signals are sounded at the bridge; piers and racons are at the center of each span of the east bridge.

(415) Power cables cross the strait 0.3 mile west of the highway bridges and 1.2 miles east of it; the minimum clearance is 179 feet.

(416) **Crockett**, on the south shore just east of the highway bridges, is built around The California and Hawaiian Sugar Company Refinery. The refinery's wharf has a 2,715-foot face with 2,815 feet of berthing space with dolphins and a deck height of 12 feet. A depth of 30 feet is alongside. Four cranes and a conveyor system serve the wharf, maximum unloading rate is 250 tons per hour each and water is available. The wharf is used for receipt and shipment of sugar products and the transfer of bulk liquid molasses; it is owned and operated by California and Hawaiian Sugar Company.

(417) A marina is on the south shore just west of the highway bridges, and a small-boat basin is in **Elliot Cove** on the north side of the strait opposite Crockett.

(418)

Port Costa to Bulls Head Point

(419) A light is 130 yards off the south side of Carquinez Strait, 1.5 miles east of Interstate Route 80 fixed highway bridges; a light is off **Port Costa**, 0.6 mile to the east. On the north side of the strait, a light is on **Dillon Point** and another is off **Benicia Point**.

(420) The Defense Fuel Supply Center Support Point, Ozol Oil Wharf, at **Ozol**, is about 1.6 miles southeast of Port Costa. The 270-foot offshore wharf has 880 feet of berthing space with dolphins. The depth alongside is 37 feet and the deck height is 8 feet. Water and electrical shore power connections are available. The wharf is owned by the U.S. Government and operated by Blaiz Co., Inc.

(421) There are three wharves extending out to deep water at **Martinez**, 2 miles southeast of Point Carquinez.

(422) The westernmost of these facilities is the municipal fishing pier. A small-boat harbor, protected by breakwaters, is on the east side of the pier. A private light is on the channel end of both breakwaters. In 1994, shoaling to a depth of about 4 feet was reported at the entrance to the marina.

(423) The Shell Oil Company, Martinez Refinery Wharf, is east of the municipal fishing pier. The 900-foot offshore wharf has 1,850 feet of berthing space with dolphins and has a depth of 42 feet alongside decreasing to 39 feet at the west end; the deck height is 15 feet. Water and electrical shore power connections are available. The wharf is owned and operated by the Shell Oil Company and is marked by private lights and a sound signal. A **security zone** surrounds the wharf. (See **33 CFR 165.1197**, chapter 2, for limits and regulations.)

(424) The Tesoro Amorco Pier, Upper and Lower Wharves, are northeast of the Shell Oil Company Wharf. The wharves provide 978 feet of berthing space and have a depth of 35 feet alongside; the deck height is 15 to 17 feet. The wharves are used for the receipt and shipment of petroleum products and for bunkering vessels. The wharves are owned and operated by Tesoro Corporation and are marked by private lights. A **security zone** surrounds the wharves. (See **33 CFR 165.1197**, chapter 2, for limits and regulations.)

(425) **Benicia** is on the north shore at the east end of Carquinez Strait. Most of the smaller piers around the town are in ruins.

(426)

Caution

(427) The bottom of Carquinez Strait south of Benicia Point is sandy and changeable. Strong tides, alongshore currents and seasonal runoff influence the bottom, resulting in a shoaling trend migrating southeast from the point through much of General Anchorage No. 22. Mariners should use caution in transiting this area, with the expectation of changing depths, possibly shoaler than charted.

(428) A marina, protected by breakwaters, is at Benicia; private lights on the breakwater mark the entrance.

(429) The **Port of Benicia** is at Army Point at the east end of the town. Highway and railroad connections and water and electrical shore power connections are available at all of the facilities.

(432)

Structures across Carquinez Strait (east end)

Name	Type	Location	Clearances (feet) Horizontal	Vertical	Information
Benicia-Martinez highway bridge	fixed	38°02'18"N., 122°07'16"W.	440	135	A sound signal and RACON mark the main channel span. **(Note 1)**
Union Pacific Raiload bridge	vertical lift	38°02'19"N., 122°07'15"W.	291	70 (down) 135 (up)	Bridgetender monitors VHF-FM channel 13 and works on channel 14; call sign KQ-7193, Union Pacific Railroad Bridge. **(Note 2)**
Interstate 680 highway bridge	fixed	38°02'21"N., 122°07'09"W.	574	153	

Note 1 – Regulated Navigation Area under the main channel span (See **33 CFR 165.1181**, chapter 2, for limits and regulations)
Note 2 – All mariners intending to transit underneath the Union Pacific Railroad Bridge should be familiar with the communications protocol established specifically for vessel-to-bridge radiotelephone communications at the bridge. The protocol addresses procedures for requesting an opening of the bridge as well as special emergency communication procedures for all vessels transiting underneath the bridge. For a complete explanation of the San Francisco communications protocol, or to contact the Training Director, go to *http://www.pacificarea.uscg.mil/vtssf/*.

(430) Valero-Benicia Refinery (38°02'41"N., 122°07'45"W.): 1,100 feet of berthing space; 40.4 feet alongside; deck height, 15 feet; receipt and shipment of petroleum products; receipt of crude oil; owned and operated by Valero Energy Corporation. A **security zone** has been established around the wharf. (See **33 CFR 165.1197**, chapter 2, for limits and regulations.)

(431) Benicia Port Terminal Berth (38°02'28"N., 122°08'05"W.): 2,404 feet of berthing space; 35 to 40 feet alongside; deck height, 11 to 15 feet; receipt of automobiles and crude oil; receipt and shipment of general cargo; shipment of bagged rice, petroleum coke and petroleum products; owned by Benicia Port Terminal Company and operated by various companies.

(433) **Bulls Head Point**, just east of the south end of the bridge, shows as a 100-foot rounding hill with numerous towers.

(434) The Plains Products Terminal Wharf is 0.9 miles northeast of the Interstate 680 highway bridge and is marked by four private lights. The wharf has 970 feet of berthing space and a depth of 34 feet alongside and is used for shipping/receiving petroleum products.

(435) The Marathon Martinez Refinery, Avon Marine Terminal, extends across the flats at Avon, northeast of the Plains Products Terminal Wharf. The wharf has a total berthing space of 1,320 feet with depths of 35 to 40 feet alongside the channel face; deck height is 19 feet, with 14 feet at the center section. Tankers berth along the channel side of the face and barges along the inshore side of the face. The wharf produces bio diesel products and is owned/operated by Marathon. Private lights and sound signals are on the outer ends of the pier. A security zone surrounds the wharf. (See **33 CFR 165.1197**, chapter 2, for limits and regulations.)

(436)

ENC - US5CA42M
Chart - 18656

(437) **Suisun Bay** is a broad shallow body of water with marshy shores and filled with numerous marshy islands, many of which have been reclaimed and are now under cultivation. It is practically the delta of the Sacramento and San Joaquin Rivers that empty into the east part of the bay. A dredged channel leads from the east end of Carquinez Strait along the southern part of Suisun Bay to a the south part of Honker Bay. Another dredged channel leads through New York Slough to the San Joaquin River. The project depths for these channels is 35 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 the USACE hydrographic survey website listed in Appendix A.

(438) The bay is used by many light-draft vessels having local knowledge. It is recommended that large vessels take a pilot if bound above Crockett. For information on obtaining an inland pilot contact the San Francisco Marine Exchange or San Francisco Bar Pilots.

(439)

Anchorages

(440) **General anchorages** are in Suisun Bay. (See **33 CFR 110.1** and **110.224**, chapter 2, for limits and regulations.)

(441) **Suisun Slough** empties into the northwest side of Suisun Bay 5.5 miles north of Benicia. A dredged entrance channel leads from Suisun Bay into the slough; the controlling depth was 6½ feet in 1990. The entrance channel is marked by lights. Above the dredged entrance channel, the river channel had a reported depth of 6.3 feet in 2001, from the mouth to **Suisun City**, 12 miles above the entrance. Traffic on the slough includes gasoline, jet fuel and residual fuel oil. Petroleum products are barged to an oil distributor at Suisun City. A power cable with a clearance of 110 feet crosses the slough just south of the city.

(442) A **restricted berthing area** for Maritime Administration Reserve Fleet vessels is along the west side of Suisun Bay. (See **33 CFR 162.270**, chapter 2, for limits and regulations.)

(443) (See **33 CFR 117.1** through **117.59**, **117.151**, and **117.185**, chapter 2, for drawbridge regulations for the bridges over the minor tributaries of Suisun Bay.)

(444)

ENC - US5CA43M
Chart - 18658

(445) **Military Ocean Terminal Concord (MOTCO)** is on the south side of the bay. A **restricted area** has been established along the waterfront of the terminal (See **33 CFR 334.1110**, chapter 2, for limits and regulations.) A **security zone** has also been established around the piers of the terminal. (See **33 CFR 165.1199**, chapter 2, for limits and regulations.)

(446)

ENC - US5CA42M
Chart - 18656

(447) Two adjacent small-craft basins are on the south side of the flats about 1.6 miles east of **Middle Point**, the east boundary of the Navy weapons station. The basins are connected to the bay by twin canals cut through the flats, though the east basin is shoaled in and not in use. All access is via the west basin, with a reported depth of 6 feet or less.

(448)

ENCs - US5CA46M, US4CA46M
Chart - 18661

(449) **Pittsburg**, on the south side of New York Slough 12 miles east of Suisun Point bridges, is a manufacturing city with several deepwater berths.

(450) The PGE-Pittsburg Fuel Pier, about 0.3 mile west of **New York Point**, is an offshore wharf with 1,070 feet of berthing space, 35 feet alongside, and a deck height of 14 feet. It is used for receiving and transshipping petroleum products.

(451) The Diablo Service Corp. Wharf, about 0.6 mile east of New York Point is an offshore wharf with 1,154 feet of berthing space with dolphins, 35 feet alongside, and deck height of 12 feet. There is a conveyer system and crawler tractors. Rail and highway connections and water and electrical shore-power connections are available. It is owned by Tosco Corp. and is used for the receipt of petroleum coke.

(452) USS-Posco Industries, Pittsburg Wharf, about 1.3 mile east of New York Point, is a 891-foot marginal wharf with depths of 33 feet alongside and a deck height of 11 feet. Three 37½-ton cranes are available, and there are rail and highway connections and water and electrical shore power connections. It is used for receipt of semifinished steel.

(453) The Dow Chemical Co., Pittsburg Plant Wharf, about 2 miles east of New York Point, is an offshore wharf with 672 feet of berthing space with dolphins, 40 feet alongside and a deck height of 20 feet. It is used for shipment and receipt of caustic soda.

(454) **Antioch**, on the south side of San Joaquin River 16 miles east of Suisun Point bridges, is a manufacturing city with waterborne commerce.

(455) Georgia-Pacific Corp., Antioch Plant Wharf, about 38°00'56"N., 121°47'08"W., is a 197-foot offshore wharf, 780 feet usable with dolphins, with 31 feet alongside and a deck height of 11 feet. A conveyor system is available for the receipt of gypsum rock. Highway connections and water and electrical shore power connections are available.

(456) Gaylord Container Corp., California Mill Wharf, about 0.5 mile east of Kaiser Gypsum Co. Pier, is a 291-foot offshore wharf, 766 total berthing space, with depths of 35 feet alongside. Receipt of miscellaneous dry bulk commodities.

(457) There are also barge facilities at Antioch.

(458) The Fulton Shipyard, on the east edge of the city, has a marine railway that can haul out vessels up to 350 tons for general repairs. The yard repairs auxiliary vessels such as towboats and barges.

(459) Several small-craft facilities are at Pittsburg and Antioch.

(460)

ENCs - US5CA46M, US4CA46M, US5CA47M
Charts - 18661, 18662

(461) The **Delta Region**, the combined deltas of the San Joaquin and Sacramento Rivers, comprises the feeder rivers, sloughs, and canals that directly or indirectly connect with one or both of the rivers. Hundreds of miles of navigable waterways for small boats are available in the Delta; both local and visiting small craft use these waterways extensively. Common types of pleasure craft peculiar to the Delta include pontoon boats and houseboats, but many conventional powerboats and sailboats use these waters also, especially in summer when San Francisco Bay is foggy and choppy. Some of the more important sloughs are used by tugs and barges.

(462) Bordering the various waterways are levees that are 12 feet or more higher than the land behind them. The levees are built up from dredged material taken from the adjacent waterway, and because of the settlement of the levees, dredging has been done periodically to keep the tops at height and grade. As material is needed for levee work, the dredge pays more attention to the requirements of the levee than to the depth of the channel for navigation purposes. This leaves an uneven bottom. The tops of the levees generally have dirt roads. **Tule** is often found on the channel side of the levees. Tule is the name given to a tall aquatic plant growth similar to bulrush.

(463) Many public and private small-boat harbors, marinas and boating resorts are spread over the Delta region. All types of facilities and services for small craft are available, though some areas in the Delta are much more developed than others. Groceries are one of the most difficult items to obtain in this region; groceries in any quantity must be obtained from the larger towns on

the Sacramento River, at Antioch or Stockton on the San Joaquin River or at one of the larger resorts. Diesel oil is similarly rather scarce, since most craft on these waters use gasoline. Diesel oil may be obtained at the junction of the Mokelumne and San Joaquin Rivers, on the west side of King Island, at or near the cities of Antioch and Stockton, and at Bethel Island.

(464) Some areas in the Delta in which small-craft facilities are especially concentrated are most of the perimeter of **Bethel Island (Bethel Tract)**, 3.4 miles east from Antioch Bridge; the south side of San Joaquin River on both sides of Antioch Bridge; the west side of the Mokelumne River from its junction with the San Joaquin River to Georgiana Slough; and the San Joaquin River from Fourteenmile Slough through Stockton.

(465)

Cable ferries

(466) The Sacramento and San Joaquin Rivers, including some of the feeder rivers, sloughs and canals that directly or indirectly connect with one or both of the rivers, are crossed by cable ferries. These ferries in the delta region are guided by cables and sometimes propelled by a cable rig attached to the shore. Cables to the ferries, which extend from both banks of the waterway, may be at, near, or above the water surface. Operating procedures vary and mariners are advised to use extreme caution and seek local knowledge. In 1978, the U.S. Coast Guard advised that cable ferries were not operating in many charted locations in the delta region. These ferries may operate intermittently, so caution is advised while operating in their vicinity. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(467) **Clearances for structures** (bridges, cables, pipelines, etc.) across all navigable waterways throughout the **Delta Region** (except the San Joaquin River) are listed on structure-crossing tables. These tables are located near the waterways being discussed in the text. Mariners are advised that **low water datum** listed on the tables is **mean lower low water** at **low-river stage**; overhead cable clearances reference **high water datum**. During **flood stage levels**, bridge and overhead cable clearances may be **reduced** as much as 29 feet or more. See chapter 1 for more information about bridges and overhead cables.

(468)

ENCs - US5CA46M, US4CA46M, US5CA48M
Charts - 18661, 18663

(469) **San Joaquin River** rises in the Sierra Nevada, flows 275 miles in a west direction, and enters Suisun Bay through **New York Slough**. The winding river is navigable for deep-draft vessels to Stockton. The water is generally fresh at Antioch. Major floods in the river valley may occur from November to April, caused by intense general storms of several days' duration. At the mouth of the river an ordinary flood will cause a rise of 8 feet and an extreme flood a rise of 10 feet in the river level. At Stockton, ordinary flood will cause a rise of 8.5 feet, and extreme flood a rise of 13.5 feet in the river level. The delta of the river is formed of many marshy islands intersected by sloughs and channels. The islands are reclaimed tule and cattail marshes that have been converted to agriculture. Bordering the river are levees that are 12 feet or more higher than the land behind them. Important information regarding inland waterway navigation can be found in **33 CFR 162.205**, chapter 2.

(470) Reports of gage heights of the San Joaquin River delta can be obtained from the Sacramento National Weather Service Office at any time. The information is published in the Sacramento Bee and, in addition, is reported on radio broadcasts from station KFBK (1530 kHz) whenever the gage heights are sufficient to be of general interest.

(471) Information on gage heights can also be obtained from the State Department of Water Resources, 1416 9th Street, Sacramento, CA 95814 or by recorded message at 916–653–6416.

(472) A **federal project** provides for a 35-foot channel from the mouth of the San Joaquin River to a turning basin at Stockton. 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.

(473)

Anchorages

(474) **General and explosives anchorages** are in the San Joaquin River on the west side of Sherman Island near the mouth and just north of Venice Cut between Mandeville Island and Venice Island. (See **33 CFR 110.1** and **110.224**, chapter 2, for limits and regulations.)

(475) **Antioch Bridge** (State Route 160), a fixed highway bridge with a clearance of 142 feet at low water and 138 feet at high water, crosses San Joaquin River about 3 miles east of Antioch. There are no other bridges over the main channel below the turning basin at Stockton. Power cables over the main channel of San Joaquin River from the mouth to the turning basin at Stockton have a minimum clearance of 140 feet.

(476) There are small-craft facilities on the south side of San Joaquin River on both sides of Antioch Bridge.

(477) The main channel in San Joaquin River to Stockton is marked by a daybeacon, buoys, lights and lighted ranges. At **Mandeville Cut** and **Venice Cut**, 15 miles above Antioch Bridge, the river still follows its old channel and violent sheers are experienced if the navigator is not prepared to meet the river current when passing from the cuts into the river and from the river into the relatively quiet waters of the dredged channel. Under freshet conditions, vessels tend to sheer off course at the junction of the San Joaquin River and the main ship channel at Channel Point near Stockton.

(481)

Structures Across the Principal Tributaries of the San Joaquin River

Name	Type	Location	Clearances (feet) Horizontal	Vertical* Low / High	Information
Mokelumne River					
Mokelumne River highway	swing	38°07'34"N., 121°34'47"W.	100	11 / 8	Bridgtender monitors VHF-FM channel 16 and works channel 9; call sign KMJ-382 Mokelumne River Bridge. **(Note 1)**
South Fork Mokelumne River					
Overhead cable	power	38°07'04"N., 121°29'44"W.		110	
Overhead cable	power	38°13'32"N., 121°29'30"W.		110	
San Joaquin County highway bridge	removable span	38°13'32"N., 121°29'30"W.	58	16 / 13	**(Note 1)**
North Fork Mokelumne River					
Millers Ferry highway bridge	swing	38°13'25"N., 121°30'25"W.	85	15 / 12	Bridgetender monitors VHF-FM channel 16 and works channel 9; call sign WBE-8326 Millers Ferry Bridge. **(Note 1)**
Wilson Bridge/ Deadhorse Island bridge	removable span	38°13'28"N., 121°30'17"W.	56	14 / 11	
Mokelumne River					
Interstate 5 highway bridges	fixed	38°15'18"N., 121°26'52"W.	65	24 / 21	
Franklin Road bridge	swing	38°15'20"N., 121°26'23"W.	80	21 / 18	Clearances are for the south draw only. **(Note 1)**
Union Pacific Railroad bridge	swing	38°15'17"N., 121°25'54"W.	61	19 / 16	Clearances are for the south draw only. **(Note 1)**
Galt-New Hope Road bridge	fixed	38°14'12"N., 121°25'07"W.	62	18 / 2	
Little Potato Slough					
Potato Slough bridge	swing	38°06'56"N., 121°29'52"W.	100	37 / 35	Bridgetender monitors VHF-FM channel 16 and works channel 9; call sign KSK-278 Potato Slough Bridge. **(Note 2)**
Georgiana Slough					
Overhead cable	power	38°08'47"N., 121°36'03"W.		85	
Tyler Island bridge	swing	38°09'43"N., 121°35'05"W.	80	13 / 10	Bridgetender monitors VHF-FM channel 16 and works channel 9; call sign WHU-246 Tyler Island Bridge. **(Note 3)**
Old River					
Overhead cable	power	38°04'16"N., 121°34'32"W.		110	
Overhead cable	power	37°58'57"N., 121°34'53"W.		110	
BNSF Railroad bridge	bascule	37°56'24"N., 121°33'38"W.	95 (75 open)	14 / 11	Bridgetender monitors VHF-FM channel 16 and works channel 9; call sign WHU-322 Santa Fe Railroad Bridge.
Overhead cable	power	37°55'44"N., 121°33'32"W.		125	
State Route 4 highway bridge	swing	37°53'28"N., 121°34'13"W.	98	16 / 12	**(Note 4)**
Overhead cable	power	37°53'13"N., 121°34'32"W.		50	Cable is temporary with estimated duration through April 2011; vertical clearance is approximate.
Old River bridge	fixed	37°50'36"N., 121°32'16"W.	24	18 / 14	
Overhead cable	power	37°50'36"N., 121°32'16"W.		110	
Overhead cable	power	37°50'21"N., 121°32'20"W.		115	
Overhead cable	power	37°49'44"N., 121°33'09"W.		110	
Overhead cable	power	37°49'08"N., 121°33'15"W.			data unavailable
Overhead cable	power	37°48'54"N., 121°33'11"W.		26	
Overhead cable	power	37°47'26"N., 121°30'51"W.			data unavailable
Tracy Boulevard bridge	fixed	37°48'16"N., 121°26'59"W.	46	18 / 15	
Overhead cable	power	37°48'28"N., 121°24'36"W.		110	
Junction with San Joaquin River		37°48'30"N., 121°19'39"W.			
Middle River					
Bacon Island bridge	swing	37°57'23"N., 121°31'41"W.	37 (west span) 90 (east span)	18 / 15 11 / 8	Bridgetender monitors VHF-FM channel 16 and works channel 9; call sign WHU-8326 Bacon Island Bridge. **(Note 5)**
Overhead cable	power	37°56'33"N., 121°31'57"W.		110	
BNSF Railroad bridge	bascule	37°56'23"N., 121°32'00"W.	85 (79 open)	14 / 11	**(Note 5)**

Structures Across the Principal Tributaries of the San Joaquin River

Name	Type	Location	Clearances (feet) Horizontal	Vertical* Low / High	Information
Overhead cable	power	37°56'09"N., 121°31'52"W.		125	
Woodward Island Bridge	removable span	37°55'12"N., 121°31'00"W.	83	34 / 30	
Overhead cable	power	37°54'24"N., 121°30'26"W.		114	
State Route 4 highway bridge	fixed	37°53'28"N., 121°29'21"W.	105	14 / 11	**(Note 5)**
Overhead cable	power	37°53'04"N., 121°28'15"W.		110	
Tracy Boulevard bridge	fixed	37°52'56"N., 121°27'23"W.	68	15 / 12	
Overhead cable	power	37°53'28"N., 121°26'25"W.		110	
Overhead cable	power	37°53'35"N., 121°25'51"W.		70	
Howard Road bridge	fixed	37°52'39"N., 121°23'00"W.	24	18 / 15	
Undine Road bridge	fixed	37°50'05"N., 121°23'02"W.	45	18 / 15	
Overhead cable	power	37°49'57"N., 121°23'07"W.			data unavailable
Overhead cable	power	37°49'45"N., 121°23'11"W.		110	
Junction with Old River		37°49'20"N., 121°22'30"W.			
Turner Cut					
Zuckerman Bridge	retractable span	37°58'35"N., 121°28'30"W.	30	19 / 16	Bridgetender monitors VHF-FM channel 16 and works channel 9; call sign WHV-959 Zuckerman Brothers Bridge (202-464-1253). **(Note 6)**

*** Vertical clearances listed reference mean lower low water at low-river stage and high water datum.**
Note 1 – See **117.1 through 117.59 and 117.175**, chapter 2 for limits and regulations
Note 2 – See **117.1 through 117.59 and 117.167**, chapter 2 for limits and regulations
Note 3 – See **117.1 through 117.59 and 117.157**, chapter 2 for limits and regulations
Note 4 – See **117.1 through 117.59 and 117.183**, chapter 2 for limits and regulations
Note 5 – See **117.1 through 117.59 and 117.171**, chapter 2 for limits and regulations
Note 6 – bridge maintained in the open position except when being crossed by a vehicle. If necessary for the bridge to be in the closed position for an extended period, the bridgetender may be contacted.

(478) **Stockton**, 28 miles above Antioch Bridge, is in the center of the fertile San Joaquin Valley. The deep-draft harbor is near the western limits of the city.

(479)

Bridges

(480) A fixed highway bridge with a clearance of 45 feet at high water (50 feet at low water) crosses the upper Stockton channel 0.2 mile east of the turning basin.

(482)

Weather, Stockton

(483) Stockton, the county seat of San Joaquin County, is near the center of the great **Central Valley** of California, on the southeast corner of the broad delta formed by the confluence of the San Joaquin and Sacramento Rivers. The surrounding terrain is flat, irrigated farm- and orchard-land, near sea level, with the rivers and canals of the delta controlled by a system of levees.

(484) About 25 miles (46 km) east and northeast of Stockton lie the foothills of the Sierra Nevada, rising gradually to an elevation of about 1,000 feet (305 m). Beyond the foothills, the mountains rise abruptly to the crest of the Sierra, at a distance of about 75 miles (139 km), with some peaks here exceeding 9,000 feet (2,745 m) in elevation. On a few days during the year, when atmospheric conditions are favorable, the "downslope" effect of a north or northeast wind can bring unseasonably dry weather to the delta area; but on the whole the Sierra Nevada has little or no effect on the weather of San Joaquin County. The Sierra Nevada does affect the area, however, to the extent that the entire economy of the Central Valley depends upon the underground water supplies and rivers which are fed in summer by the melting snows that have piled up during the winter on the windward (west) slopes of the mountains.

(485) To the west and southwest, the Coast Range, with peaks above 2,000 feet (610 m), form a barrier separating the Central Valley from the marine air, which dominates the climate of the coastal communities. Several gaps in the Coast Range in the San Francisco Bay Area, however, permit the passage inland of a sea breeze that fans out into the delta and has a moderating effect on summer heat, with the result that Stockton enjoys slightly cooler summer days than communities in the upper San Joaquin and Sacramento Valleys.

(486) Stockton's climate is characterized in summer by warm, dry days and relatively cool nights, with clear skies and no rainfall; and in winter by mild temperatures and relatively light rains, with frequent heavy fogs. The annual average temperature is 62°F (16.7°C) with an average daily maximum of 74°F (23.3°C) and an average daily minimum of 49°F (9.4°C).

(487) The annual rainfall averages between 13 and 14 inches (330 to 356 mm), with 90 percent of this precipitation falling in the winter-half year, i.e., November through April. Thunderstorms are infrequent, occurring on 3 or 4 days a year, generally in the spring, and occasionally in summer, although rainfall with summer thunderstorms is negligible. Measurable rain can be expected on about 52 days a year, and rain exceeding 0.5 inch (13 mm) on

(498)

Facilities in the Port of Stockton

Name	Location	Berthing Space	Depths*	Deck Height	Mechanical Handling Facilities and Storage	Purpose	Owned/Operated
Port of Stockton Wharves 12 and 13	37°57'02"N., 121°20'05"W.	850	40	13.4	• 130,000-ton Open storage area • Tank storage (19.2 million gallons) • Loading tower and belt conveyor system	Shipment of clay, coal, petroleum, coke and sulphur	Port of Stockton
Port of Stockton Wharves 10 and 11	37°57'05"N., 121°19'55"W.	1,011	35	15.5	• Open storage (18.5 acres) • Two 30-ton container cranes • Three 30-ton bridge cranes • One 150-ton crawler crane	Receipt and shipment of fertilizer	Port of Stockton
Port of Stockton Wharf 9	37°57'06"N., 122°19'46"W.	645	35	15.5	• Covered storage (56,800 square feet) • Open storage (175 acres)	Receipt and shipment of bagged aggregate, rice and fertilizer	Port of Stockton
Port of Stockton Wharf 8	37°57'00"N., 121°19'30"W.	484	35	15.5	• Tank storage: (8 million gal. molasses) (14 million gal. ammonia) • Open storage (30,000 square feet) • Covered storage (36,150 square feet)	Receipt and shipment of bagged rice, fertilizer and molasses	Port of Stockton/ Brusco Tug & Barge, Inc., California Ammonia Co., Cargill Inc., PM Ag Products Inc.
Port of Stockton Wharf 7	37°57'07"N., 121°19'35"W.	516	35	15.5	Covered storage (25,100 square feet)	Receipt and shipment of bagged rice, fertilizer and molasses	Port of Stockton
Port of Stockton Wharf 6	37°57'06"N., 121°19'34"W.	418	35	15.5	Covered storage (17,650 square feet)	Receipt and shipment of cement and molasses	Port of Stockton
Port of Stockton Wharf 5	37°57'06"N., 121°19'30"W.	429	35	15.5	Covered storage (41,000 square feet)	Receipt and shipment of cement and molasses	Port of Stockton
Port of Stockton Wharf 4	37°57'07"N., 121°19'22"W.	461	35	15.5	• Covered storage (41,300 square feet) • Open storage (62,800 square feet)	• Receipt and shipment of conventional general cargo • Receipt of dry bulk fertilizer	Port of Stockton
Port of Stockton Wharf 3	37°57'07"N., 121°19'16"W.	461	35	15.5	• Covered storage (30,000 square feet) • One 30-ton container crane • Belt-conveyor system	• Receipt and shipment of miscellaneous dry bulk material • Receipt of dry bulk fertilizer and cement	Port of Stockton/ Viridian Fertilizer Inc., Calaveras Cement Co.
Port of Stockton Wharf 2	37°57'05"N., 121°19'12"W.	617	35	15.5	• Covered storage (75,000 tons) • Open storage (175 acres) • Two 30-ton gantry cranes	• Receipt and shipment of miscellaneous dry bulk material • Receipt of dry bulk fertilizer and cement	Port of Stockton/ Viridian Fertilizer Inc., Calaveras Cement Co.
Penny Newman Grain Company, Stockton Elevator Wharf	37°57'04"N., 121°18'59"W.	564	37	15.5	• Covered storage (6.8 million bushels) • Two grain towers with loading spouts (1,000 tons per hour)	Shipment and occasional receipt of grain	Continental Grain Corperation

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.

about 7 days a year. Since the Pacific storms that bring rainfall to this area are associated with above-freezing temperatures (>0°C) at sea-level elevations, snowfall is practically unknown in the Stockton area with trace amounts happening a few times and measurable snowfall happening only one time; February 1976.

(488) In summer, temperatures exceeding 100°F (37.8°C) can be expected on 6 days in July and about 14 days during the entire summer. During these hot afternoons the air is extremely dry, with relative humidities running generally less than 20 percent. Even on these hot days, however, temperatures will fall into the low sixties (16.1° to 17.2°C) at night. In winter the nighttime temperature on clear nights will fall to, or slightly below, freezing (0°C) and will rise in the afternoon into the low fifties (10.6° to 11.7°C). The all-time recorded maximum for Stockton is 114°F (45.5°C), recorded in July 1972, while the all-time minimum is 16°F (-8.9°C), recorded in January 1949. Each month April through October, has recorded temperatures in excess of 100°F (37.8°C), while each month November through April has recorded temperatures of freezing (0°C) or lower.

(489) In late autumn and early winter, clear still nights give rise to the formation of dense fogs, which normally settle in during the night and burn off sometime during the day. In December and January, the so-called fog season, under stagnant atmospheric conditions the fog may last for as long as 4 or 5 weeks, with only brief and temporary periods of clearing.

(490)

Pilotage, San Joaquin River

(491) River pilots, commissioned by the Port of Stockton, are obtained by ship's agents, through the office of the Port of Stockton, or the San Francisco Bar Pilots.

(492)

Towage

(493) It has not been necessary for towage companies to operate at this port because all vessels operate under their own power; however, tugs up to 1,200 hp are available.

(494)

Quarantine, customs, immigration and agricultural quarantine

(495) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(496)

Wharves

(497) Deep-draft facilities at the Port of Stockton are on the south side of Stockton Deep Water Channel from the junction with the San Joaquin River East to the turning basin (East Complex). All facilities have highway connections, and the facilities operated by the Port of Stockton are served by the ports beltline railroad, which connects with two major railroads. All facilities have water connections and most have electrical. Warehouse storage is available in the port for general merchandise and dry bulk materials. General cargo is usually handled by ships tackle or by shore- side traveling cranes; special handling equipment, if available, is listed under *Mechanical Handling Facilities* in the table. Shore-based hoisting facilities with lifting capacities to 150 tons are available. Additional rental cranes are available locally. Floating cranes for heavy lifts are available at Alameda. Depths alongside are reported; for information on the latest depths contact the Stockton Port District. Only the deep-draft facilities are listed in the table.

(499)

Supplies

(500) Supplies may be had in any quantity, and water is piped to the wharves. Ships may fuel from barges; alongside bunkering of large vessels may be done at the oil terminals in San Pablo Bay and Carquinez Strait.

(501)

Repairs

(502) Some dockside facilities are available here, but major repairs to oceangoing vessels must be done at the drydocks in San Francisco, Oakland, Alameda and Richmond. Several facilities make repairs to small craft; marine railways up to 200-ton capacity are available.

(503)

Small-craft facilities

(504) Several small-craft facilities are at Stockton or nearby.

(505) From its junction with Stockton Channel, the river has a controlling depth of about 3 feet for 70 miles to Hills Ferry and is used only by small pleasure craft, fishermen and an occasional small barge. The only facilities available are those dispensing gasoline, lubricants and water at a few points.

(506) More than 15 bridges cross San Joaquin River between Stockton and Hills Ferry. The minimum clearance for bridges crossing the river between Stockton and Mossdale, about 13 miles above Stockton, is 17 feet. (See **33 CFR 117.1** through **117.59** and **117.191**, chapter 2, for drawbridge regulations.)

(507)

ENCs - US5CA46M, US4CA46M, US5CA47M
Charts - 18661, 18662

(508) The principal tributaries of the San Joaquin River are described as the river is ascended. Bridge clearances are at low water. (See **33 CFR 117.1** through **117.59**, **117.143**, **117.150**, **117.157**, **117.159**, **117.161**, **117.167**, **117.171**, **117.175**, and **117.183**, chapter 2, for drawbridge regulations.)

(509) **Threemile Slough** meets the San Joaquin River 5.8 miles above Antioch Bridge and joins the Sacramento River at the north end of Decker Island. The slough is a route frequently used by tugs and barges making passage between Sacramento and Stockton. Near the junction with the Sacramento River is a highway lift bridge with clearances of 16 feet down and 110 feet up at low water. The bridgetender monitors VHF-FM channel 16 and works on channel 9; call sign KMJ–385, Threemile Slough Bridge. (See **33 CFR 117.1**through **117.49**, chapter 2, for drawbridge regulations.) The power cable east of the bridge has a clearance of 108 feet.

(510) **Mokelumne River**, one of the principal tributaries of the San Joaquin River, rises in the Sierra Nevada and empties into it 11.8 miles above Antioch Bridge. The river separates, 3.5 miles above its mouth, into two branches, the **North Mokelumne River (North Fork)** and the **South Mokelumne River (South Fork)** The branches continue in a north direction and rejoin 9 miles north-northeast from the mouth. The river then describes a semicircular route for 7 miles to the north and east to the head of navigation at the Galt-New Hope Bridge.

(511) Corps of Engineers project maps for 1978 show the following controlling depths for Mokelumne River: 12 feet from the mouth to the lower junction of the North and South Mokelumne Rivers, thence 7 feet by North Mokelumne River to Snodgrass Slough; thence 2 feet to upper junction of the North and South Mokelumne Rivers; 7 feet from the lower junction by South Mokelumne River to the upper junction; and thence 2 feet to the Galt–New Hope bridge. Mokelumne River is subject to shoaling; local knowledge is advised.

(512) **Little Potato Slough** (38°06'00"N., 121°29'30"W.) enters the South Fork of the Mokelumne River about 6 miles east of the confluence of the north and south forks and connects the river with other tributaries of the San Joaquin River.

(513) **Georgiana Slough** enters Mokelumne River about 3 miles above the mouth, and connects that river with the Sacramento River at Walnut Grove. The controlling depth through the slough is about 13 feet. Tugs and

(528)

Structures Across the Sacramento Deep Water Ship Channel, Sacramento River and its Principal Tributaries

Name	Type	Location	Clearance		Information
			Horizontal	Vertical* Low / High	
Sacramento River					
Overhead cable	power	38°03'55"N., 121°47'09"W.		119	Clearance of 122 feet over ship channel
Overhead cable	power	38°04'56"N., 121°45'10"W.		140	
Overhead cable	power	38°05'07"N., 121°44'45"W.		130	Clearance of 160 feet over ship channel
Rio Vista/ State Highway 12 bridge	vertical lift	38°09'31"N., 121°40'57"W.	270	22 /18 (down) 149 / 144 (up)	Bridgetender monitors VHF-FM channel 16 and works on channels 9 and 13; call sign KMJ-384, Rio Vista Bridge. **(Note 1)**
Overhead cable	power	38°10'04"N., 121°37'43"W.		125	
Overhead cable	power	38°09'52"N., 121°37'16"W.		125	
Isleton bridge	bascule	38°10'19"N., 121°35'38"W.	200 (166 open)	18 / 15	Bridgetender monitors VHF-FM channel 16 and works on channel 9; call sign KMJ-383, Isleton Bridge. **(Note 2)**
Walnut Grove bridge	bascule	38°14'33"N., 121°30'53"W.	199 (187 open)	24 / 21	Bridgetender monitors VHF-FM channel 16 and works on channel 9; call sign KMJ-491, Walnut Grove Bridge. **(Note 2)**
Overhead cable	power	38°17'34"N., 121°33'45"W.		110	
Paintersville bridge	bascule	38°19'07"N., 121°34'40"W.	196 (163 open)	18	Bridgetender monitors VHF-FM channel 16 and works on channel 9; call sign KMJ-381, Paintersville Bridge. **(Note 2)**
Overhead cable	power	38°20'45"N., 121°32'56"W.		125	
Freeport bridge	bascule	38°27'21"N., 121°30'07"W.	199 (190 open)	32 / 29	Bridgetender monitors VHF-FM channel 16 and works on channel 9; call sign KMJ-490, Freeport Bridge. **(Note 2)**
Overhead cable	power	38°28'02"N., 121°30'17"W.		125	
Pioneer bridges	fixed	38°34'18"N., 121°30'57"W.	214	84 / 55	58 feet (high water) for middle 165 feet
Tower bridge	vertical lift	38°34'50"N., 121°30'30"W.	171	29 (down) 125 (up)	Bridgetender monitors VHF-FM channel 16 and works on channel 9; call sign KDO-739, Tower Bridge. **(Notes 2 and 7)**
I Street bridge	swing	38°35'11"N., 121°30'23"W.	148	32 / 30	Highway and railroad **(Note 2)**
Overhead cable	power	38°35'11"N., 121°30'23"W.		80 (east draw) 74 (west draw)	Clearances reference the draws of the I Street Swing Bridge
Overhead cable	power	38°35'34"N., 121°30'23"W.		125	
Junction with American River		38°35'50"N., 121°30'32"W.			
Overhead power cable	power	38°35'33"N., 121°30'28"W.		125	
Bryte Bend bridges	fixed	38°35'54"N., 121°32'53"W.	250	82 / 55	
Overhead cable	power	38°35'58"N., 121°33'00"W.		80	
Interstate 5 bridges	fixed	38°40'24"N., 121°37'35"W.	175	84 / 55	
Overhead cable	power	38°47'00"N., 121°37'06"W.		125	
Junction with Feather River		38°47'06"N., 121°37'16"W.			
Overhead cables	power	38°45'49"N., 121°41'00"W.		80	
Overhead cables	power	38°45'49"N., 121°41'15"W.		125	
State Highway 113/ Knights Landing bridge	bascule	38°48'08"N., 121°43'12"W.	199 (160 open)	23 (low)	**(Note 2)**
Overhead cable	power	38°48'13"N., 121°43'23"W.		125	
Overhead cable	power	38°49'09"N., 121°43'27"W.		124	
Overhead cable	power	38°51'34"N., 121°43'52"W.		125	
Overhead cable	power	38°51'35"N., 121°43'52"W.		125	
Overhead cable	power	38°53'58"N., 121°48'12"W.		80	
Overhead cable	power	39°00'51"N., 121°49'32"W.		125	
Overhead cable	power	39°02'27"N., 121°50'02"W.		80	
Overhead cable	power	39°04'00"N., 121°52'13"W.		125	
Overhead cable	power	39°04'25"N., 121°53'26"W.		60	
Meridian/State Highway 20 bridge	swing	39°08'44"N., 121°55'04"W.	143	39 / 10	**(Note 2)**
Overhead cable	power	39°08'45"N., 121°55'04"W.		120	
Overhead cable	power	39°10'12"N., 121°56'15"W.		106	

Structures Across the Sacramento Deep Water Ship Channel, Sacramento River and its Principal Tributaries

Name	Type	Location	Clearance		Information
			Horizontal	Vertical* Low / High	
River Road bridge	removable span	39°12'51"N., 122°00'02"W.	100	32 (low)	Vertical clearance is 6 feet (25 feet when raised) above flood level. **(Note 2)**
Overhead cable	telephone	39°12'52"N., 121°00'04"W.		75	
Overhead cable	power	39°12'53"N., 121°00'07"W.		75	
Sacramento Deep Water Ship Channel at Cache Slough					
Overhead cable	power	38°11'16"N., 121°39'36"W.		137	
Overhead cable	power	38°15'58"N., 121°39'52"W.		140	
Overhead cable	power	38°19'17"N., 121°39'02"W.		140	
Overhead cable	power	38°28'26"N., 121°35'01"W.		140	
Overhead cable	power	38°33'08"N., 121°34'43"W.		140	
Overhead cable	power	38°33'40"N., 121°33'33"W.		140	
Industrial Boulevard bridge	fixed	38°33'41"N., 121°32'20"W.	130	32 / 29	
Jefferson Boulevard bridge	bascule	38°33'41"N., 121°31'43"W.	86 (73 open)	20 / 17	Combination highway and railraod
Steamboat Slough					
Overhead cable	power	38°13'49"N., 121°36'09"W.		125	
Steamboat Slough bridge	bascule	38°18'17"N., 121°34'28"W.	200 (184 open)	24 / 21	Bridgetender monitors VHF-FM channel 16 and works on channel 9; call sign WHX-295, Steamboat Slough Bridge. **(Note 3)**
Lindsey Slough					
Hastings Farm Highway bridge	removable span	38°14'49"N., 121°52'09"W.	53	22 / 19	**(Note 4)**
Overhead cable	power	38°14'51"N., 121°42'24"W.		110	
Overhead cable	power	38°15'30"N., 121°43'37"W.		85	
Miner Slough					
Overhead cable	power	38°15'56"N., 121°38'37"W.		114	
State Route 84 bridge	swing	38°17'32"N., 121°37'51"W.	72	21 / 17	**(Note 5)**
Overhead cable	power	38°17'12"N., 121°36'27"W.		110	
Sutter Slough					
Overhead cable	power	38°16'00"N., 121°36'08"W.		93	
Overhead cable	power	38°19'44"N., 121°34'42"W.		93	
State Route 160 bridge	swing	38°19'40"N., 121°34'35"W.	75	22 / 19	**(Note 6)**

* Vertical clearances of overhead cables are referenced to High Water Datum. Vertical clearances for bridges are referenced to Low Water Datum and High Water Datum.

Note 1 – See **117.1 through 117.59**, chapter 2 for limits and regulations
Note 2 – See **117.1 through 117.59 and 117.189**, chapter 2 for limits and regulations
Note 3 – See **117.1 through 117.59 and 117.199**, chapter 2 for limits and regulations
Note 4 – See **117.1 through 117.59 and 117.165**, chapter 2 for limits and regulations
Note 5 – See **117.1 through 117.59 and 117.173**, chapter 2 for limits and regulations
Note 6 – See **117.1 through 117.59 and 117.201**, chapter 2 for limits and regulations
Note 7 – Bridge lighting for navigation is required, Bridge Lighting and Other Signals, See 33 CFR Part 118.

barges formerly used the slough in making the run from Sacramento to Stockton, but to avoid the snags and sharp turns they now favor the route through Threemile Slough.

(514) **Old River** flows into the San Joaquin River about 13 miles above the Antioch Bridge after diverging from the latter river about 38 miles above the bridge. It is the most west branch of the interconnecting tidal channels into which San Joaquin River divides in crossing its delta. Old River has many sloughs and canals that connect with Middle River to the east.

(515) **Middle River** enters the San Joaquin River 15.3 miles above Antioch Bridge. The river and connecting channels are a part of a complicated network of tidal canals, some natural and some artificial, in the delta of the San Joaquin River. One of the principal channels, Middle River, leaves Old River at the southwest corner of Roberts Island about 7 miles south-southwest of Stockton and roughly parallels Old River to the San Joaquin River.

(516) The controlling depth in Middle River is about 6 feet to the Bacon Island swing bridge, about 15.5 miles below the junction with Old River. The channel is not maintained above the bridge, and navigation is obstructed by many snags and shoals.

(517)

Cable ferry

(518) Woodward Island Ferry crosses Middle River about 12.5 miles below the junction with Old River. The ferry carries passengers and vehicles and operates from 0800 to 1700 daily. White warning signs, with black letters and orange borders, are posted about 500 feet on either side

of the ferry crossing. Flashing red beacons are shown by the ferry when underway. When the ferry is underway, the cables are 6 to 7 feet above the water surface; when docked, the cables are on or within 1 or 2 feet of the bottom. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(519) **Empire Cut** enters Middle River about 16.5 miles below the latter's junction with Old River.

(520)

Cable ferries

(521) Mildred Island Ferry crosses Empire Cut about 0.6 mile east of the junction with Middle River. This private cable ferry carries passengers, vehicles and farm equipment and operates during daylight hours. When the ferry is underway, the cables are suspended at an unknown depth below the water surface; when docked, the cables are dropped to the bottom. A sign on each side of the ferry warns of the cables; a flashing red signal is shown when underway. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(522) Gasoline and fishing supplies may be obtained at the town of **Middle River**, about 8.5 miles above the mouth.

(523) **Little Connection Slough** enters the San Joaquin River about 1 mile above the mouth of Middle River.

(524)

Cable ferry

(525) Venice Island Ferry crosses Little Connection Slough about 1 mile above the entrance. The ferry carries passengers and vehicles and operates from 0800 to 1700 daily. White warning signs, with black letters and orange borders, are posted about 500 feet on either side of the ferry crossing. Flashing red beacons are shown by the ferry when underway. When the ferry is underway, the cables are 6 to 7 feet above the water surface; when docked, the cables are dropped to the bottom. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(526) **Turner Cut** enters the San Joaquin River about 7.5 miles below Stockton and is crossed about 2 miles above the entrance by a highway bridge with a 30-foot retractable span. The bridge is normally maintained in the open position except when it is being crossed by a vehicle.

(527) **Sacramento River** rises in the Trinity Mountains in north central California, flows south for 325 miles, and enters Suisun Bay on the north side of **Sherman Island**. Deep-draft vessels follow the lower Sacramento River to **Cache Slough**, 1.5 miles above Rio Vista Bridge, thence through a deepwater ship channel to Sacramento, a distance of 37 miles above the mouth of the river. Barges and other small craft also use Sacramento River all the way to Sacramento, a distance of 50 miles. Above Sacramento, small craft go to Colusa, 125 miles above the mouth, but there is no regular navigation above this point. Important information regarding inland waterway navigation can be found in **33 CFR 162.205**, chapter 2.

(529)

Cable ferry

(530) **Steamboat Slough** enters Cache Slough about 1.8 miles above Rio Vista bridge. A cable ferry crosses the Steamboat Slough about 5 miles above the junction with Cache Slough. The ferry carries passengers and vehicles and operates 24 hours daily. When the ferry is underway, the cable is suspended below the water surface at varying depths. When the ferry is docked, the cable is about 5 feet below the surface of the water. Warning signs are posted at the crossing. When underway, the ferry shows flashing red lights. **DO NOT ATTEMPT TO PASS A MOVING CABLE FERRY.**

(531)

Channels

(532) **Sacramento River Deep Water Ship Channel** extends from Suisun Bay through lower Sacramento River, Cache Slough, and a 22-mile land cut to a triangular harbor and turning basin at the Port of Sacramento. The **William G. Stone Lock** is on the barge canal that once connected the Deep Water Ship Channel with the Sacramento River; the lock is closed to all navigation.

(533) The project depth in the ship channel is 30 feet and 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 the USACE hydrographic survey website listed in Appendix A. The controlling depth in the river route is about 10 feet. Above Sacramento, the controlling depth is about 6 feet to Colusa. The sounding datum is **mean lower low water at low-river stage.**

(534) Numerous uncharted piles, snags, pumps and pipes, some submerged, may exist along the edges of the river. Mariners are advised to exercise extreme caution while navigating close to the banks of the river.

(535)

Currents

(536) Currents in Sacramento River depend on the river stage. During high-river stages, there is little or no flood current and the ebb current is strong to Sacramento. During the dry season a flood current can be carried to Paintersville and from there slack water to Freeport, 30 and 41 miles above the mouth, respectively. At times of extreme low-river stages, flood current may be evident as far as Sacramento. Local knowledge is required to estimate current conditions for a particular time.

(537) Major floods in the Sacramento River valley usually occur from November to April and are generally caused by intense general storms of several days' duration, the runoff from which may be augmented by the melting of snow in the mountains. At the mouth of the river an ordinary flood will cause a rise of 8 feet and an extreme flood a rise of 10 feet in the river level. At Sacramento, ordinary flood will cause a rise in the river level of 20 feet and extreme flood, a rise of 30 feet.

(538) Reports of gage heights of the Sacramento River can be obtained from the Sacramento National Weather Service Office at any time of the year. The information is published in the **Sacramento Bee** and, in addition, is reported on the radio broadcast from station KFBK (1530 kHz) whenever the gage heights are of sufficient magnitude to be of general interest. Information on gage heights can also be obtained from the State Department of Water Resources, 901 "P" Street, Sacramento, CA 95814 or by recorded message at 916–651–0725.

(539) The upper 20 miles of Sacramento River Deep Water Ship Channel are free of river current and flood waters. However, the area is still affected by tidal currents. 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.

(540)

Weather, Sacramento Valley

(541) The climate of the lower Sacramento Valley is mild, with plenty of sunshine year round. Cloudless skies prevail during the spring, summer and fall. Winter is the rainy season, with measurable amounts falling on about 10 days per month. Snow is rare, since freezing temperatures are rare. The valley is protected from most severe winter storms by the mountains to the west, north and east. Sometimes, torrential rains on the slopes can cause flooding along the Sacramento River. The average annual precipitation for the Sacramento Airport is about 17.5 inches (445 mm) with about 90% of this amount falling from November through April.

(542) The mountains are responsible for the predominantly south winds throughout the valley. These are oceanic winds that have moved through the Carquinez Strait and been turned north by the Sierra ranges. At the port of Sacramento, southeast through southwest winds prevail, particularly during spring and summer. Northwest through north winds are also frequent and bring warm, dry air down the mountains. These winds cause brief heat waves, with temperatures rising to over 100°F (37.8°C) in summer, and they modify cool weather in winter. Strongest winds occur in winter although gales occur less than 1 percent of the time, even in midwinter. Winds of 17 to 28 knots occur 6 to 10 percent of the time from December through March and less than 5 percent of the time during July, August and September. Extreme winds have reached 60 knots, with gusts of more than 70 knots; these are most likely during fall or winter.

(543) Dense fog is common in winter, infrequent during spring and fall and rare in summer. It is a radiation type fog that occurs during the late night and early morning hours. It usually clears by noon. Occasionally stagnant weather conditions will cause the fog to hang on for a few days. Visibilities at Sacramento drop below 0.5 mile (0.9 km) on about 5 to 10 nights per month, from November through February. During this same period, they fall below 7 miles (13 km) on about 10 to 20 occasions per month. During the summer, visibilities are almost always better than 7 miles (13 km). Twenty-two out of 31 days during each month, December and January, can expect fog. This number drops to less than one day for both June and July.

(544)

Routes

(545) The deep-draft channel to the Port of Sacramento through Sacramento River Deep Water Ship Channel is marked with navigational aids.

(546) The shallow-draft route continues in Sacramento River from 1.5 miles above the Rio Vista Lift Bridge to Sacramento, and for the most part is marked by leading lights.

(547) From Ida Island for a distance of 3.5 miles upstream there are shifting shoals. After passing Ida Island work gradually over to the west half of the channel and favor that side around the next bend. From this point to Clarksburg the channel is clear, and midchannel courses may be followed favoring the falling tide bends. At Clarksburg favor the east shore a little until just past the town, then swing into midchannel again. From just below Freeport the channel is rather shoal and wing dams have been built at several places to scour out the channel. These are covered at high-water stages and may be struck if the shore is approached too closely. By favoring the ebbtide bends no trouble should be encountered from here to Sacramento.

(548) **NOTE:** Care should be exercised at all times to keep clear of the levees, as most of them are faced with rock that may damage vessels that drag along them.

(549)

Pilotage, Sacramento River

(550) River pilots, commissioned by the Port of Sacramento, are arranged for by the ship's agents but may be obtained through the office of the port of Sacramento or the San Francisco Bar Pilots.

(551)

Towage

(552) Tugs up to 1,500 hp are available.

(553)

ENCs - US5CA46M, US4CA46M
Chart - 18661

(554) **Rio Vista**, on the northwest bank, 10.5 miles above the mouth of the Sacramento River, is commercially the most important town below Sacramento. The **Rio Vista Coast Guard Station** is just south of the town. A small-craft harbor on the south side of the town has gasoline, diesel fuel, water and berths available. A 20-ton lift here can handle craft up to 40 feet for hull and engine repairs. A large dredging facility is on the northwest side of the river just north of the Rio Vista Bridge.

(555) **Ida Island**, on the south bank 13.5 miles above the mouth of the river, is the site of a resort and small-boat

basin. Gasoline, water and moorage are available. A full marine service with marine railway can handle vessels up to 40 feet.

(556) **Isleton**, on the south bank 15 miles above the mouth of the river, has a 140-foot public landing. Gasoline, diesel fuel and some supplies are available in town. A large grain elevator is on the southeast side of the river, 0.75 mile above Isleton.

(557)

ENC - US5CA47M
Chart - 18662

(558) **Walnut Grove**, 24 miles above the mouth of Sacramento River, is at the junction with Georgiana Slough. Public landings are on the southeast and northwest bank of the river at Walnut Grove. Moderate quantities of gasoline, diesel, marine supplies, ice and food may be obtained in town only. **Delta Cross Channel** just north of Walnut Grove is used by small vessels transiting between Sacramento River and Snodgrass Slough when the control gates are open. A wharf with a large wooden boat storage shed is on the east side of the river and can provide gasoline, a pump out station and a boat hoist. A **measured nautical mile** along the northeast side of the river begins 1.2 miles above Walnut Grove.

(559) **Courtland**, 31 miles above the mouth of the river, has a U.S. Post Office and supplies in moderate quantities; oil, water and ice are available in town; it is reported that gasoline is not available.

(560) At **Clarksburg**, 37.5 miles above the mouth of the river, there are two abandoned oil company landings.

(561) **Freeport**, 41.5 miles above the mouth of the river, has gasoline. A water intake facility at 38°28'21"N., 121°30'24"W. is marked by four private white lights.

(562) A paved highway between Antioch and Sacramento runs along the levee of the river for nearly its entire distance.

(563) **Sacramento**, the State capital, is the head of navigation for most of the shipping on the river and is a distribution and transportation center for north California and parts of Nevada and Oregon. The **Port of Sacramento**, 79 miles above the Golden Gate Bridge and at the head of the deepwater channel, is an important point for interchange of cargo between rail, highway and water transportation. The port has a 124-metric-ton capacity mobile harbor crane that will handle container cargo.

(564)

Weather, Sacramento

(565) The lower Sacramento Valley, where Sacramento is located, enjoys a mild climate and abundance of sunshine throughout the year. Cloudless skies prevail during the summer and largely in the spring and autumn. The summers are remarkably dry, with warm days and pleasant nights. In the winter "rainy season" (December, January, and February) over one-half of the total annual precipitation falls, yet rain in measurable amounts occurs only on about 10 days monthly during winter. Snow is rare since freezing temperatures are rare, with trace amounts falling several times and measurable snowfall having fallen on only one occasion, two inches (51 mm) in February 1976. Mountains surround the valley to the west, north and east. The Sierra Nevada snow fields are only 70 miles east of Sacramento and usually provide a plentiful supply of water in the valley streams during the dry season. Because of the shielding influence of the high mountains around the valley, winter storms reach valley districts in modified form. However, torrential rain and heavy snow frequently fall on the western Sierra slopes, the southern Cascades and to a lesser extent the Coastal Range. As a result, flood conditions occasionally occur along the Sacramento River and its tributaries. Excessive rainfall and damaging windstorms are rare in the valley. The average annual precipitation for the Sacramento Airport is about 17.5 inches (445 mm), with about 90% of this amount falling from November through April.

(566) Prevailing winds at Sacramento are south all year, due to the north-south direction of the valley and the deflecting effect of the towering Sierra Ranges on the prevailing oceanic winds that move through the Carquinez Strait at the junction of the Sacramento and San Joaquin Rivers. No other tidewater gap exists in the coastal mountains to admit marine air into the Sacramento or the San Joaquin Valley. Occasionally a steep northerly barometric pressure gradient develops and air is forced over the Siskiyou Mountains to the north, warmed dynamically with descent, and reaches the valley floor as a warm, dry, north wind. These occasionally disagreeable winds, known as "northers" in the valley, are the counterpart of the well-known "chinook" winds of the Rocky Mountains, and they, or modifications of them, produce the pronounced heat waves in summer. Fortunately, they are of infrequent occurrence and produce an unstable atmospheric condition that is usually followed within 2 or 3 days by the normally cool south breezes, especially at night. Summer nights in the lower Sacramento Valley are, with few exceptions, cool and invigorating, the result of a prevailing oceanic influence. While it is true that "northers" cause dry, hot weather for brief periods during the summer, it is equally true they are the modifications of cold waves in the winter. Winter northers, with only a few exceptions, are comparatively warm, drying winds. The average annual temperature for Sacramento is 61°F (16.1°C) with an average maximum of 74°F (23.3°C) and an average minimum of 48°F (8.9°C). The all-time maximum occurred in June 1961 when the mercury climbed to 115°F (46.1°C). The all-time minimum of 18°F (-7.8°C) was recorded in December 1990. Each month, May through October, has seen temperatures in excess of 100°F (37.8°C) while every month, November through April, has recorded temperatures at or below freezing (0°C).

(567) The average annual thunderstorm occurrence is three. They are usually mild and are most likely in February and March. However, they have been documented in each of the twelve months. Snow falls so rarely, and in such

(582)

Facilities in the Port of Sacramento

Name	Location	Berthing Space	Depths*	Deck Height	Mechanical Handling Facilities and Storage	Purpose	Owned/Operated
Port of Sacramento Berth 8	38°33'56"N., 121°33'04"W.	840	35	19	• Covered storage (308,000 square feet) • Open storage (27.3 acres)	Shipment of miscellaneous dry bulk commodities	Port of Sacramento
Port of Sacramento Berth 7	38°33'53N., 121°32'58"W.	840	35	19	Covered storage (86,400 square feet)	Receipt and shipment of general cargo	Port of Sacramento
Port of Sacramento Berth 6	38°33'50"N., 121°32'54"W.	600	35	19	Open storage (6 acres)	Receipt and shipment of general cargo and miscellaneous dry bulk	Port of Sacramento
Port of Sacramento Berth 5	38°33'46"N., 121°32'48"W.	600	35	19	• Silo storage (1.2 million bushels) • Vessel loading spouts	Shipment of grain, feed pellets, miscellaneous dry and liquid bulk	Port of Sacramento/ Cargill, Inc.
Port of Sacramento Berth 2	38°33'42"N., 121°32'38"W.	600	35	19	Covered storage (86,400 square feet)	Receipt and shipment of general cargo	Port of Sacramento
Port of Sacramento Berth 1	38°33'42"N., 121°32'31"W.	613	35	19	• Silo storage (21,500 tons) • Vessel loading spouts	Receipt and shipment of bulk rice	Port of Sacramento

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.

small amounts, that its occurrence may be disregarded as a climatic feature. Heavy fog occurs mostly in midwinter, rarely in summer, and seldom in spring or autumn. Light and moderate fog are more frequent and may come anytime during the wet, cold season. The fog is usually the radiational cooling type, and confined to the early morning hours. An occasional winter fog, under stagnant atmospheric conditions, may continue for several days.

(568)

Pilotage, Sacramento

(569) See Pilotage, Sacramento River, indexed as such, earlier in this chapter.

(570)

Towage

(571) Tugs up to 1,500 hp are available.

(572)

Quarantine, customs, immigration and agricultural quarantine

(573) Sacramento is a port of entry. (See Vessel Arrival Inspections, chapter 3.)

(574) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(575)

Coast Guard

(576) **Sacramento Coast Guard Air Station** is northeast of Sacramento at McClellan Air Force Base.

(577)

Harbor regulations

(578) Copies of the harbor regulations are available from the Port of Sacramento located at 1110 West Capital Avenue, West Sacramento, CA 95691.

(579) The port radio station KPB-386 VHF-FM channel 18A is monitored 24 hours a day.

(580)

Wharves

(581) The deepwater facilities of the Port of Sacramento consist of six berths, each of which has a berthing length of at least 600 feet with a deck height of 19 feet and reported depths alongside of 35 feet. All berths are served by railroad and highway connections, and all berths have water and electrical shore power connections. General cargo at the port is usually handled by ship's tackle; mechanical handling equipment, if available, is mentioned in the facilities table. All of these facilities are owned and most are operated by the Sacramento-Yolo Port District.

(583)

Supplies

(584) Provisions are available in any quantity. Some marine supplies may be obtained. Fuel oil may be obtained by tank truck or barge. Ships do not normally take on fuel or provisions in Sacramento.

(585)

Repairs

(586) There are no repair facilities for large oceangoing vessels in Sacramento; the nearest shipyards with large drydocks are at Richmond, Oakland, Alameda and San Francisco.

(587)

Small-craft facilities

(588) There are several small-craft facilities along the Sacramento River at Sacramento. Mariners are advised that there are no facilities serving small craft along the Sacramento Deep Water Ship Channel and at the Port of Sacramento. Once at the head of navigation on the channel, there is no way to pass through the locks to the Sacramento River.

(589)

Communications

(590) Sacramento is served by four railroads, several highways and two airports.

(591)

ENC - US5CA49M
Chart - 18664

(592) Above Sacramento the prevailing flood conditions are as follows: At Verona at the junction of Feather River, 70 miles above the mouth, 20 feet at ordinary floods and 24 feet at extreme floods; at Colusa, 125 miles above the mouth, 25 feet at ordinary floods and 32 feet at extreme floods.

(593) Between Sacramento and Colusa are numerous warehouses and small landings.

(594) **Feather River** rises in the Sierra Nevada and empties into Sacramento River at **Verona**, 18 miles above Sacramento. The river has been improved by snagging and the construction of wing dams at **Marysville**, 26 miles above the mouth. The controlling depth is usually 3 feet from about February 15 to June 15. Ordinary flood fluctuation is 20 feet, and extreme flood fluctuation is about 25 feet. With the exception of several small privately owned landings, all loading is handled on the banks. There has been no commercial navigation on the Feather River in recent years.

(595)

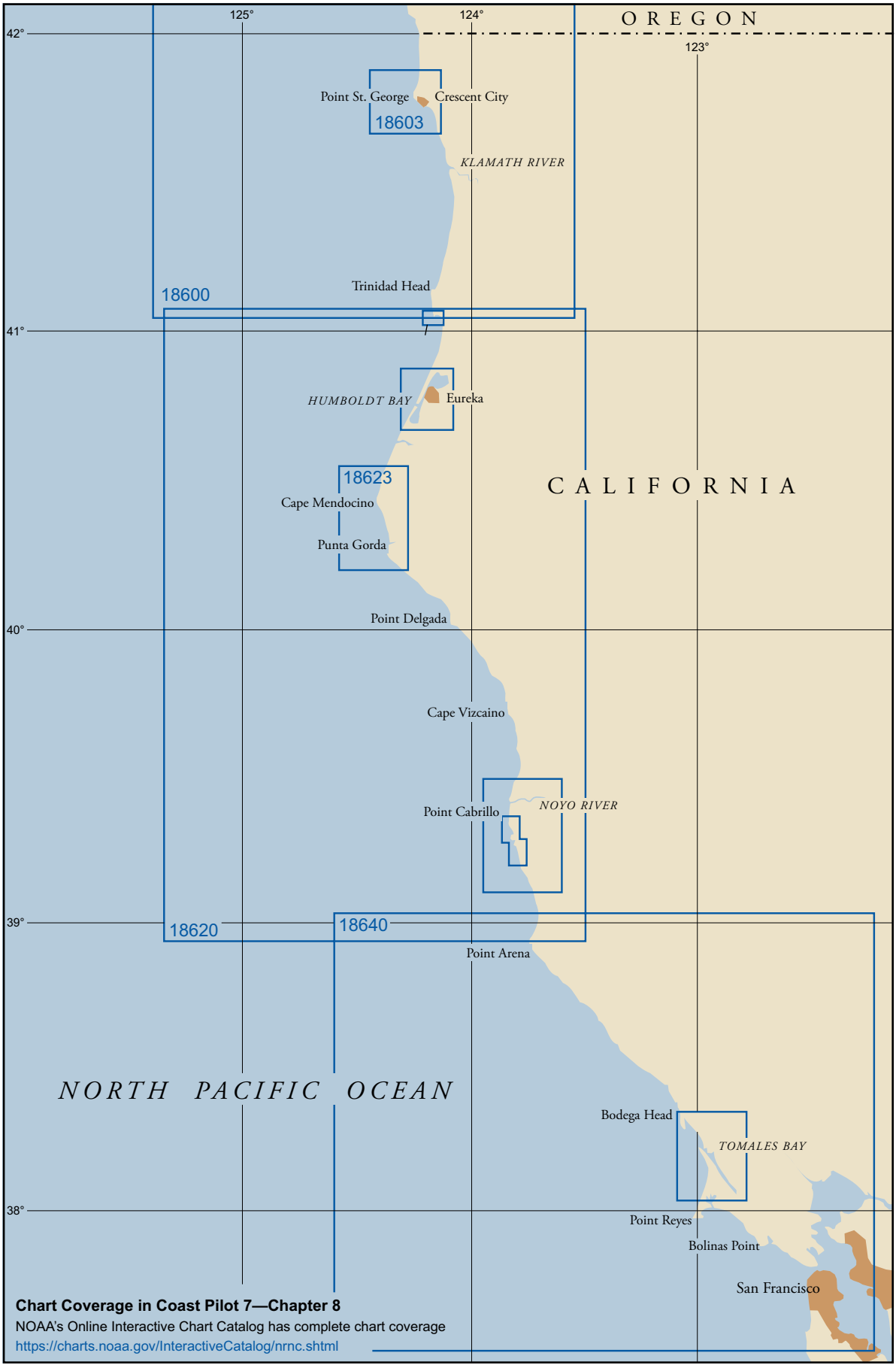
Lake Tahoe

(596) **Lake Tahoe** (39°06'N., 120°00'W.), California-Nevada, is a recreation area almost surrounded by Tahoe, Toiyabe and Eldorado National Forests. **Restricted areas** established by federal regulations are given in **33 CFR 162.210** and **162.215**, chapter 2. Lake Tahoe is to be navigated by leaving all white buoys with orange bands to starboard when transiting in a counterclockwise direction; safe water will always be found toward the center of the lake from these buoys. Information about facilities may be obtained from one of the local offices of the Forest Service, U.S. Department of Agriculture.

(597)

Coast Guard

(598) **Lake Tahoe Coast Guard Station** is on the west shore of the lake about 1.2 miles northeast of Tahoe City.


125°
124°
123°
42°
41°
40°
39°
38°
OREGON
CALIFORNIA
NORTH PACIFIC OCEAN
Point St. George
Crescent City
18603
KLAMATH RIVER
Trinidad Head
18600
HUMBOLDT BAY
Eureka
18623
Cape Mendocino
Punta Gorda
Point Delgada
Cape Vizcaino
Point Cabrillo
NOYO RIVER
18620
18640
Point Arena
Bodega Head
TOMALES BAY
Point Reyes
Bolinas Point
San Francisco
Chart Coverage in Coast Pilot 7—Chapter 8
NOAA's Online Interactive Chart Catalog has complete chart coverage
https://charts.noaa.gov/InteractiveCatalog/nrnc.shtml

San Francisco Bay to Point St. George, California

(1)

ENC - US2WC06M
Chart - 18010

(2) This chapter describes Bodega Bay, Tomales Bay, Noyo River and Anchorage, Shelter Cove, Humboldt Bay and numerous other small coves and bays. The only deep-draft harbor is Humboldt Bay, which has the largest city along this section of the coast, Eureka. The other important places, all for small craft, are Bodega Harbor, Noyo River, Shelter Cove and Crescent City Harbor. The coast is rugged and often mountainous, with many detached rocks. The principal dangers, all marked, are Blunts Reef, Redding Rock and St. George Reef.

(3)

COLREGS Demarcation Lines

(4) The lines established for this part of the coast are described in **33 CFR 80.1144** through **80.1152**, chapter 2.

(5)

Blue, fin and humpback whales

(6) All whales are protected under the Marine Mammal Protection Act (MMPA) and, when in Sanctuary waters, under the National Marine Sanctuaries Act (NMSA). Certain large whales, including blue, fin and humpback whales, are also listed as endangered under the Endangered Species Act (ESA). See chapter 3 for more information.

(7)

Weather, San Francisco Bay to Point St. George

(8) Winter storms and a strong spring pressure gradient between the subtropical high and the Aleutian Low make these two seasons very windy. Speeds of 20 to 30 knots occur 15 to 20 percent of the time. Gales occur about 5 percent of the time off Point Arena and north of Cape Mendocino. Fronts and storms cause varying wind directions, but since many lows pass well offshore and to the north, winds are often out of a southerly direction. Strong winds inhibit radiation or winter fog formation. It is most likely south of Eureka in the early morning after a night of clear skies and light winds. At times, this type of fog can plague Humboldt Bay. South winds help keep winter temperatures mild for these latitudes. Daytime highs in the mid-fifties (11.7° to 13.9°C) and nighttime lows around 40°F (4.4°C) are common; this compares with highs in the upper thirties (3° to 4°C) and lows in the mid-twenties (-5° to -2.8°C) along the East Coast. The storms that pass near or through the area make winter the rainy season. December through January is the height of the season, and precipitation of 0.1 inch (2.54 mm) or more can be expected on about 10 to 11 days per month south of Cape Mendocino and on up to 20 days to the north. Snow falls occasionally along this north coast.

(9) Winds in spring are more variable than in winter, as the subtropical high builds and the Aleutian Low shrinks. The change takes place gradually from north to south. Northwest through north winds become more common while south winds are not quite so prevalent. With the decrease in storm activity, rain falls on only about 6 or 7 days per month. Temperatures rise by about 4° or 5°F (-15.6° or -15.0°C) over winter averages by April. Visibilities are at their best during March and April. The pressure gradient keeps strong winds frequent.

(10) By summer, the high has taken control along this coast. However, south winds continue to occur frequently in the north. Northwest through north winds are most common and are reinforced by the sea breeze. Wind speeds of 20 to 30 knots occur 10 to 20 percent of the time, attesting to this reinforcement. They are most likely north of Cape Mendocino, where gales occur 5 to 10 percent of the time. These speeds do not inhibit the formation of advection fog, which plagues the area from July through September. Visibilities drop below 1 mile (2 km) on about 10 to 15 days per month south of Point Delagada and 5 to 10 days per month to the north. Sound signals fill the air 30 to 50 percent of the time during August, which is the worst month. At coastal stations, visibilities drop below 0.5 mile (0.9 km) on 10 to 20 days per month. Fog is particularly dangerous in shoal-ridden Humboldt Bay. Point Reyes and Point Arena are the foggiest spots, while Point St. George appears to be the least foggy. Fog and low stratus often blanket the waters around Point Reyes for weeks at a time, permitting little sunshine. As a result, Point Reyes has close to the lowest average midsummer temperature of any observing site in the United States. In general along the coast, daytime temperatures average in the low to midsixties (16.7° to 19.4°C), while nighttime lows drop into the low fifties (11° to 12° C). This compares with an average July high of 85°F (29°C) and a low of 67° F (19°C) in New York. Rain is of little concern.

(11) Autumn brings a gradual return to winter conditions. Fog becomes less frequent. This is a gradual change in sheltered regions like Humboldt Bay, where radiation fog is likely. Temperatures fall off by 2° or 3°F (-17.2° or -16.7°C) on the average by October. Winds become a mix of south and north, with north gaining the edge, as fall turns toward winter. Gales are infrequent, and winds blow 20 to 30 knots 10 to 15 percent of the time.

(12)

ENC - US3CA14M
Chart - 18640

(13) From Point Reyes, the coast trends in a general north direction for 10 miles as a broad white sand beach backed by high grassy sand dunes, and then curves northwest for 6 miles in high yellow cliffs, terminating in **Tomales Point**. The large white building at the radio station, 7 miles northeast of Point Reyes, is prominent.

(14) The **Greater Farallones National Marine Sanctuary** has been established to protect and preserve the natural, cultural and historical resources in the waters surrounding the Farallon Islands, including offshore of the Marin and Sonoma county coasts to Bodega Head. The sanctuary boundary includes the estuarine waters of Bolinas Lagoon, Tomales Bay, Estero Americano, Estero de San Antonio and Bodega Bay but not Bodega Harbor. Visitor use is encouraged for boating, diving, snorkeling, fishing, swimming, kayaking and wildlife viewing. (See **15 CFR 922.80** through **922.85**, chapter 2, for limits and regulations.)

(15) **Bodega Bay**, a broad opening between Tomales Point and Bodega Head, affords shelter from northwest weather at its north end but is dangerous in south or west weather. The summit of **Bodega Head** is rounding and grassy, with steep rocky cliffs on the south and west ends. Low **Bodega Rock** and foul ground extend from 0.2 to 0.7 mile southeast of the south face of Bodega Head.

(16) **Bodega Marine Life Refuge** is just north of Bodega Head. Its sea perimeter begins at 38°18'40"N., 123°04'04"W. and extends offshore around **Mussel Point** to 38°19'23"N., 123°04'22"W. The refuge extends from the shoreline, at the line of mean high water (tide), a distance of 1,000 feet offshore. Within these perimeters all marine plants and invertebrates are protected. Established by an act of the California legislature in 1965, the refuge is managed by the University of California at Davis.

(17) **University of California Bodega Marine Laboratory**is on **Horseshoe Cove** about 1.3 miles northwest of Bodega Head Light. Two large white buildings at the site are reported to be prominent and lighted at night.

(18) **Bodega Head Light** (38°18'01"N., 123°03'14"W.), 110 feet above the water, is shown from a post with a red and white diamond-shaped daymark on the southeast end of Bodega Head.

(19) Lighted buoys mark the entrance to Bodega Bay.

(20)

Danger

(21) In good weather small boats having local knowledge sometimes use the passage between Bodega Head and Bodega Rock. The passage is unsafe whenever breakers from heavy ground swells reduce the width of the passage. Large breaking waves can occur inside the 30-foot depth contour line northwest and southwest of Bodega Rock. The safest part of the passage between Bodega Head and Bodega Rock is along the deeper part of the passage. When the width of the passage is reduced by breakers, mariners entering Bodega Bay should pass south of Bodega Harbor Approach Lighted Gong Buoy BA.

(22)

COLREGS Demarcation Lines

(23) The lines established for Bodega and Tomales Bays are described in **33 CFR 80.1144**, chapter 2.

(24) **Tomales Bay** enters the south part of Bodega Bay east of Tomales Point and extends southeast for 12 miles with an average width of 0.5 mile. The channel with depths of 3 to over 10 feet is marked by buoys and daybeacons for about 4 miles to deeper water inside the bay. The shoals and channels within the bay are subject to continual change, local knowledge is advised. An unmarked rock covered 10 feet is near the center of the bay, 0.8 mile southeast of Pelican Point in about 38°10'47"N., 122°55'08"W. In 2006, a partially submerged metal pipe was reported near the entrance to Tomales Bay in about 38°14'21"N., 122°59'09"W. Mariners are advised to transit the area with caution.

(25) **The entrance bar is dangerous and should not be attempted by strangers**. A 6-knot current may be encountered on a spring tide at the entrance to the bay. The shallow area on the entrance bar frequently becomes rough, and it is reported that the sudden appearance of breakers in a calm sea is common. Because such waves appear with little warning, they are called "sneaker waves." These waves occur primarily during the ebb tide, but the entire bar area can become rough owing to strong afternoon winds. Boatmen should plan to leave the area before the tide turns or be prepared to remain outside until the rough water subsides or to go to another harbor such as Bodega.

(26) Fish, clams, mussels and oysters are taken from Tomales Bay by commercial and sport fishermen. Oyster farms occupy large sections of tide flats south of Toms Point. A small-craft facility on the bay can make hull and engine repairs and is equipped with a travel lift and a crane, each capable of handling craft up to 15 tons. Long piers used by sport fishermen extend out into the bay at several places. Berths with electricity, gasoline, water, ice, winter boat storage, marine supplies and launching ramps are available.

(27) Tomales Bay is part of the Greater Farallones National Marine Sanctuary.

(28) **Bodega Harbor**, in the north part of Bodega Bay, is an important commercial fishing base and, in season, an active sports fishing and recreation harbor. During salmon season more than 500 fishing craft either anchor just outside in the shelter of the north part of the bay or dock at the numerous marinas inside the harbor.

(29) A dredged channel leads from Bodega Bay to facilities along the north and northeast sides of the harbor at the town of Bodega Bay. The channel has a turning basin just inside the entrance, at the north end

(37)

METEOROLOGICAL TABLE – COASTAL AREA OFF POINT ARENA, CA
Between 38°N to 40°N and 122°W to 127°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	3.6	3.1	3.3	4.1	6.1	4.8	4.0	2.4	2.6	2.8	2.6	3.4	3.6
Wave Height > 9 feet [1]	9.8	9.8	10.3	12.6	15.3	11.1	11.2	8.1	7.6	60	7.4	9.1	10.1
Visibility < 2 nautical miles [1]	8.0	8.6	5.7	4.1	5.2	7.0	9.4	10.0	11.8	9.7	9.4	10.4	8.2
Precipitation [1]	11.1	10.5	9.4	5.6	3.2	2.3	1.8	1.6	2.0	4.4	9.0	12.0	5.6
Temperature > 69° F	0.2	0.1	1.0	0.3	1.2	2.4	2.3	3.8	3.1	1.6	0.7	0.1	1.5
Mean Temperature (°F)	52.3	52.9	53.6	53.6	55.3	57.4	59.1	60.4	60.5	58.9	56.2	53.5	56.4
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 (%)	82	81	80	80	82	84	85	85	85	85	82	82	83
Overcast or Obscured [1]	33.6	34.2	29.5	25.1	26.3	31.2	39.2	38.6	34.2	29.0	31.4	34.9	32.3
Mean Cloud Cover (8ths)	5.0	5.0	4.7	4.4	4.2	4.3	4.7	4.6	4.3	4.2	4.6	5.0	4.6
Mean SLP (mbs)	1019	1019	1018	1018	1017	1016	1016	1015	1015	1017	1019	1019	1017
Ext. Max. SLP (mbs)	1047	1036	1041	1043	1043	1042	1035	1030	1030	1033	1041	1051	1051
Ext. Min. SLP (mbs)	985	984	982	994	993	996	998	997	1000	995	985	991	982
Prevailing Wind Direction	N	NW	NW	NW	NW	NW	NW	NW	NW	NW	N	N	NW
Thunder and Lightning [1]	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.1	0.3	0.2

[1] Percentage Frequency

of the harbor and along the northeast side of the harbor. (See Notice to Mariners and latest editions of charts for controlling depths.) The entrance is protected by jetties—the south jetty is marked by a light and a sound signal. The channel inside is marked by daybeacons, lights and a lighted range.

(30) Transient berths with electricity, gasoline, diesel fuel, ice, water and some marine supplies and provisions can be obtained in the harbor. The marina at Spud Point on the west side of the harbor has the largest lift in the area, which can handle boats up to 20 tons. Hull, engine and electronic repairs; launching ramps and winter dry and wet storage are available in the harbor. A channel marked by private buoys and a light leads from the main channel just southwest of the outer turning basin to a marina at the northwest side of the harbor.

(31)

Coast Guard

(32) **Bodega Bay Coast Guard Station** is on the east side of the channel, 0.8 mile above the entrance.

(33)

ENC - US3CA14M
Chart - 18640

(34) The coast from Bodega Head for 52 miles to Point Arena trends in a general northwest direction. There are some dangers, but they do not extend over a mile offshore, and in thick weather the 30-fathom curve may be followed with safety. In the summer the rocks are generally marked by kelp, which extends in some cases to the 10-fathom curve, but during the winter gales much of the kelp is torn away.

(35) In clear weather the mountains may be readily seen and at times are visible when the lower land is shut in by haze or fog. In thick weather soundings should be taken frequently, as the currents are extremely irregular both in direction and velocity.

(36) Protection from the prevailing northwest winds of summer may be had at several places, but there is no shelter from the winter winds, which are usually accompanied by a heavy west swell.

(38) North of Bodega Head, the cliffs are about 200 feet high for 2 miles and then are succeeded by a broad sand beach 2 miles long backed by sand dunes 120 feet high. From this point the coast north consists of abrupt rocky cliffs, broken by gulches, to the mouth of the Russian River, 10 miles north of Bodega Head.

(39) Numerous rocks, 20 to 130 feet high, are within 0.3 miles of the shore, but some extend as much as a mile offshore. **Gull Rock**, 100 feet high, is 1.7 miles southeast of the mouth of Russian River and 0.3 mile offshore. About 0.5 mile northwest of Gull Rock and 400 yards offshore is a large arched rock, 85 feet high, with a flat top. This is the largest arched rock on this part of the coast.

(40) **Duncans Landing**, 6 miles north of Bodega Head, is a fair small-boat landing in northwest weather.

(41) The spit making out from the south point of **Russian River** has been partially reinforced by a short rock jetty, but the mouth of the river is closed by a shallow bar. The bold sharp point immediately to the south of the river appears as an island from the south; it is connected to the mainland by a roadway. Many summer resorts are on the shores of Russian River; at the settlement of **Jenner** there is a landing. Gasoline and water can be obtained nearby.

(42) **Ross Mountain**, 3 miles inland and north of Russian River, is the highest knob on the ridge. A few clusters of trees are near its summit; the slopes are bare of trees and the gulches are wooded.

(43) From Russian River for 6.5 miles to Fort Ross Cove, the coast is high, consisting of bare steep spurs from Ross Mountain. **Sunken Reef** extends 0.8 mile from shore 4.5 miles northwest of Russian River.

(44) **Fort Ross Reef**, 5.7 miles northwest of Russian River and nearly 1 mile southeast of Fort Ross Cove, consists of pinnacle rocks 35 feet high, 600 yards offshore, and connected with the beach by a reef that is partially marked by kelp.

(45) **Fort Ross Cove**, 15.5 miles north of Bodega Head and 33 miles north of Point Reyes, affords good shelter in northwest weather. The holding ground is poor, and the anchorage is constricted by a rock that uncovers in the middle of the cove and a rock about 50 yards north of it that is covered 14 feet. The cove is divided into two bights, the west one being slightly the larger. The anchorage is suitable for small vessels only and if used by strangers should be entered with caution.

(46) **Fort Ross** was first settled by the Russians in 1812, and the old Russian church is still standing. The buildings have been restored, and the area is now a State Historical Monument. There are no landing facilities.

(47) From Fort Ross Cove the coast extends northwest and is nearly straight. It is bold and wooded to the crests of the hills, which closely approach the coast, and is cut by numerous gulches and bordered by many inshore rocks. The 30-fathom curve is at an average distance of 0.7 mile offshore from Fort Ross Cove for 20 miles to near Gualala River.

(48) **Salt Point**, 5 miles north of Fort Ross Cove, is 35 feet high, very rocky and bare of trees; it is bordered by outlying rocks for 200 yards. The 30-fathom curve is less than 0.5 mile off this point.

(49) **Fisk Mill Cove**, 2.5 miles north of Salt Point, affords fair shelter for small vessels in northwest weather. The bottom is rocky, but there are no hidden dangers.

(50) **Horseshoe Point**, 3 miles north of Salt Point, is a cliff 180 feet high, with a depression of 60 feet immediately behind it. It is bare of trees and the summit is marked by several projecting rocks.

(51) From Horseshoe Point the coast trends northwest for 12.5 miles to Gualala River and consists of cliffs, about 60 feet high, bordered by numerous outlying rocks. The tree line is from 0.1 to 0.5 mile back from the edge of the cliffs.

(52) **Fisherman Bay**, 26.5 miles northwest of Bodega Head, is a fair shelter for small craft in northwest weather. There are two covered rocks marked by kelp 350 yards off the south point of the bay. There is a general store at the village of **Stewarts Point** on the north side of the bay.

(53) **Gualala Point**, 16 miles southeast of Point Arena and 1 mile south of Gualala River, is 42 feet high, about 300 yards offshore, and connected with the bluff by a rocky reef covered with sand. Sand dunes extend behind the bluff for 600 yards.

(54)

Local magnetic disturbance

(55) Differences of as much as 8° from normal variation have been reported near Gualala Point and a difference of as much as 4° near Saunders Reef.

(56) **Gualala River** intersects the coast 15 miles southeast of Point Arena. A long sand beach extends a mile south from the mouth. The white hotel building at **Gualala** can be seen from the west and southwest.

(57) **Robinson Reef** lies north of the mouth of Gualala River and 1.1 miles north of Gualala Point. It consists of a cluster of 25 or more visible rocks about 600 yards offshore, with a covered rock 70 yards west-northwest of the outer rock.

(58) **Havens Anchorage**, 12 miles southeast of Point Arena and 4 miles northwest of Gualala Point, offers shelter for small vessels from the prevailing northwest winds south of Fish Rocks. The cove is constricted by rocks and ledges extending 250 yards southeast from the west head. Strangers should approach the anchorage with caution. During the summer the anchorage is used extensively by fishing boats in northwest weather.

(59) **Fish Rocks**, two rocky islets 4.2 miles northwest of Gualala Point, are connected at low water with the shore and surrounded by numerous smaller rocks. The outer rock is 150 feet high and the inner 100 feet high and 100 yards offshore. A rock 40 feet high lies 175 yards southeast of the outer rock.

(60) **Havens Neck**, 145 feet high and prominent, is 0.6 mile northwest of Fish Rocks. It is bare of trees and connected with the bluffs by a narrow neck.

(61) **Gualala Mountain**, 5 miles inland northeast of Havens Neck, is heavily wooded and prominent in clear weather. **Sail Rock**, 44 feet high, is a sharp, pyramidal rock 800 yards offshore, 2.8 miles northwest of Fish Rocks. From off Point Arena it resembles a small vessel under sail. **Saunders Reef**, 4.5 miles northwest of Fish Rocks, is 0.5 mile offshore. It shows several rocks that uncover and is well marked by kelp. Foul ground extends between it and the shore.

(62) **Arena Cove**, 2.5 miles southeast of Point Arena, is a slight indentation affording shelter to small vessels in northwest weather. The south head is a high yellow cliff that under favorable circumstances is visible for a considerable distance. A wharf is at the head of the cove. A 3-ton hoist is on the wharf; gasoline, diesel fuel and water are available. Some groceries may be had. A white lookout tower with a red roof on a steel structure is prominent. A lighted bell buoy is 0.6 mile southwest from the end of the wharf. To enter, make the lighted bell buoy, then bring the end of the wharf to bear **074°** and stand in on this course. This leads about 150 feet south of a rock covered 16 feet that lies 300 yards 264° from the end of the wharf. In thick weather during the summer in approaching the cove from north or south, the edge of the kelp may be followed, which will lead to within 300 yards of the lighted bell buoy. The town of **Point Arena** is on the highway 1 mile east of the landing.

(63) A breaker is reported in a heavy southwest swell 0.8 mile west-southwest of the north point of Arena Cove, and scattered kelp extends almost out to that position.

(64) **Point Arena**, 68 miles northwest of Point Reyes, consists of a long level plateau, diminishing in height to

the end of the 60-foot-high point. It is the first prominent point north of Point Reyes. The point is bare of trees for about a mile from the shore.

(65) **Point Arena Light** (38°57'17"N., 123°44'26"W.), 155 feet above the water, is shown from a 115-foot white cylindrical tower with black gallery at the extremity of the point. A reef that usually shows breakers extends about 0.6 mile northwest from the extremity of the point.

(66) **Arena Rock**, 1.4 miles north of Point Arena Light, is covered 13 feet and shows a breaker except in very smooth weather. A covered rock that rises abruptly from deep water and breaks only in heavy weather is 200 yards north of Arena Rock.

(67)

Caution

(68) Vessels approaching Point Arena from north in thick weather are advised to keep outside the 40-fathom curve because Arena Rock is only 0.8 mile inside the 30-fathom curve and shoaling near it is abrupt.

(69)

ENCs - US5CA15M, US3CA15M
Chart - 18620

(70) From Point Arena the coast extends in a general north-northwest direction for 50 miles and then trends northwest for nearly 35 miles to Punta Gorda, thence north-northwest for 10 miles to Cape Mendocino. The south portion is less bold and rugged than the north portion, and the mountains are neither as high nor as close to the coast. The dangers are all included within the 30-fathom curve, and except for Blunts Reef and the other reefs in the vicinity of Cape Mendocino do not extend more than a mile offshore. Several submarine valleys with depths greater than 50 fathoms come within 0.5 to 2 miles of the shore between Point Delgada and Cape Mendocino; the currents are irregular in this area.

(71) From Cape Mendocino to Trinidad Head, the coast trends in a north-northeast direction for 40 miles and, with the exception of the rocks off False Cape, the dangers are within 0.5 mile of the shore. The land is generally low with sandy beaches, broken by the mouths of the Eel and Mad Rivers and the entrance to Humboldt Bay. The only marked elevations north of False Cape are Table Bluff and Buhne Point.

(72) In clear weather the mountains are good landmarks and can frequently be seen when the lower land is obscured by fog or haze.

(73) Between Point Arena and Cuffeys Cove, protection from the prevailing northwest winds of summer may be had in a few places, but there is none from south or west.

(74) From Point Arena the cliffs of the point extend 0.5 mile northeast to the mouth of **Garcia River,** from which sand dunes and beaches extend north for 4 miles. Beyond this point for 40 miles to **Ten Mile River Beach** the coast is rugged, with high, bold cliffs bordered by numerous outlying rocks.

(75) **Elk Rock**, 8.5 miles north of Point Arena, is 95 feet high and 0.5 mile offshore.

(76)

Nose Rock to Navarro Head

(77) **Nose Rock**, 10.3 miles north of Point Arena and 0.7 mile offshore from Elk, is 24 feet high. **Casket Rock**, 700 yards northeast of Nose Rock, is the outermost of three large rocks west of a 150-foot cliff fronting the village of **Elk**.

(78) **Cuffeys Cove**, 11 miles north of Point Arena, is a small anchorage affording fair shelter in northwest winds. **Cuffeys Inlet**, just west of the cove, is an excellent anchorage for small boats in north and west weather. Caution is necessary to avoid the many covered and visible rocks in the approaches to the cove and inlet. A small kelp-covered rock that uncovers lies near the center of the entrance to the inlet. The cove is covered with patches of kelp during most of the year.

(79) From Cuffeys Cove for 3 miles to **Navarro River**, the coast consists of cliffs 200 feet high, bordered by outlying rocks. Although the mouth of the river is nearly always closed by a bar with only 1 or 2 feet of water over it, the entrance has fair shelter from northwest winds. **Navarro Head**, 405 feet high, is on the north bank of the river.

(80)

Salmon Point to Caspar

(81) **Salmon Point**, the south entrance point to **Whitesboro Cove**, 1.2 miles north of Navarro River, is a treeless cliff 109 feet high. Detached rocks extend west of the point for 0.2 mile, with **Bull Rock**, a covered ledge, usually showing a breaker 0.5 mile northwest of the extremity of the point. In a heavy swell, breakers show between it and the visible rocks off the point. Whitesboro Cove is rocky, exposed to northwest and west winds, and seldom used as an anchorage.

(82) **Albion Cove**, 16.5 miles north of Point Arena, affords good shelter in north weather. The south point at the entrance rises to a knoll 179 feet high; low rocks extend nearly 500 yards west of the point. The north point is a rocky islet 80 feet high lying close to the point that has the same elevation; both are bare. Small visible rocks lie 200 yards west of the islet, and covered rocks, showing breakers in a moderate swell, extend out more than 500 yards west-southwest from it. **Mooring Rock**, in about the middle of the cove, is 30 feet high, pyramidal in shape, and marked by a light and and a mariner-radio-activated sound signal, initiated by keying the microphone five times on VHF-FM channel 81A. Small rocks extend from Mooring Rock to the north shore. A lighted whistle buoy marks the entrance to the cove.

(83) The village of **Albion** is on both high banks of **Albion River**. Several small piers on the river serve the commercial and sport fishermen. Gasoline, diesel oil, water, ice, fishing supplies and a launching ramp are

available. The river is crossed by a fixed highway bridge that has a clearance of 118 feet, 0.1 mile above the mouth.

(84)

COLREGS Demarcation Lines

(85) The lines established for the Albion River are described in **33 CFR 80.1146**, chapter 2.

(86) Between Albion Cove and Colby Reef, breakers are seen in a heavy swell nearly 0.5 mile from shore; vessels should not approach closer than 1 mile.

(87) **Stillwell Point**, 1.6 miles north of Albion Cove, is a bold, sharp 190-foot cliff. A 141-foot-high rocky islet lies close inshore on its northwest side. A yellow slide is on the south face of Stillwell Point. **Colby Reef**, 0.5 mile offshore west of Stillwell Point, is a shoal rocky patch. Numerous other dangers are just inside the 20-fathom curve along this stretch of coast.

(88) **Little River**, 19 miles north of Point Arena, offers shelter in the entrance cove. The reefs and rocks surrounding the cove are well marked by kelp, and a heavy undertow is felt when in the vicinity of the rocks. The northwest shore of the cove is bluff, rocky, and bare of trees for over 0.5 mile. The entrance is marked by a bell buoy, but the channel narrows to 60 yards by covered rocks north of the inner visible rock. The beach area at Little River is a State Park.

(89) The 2-mile coast between Little River and Mendocino Bay is a broad tableland with a seaward face of cliffs, 40 to 60 feet high, bordered by numerous low rocks. The tree line is over 0.5 mile from the cliffs.

(90) **Mendocino Bay**, 21 miles north of Point Arena, affords fair shelter in northwest weather, but vessels are obliged to leave in south or west weather. In heavy southwest gales the sea breaks clear across the entrance. The south point at the entrance is a rocky, irregular cliff 100 feet high, bordered by numerous rocks extending 150 yards offshore. A knoll 156 feet high is 300 yards inshore from the point. A reef covered 3 fathoms extends 500 yards northwest of the outermost visible rock. This area should be avoided when there is any swell running. The north point is a broken cliff 60 feet high, bordered by numerous rocks close inshore. A whistle buoy marks the entrance to the bay.

(91) **Big River** enters in the northeast part of Mendocino Bay. The town of **Mendocino** is on the north shore of the bay. Water is available.

(92) **Russian Gulch**, 2 miles north of Mendocino, is a small cove occasionally used as an anchorage by small craft with local knowledge as it affords excellent protection. A State Park is at the head of the cove. The concrete arch highway bridge across Russian Gulch should show well from south to west. An important danger is a submerged rock 400 yards northwest of the south entrance point, surrounded by a reef covered 1¼ fathoms.

(93) **Point Cabrillo**, 3 miles north of the town of Mendocino and 24 miles north of Point Arena, is a flat-topped point 50 to 60 feet high terminating seaward in nearly vertical cliffs; numerous low rocks extend offshore over 200 yards, and the 30-fathom curve is barely 0.2 mile outside of them. The point is bare except for a few trees at the houses near the light.

(94) **Point Cabrillo Light** (39°20'55"N., 123°49'34"W.), 81 feet above the water, is shown from a 47-foot white octagonal frame tower on a dwelling on the point.

(95) From Point Cabrillo the coast trends north for 9 miles to Laguna Point as a nearly straight line of bluffs, with numerous rocks close under the cliffs. It is moderately high, partly wooded to the face of the cliffs and is broken by several indentations and small streams. The 30-fathom curve is an average distance of 1 mile from shore.

(96) **Caspar Anchorage**, a mile north of Point Cabrillo, is a small cove at the mouth of **Caspar Creek**. Fair shelter, except from west, is afforded, but the anchorage is constricted and seldom used. The village of **Caspar** is on the north bank of the creek near its mouth.

(97)

Noyo Anchorage to Bald Hill

(98) From Caspar Creek for 4 miles to Noyo Anchorage the coast consists of broken irregular cliffs, 40 to 60 feet high, with numerous rocks extending 400 yards offshore. These are fairly well fringed by kelp, especially in summer.

(99) **Noyo Anchorage**, 5 miles north of Point Cabrillo, affords fair shelter from north or south. The anchorage is limited to an area about 400 yards long and less than 200 yards wide, with depths of 3½ to 6½ fathoms. Buoys mark the entrance to the anchorage.

(100) **Noyo River** enters the east side of Noyo Anchorage. A jetty with a light and sound signal is on the north side of the entrance and a small jetty, with a light off the seaward end, is on the south side of the entrance. A dredged channel leads between the jetties to **Noyo Basin**, about 0.6 mile above the entrance—the basin has reported depths of 10 feet. The basin is protected by a breakwater that is marked on its outer end by a light. The river above the first sharp bend affords excellent protection for small boats. A fixed highway bridge with a clearance of 97 feet crosses the river about 300 yards east of the mouth. Overhead power cables crossing the river have a least clearance of 80 feet.

(101) **Hazardous bar conditions** are common at the entrance to Noyo River. Mariners should monitor VHF-FM channel 16 for safety broadcast/advisories concerning the Noyo River and are encouraged to contact the Coast Guard prior to transiting the entrance.

(102) The Coast Guard has established Noyo River Entrance Small Boat Warning Light on the north side of the river in about 39°25'40"N., 123°48'20"W. The light is equipped with two quick-flashing yellow lights that will be activated when seas exceed 8 feet in height and are considered hazardous for small boats. Mariners are cautioned that if the lights are not flashing, there is no guarantee that sea conditions are favorable.

(103) Caution is necessary in entering to avoid the reefs and a rock on the south side of the entrance. Heavy west or southwest swells form breakers at the entrance to the river; once inside there is good shelter. With west winds and seas, heavy surge is felt in the river as far as Noyo Basin.

(104)

COLREGS Demarcation Lines

(105) The lines established for the Noyo River are described in **33 CFR 80.1148**, chapter 2.

(106)

Coast Guard

(107) The Noyo River Coast Guard Station is located on the south bank of the river, just below Noyo Basin. The station monitors VHF-FM channel 16 or can be reached at 707–964–6612.

(108) A **Storm Warning Flag System** consisting of a series of square flags and triangular pennants will be displayed on a pole that is located on the southwest end of the Noyo River Coast Guard Station dock and will be visible to mariners from both directions. The flags will indicate that winds and/or sea conditions forecast for the area may pose a hazard to boaters. (See illustration; chapter 1.) Flags are flown at select Coast Guard stations to supplement other weather notification sources. Light signals corresponding to these flags are not displayed at night. In all cases, mariners should rely upon National Weather Service Broadcasts as their primary source of government provided weather information.

(109) The lower section of Noyo River is the principal commercial and sport fishing center of this section of the coast. Many fishing boats are based here. Most of the facilities extend along both banks of the river to about 0.5 mile above the entrance. Water and ice can be obtained at several fishhouses with wharves having depths from 4 to 8 feet alongside. Berths, gasoline, diesel fuel, water, ice, marine supplies and launching ramps are available at the facilities along the river and at Fort Bragg. Machine shops and marine railways can handle vessels up to 45 feet for hull and engine repairs. The phone number for the Noyo Basin Harbormaster is 707–964–4719.

(110) From Noyo River, for 0.7 mile to Fort Bragg, the coast consists of rocky cliffs, 40 to 60 feet high, bordered by rocks and sunken ledges extending 100 to 400 yards offshore.

(111) **Fort Bragg**, 30 miles north of Point Arena, is the largest coast town between San Francisco and Eureka. It is near the head of a cove formerly known as **Soldiers Harbor**. The former loading wharf has been removed; lumber is now shipped out by rail and truck. Groceries can be obtained and minor repairs made.

(112) The cove is constricted by the rocks and ledges extending from both the north and south, leaving only a limited area for small boats to anchor. A rocky reef, partly bare at high water, extends southwest from the north head and breaks the force of the swell from northwest. In west weather the cove is wide open. Since Noyo River gives better protection, the cove is seldom used.

(113) For 3 miles from Fort Bragg to Laguna Point, the coast is moderately low and rocky and cut by two small streams; the tree line is within 0.2 mile of the beach.

(114) **Laguna Point**, 8.5 miles north of Point Cabrillo, is near the south end of Ten Mile River Beach. It is a small, projecting cliff, 30 feet high, flat-topped and bare of trees for 600 yards. It is noticeable only when close inshore. A bare reef extends 300 yards northwest from the point. The cove immediately north of Laguna Point is exposed and only available for small boats. It affords fair protection in south weather and is occasionally used in winter.

(115) **Bald Hill**, 2.5 miles southeast of Laguna Point, is a prominent landmark; its summit and southwest slope are bare of timber.

(116)

ENCs - US5CA15M, US3CA15M
Chart - 18620

(117) For 0.5 mile north of Laguna Point the bluffs are low, thence a straight sand beach extends for 3 miles to the mouth of **Ten Mile River**. The beach is backed by sand dunes for 0.5 mile inland; the tree line is about 1.5 miles from the beach. The concrete highway bridge over Ten Mile River is conspicuous from the west.

(118) From Ten Mile River the coast extends in a general northwest direction for 52 miles to Punta Gorda. This stretch of the coast is particularly bold and rugged, bordered by numerous rocks, and is heavily timbered as far as Point Delgada. North of Point Delgada the tops of the ridges are generally bare or only partly covered with trees and brush. The cliffs along the shore range from 40 to 100 feet in height. The high, rugged mountains in the vicinity of the coast, which reach elevations of 3,000 to 4,000 feet, are prominent.

(119) **Kibesillah Rock**, 1.2 miles north of Ten Mile River and 0.4 mile off the line of the cliffs, is the outermost danger for many miles north and south. It is small and washed over almost continuously even in ordinary weather. Other rocks and rocky islets up to 80 feet high are inside of Kibesillah Rock.

(120) **Bells Mountain**, 4.5 miles north of Ten Mile River and 0.5 mile inland, is bare on top with a few trees on the oceanside.

(121) **Switzer Rock**, 5.5 miles north of Ten Mile River and 0.3 mile offshore, is small with deep water close around it; every large swell washes over the rock. A covered rock marked by a breaker is 170 yards southeast of Switzer Rock.

(122) **Gordon Hill,** 6.5 miles north of Ten Mile River, is bare to the summit and terminates seaward in 60-foot-high **Abalone Point**, which is bordered by low outlying rocks.

(123) **Hardy Rock**, 9.5 miles north of Ten Mile River and 0.4 mile offshore, is a small 47-foot-high islet.

(124) From Abalone Point the coast trends northwest for 4 miles to **Cape Vizcaino**, which is a broad, irregular line of precipitous cliffs, 100 feet high, very broken, and bordered by low rocks, 200 to 300 yards offshore.

(125) **Island Knob**, a rocky lime-covered islet, lies close-to and almost connected with Cape Vizcaino. A covered rock marked by a breaker is 275 yards west of the islet. **Cottaneva Rock**, 20 feet high, is 500 yards southeast of Island Knob and 275 yards offshore. Several smaller rocks lie inside of it and two others about 160 yards northwest.

(126) **Cahto Peak**, 11.5 miles east of Cape Vizcaino, is prominent in clear weather.

(127) Between Cape Vizcaino and Point Delgada are several small exposed landings available for use only in the summer and in smooth weather.

(128) **Sea Lion Rock**, a mile north of Cape Vizcaino and 500 yards offshore, is 5 feet high and inhabited by sea lions. **Cottaneva Needle**, 0.5 mile north of Sea Lion Rock, is a prominent black pinnacle rock 55 feet high.

(129) **Double Cone Rock** is 3.5 miles north of Cape Vizcaino and 300 yards offshore.

(130) **Usal Rock**, 5 miles north of Cape Vizcaino, is 45 feet high and black in color. It lies 200 yards off a small point of rocks.

(131) The mouth of **Usal Valley** is about a mile north of Usal Rock and is a narrow, steep gulch, in front of which is a small area of flat land with a low beach. A small grassy hillock is just inside the gulch. The view up the valley is open for a very short time while passing.

(132) **Big White Rock**, 95 feet high, lies 7.7 miles north of Cape Vizcaino and 125 yards offshore from the steep cliffs, which are bordered by numerous rocks. The rock is a prominent feature when the higher points of the land are in fog.

(133) **Anderson Cliff**, 10 miles north of Cape Vizcaino, is a projecting rocky spur 715 feet high, with one large rock and numerous smaller ones close inshore. **Jackson Pinnacle**, 1.1 miles north of Anderson Cliff, is a black rock 45 feet high, so close to the rocky beach that from seaward it is hard to distinguish from the bluff behind it. When seen from along shore, it is prominent.

(134) **Cluster Cone Rock**, a prominent 68-foot pinnacle, is the largest and whitest of a small cluster of 6 rocks, 200 yards offshore, lying 12.5 miles north of Cape Vizcaino.

(135) **Morgan Rock**, a large white-topped, block-shaped rock 57 feet high and 0.5 mile northwest of Cluster Cone Rock, shows prominently. It is the largest of a group of rocks extending some 200 yards from a high rocky cliff and is particularly valuable as a landmark when higher land is covered by fog.

(136) **Bear Harbor Ridge**, a detached coastal ridge about a mile northwest of Cluster Cone Rock, has two peaks; the south one, 375 feet high, is the higher. It is the most prominent feature in this vicinity when viewed from the northwest. The seaward face of the ridge is marked by steep, loose slides.

(137) **Needle Rock**, 46 feet high, is 14.5 miles north of Cape Vizcaino; the rock blends into the bluff from offshore. A group of old mill buildings, a few houses and an old landing platform about midway up the flat mark the abandoned landing.

(138) **Small White Rock**, 37 feet high, lies 5 miles north of Cluster Cone Rock and 4 miles south of Point Delgada. It is close inshore and just outside the low-water beach; once identified, this rock makes a valuable landmark.

(139) From just below Small White Rock to Point Delgada, the country is not timbered but is covered with dense, low brush, which presents a uniform dark green appearance.

(140) A submarine ridge known as a **Tolo Bank** extends south from Point Delgada for about 7 miles. The depths are quite irregular; the least depth found is 9 fathoms.

(141)

Caution

(142) The area just south of Shelter Cove is subject to slides that might deposit rocks along the shore.

(143) **Point Delgada**, 66 miles north of Point Arena and nearly 20 miles south of Punta Gorda, is a cliff-faced plateau making out about a mile from the general trend of the coast. The seaward face of the plateau is a mile long and bordered by numerous rocks. A lighted horn buoy is 1.1 miles southwest from the point, and a bell buoy is 0.8 miles southeast from the point. A paved airplane landing strip, approximately 3,500 feet and a 43-foot high lighthouse (unlit) that can be observed offshore during the day are on the point.

(144) **Shelter Cove** lies under the south face of Point Delgada and affords fair shelter in northwest weather but is exposed and dangerous with south or southeast winds. Occasionally a swell runs in the cove. There are no wharves in the cove. Water may be obtained ashore but must be carried down from the plateau. A marine supply store is on the bluff on the west side of the cove. Gasoline, diesel fuel, lubricants, ice, marine supplies and provisions are available. A launching ramp is at the head of the cove. Shelter cove is used extensively as an offshore moorage for fishing boats. A pump-out station and dry winter storage are at Shelter Cove. Local boat launch service monitors VHF-FM channel 68. A paved road is maintained to the cove. Telephone service is available.

(145) The rocks covered 1 to 5 fathoms south of Point Delgada can be avoided in approaching Shelter Cove by staying over 200 yards south of the lighted whistle buoy and east of the bell buoy.

(146) From Point Delgada the coast extends northwest for 19 miles to Punta Gorda and is backed by steep mountains covered with chaparral and trees. A black-sand beach, 0.8 miles north of Point Delgada, extends north for 4 miles. **Kaluna Cliff** overlooks the south end of the sand beach, and its steep face, scarred by frequent slides, is a noticeable landmark.

(147) **King Peak**, 4,090 feet high, the highest of three, is the well-known landfall generally called **Three Peaks**. It

lies 8.5 miles north of Point Delgada, 2.5 miles from the coast, and in clear weather is visible seaward for about 75 miles.

(148) About 6 miles north from Point Delgada is the head of **Delgada Canyon**, a submarine valley; the 100-fathom curve lies within 0.5 mile of the beach. This valley extends in a north direction with an average width of 1 mile between the 100-fathom curves for 3.5 miles, and then expands, funnel-shaped, for 3 miles more. Over 400 fathoms are found at its mouth and 300 fathoms within 4 miles of the beach. The side slopes are steep.

(149) **Big Flat** is a narrow strip of low, flat land 7 miles northwest of Point Delgada. It is 2 miles long and is bordered by sand beaches. A few abandoned ranch houses and barns are at the south end of the flat. **Shubrick Rock**, low and small, lies 300 yards off the south end.

(150) About 11.5 miles northwest of Point Delgada is the head of **Spanish Canyon**, a submarine valley. The 100-fathom curve lies within 2 miles of the shore.

(151) **Reynolds Rock**, 10 feet high, is 14.5 miles northwest of Point Delgada. It is 550 yards offshore and, when seen from close inshore, appears as a double-headed rock over which the swell breaks in nearly all weather.

(152) **Rodgers Break**, 0.5 mile west of Reynolds Rock, is covered 1¾ fathoms. This pinnacle rock lies 4 miles southeast of Gorda Rock and 6.8 miles west-northwest of Big Flat; it seldom breaks, and the top is occasionally seen in a heavy swell. A pinnacle rock covered 2½ fathoms lies about 0.5 mile northwest about the same distance offshore. It probably breaks in very heavy weather. This pinnacle and Rodgers Break are the outermost known dangers in this stretch of the coast.

(153) From Reynolds Rock northwest to Punta Gorda the shore is bordered by numerous rocks extending about 0.3 mile offshore. The sharp depression in the hills near the coast, caused by the gulch of **Cooskie Creek**, 3.5 miles south of Punta Gorda, is sometimes useful on dark nights to vessels close inshore in making the point from south.

(154)

ENC - US5CA95M
Chart - 18623

(155) **Punta Gorda** is a high, bold, rounding cape, 83 miles northwest of Point Arena and 11 miles south of Cape Mendocino. The seaward face rises to about 900 feet, 400 yards back from the beach, and terminates in a spur, 140 feet high, almost overhanging the sea. It is bare of trees except in the gulches. The gray rectangular structure of an abandoned lighthouse, 25 feet high, is south of the point. For over 1.5 miles north and about 2 miles south of the point, the beach is bordered by numerous rocks and shoals extending in some cases 0.6 mile offshore.

(156) The wind, sea and currents off Punta Gorda are probably as strong as off any point on the coast; frequent and strong tide rips have been noted. Many times when the weather at Shelter Cove and even at Big Flat is clear and calm and the sea smooth, both the wind and the sea will pick up as Punta Gorda is approached, until just north of this point where strong breezes to moderate gales will be experienced. At other times clear weather south of this point will lead to fog north, or vice versa.

(157) **Gorda Rock**, 10 feet high and conical in shape, is 0.7 mile south of Punta Gorda and 0.6 mile offshore.

(158) **Conical Rock**, 20 feet high, is 100 yards off the point, and another 20-foot rock is 350 yards north from it; these rocks have foul ground between them.

(159) From Punta Gorda to Cape Mendocino the hills back of the coast are lower than those south; they are bare of trees and bordered by stretches of low, narrow, sandy flats with a narrow, low-water beach. The outlying rocks are not more than 0.7 mile offshore until about 2.5 miles south of Cape Mendocino, where they extend offshore to Blunts Reef, 2.5 miles west of the cape. **Mattole Canyon**, a narrow submarine valley, is 3 miles north of Punta Gorda where the 100-fathom curve is about 1 mile from the beach. **Mendocino Canyon** is 4.5 miles south of Cape Mendocino where the 100-fathom curve is about 2 miles from the beach.

(160) **Christmas Rock**, covered 1½ fathoms, is 0.9 mile northwest of Punta Gorda.

(161) **Mattole River**, 2 miles north of Punta Gorda, is not navigable. The north 360-foot-high head is bare and the south head, about the same height, is partly covered with oak trees. A prominent sand dune is on the south side at the entrance to the valley. Another large sand dune, 3.5 miles to the north, marks the north side of **McNutt Gulch** and should not be confused with the one at Mattole River.

(162) **Mattole Point** is 0.3 mile north of the river at the base of **Moore Hill**. **Sea Lion Rock**, 8 feet high, is 0.3 mile north of Mattole Point and 250 yards off the beach at the head of Mattole Canyon. A rock covered ½ fathom lies 0.4 mile northwest of Mattole Point.

(163) A rock, 16 feet high, is the largest of a cluster of small rocks 0.5 mile offshore and nearly 4 miles north of Punta Gorda. **The Brothers,** 8 feet high, consist of two small rocks, close together, 800 yards offshore and 1.5 mile north-northwest of Sea Lion Rock. **Mussel Rocks**, 0.9 mile north of The Brothers, form a ledge that projects 400 yards from the shore.

(164) **Devils Gate Rock**, 20 feet high, lies nearly 2.8 miles south of Cape Mendocino and 0.5 mile offshore. It is low and pyramidal, with a smaller rock close under the northwest face. A reef extends 200 yards west from the rock; numerous rocks lie inshore. A rocky shoal covered 3½ fathoms lies 1.4 miles west of Devils Gate Rock.

(165) A rock that bares 1 foot is about 1.1 miles north-northwest of Devils Gate Rock and 0.8 mile offshore.

(166) **Steamboat Rock**, 30 feet high, lies 1.5 miles south of Cape Mendocino and 600 yards offshore. The upper part of the rock is white and the lower black, somewhat resembling a steamer with a low black hull and white upper works.

(167) **Cape Mendocino**, 185 miles north of San Francisco Bay entrance and 367 miles south of Columbia River entrance, is a mountainous headland, the famous landmark

(169)

METEOROLOGICAL TABLE – COASTAL AREA OFF CAPE MENDOCINO
Between 40°N to 42°N and 124°W to 127°W

WEATHER ELEMENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARS OF RECORD
Wind > 33 knots [1]	6.5	5.1	4.4	3.2	4.6	3.4	3.7	2.4	3.2	2.9	4.2	6.0	4.1
Wave Height > 9 feet [1]	10.8	8.8	10.7	5.5	9.9	7.4	8.8	5.9	6.9	5.0	7.7	11.3	8.2
Visibility < 2 nautical miles [1]	6.9	7.2	5.3	3.2	4.6	6.6	11.0	11.0	11.1	9.8	8.9	7.4	7.7
Precipitation [1]	15.1	12.9	12.2	8.2	4.3	3.2	2.1	3.2	3.3	6.1	12.3	15.0	7.6
Temperature > 69° F	0.0	0.0	0.0	0.1	0.2	0.8	0.9	2.2	1.7	0.8	0.2	0.0	0.6
Mean Temperature (°F)	51.7	51.8	52.1	52.6	54.2	56.7	58.2	59.5	59.5	57.6	55.0	52.5	55.3
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	0.1	0.0
Mean RH (%)	84	83	82	81	83	84	86	87	86	85	83	83	84
Overcast or Obscured [1]	38.8	39.8	35.8	31.6	31.4	32.4	40.4	40.5	35.5	33.2	36.5	37.5	36.1
Mean Cloud Cover (8^{ths})	5.4	5.5	5.3	4.9	4.8	4.6	4.8	4.8	4.3	4.5	5.2	5.4	4.9
Mean SLP (mbs)	1018	1018	1018	1019	1019	1018	1017	1017	1015	1017	1018	1018	1018
Ext. Max. SLP (mbs)	1042	1060	1047	1036	1050	1045	1043	1042	1044	1043	1037	1038	1060
Ext. Min. SLP (mbs)	960	982	984	985	992	992	998	993	990	987	978	984	960
Prevailing Wind Direction	S	S	N	N	N	N	N	N	N	N	N	S	N
Thunder and Lightning [1]	0.3	0.8	0.2	0.3	0.1	0.2	0.1	0.0	0.2	0.4	0.5	0.4	0.3

[1] Percentage Frequency

of the old Spanish navigators and the galleons from the West Indies. The cape is the turning point for nearly all vessels bound north or south. In view of the dangers in the vicinity, it should be approached with considerable caution in thick weather; the bottom and the currents are very irregular. It is in the latitude of great climatic change; the winds do not blow home so violently in the bight south of it, and the amount of rainfall increases rapidly to the north. Fog is more prevalent south. The strong northwest winds of summer are less violent south of the cape, which forms a parallel lee for vessels working their way north.

(168) The seaward face of Cape Mendocino is steep, rocky and water worn toward the shoreline. To the northeast, the general appearance is rolling and grass covered, except in the deep ravines and upon some of the steep hillsides where the north exposure is covered with forest or brush. For about 3 miles south of the cape, the beach is bordered by numerous rocks and sunken ledges extending in some cases to over 0.5 mile offshore.

(170) **Sugar Loaf**, 326 feet high, is 250 yards west of Cape Mendocino and is connected with it at low water by a narrow neck of rocks and shingle beach. This rock is a prominent feature in making the cape from either north or south, but in thick or hazy weather care should be taken to avoid mistaking it for False Cape Rock, which it somewhat resembles, that is in a similar position off False Cape, 4.5 miles north of Cape Mendocino. False Cape Rock is about 216 feet high and is not so regular in outline as the Sugar Loaf, and, from the west or northwest, shows two large rocks, 95 and 54 feet high, immediately inside it, whereas the Sugar Loaf stands solitary and compact. As seen from the southwest, Sugar Loaf shows a cave on its southwest face, extending about one-third the height of the rock.

(171) **Blunts Reef**, 2.6 miles west of Cape Mendocino, is one of the outermost visible dangers in the area. The reef consists of two small black rocks awash about 230 yards apart. **Blunts Reef Lighted Bell Buoy 40** (40°26'47"N., 124°29'59"W.), is 1.4 miles west of the outer rock.

(172) The area as far west as Blunts Reef Lighted Buoy 40 and for about 4 miles north and south of Cape Mendocino includes dangerous rocks and covered ledges. Vessels should not attempt the passage between Blunts Reef Lighted Bell Buoy 40 and the cape under any circumstances. A heavy west swell breaks even in 9 to 10 fathoms in this locality.

(173) From Cape Mendocino for 4.5 miles to False Cape, the coast is straight, bold and bordered by a broad low-water beach.

(174) **False Cape** is a steep, bold headland, rising to a height of over 600 feet in less than 0.2 mile from the beach; it projects slightly from the general trend of the coast. It is covered with grass, but the gulches on its sides are wooded. The base of the cape is bordered by a narrow, low-water beach of shingle and sand. For about a mile on each side of the cape are numerous rocks and ledges, the outermost of which are about a mile from the beach.

(175) **False Cape Rock**, 216 feet high, lies 0.4 mile west of the cape; other rocky islets are between it and the shore. It is not as regularly shaped nor as high as the Sugar Loaf off Cape Mendocino, and the top is much flatter. **Mussel Rock**, 7 feet high, is 0.8 mile north of False Cape Rock.

(176)

ENCs - US5CA15M, US3CA15M
Chart - 18620

(177) North of False Cape the hills decrease in height; 4 miles beyond the cape is the beginning of a stretch of sand beach and dunes, broken only by Table Bluff and Buhne Point, that extend to Trinidad Head.

(178) **Centerville Beach**, 4 miles north of False Cape, is not prominent from seaward. A white cross is on the 120-foot bluff just south of Centerville Beach. A number of

buildings from a former U.S. Naval facility are on the bluffs 0.8 mile south of the village.

(179) **Eel River** empties 8 miles north of False Cape. This is a stream of considerable size and is occasionally entered by light-draft vessels, but the channel over the bar is continually shifting. The depth on the bar varies largely with the amount of water in the river, depending upon the character of the winter, and has been at times as much as 14 feet, but generally the depth is about 8 or 9 feet. The river is seldom entered except by fishing boats and other very small craft, and then only by those with local knowledge of the bar.

(180) **Eel Canyon** is a submarine valley extending in a northwest direction. It comes to a head 10 miles northwest of Cape Mendocino. Vessels are cautioned against mistaking this valley for one of those south of the cape.

(181)

Table Bluff to Humboldt Bay

(182) **Table Bluff**, 12 miles north of False Cape and 4.5 miles south of Humboldt Bay entrance, is a prominent feature from seaward. The west face is 0.5 mile long, 165 feet high, and very steep and has a narrow sand beach under it.

(183) From Table Bluff for 4 miles to Humboldt Bay entrance the coast consists of a narrow sand spit.

(184) **Humboldt Bay**, 21 miles north of Cape Mendocino, is the first important harbor north of San Francisco and is used by vessels drawing up to 38 feet. Humboldt Bay is the second largest natural bay on the coast of California and as such contains many environmentally and economically important wetland habitats. In addition to being a nursery area for many species of commercially and recreationally important fish and invertebrates, Humboldt Bay also produces more than 50 percent of the oysters harvested in California. Due to Humboldt Bay's location on the Pacific Flyway, it is also an important feeding, resting and nesting area for thousands of migratory shorebirds and waterfowl. Along Humboldt Bay's shoreline, thousands of acres have been set aside by state,federal and local agencies as wildlife habitat for a variety of threatened and endangered species. Humboldt Bay can be used as a harbor of refuge in impending bad weather, providing a vessel can get inside before the bar becomes impassable. The bay consists of two shallow basins, South Bay in the south and Arcata Bay in the north part, connected by a narrow channel about 5 miles long. Due to the sensitive nature of Humboldt Bay's environment, extreme care should be taken to utilize all best management practices when transiting Humboldt Bay, fueling or transferring fuels or lubricants and transferring cargo.

(185) The redwood timber industry dominates Humboldt Bay. Large quantities of lumber and wood products are shipped to both foreign and domestic ports. General merchandise, gasoline and fuel oil are received.

(186) Coast Guard Captain of the Port considers the following channels to be narrow channels or fairways for the purpose of enforcing the International and Inland Rules of the Road, Rule 9.

(187) a. Humboldt Bay Bar Channel.

(188) b. Humboldt Bay Entrance Channel.

(189) c. Fields Landing Channel.

(190) d. North Bay Channel.

(191) e. Eureka Channel; Outer and Inner Reaches.

(192) f. Samoa Channel.

(193) g. All other government maintained channels and turning basins.

(194)

Routes

(195) A pilot should be engaged by deep-draft vessels and by strangers if there is any sea on the bar. Because the bar is subject to change, the entrance ranges may not always mark the deepest channel.

(196)

From south

(197) From a position 1.5 miles 260° from Blunts Reef Lighted Bell Buoy 40, steer **356½°** for 5 miles, thence a **038½°** course made good for 20 miles leads to Humboldt Bay Entrance Lighted Whistle Buoy HB. In thick weather, after passing False Cape Rock, all dangers will be cleared by keeping in a depth of over 15 fathoms until up with the lighted whistle buoy, where anchorage should be made until a pilot is obtained.

(198)

From north

(199) From a position 3 miles west of Trinidad Head Light, a **187°** course, made good for 17 miles, leads to Humboldt Bay Entrance Lighted Whistle Buoy HB. In thick weather the depths should not be shoaled to less than 20 fathoms between Turtle Rocks and Trinidad Head and, when south of the head, the depths should not be shoaled to less than 15 fathoms until up with the lighted whistle buoy, where a vessel should anchor until a pilot is obtained.

(200)

From seaward

(201) In clear weather the high land of Cape Mendocino and Punta Gorda south, and Trinidad Head north of the entrance, are good landmarks. In thick weather soundings should be taken frequently, and upon getting depths of 30 fathoms or less great caution must be exercised until sure of the vessel's position, when the course should be shaped for the lighted whistle buoy.

(202) Sailing craft during the prevailing northwest winds of summer should try to make the land in the vicinity of Trinidad Head; this gives a fair slant for the entrance and is an additional precaution against the irregular south set of the current. In thick weather soundings should be taken constantly when inside of 50 fathoms. Making the land north of the entrance avoids the irregular bottom and dangerous currents in the vicinity of Cape Mendocino.

(203) From the Humboldt Bay Entrance Lighted Whistle Buoy HB, make good a course of **105°** following the

Humboldt Bay Approach Range to the intersection with Humboldt Bay Entrance Range, thence a course of **140.3°** on the entrance range into the bay. The entrance range parallels the south jetty and is only about 150 yards from it. The turn from the approach to the entrance range, 200 yards off the outer end of the south jetty, is rather abrupt and is difficult under certain conditions of wind, sea and current. Inside the bay the channels are well marked by navigational aids.

(204) The approach to the bay is marked by a lighted whistle buoy and a bell buoy off the entrance and approach range lights and a sound signal on the outer end of the North Spit. A light is shown near the seaward ends of the north and south jetties. The south jetty light has a sound signal. Range lights and lighted buoys mark the entrance channel inside the bar.

(205) **NOTE:** The approach range should not normally be used beyond its intersection with the entrance range. The entrance range should not normally be used seaward of the outer ends of the jetties. Both ranges are lighted 24 hours a day.

(206) Two jetties are at the entrance to the bay, 700 yards apart. The bar northwest of the south jetty is subject to considerable shifting and shoaling at times, especially during the winter.

(207) In the past **Humboldt Bar** was considered treacherous and dangerous and many disasters have occurred there. Even with present improvements, mariners are still advised to use extreme caution on the bar and, because strong currents may be encountered, when approaching the abrupt turn at the outer end of the south jetty. The bar is smoothest during the last of the flood current, and it is often passable at this time and impassable 2 hours later, when the ebb current has set in. Mariners are advised to contact Coast Guard Station Humboldt Bay on VHF-FM channel 16 or 22A prior to transitting the bar. Caution should also be exercised inside the jetties due to the rapid change in the channel conditions.

(208) Deep-draft vessels are usually taken in and out of the bay at high tide if there is any swell on the bar because of the shoaling in the entrance channel. During the summer months, vessels usually enter on both ingoing and outgoing tides. In winter, entry is usually made on the first or last of the ingoing tide or the first of the outgoing tide. Departure is made on the ingoing tide only, regardless of the time of year.

(209) The Coast Guard has established **Humboldt Bay Entrance Small Boat Warning Sign** (40°46'02"N., 124°13'01"W.) at Coast Guard Station Humboldt Bay. The north-facing sign is equipped with two flashing yellow lights that will be activated when seas exceed 6 feet in height and are considered hazardous for small boats. A **Hazardous Bar Conditions Advisory** will also be broadcast when seas exceed 10 feet in height. Boaters are cautioned, however, that if the lights are not flashing, it is no guarantee that sea conditions are favorable.

(210)

COLREGS Demarcation Lines

(211) The lines established for Arcata-Humboldt Bay are described in **33 CFR 80.1150**, chapter 2.

(212)

Channels

(213) **Federal project** depths for Humboldt Bay are 48 feet over the bar and in the entrance channel, thence 38 feet in North Bay Channel to Eureka, thence 38 feet in the Eureka Channel outer reach and 26 feet in the inner reach. Project depth in Samoa Channel, including the turning basin, is 38 feet and in Fields Landing Channel leading to South Bay, including the turning basin, is 26 feet. Maintenance dredging is performed regularly. (See Notice to Mariners and latest chart edition for controlling depths.)

(214)

Prominent features

(215) From seaward Humboldt Bay can be identified by Humboldt Bay Entrance Lighted Whistle Buoy HB. Both north and south jetty tips are marked by lights. By day the tall stacks and the smoke from the pulp mill in the bay can usually be seen. North Spit has clumps of trees along the bay shore near the channel while South Spit is barren. The red bluff at **Buhne Point** on the east shore of the bay and a lighted radio tower about 1.0 mile east are conspicuous in entering the bay.

(216) **South Bay**, in the south part of Humboldt Bay, is about 3 miles long and 2 miles wide. A marked channel on the east side of the bay leads to a lumber wharf on the east side of the channel at **Fields Landing**.

(217) **Bucksport** is on the east shore about 3 miles above the entrance. The two oil piers at Bucksport are used mainly by barges.

(218) **Fairhaven** is a small town on the west shore, about 3.5 miles above the entrance. The pier of a pulp company is here.

(219) **Eureka**, the principal town on the bay, is on the east shore, 4 miles north of the entrance. It handles much of the waterborne commerce on the bay. Eureka is the terminus of the North Coast Railroad Co.; a branch of the railroad continues to Arcata and Samoa.

(220) **Samoa** is a small settlement on the west shore opposite Eureka, about 5.5 miles above the entrance. A large pulp mill here ships a considerable amount of pulp.

(221) **Arcata Bay**, the north part of Humboldt Bay, is about 3 miles in diameter with low, marshy shore cut by sloughs. **Arcata** is on the north shore of the bay. The town has no serviceable wharves. The ruins of several old wharves are near the head of abandoned Arcata Channel.

(222)

Anchorages

(223) There are no authorized anchorages in Humboldt Bay.

(224)

Regulated navigation areas

(225) The Bar Channel and Entrance Channel of Humboldt Bay are included in a **regulated navigation area.** (See **33 CFR 165.1195**, chapter 2, for limits and regulations.)

(226)

Bridges

(227) A fixed highway bridge crosses Humboldt Bay from Eureka to a point just above Samoa on the Samoa Peninsula. Clearances of the fixed spans are 40 feet from Eureka to Woodley Island, 30 feet from Woodley Island to Indian Island and 45 feet from Indian Island to the Samoa Peninsula.

(228)

Currents

(229) The tidal currents follow the general direction of the channels. In the main channel, the average velocity is less than 2 knots and the maximum does not exceed 3 knots. Between the jetties, the average velocity is about 2 knots, with a maximum of about 4 knots; during storm conditions, velocities can reach up to 5.5 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.

(230)

Weather, Eureka

(231) The climate of Eureka is completely maritime, and high humidity prevails the entire year, which is divided into the "rainy" season and the "dry" season. The rainy season begins in October and continues through April. About 90 percent of the year's precipitation falls during this period. The dry season extends from May through September and is marked by considerable fog or low cloudiness. On average, 23 of the 31 days in August will record fog where only 10 of the 31 days in March will note fog. Usually, however, the fog clears in the late forenoon and the early afternoons are generally sunny. On average, better than 38 inches (965 mm) of precipitation falls on an annual basis in Eureka and 152 of the 365 days of the year record some sort of precipitation. January is the wettest month and July, the driest. Snowfall is light and averages less than one-half inch annually (13 mm) however, snowfall has been recorded in each of the months November through April. The greatest daily snowfall was two inches (51 mm) in February 1989.

(232) Temperatures are moderate the entire year. Although the highest ever recorded was 87°F (30.6°C) in October 1993, and the lowest 21°F (-6.1°C) in December 1972, the usual range is from a low of about 47°F (8.3°C) to a high of about 58°F (14.4°C). The daily range of temperature averages from about 10°F (-12.2°C) in the summer to 13°F (7°C) in the winter and is occasionally not over 2° to 3°F (1° to 2°C).

(233) The principal industries are lumbering, fishing and dairy farming. Owing to the low temperatures and lack of sunshine, there is very little truck farming, but the climate is nearly ideal for berries and flowers.

(234)

Pilotage, Humboldt Bay

(235) Pilotage is compulsory for foreign vessels under registry and U.S. vessels under registry and enrollment. Pilotage is voluntary for all other vessels.

(236) Pilotage for ports in Humboldt Bay is available from **Humboldt Bar Pilots**. Arrangements for pilots are made by ship's agents.

(237) The pilots monitor VHF-FM channel 16. The pilot boat monitors VHF-FM channels 13 and 16, and the pilot and tug boat use 13, 18 and 77 as working frequencies. The pilot boat, TUG KOOS KING, is 65 feet long and has a black hull, buff and white house and red stack with a white K.

(238) Pilots board vessels within 0.5 mile radius of Humboldt Bay Entrance Lighted Whistle Buoy HB (40°46.4'N., 124°16.2'W.) or 1.5 miles west of Humboldt Bay Entrance Jetties. When boarding, pilots request vessels maintain a speed not to exceed 5 knots and rig the pilot ladder on the leeward side about 3 meters above the water; no man ropes.

(239) In the summer, vessels are entered on flood and ebb tidal currents; in the winter, vessels usually are entered on the first or last of the flood or first of the ebb. Vessels depart on flood tidal currents only, regardless of the time of year. Vessels with drafts over 30 feet enter or depart on the last of the flood from November through March 30; night sailing depends on the bar condition before dark.

(240) Pilots report that strong currents create a north set in the Bar Channel from October to April. When vessels enter the jetties, this current has a tendency to twist vessels by setting the stern north and turning the bow south toward the south jetty. During or shortly after southeast, south and southwest storms, currents in the Bar Channel and Entrance Channel are reported to attain a velocity of about 4 to 5.5 knots. Heavy swells about 8 to 10 feet high occur well inside the jetties when seas from the southwest are deflected, about midway along the north jetty.

(241)

Towage

(242) Tugs up to 2,000 hp are available.

(243)

Quarantine, customs, immigration and agricultural quarantine

(244) Eureka is a customs port of entry. (See Vessel Arrival Inspections, chapter 3.)

(245) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.) The city has several hospitals.

(246)

Coast Guard

(247) Humboldt Bay Coast Guard Station is on North Spit.

(252)

Facilities at Humboldt Bay and Eureka

Name	Location	Berthing Space	Depths*	Deck Height	Mechanical Handling Facilities and Storage	Purpose	Owned/Operated
Chevron Products Co. Eureka Terminal Wharf	40°46'41"N., 124°11'42"W.	400	24-30	10.5	• Tank storage (105,000 barrels) • Pipelines extend from wharf to storage tanks	Receipt of petroleum products by barge	Chevron Products Co.
Sierra Pacific Industries Eureka Wharf	40°47'42"N., 124°11'15"W.	470	35	10	• Open storage (15 acres) • Wood chip loader and belt conveyor	Shipment of logs, lumber and wood chips	Eureka Forest Products, Inc/Sierra Industries, Inc.
Pacific Affiliates Eureka Wharf	40°48'05"N., 124°10'58"W.	1,000	35	11	• Open storage (40 acres) • Covered storage (40,000 ft²)	Receipt and shipment of conventional general cargo	David L Schneider/ Pacific Affiliates, Inc.
Redwood Marine Terminal 1	40°48'13"N., 124°11'18"W.	1,147	35	20	• Open storage (148 acres) • Covered storage (60,000 ft²)	Shipment of logs, lumber and wood chips	Port of Humboldt Bay
California Redwood Chip Export Wharf	40°47'55"N., 124°11'26"W.	1,345	38	20	Open storage (100,000 tons)	Shipment of wood chips	Louisiana-Pacific Corp.
Fairhaven Terminal Co./ Westfall Stevedore Co. Simpson Mill Wharf	40°47'18"N., 124°11'41"W.	500	38	15	• Open storage (64 acres) • Covered storage (160,000 ft²)	• Receipt and shipment of conventional general cargo and wood pulp • Receipt of lumber	Simpson Investment Co./Fairhaven Terminal Co. and Westfall Stevedore Co.
Humbolt Bay Forest Products Fields Landing Wharf	40°43'57"N., 124°13'09"W.	900	26	12	• Open storage (50 acres) • Three 12-ton crawler cranes • Covered storage (8,600 ft²)	Receipt and shipment of logs, lumber and wood chips	Humboldt Bay Forest Products, 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.

(248)

Harbor regulations

(249) These regulations are prescribed by the Humboldt Bay Harbor Recreation and Conservation District. The District operates a large marina on the south side of Woodley Island, just north of Eureka on the north side of Eureka Channel Inner Reach. A wharfinger, located at the Eureka Public Marina, has jurisdiction over fishing and pleasure craft using the facilities at the city-owned boat basin.

(250)

Wharves

(251) The deep-draft facilities at Humboldt Bay are alongside the channels leading to Arcata Bay and at Fields Landing in South Bay. Only the deep-draft facilities are listed in the table. The alongside depths for the facilities are reported; for the latest depths, contact the private operators. All facilities have direct highway connections. One facility, Pacific Affiliates Eureka Wharf, has a railway connection. All facilities have water connections and some have electrical connections.

(253)

Supplies

(254) Deep-draft vessels are usually bunkered at the berths by tank truck. Marine supplies and provisions, including water, are available at the port.

(255)

Repairs

(256) There are no facilities for making major repairs to deep-draft vessels; the nearest such facilities are at the Port of San Francisco. Complete hull and engine repairs are available for small craft. The Humboldt Bay Harbor, Recreation and Conservation District has a lift to 150 tons. The largest marine railway, located on the west side of the channel opposite Eureka, can handle craft up to 300 tons, 100 feet long, 30 feet wide and with a 10-foot draft.

(257)

Small-craft facilities

(258) Transient berths with electricity are available at the marina on the side side of Woodley Island and at Eureka Public Marina (40°48'14"N., 124°10'36"W.). Water, gasoline, diesel fuel, marine supplies and launching ramps are available in Humboldt Bay.

(259)

ENCs - US5CA15M, US3CA15M
Chart - 18620

(260) North of the entrance to Humboldt Bay, the coast consists of sand dunes partly covered with timber for 11 miles to the mouth of **Mad River**. The first 7 miles forms the west shore of Humboldt Bay, and then the land behind the dunes is low and marshy as far as the river.

(261) From the mouth of Mad River, the sand dunes are 20 to 60 feet high and continue for 5.5 miles to **Little River**, a small shallow stream. The north point at the mouth of the stream is rocky, and from this point the coast consists of rocky cliffs extending beyond Trinidad Head.

(262)

Coast Guard

(263) **Humboldt Bay Coast Guard Air Station** is at McKinleyville about 2.5 miles north of the mouth of Mad River.

(264)

Little River Rock to Flatiron Rock

(265) **Little River Rock**, 126 feet high, is 0.8 mile northwest of the mouth of Little River and 0.3 mile offshore. Several rocks and foul ground are between it and the beach, and a rock 4 feet high is about 100 yards northwest.

(266) From Little River Rock to Trinidad Head, the shore is bordered by numerous rocks and ledges extending 0.3 mile offshore.

(267) **Pilot Rock**, 93 feet high, is 0.5 mile south of Trinidad Head. It is of small extent, conical, and whitish in color, rising abruptly from depths of 48 to 50 feet on all sides. Pilot Rock is marked on its west side by a gong buoy.

(268) **Trinidad Head** is nearly 39 miles north-northeast of Cape Mendocino and 17.5 miles north of the entrance to Humboldt Bay. It rises to a height of 380 feet. The sides are steep and covered with chaparral. From north or south the head is generally raised as a dark, round-topped island. Near the north end it is joined to the mainland by a narrow neck, from the south side of which **Little Head**, a rocky knoll 125 feet high, projects into Trinidad Harbor. The white cross 200 yards north of the south point of Trinidad Head is fairly prominent.

(269) **Trinidad Head Light** (41°03'07"N., 124°09'05"W.), 193 feet above the water, is shown from a lighthouse near the southwest side of the head; a sound signal is at the light. A lighted whistle buoy is 1 mile west of the head.

(270) **Trinidad Harbor**, a small cove east of Trinidad Head, affords shelter in northwest weather but is dangerous in west or south weather. The cove is small and is further constricted by several rocks, and, as a rule, there is always a swell even in north weather. It is used by fishing boats to a considerable extent during the summer, even though the holding ground is only fair. A white lighthouse structure, a memorial containing the original oil-burning light used at Trinidad Head until 1948, is at the center of the bluff on the north side of the harbor. A pier with a bait and tackle shop and restaurant is located in the bight west of Little Head. A small marine railway near the foot of the pier is used for launching and retrieving small craft up to 25 feet long and 8½ feet wide. A beach boat launch is located on the east side of the marine railway. A water taxi is available during the summer months, and a floating pier is provided to access the main pier during the months of May through September. Gasoline, marine supplies and ice are available in **Trinidad**, a town on the north shore of the cove. The harbor monitors VHF-FM channel 78.

(271) **Prisoner Rock**, 220 yards east of Trinidad Head, is 42 feet high and the most prominent of the rocks in the cove. It consists of two rocks so close together that they are usually taken for one. From south they resemble an animal lying down with its head toward the west. A rock covered 7 feet is 150 yards north-northwest from them.

(272) **Flat Rock**, low and small, lies 350 yards east-northeast from Prisoner Rock; a rock covered 5 feet lies 150 yards south-southeast from it. A bell buoy is 175 yards west of a rock covered 9 feet, which lies 400 yards south-southeast of Prisoner Rock.

(273)

Anchorage

(274) The best anchorage is in 42 feet, muddy bottom, about halfway between Prisoner Rock and Trinidad Head, with Flat Rock, bearing 073°, just open south of Prisoner Rock. A **special anchorage** is on the east side of Trinidad Head. (See **33 CFR 110.1** and **110.127c**, chapter 2, for limits and regulations.)

(275) **Blank Rock**, 111 feet high, lies 0.3 mile west of Trinidad Head. Foul ground is between it and the head. A smaller rock is 150 yards north of Blank Rock. A rock awash and a ledge covered 15 feet are 275 yards south-southeast of Blank Rock.

(276) **Flatiron Rock**, 72 feet high, lies 0.3 mile northwest of Blank Rock. It is considerably larger than Blank Rock, with two rocky heads of about the same height. A covered rock lies 300 yards off its southwest face, and numerous ledges extend southeast toward the head.

(277)

ENC - US3OR03M
Chart - 18600

(278) From Trinidad Head for 5.5 miles to Rocky Point, the coast is rocky, with numerous outlying islets and ledges extending as much as 1.2 miles offshore and cliffs reaching elevations of over 100 feet. The mountains back of Trinidad Head are good landmarks for vessels approaching from seaward. North of Rocky Point, the beach is low and sandy, with several lagoons behind it, for nearly 11 miles to the south end of the Gold Bluffs. From this point to Point St. George, the coast is rocky, the cliffs being from 100 to 500 feet high and bordered by numerous rocks. The Klamath River breaks through the cliffs 16 miles south of Point St. George. From Point St. George for 65 miles to Cape Blanco, the coast trends in a general northwest direction with a shallow bight known as Pelican Bay immediately north of Point St. George. The beach is fringed by numerous rocks and ledges, but, with the exception of St. George, Rogue River and Orford Reefs, these in general do not extend over a mile from shore. The 30-fathom curve follows the general trend of the coast and in thick weather may be considered as the limit inside of which it is unsafe to approach, but in the vicinity of St. George, Rogue River and Orford Reefs, the depths should not be shoaled to less than 50 fathoms.

(279) **Green Rock**, 108 feet high and of small extent, lies 1.5 miles north of Trinidad Head and nearly 600 yards offshore. The top is covered with grass. Numerous rocks lie inshore, and a rock awash lies 700 yards west of it. A rock covered 2¾ fathoms lies 0.5 mile west of Green Rock. It seldom breaks and rises abruptly from 15 fathoms. Two covered rocks lie 0.5 and 0.8 mile north-northeast of Green Rock.

(280) **White Rock**, 118 feet high, lies 1.9 miles north of Trinidad Head. It is of small extent and is 250 yards off a wooded projecting head about the same height. Another rocky islet 129 feet high is 1 mile north of White Rock.

(281) **Cone Rock**, 17 feet high, is 3.8 miles north of Trinidad Head and over 1 mile offshore. It is conical in shape and of small extent. A smaller rock, 15 feet high, lies 0.5 mile east.

(282) **Turtle Rocks**, two rocks of small extent 20 and 29 feet high, are 1.5 miles north of Cone Rock and abreast of Rocky Point. East of Turtle Rocks the ground is foul, with two breakers 600 and 800 yards from the outer rock and numerous visible rocks extending to the beach. A bell buoy is 0.5 mile west of Turtle Rocks.

(283) **Rocky Point**, 5.5 miles north of Trinidad Head, is a bold feature with cliffs about 200 feet high, bordered by numerous rocks and ledges extending 200 to 300 yards offshore. The point is covered with oak and scrub pine for 0.5 mile back to the redwood forest; through this oak growth two rocky pinnacles about 250 feet high are visible.

(284) **Rodgers Peak**, 2,800 feet high and 6.3 miles east of Rocky Point, is heavily wooded and easily identified.

(285) North of Rocky Point the cliffs are succeeded by a low sandy beach for 4.5 miles to the north end of **Big Lagoon**. which is immediately behind the sand beach. Above Big Lagoon the cliff formation is resumed and extends 2 miles to **Stone Lagoon**.

(286) **Sharp Point**, 6.2 miles north of Rocky Point, is a sharp-pointed conical rock cliff about 400 feet high. Its light-gray color makes it readily distinguishable for a distance of 15 miles in clear weather from any direction. The beach in this area is bordered by numerous rocks extending about 0.8 mile offshore.

(287) **Gold Bluffs**, a 9-mile stretch of gravel and sand 100 to 500 feet high, begin about 9 miles north of Rocky Point. The south part is comparatively low and bordered by several outlying rocks; in about the middle the buffs are broken by two valleys.

(288) **Mussel Point**, 11.2 miles north of Rocky Point, is a light gray cliff about 300 feet high, with a small, flat top distinguishable at 10 to 12 miles in clear weather.

(289) **Reading Rock**, 94 feet high and of small extent, is 4.5 miles offshore west of Mussel Point. It is dark for about one-third the height and white above with a cleft on the south face. It is marked by a light, 98 feet above the water, shown from a house with a red and white diamond-shaped daymark.

(290) North of Gold Bluffs the coast becomes rocky, irregular and broken, the bold cliffs being bordered by many rocks.

(291) A yellow clay slide extending from the top of a 900-foot slope to the beach is 9 miles north of Mussel Point. It is sharp at the top, broad at the base and the highest and most prominent of the bluffs in that vicinity. It may be seen in clear weather for a distance of 15 to 18 miles.

(292) **Split Rock** is a slightly projecting head 3.5 miles north of the north end of Gold Bluffs; it is so named because of the cut on the north face.

(293) **High Bluff** is a slightly projecting head 0.8 mile north of Split Rock. It is prominent because of an enormous split or chasm on its north face; at the south edge of the cut the bluff is 340 feet high.

(294) **White Rock**, 107 feet high, lies 600 yards north of High Bluff and 300 yards offshore. Numerous rocks, covered and visible, lie between it and the beach. Its south face is very precipitous, and its west face is steep, sloping north. It can be distinguished by its color for several miles.

(295) **Flint Rock Head**, 177 feet high, is a detached rocky head connected with the cliffs by a low sandspit. It is at the south end of the Klamath River sand beach, 1.8 miles north of Split Rock. Its southwest face is precipitous. A rock awash lies 0.6 mile northwest from Flint Rock Head and 0.5 mile offshore.

(296) **Klamath River** mouth is 16 miles south of Point St. George and 30 miles north of Trinidad Head. It is a large river draining an extensive mountainous area. The entrance is no longer navigable, but there is small-craft traffic on the river. There are several float landings where sport fishing craft berth. Gasoline, water, ice, launching ramps and marine supplies are available.

(297) The coast highway crosses the river at **Klamath**, a small town 2 miles inland. A fixed highway bridge, 3 miles above the mouth, has a clearance of 13 feet.

(298) **Requa** is a small village on the north shore of the river just inside the mouth with a hotel and private landings.

(299) **Red Mountain**, 8 miles east of the mouth of Klamath River, is visible for about 60 miles in clear weather.

(300) From the mouth of the Klamath River the coast curves northwest for 3 miles to the mouth of **Wilson Creek**. The cliffs are high, irregular and jagged, and the hills above are covered with grass and chaparral. Numerous rocks extend about 300 yards offshore.

(301) A covered rock 0.6 mile offshore is 1.4 miles northwest of the mouth of Klamath River. A rock, 37 feet high, is 1 mile offshore, 2.6 miles northwest of the mouth of Klamath River, and about 1.5 miles south of Wilson Creek.

(302) **False Klamath Rock**, 203 feet high, reddish and round-topped, is the most prominent rock on this part of the coast. It lies 650 yards west of the south point of the small cove into which Wilson Creek empties. **Wilson Rock**, awash, is 0.5 mile west of False Klamath Rock. A rock awash is 0.9 mile northwest of False Klamath Rock. Numerous covered rocks lie east and northeast of the line from this rock to another rock, 37 feet high, southwest of False Klamath Rock.

(303) From False Klamath Rock for 7 miles north the coast consists of bold rocky cliffs, much broken and bordered by numerous covered and exposed rocks. Beyond these, extending 3 miles to Crescent City, is a broad sand beach backed by flat cultivated land.

(304) **Midway Point**, 4 miles north of False Klamath Rock, is bold, rising to a height of 820 feet, 800 yards from the beach.

(305) **Sister Rocks**, a cluster of prominent rocks, 0.5 mile west of Midway Point, consist of three large and several smaller rocks covering a limited area; the outer one is 69 feet and the inner one 72 feet high.

(306)

ENC - US5CA90M
Chart - 18603

(307) **Crescent City Harbor**, protected by breakwaters, is midway between San Francisco Bay and the entrance to Columbia River. Commercial and sport fishing boats operate out of the harbor. Waterborne traffic in the harbor is in the receipt of gasoline and fuel oils. **Crescent City** is on the north side of the harbor.

(308) **Crescent City Entrance Light** (41°44'11"N., 124°11'28"W.), 55 feet above the water, is shown from a pile at the seaward end of the west breakwater. A sound signal is at the light. A historic private light is on the islet south of **Battery Point**. The entrance to the harbor is marked by lighted buoys, lights, and a lighted range.

(309) The entrance range should not be followed past a point approximately abeam of Whaler Island, as it leads close to the end of the breakwater extending north from this island.

(310)

COLREGS Demarcation Lines

(311) The lines established for Crescent City Harbor are described in **33 CFR 80.1152**, chapter 2.

(312) The west breakwater gives good protection from northwest winds for vessels anchored in the outer harbor, but the harbor is open to the south. The basin north of **Whaler Island** provides excellent anchorage for small craft.

(313) Vessels anchored in the harbor should take precaution against a local southeast wind known as the **kick back** or **back draft**, which frequently blows with considerable violence. This wind follows only periods of strong northwest winds outside. It usually starts in the early afternoon and ends about midnight.

(314)

Caution

(315) Care should be exercised in approaching Crescent City Harbor because of the many rocks and shoals. **Chase Ledge,** covered 21 feet, lies 0.9 mile south of **Round Rock**. **Mussel Rock,** only a few feet high, is 0.6 mile southeast of Round Rock; a rock covered 8 feet, 700 yards to the south, breaks only in a heavy swell. Other covered rocks extend north to Whaler Island. Foul ground with many bare and covered rocks extends nearly a mile offshore along the low but rocky coast northwest of Crescent City Harbor for 3.5 miles to Point St. George. This area should be avoided.

(316) The long wharf in the west part of the harbor is used by fishing vessels to offload fish. The remains of two other wharves, just east, were almost completely wiped out by the seismic sea wave that struck the harbor following the March 27, 1964, Alaska earthquake. The seismic wave caused considerable damage and changes to the harbor shoreline.

(317) The basin just north of Whaler Island is formed by the inner breakwater extending northwest from the island and the sand barrier from the island to the east shore. Citizens Dock, the Y-shaped pier at the north side of the harbor, extends out to a depth of about 9 feet. Several fishhouses are on the pier. Fishing boats unload their catch along both of the outer spurs of the pier. Water and ice are available on the pier. Gasoline and diesel fuel are available. The inner small-craft basin just north of Citizens Dock can accommodate about 250 boats with an additonal 100 boats at the small sport dock. Several mooring floats for commercial fishing boats are in the basin. Berths with electricity, gasoline, diesel fuel, water, ice, wet and dry winter storage, a pump-out station, a launching ramp and marine supplies are available.

(318) The **harbormaster** has an office at the basin north of Whaler Island. The harbormaster assigns berths and monitors VHF-FM channels 9 and 16, Monday through Friday from 0700 to 1700.

(319) A boatyard in the basin has lifts that can handle boats up to 110 feet, 270 tons. Engine repairs are available from several local firms.

(320) A Coast Guard vessel is stationed in the basin north of Whaler Island.

(321) **Castle Rock**, 2.3 miles northwest of Battery Point and 0.5 mile south of the south point of Point St. George, has a rather flat top, with a small knob near the east edge.

(322) **Point St. George**, 3 miles northwest of Battery Point, is low with several irregular and rocky hillocks near the beach. The seaward face is about a mile long in a northwest direction, with sand dunes and low land immediately behind it. The tree line is about 0.6 mile inland, with a few trees near the south end of the point. Numerous conspicuous rocks fringe the point up to 0.5 mile offshore. **Brown Rock**, 28 feet high, is near the outer end of the exposed rocks extending northwest from the point.

(323) **St. George Channel**, over a mile wide, is clear between the visible rocks fringing Point St. George and the east rocks of St. George Reef. It is frequently used in clear weather by coastwise vessels.

(324) **St. George Reef** is composed of rocks and covered ledges extending 6.5 miles northwest and west from Point St. George. Nine visible rocks are in the group.

(325) **Saint George Reef Light** (41°50'14"N., 124°22'32"W.), 146 feet above the water, is shown from a gray tower on **Northwest Seal Rock**, the outermost rock of St. George Reef; the light is private.

(326) **Star Rock**, the southeast rock of the group, is 64 feet high. It is 1.7 miles west of the south Point St. George. Between Star and Northwest Seal Rocks are three rocks, **Hump Rock, Whale Rock** and **Southwest Seal Rock**, almost in line, varying in height from 18 to 45 feet.

South of these visible rocks are two covered ledges, **Mansfield Break** and **Jonathan Rock**. The latter is 2.5 miles northwest of Star Rock and 3.2 miles southeast of Northwest Seal Rock. It breaks only in a heavy swell, and not continuously then; deep water surrounds it. Mansfield Break lies 2.3 miles south of Northwest Seal Rock and nearly 3.5 miles northwest of Star Rock. It is about 100 yards in extent, with 20 fathoms close-to and around it.

(327) **Great Break**, 0.5 mile southeast of Southwest Seal Rock, is about 150 yards in extent. A covered ledge that breaks at low water is 125 yards southwest of Southwest Seal Rock.

(328) **Dragon Channel**, which leads north of Jonathan Rock and between Mansfield Break and Great Break, is not recommended.

(329) **East Rock** and **Long Rock** are 2.1 and 1.6 miles, respectively, north of Star Rock.

(330) **Flat Rock** lies nearly midway between Long and Whale Rocks and about 0.6 mile from the former. **Mussel Rock** is nearly 0.5 mile west of Long Rock; a covered ledge showing a breaker is 200 yards north of the rock. A covered rock that breaks in moderate swells is 330 yards northeast of Hump Rock.

(331) All the rocks of St. George Reef rise abruptly; soundings made in the vicinity give no warning of their presence. In thick weather, the greatest caution should be observed and the reef given a wide berth.

(332)

ENC - US3OR03M
Chart - 18600

(333) For about 10 miles north of Point St. George, the shores of **Pelican Bay** are composed of sand dunes, with a broad beach extending to the mouth of **Smith River. Lake Talawa** and **Lake Earl** are surrounded by low marshy land behind this stretch of dunes.

(334) A small rock about 10 feet high is 1.8 miles south of the mouth of Smith River and nearly 0.5 mile offshore. A cluster of three low rocks is nearly a mile offshore and 0.9 mile north-northeast of the 10-foot rock.

(335)

ENC - US5OR51M Chart - 18602

(336) From Smith River for 3.2 miles to the California-Oregon boundary, the coast is composed of low rocky cliffs, bordered by numerous rocks and ledges, covered and awash, and backed by a low narrow tableland. Several prominent rocky knolls rise from 100 to 200 feet above this tableland.

(337) **Pyramid Point**, a rocky knoll 222 feet high, marks the north point of Smith River.

(338) **Prince Island**, of small extent and 171 feet high, lies 0.1 mile offshore abreast Pyramid Point. **Hunter Rock**, 177 feet high, double-headed and somewhat smaller, is 0.3 mile north of Prince Island. Several other smaller rocks are in the vicinity.

(339) **Cone Rock**, 1.3 miles north of Prince Island and 0.6 mile offshore, is the most prominent of the visible dangers in this vicinity. It is 68 feet high and of small extent.

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.

Rule 1—Application (International)
(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 Rulesor 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 radardetection 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 close-quarters 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 powerdriven 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.

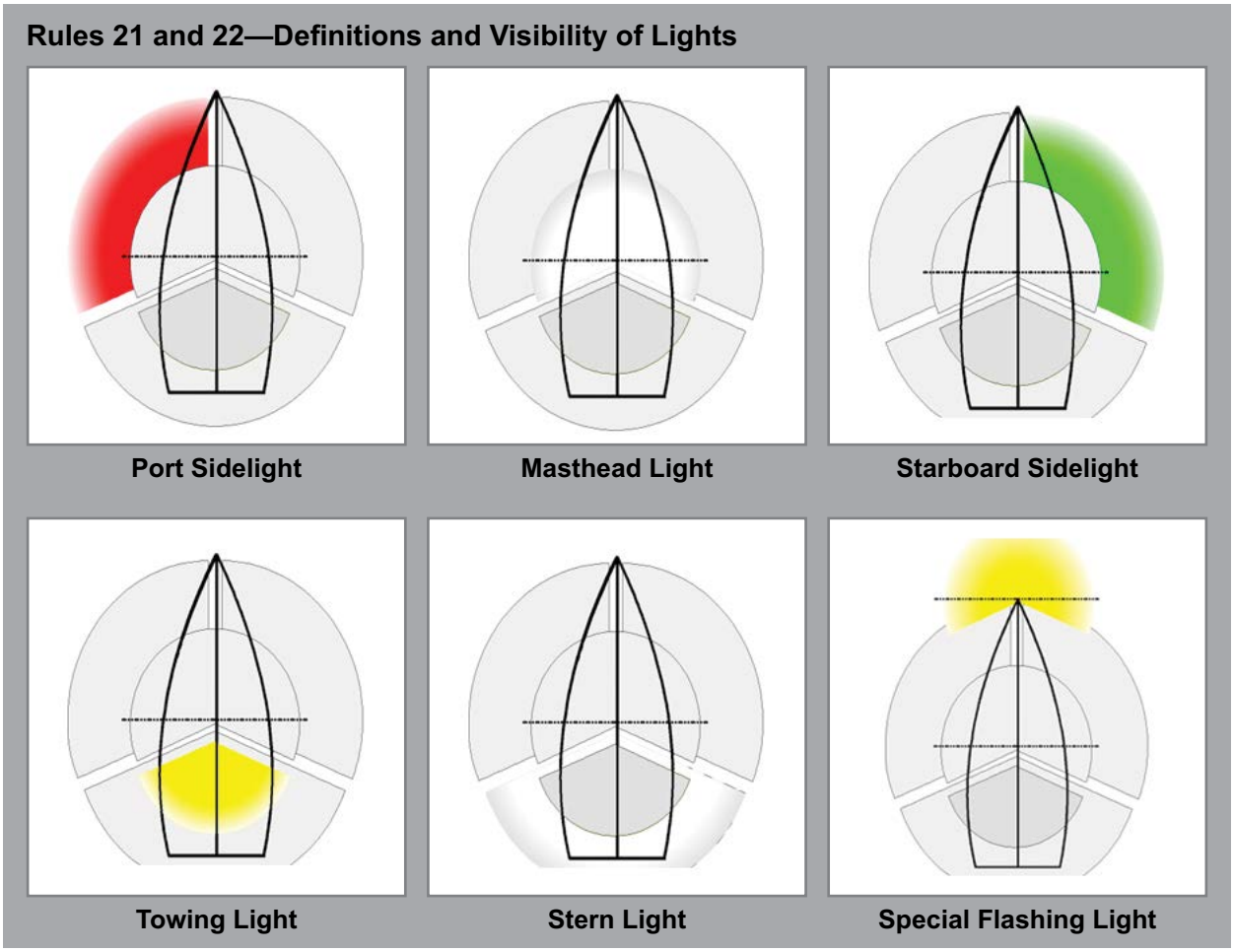
(132) (d) A vessel which detects by radar alone the presence of another vessel shall determine if a closequarters situation is developing and/or risk of collision exists. If so, she shall take avoiding action in ample time, provided that when such action consists of an alteration in course, so far as 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*

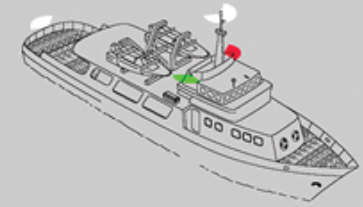
(167)

Rule 23—Power-driven Vessels Underway

23(a) **International/Inland**

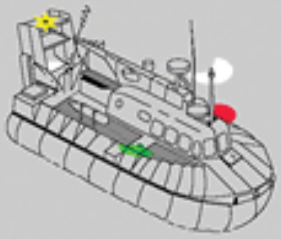
Power-driven Vessel Underway
50 meters or greater in length

23(a) **International/Inland**



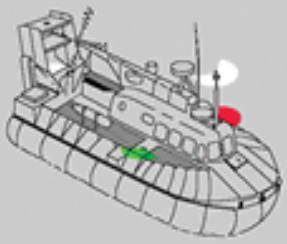
Power-driven Vessel Underway
Less than 50 meters in length

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

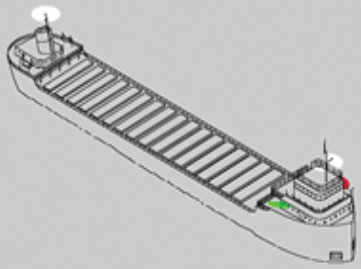
23(d)(i) **International/Inland**

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.

(165)

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.

(166) 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.

(168)

Rule 24—Towing and Pushing

(169) (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.

(170) (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.

(171) **Interpretive Rule**—See **33 CFR 90.3** and **33 CFR 82.3**, chapter 2, for regulations.

(172) (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››*.

(173) (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).

(174) (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.

(175) (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)››*.

(176) (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 ››*;

(177) (ii) a vessel being towed alongside shall exhibit a sternlight and at the forward end, sidelights, and*‹‹ a special flashing light ››*;

(189)

Rule 24—Towing and Pushing (International/Inland)

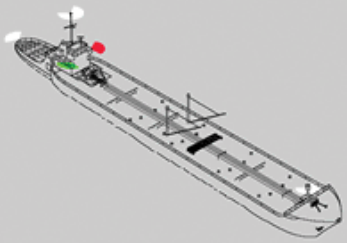
24a

Power-driven Vessel Towing Astern
Towing vessel less than 50 meters in length; length of tow **exceeds 200 meters**

24a

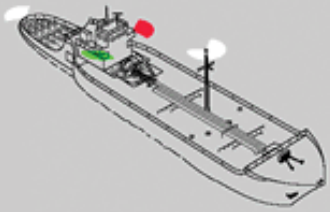
Power-driven Vessel Towing Astern
Towing vessel less than 50 meters in length; length of tow **200 meters or less**

24b



Composite Unit Underway
50 meters or greater

24b



Composite Unit Underway
Less than 50 meters in length

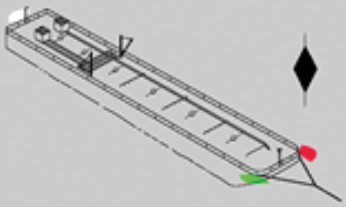
24d

Power-driven Vessel Towing Astern
Length of tow 200 meters or less; the after masthead light is optional for vessels less than 50 meters in length

24d

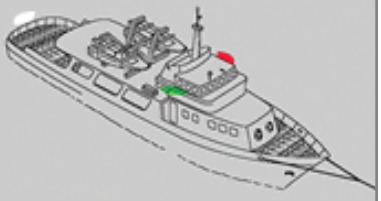
Power-driven Vessel Towing Astern
When masthead lights for towing are exhibited aft, a forward masthead light is required

24e



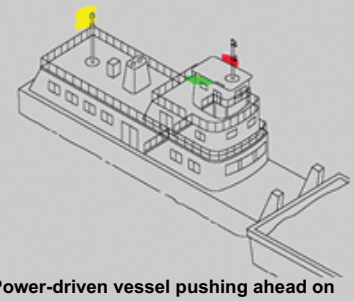
Vessel or Object Being Towed
Length of tow exceeds 200 meters

24e



Vessel Being Towed
Length of tow 200 meters or less

24h (Inland only)



Power-driven vessel pushing ahead on Western Rivers (Above the Huey P. Long Bridge on the Mississippi River)

(178)

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;

(179) (g) An inconspicuous, partly submerged vessel or object, or combination of such vessels or objects being towed, shall exhibit:

(180) (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.

(181)

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;

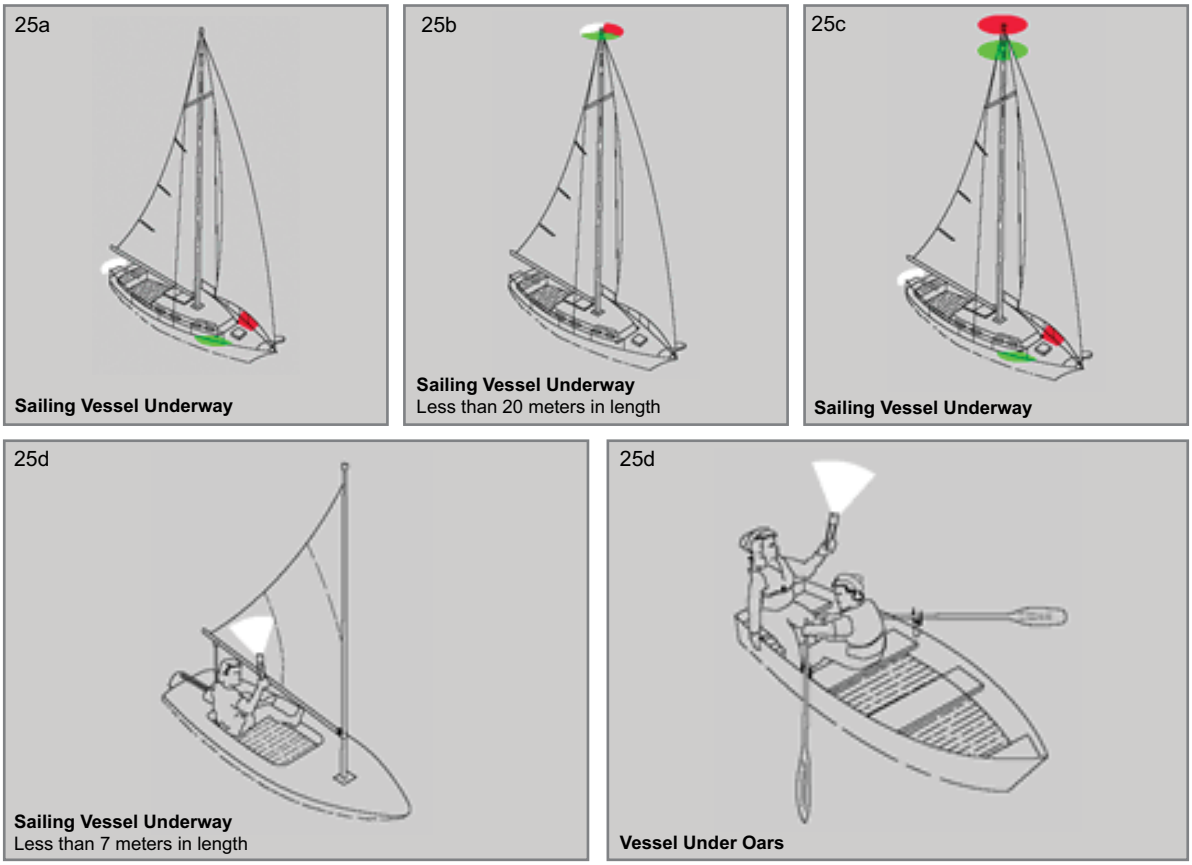
Rule 24g (Inland)

(ii) if it is 25 meters or more in breadth, four all-round white lights to mark its length and breadth;

(182) (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*

(197)

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››.

(183) (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. ›

(184)

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.

(185) (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.

(186) **Interpretive Rule**—See **33 CFR 90.7 and 33 CFR 82.7**, chapter 2, for regulations.

(187) (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»*.

(188)

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.

(190)

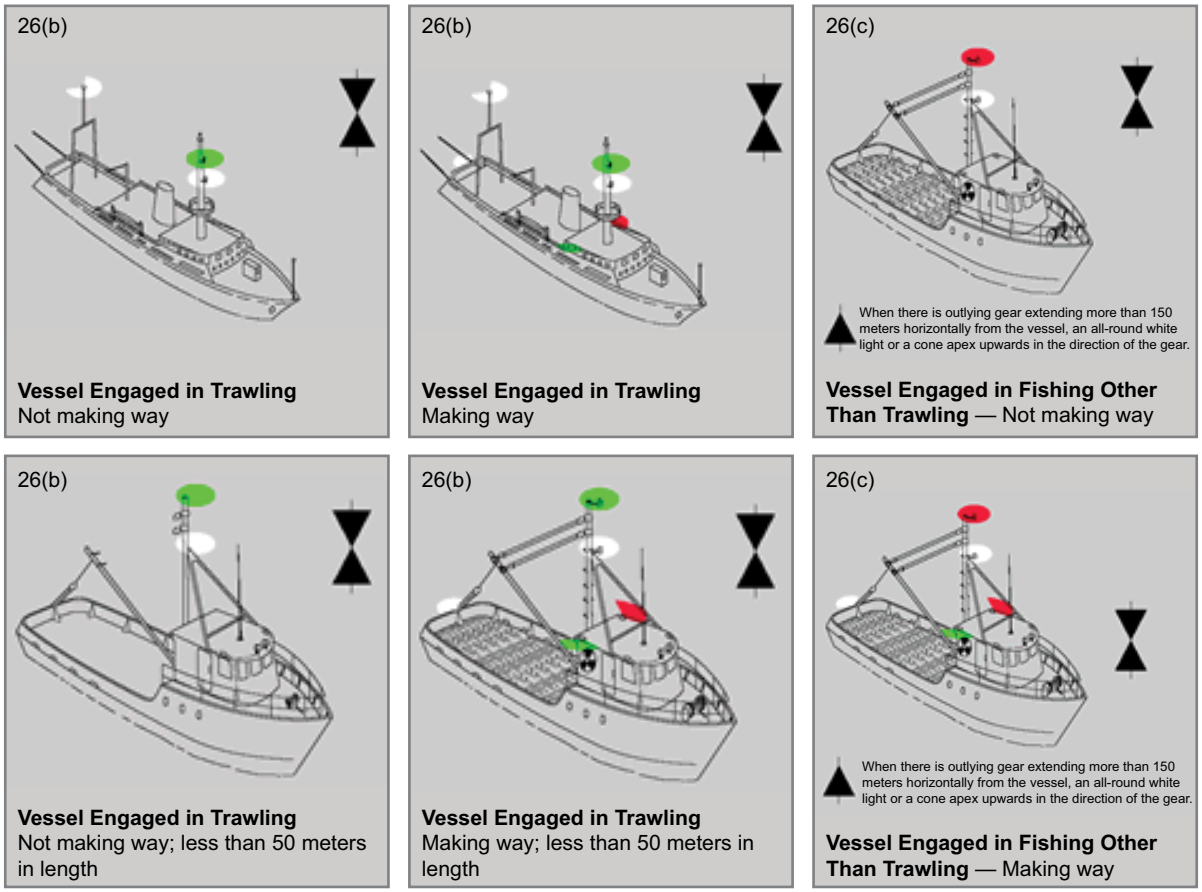
Rule 25—Sailing Vessels Underway and Vessels Under Oars

(191) (a) A sailing vessel underway shall exhibit: (i) sidelights; (ii) a sternlight.

(192) (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.

(211)

Rule 26—Fishing Vessels (International/Inland)



(193) (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).

(194) (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.

(195) (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.

(196) (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.»*

(198)

Rule 26—Fishing Vessels

(199) (a) A vessel engaged in fishing, whether underway or at anchor, shall exhibit only the lights and shapes prescribed in this Rule.

(200) (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.

(201) (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.

(202)

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.

(203) (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.

(204) *« (f) Additional signals for fishing vessels in close proximity. »* {Same as International Rules Annex II}

(205) 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.

(206) 2□(ii) Signals for trawlers.

(207) (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.

(208) (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).

(209) 3□(iii) Signals for purse seiners.

(210) (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.

(212)

Rule 27—Vessels Not Under Command or Restricted in Their Ability to Maneuver

(213) (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.

(214) (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 making way 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.

(215) (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.

(216) (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.

(217)

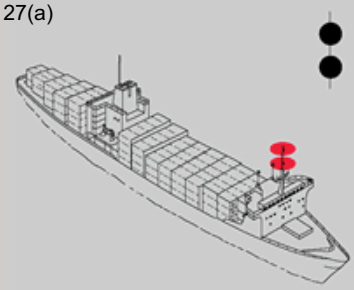
Rule 27d (Inland)
(iv) Dredge pipelines that are floating or supported on trestles shall display the following lights at night and in periods of restricted visibility.
(1) One row of yellow lights. The lights must be: (A) flashing 50 to 70 times per minute, (B) visible all round the horizon, (C) visible 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.

(218) (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.

(222)

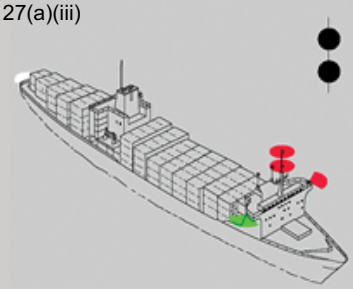
Rule 27—Vessels Not Under Command or Restricted in Their Ability to Maneuver (International/Inland)

27(a)



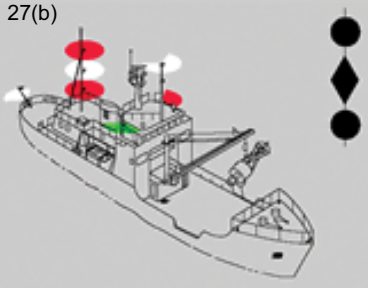
Vessel Not Under Command
Not making way

27(a)(iii)



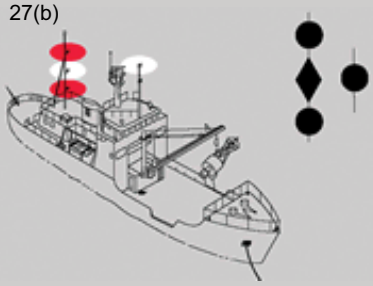
Vessel Not Under Command
Making way

27(b)



Vessel Restricted in Her Ability to Maneuver—Making way; less than 50 meters in length

27(b)

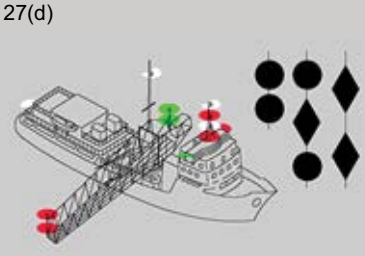


Vessel Restricted in Her Ability to Maneuver—At anchor; less than 50 meters in length

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)

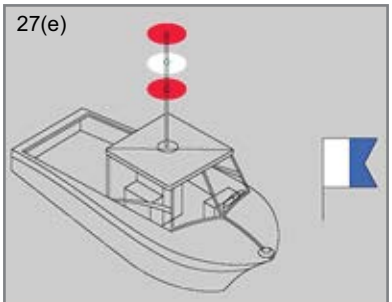


Vessel engaged in dredging or underwater operations when restricted in ability to maneuver—Making way with an obstruction on the starboard side.

27(d)

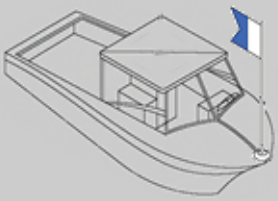
Vessel engaged in dredging or underwater operations when restricted in ability to maneuver—Not making way with an obstruction on the starboard side.

27(e)



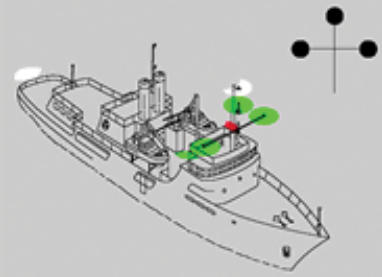
Small vessel engaged in diving operations

27(e)



Small vessel engaged in diving operations

27(f)



Vessel engaged in mineclearance operations
Vessel less than 50 meters in length.

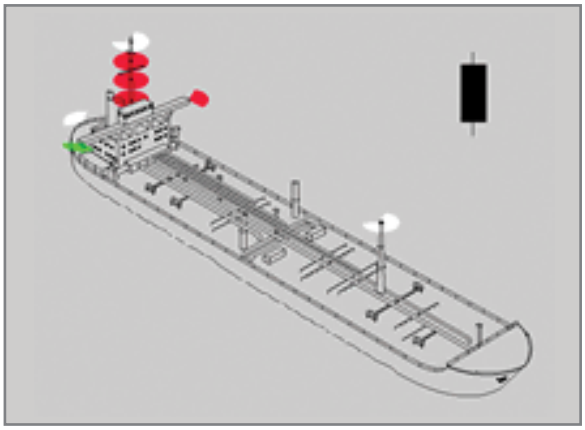
27(f)

Vessel engaged in mineclearance operations
Vessel 50 meters or greater in length.

(225)

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.



(219) (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.

(220) (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.

(221) (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.

(223)

Rule 28—Vessels Constrained by Their Draft

(224) See graphic, **Rule 28—Vessels Constrained by Their Draft**.

(226)

Rule 29—Pilot Vessels

(227) (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.

(228) (b) A pilot vessel when not engaged on pilotage duty shall exhibit the lights or shapes prescribed for a similar vessel of her length.

(230)

Rule 30—Anchored Vessels and Vessels Aground

(231) (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.

(232) **Interpretive Rule**—See **33 CFR 90.5 and 33 CFR 82.5**, chapter 2, for regulations on vessels at anchor.

(233) (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).

(234) (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.

(235) (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.

(236) (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).

(237) (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).

(238)

Rule 30 (Inland)

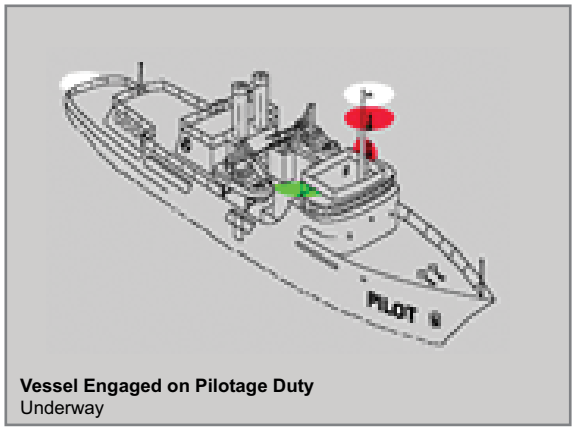
(g) A vessel of less than 20 meters in length, when at anchor in a special anchorage area designated by the Coast Guard, shall not be required to exhibit the anchor lights and shapes required by this Rule.

(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.

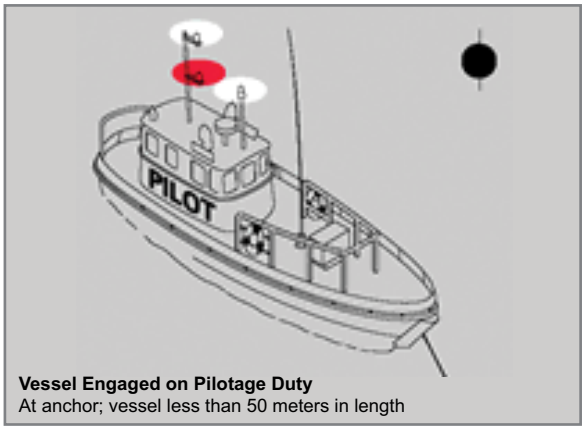
(i) Barges described in Rule 30(h) shall carry two unobstructed all-round white lights of an intensity to be visible for at least 1 nautical mile and meeting the technical requirements as prescribed in Annex I.

(229)

Rule 29—Pilot Vessels (International/Inland)



Vessel Engaged on Pilotage Duty
Underway



Vessel Engaged on Pilotage Duty
At anchor; vessel less than 50 meters in length

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	

Rule 30 (Inland)	
(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*

(239)

Rule 31—Seaplanes

(240) 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.

(241)

Part D—Sound and Light Signals

(242)

Rule 32—Definitions

(243) (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.

(244) (b) The term "short blast" means a blast of about one seconds duration.

(245) (c) The term "prolonged blast" means a blast of from four to six seconds duration.

(246)

Rule 33—Equipment for Sound Signals

(247) (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.

(248) (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.

(249)

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".

(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.

Rule 34—Maneuvering and Warning Signs (International)

(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.

(250)

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"

(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.

Rule 34—Maneuvering and Warning Signs (Inland)

(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.

(251)

Rule 35—Sound Signals in Restricted Visibility

(252) In or near an area of restricted visibility, whether by day or night the signals prescribed in this Rule shall be used as follows:

(253) (a) A power-driven vessel making way through the water shall sound at intervals of not more than 2 minutes one prolonged blast.

(254) (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.

(255) (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.

(256)

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).

(257) (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.

(258) (f) 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 shall give the signals prescribed in Rule 35(a) or (b).

(259) (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.

(260) (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.

(261) (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.

(262) (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.

(263) (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.

(264)

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.

(265)

Rule 36—Signals to Attract Attention

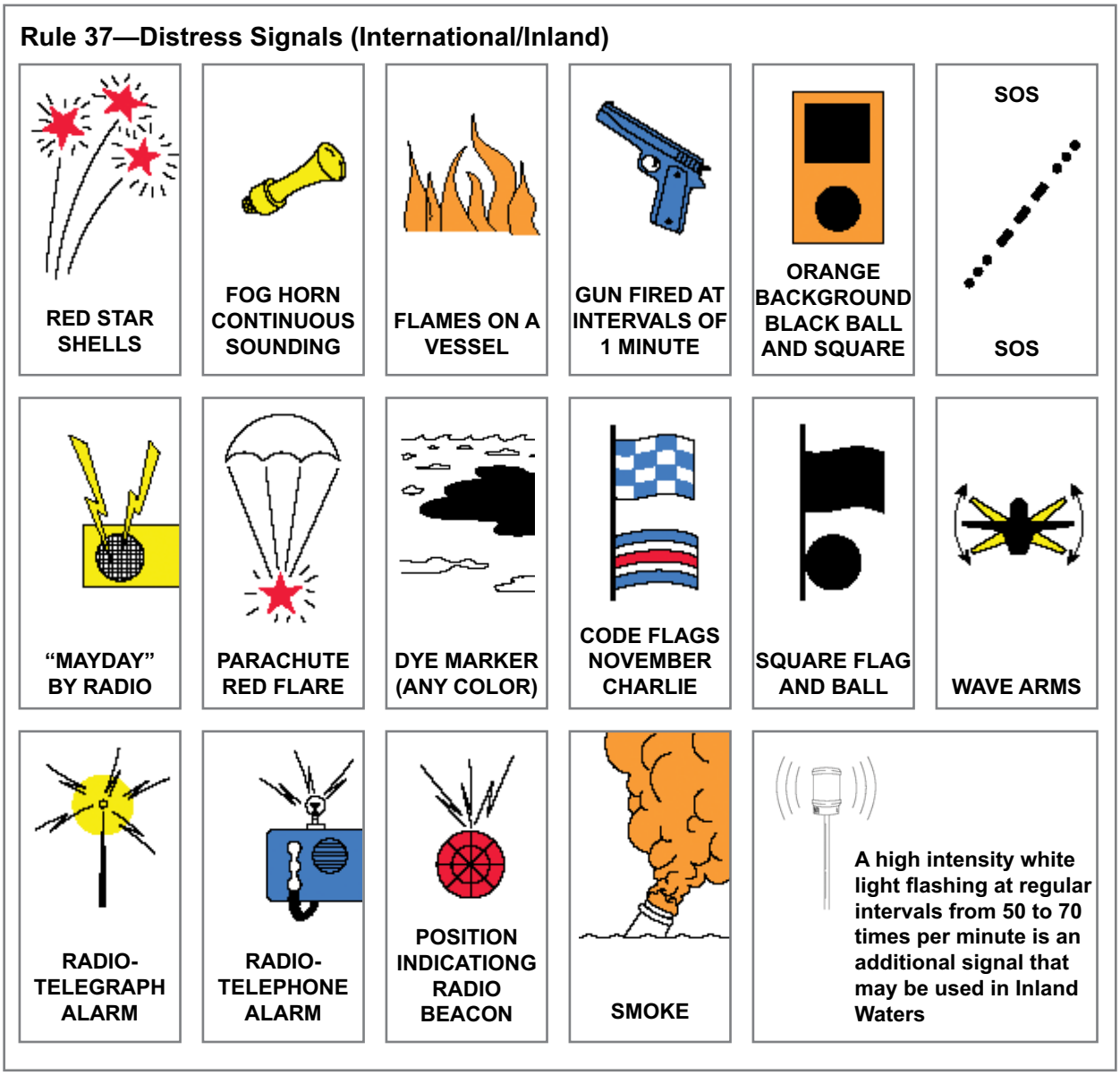
(266) If necessary to attract the attention of another vessel, any vessel may make light or sound signals that cannot be mistaken for any signal authorized elsewhere in these Rules, or may direct the beam of her searchlight in the direction of the danger, in such a way as not to embarrass any vessel.

(267)

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.

(270)



(268)

Rule 37—Distress Signals

(269) 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**).

(271)

Part E—Exemptions

(272)

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:

Rule 38—Exemptions (International)
(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.

Rule 38—Exemptions (International)
(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.

(273)

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
(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.*

(274) **Implementing Rule**—See **33 CFR 81.20**, chapter 2, for regulations.

(275)

Part F—Verification of Compliance with the Provisions of the Convention

(276)

Rule 39—Definitions

(277)

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.

(278)

Rule 40—Application

(279)

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.

(280)

Rule 41—Verification of Compliance

(281)

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).

(282)

Annex I—Positioning and Technical Details of Lights and Shapes

(283)

Definitions

(284) (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.

(285)

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).

(286)

Vertical Positioning and Spacing of Lights

(287) (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.

(288) (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.

(289) (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.

(290)

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.

(291) (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.

(292) (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).

(293) (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.

(294) (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.

(295)

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.

(296) (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.

(297) (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.

(298) (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.

(299)

Horizontal Positioning and Spacing of Lights

(300) (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.

(301) (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.

(302) (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.

(303) (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.

(304)

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.

(305)

Details of Location of Direction-Indicating Lights for Fishing Vessels, Dredgers and Vessels Engaged in Underwater Operations

(306) (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.

(307) (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 these lights or shapes be at a greater height than the lower of the three lights or shapes prescribed in Rule 27(b)(i) and (ii).

(308)

Screens ‹ For Sidelights ›

(309) (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.

(310)

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.

(311)

Shapes

(312) (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.

(313) (b) The vertical distance between shapes shall be at least 1.5 meter ‹ s ›.

(314) (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.

(315)

Color Specification of Lights

(316) (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. ›

(317) (b) The boundaries of the area for each color are given by indicating the corner coordinates, which are as follows:

(318)

(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		

(319)

Intensity of Lights

(320) (a) The minimum luminous intensity of lights shall be calculated by using the formula:

(321)

$I = 3.43 \times 10^6 \times T \times D^2 \times K^{-D}$
I is luminous intensity in candelas under service conditions.
T is threshold factor 2×10^{-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.

(322) (b) A selection of figures derived from the formula is given in the following table:

(323)

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

(324) ‹ 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. ›

(325)

Horizontal Sectors

(326) (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.

(327) (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.

(328) (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».*

(329) (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.

(330) *«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.»*

(331)

Vertical Sectors

(332) (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.

(333) (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.

(334)

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.

(335) (c)□(d) In the case of lights other than electric lights these specifications shall be met as closely as possible.

(336)

Intensity of Non-electric Lights

(337) Non-electric lights shall so far as practicable comply with the minimum intensities, as specified in the *«Intensity of Lights»* Table.

(338)

Maneuvering Light

(339) *«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.

(340)

High-speed Craft

(341) (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.

(342) (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:

(343)

$$y = \frac{y = (a+17\Psi)\ C}{1000} + 2$$

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.

(344)

Approval

(345) 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»*.

(346)

Annex II—Additional Signals for Fishing Vessels Fishing in Close Proximity

(347) See Rule 26(f).

(348)

Annex III—Technical Details of Sound Signal Appliances

(349) (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).

(350) (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.

(351) (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.

(352)

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

(353) 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.

(354) (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.

(355) (e) Positioning of whistles.

(356) (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».*

(357) (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).

(358) (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.

(359)

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.

(360) 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:

(361) (1) Be located at a distance apart of not more than 100 meters;

(362)

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.

(363)

Bell or Gong

(364) (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 ›.

(365) (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.

(366)

Approval

(367)

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.

(368)

Annex IV—Distress Signals

(369)

«*Need of Assistance*»

(370) The following signals, used or exhibited either together or separately, indicate distress and need of assistance:

(371) (a) a gun or other explosive signal fired at intervals of about a minute;

(372) (b) a continuous sounding with any fog-signaling apparatus;

(373) (c) rockets or shells, throwing red stars fired one at a time at short intervals;

(374) (d) a signal made by any signaling method consisting of the group . . . - - - . . . (SOS) in the Morse Code;

(375) (e) a signal sent by radiotelephony consisting of the spoken word "Mayday";

(376) (f) the International Code Signal of distress indicated by N.C.;

(377) (g) a signal consisting of a square flag having above or below it a ball or anything resembling a ball;

(378) (h) flames on the vessel (as from a burning tar barrel, oil barrel, etc.);

(379) (i) a rocket parachute flare or a hand flare showing a red light;

(380) (j) a smoke signal giving off orange-colored smoke;

(381) (k) slowly and repeatedly raising and lowering arms outstretched to each side;

(382) (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;

(383) (m) a ship-to-shore distress alert transmitted by the ship's Inmarsat or other mobile satellite service provider ship earth station;

(384) (n) signals transmitted by emergency position-indicating radio beacons;

(385) (o) approved signals transmitted by radio communication systems, including survival craft radar transponders *«meeting the requirements of 47 CFR 80.109»*.

(386) «*(p) A high intensity white light flashing at regular intervals from 50 to 70 times per minute.*»

(387)

«*Exclusive Use*»

(388) 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.

(389)

«*Supplemental Signals*»

(390) 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:

(391) (a) A piece of orange-colored canvas with either a black square and circle or other appropriate symbol (for identification from the air);

(392) (b) A dye marker.

(393)

Annex V—Pilot Rules

(394)

§88.01 Purpose and applicability.

(395) 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.

(396)

§88.03 Definitions.

(397) The terms used in this part have the same meaning as the terms defined in part 83 of this subchapter.

(398)

§88.05 Law enforcement vessels.

(399) (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.

(400) (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.

(401)

§88.07 Public safety activities.

(402) (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.

(403) (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.

(404)

Implementing Rules

(405) **Alternative Compliance**—see **33 CFR 81** and **33 CFR 89**, chapter 2, for regulations.

(406) **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. Information on obtaining charting products and a listing of authorized agents 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 charts and Coast Pilots, 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 for the full suite of NOAA's nautical charts and U.S. Coast Pilot volumes can be found at *https://charts.noaa.gov/MCD/Dole.shtml.*

(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)

National Ocean Service 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)

California

NWS Forecast Office Eureka – *www.wrh.noaa.gov/eka*
300 Startare Drive, Eureka, CA 95501

NWS Forecast Office Los Angeles – *www.wrh.noaa.gov/lox*
520 North Elevar Street, Oxnard, CA 93030

NWS Forecast Office San Diego – *www.wrh.noaa.gov/sgx*
11440 West Bernardo Court, Suite 230, San Diego, CA 92127

NWS Forecast Office San Francisco – *www.wrh.noaa.gov/mtr*
20 Grace Hopper Avenue, Stop 5, Monterey, CA 93943

NWS Forecast Office San Joaquin Valley
www.wrh.noaa.gov/hnx
900 Foggy Bottom Road, Hanford, CA 93230

(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 typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles depending on elevation, 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)
KEC-62	San Diego, CA	33°01'N., 116°57'W.	162.400
WWG-21	Santa Ana, CA	33°50'N., 117°36'W.	162.450
KWO-37	Los Angeles, CA	34°13'N., 118°03'W.	162.550
KIH-34	Santa Barbara, CA	34°26'N., 119°46'W.	162.400
WWF-62	Santa Barbara, CA	34°31'N., 119°58'W.	162.475
KIH–31	San Luis Obispo, CA	35°21'N.,120°39'W.	162.550
KEC–49	Monterey, CA,	37°11'N., 121°54'W.	162.550
KHB–49	San Francisco, CA	37°27'N., 122°30'W.	162.400
KIH–30	Point Arena, CA	39°01'N., 123°31'W.	162.550
KEC–82	Eureka, CA	40°25'N., 124°07'W.	162.400

(23) The National Weather Service provides **Radiofacsimile Weather Information** through Coast Guard Communications Station Pt. Reyes (NMC) and DOD Communication Station Honolulu (KVM70). The frequencies listed here are assigned frequencies. To convert to carrier frequency, subtract 1.9 KHz from the assigned frequency. Broadcasts are made on the following frequencies:

(24) **Pt. Reyes (NMC)**: 4346 KHz (0140-1608 UTC), 8682 KHz (All broadcast times), 12786 KHz (All broadcast times), 17151.2 KHz (All broadcast times), 22527 KHz (1840-2356).

(25) For further information on Marine Radiofax Charts, visit: *https://www.weather.gov/marine/radiofax_charts*

(26) **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/*

(27)

Space Weather Prediction Center (SWPC)

(28) 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.

(29)

NOAA, National Weather Service
National Centers for Environmental Predictions
Space Weather Prediction Center, W/NP9
325 Broadway
Boulder, Colorado 80305
www.swpc.noaa.gov

(30)

National Weather Service Port Meteorological Officers (PMOs)

(31) 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:

(32) Los Angeles, CA – 501 West Ocean Boulevard, Room 4480, Long Beach, CA. 90802.

(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, IL 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 Engineer 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**—maintained by the 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)

(52)

Offices and Services-Other U.S. Government Agencies

(53)

U.S. Army Corps of Engineers (USACE) Offices

(54)

District/Division Office	Information
Los Angeles District Office 915 Wilshire Boulevard Los Angeles, CA 90017	*www.spl.usace.army.mil*
Sacramento District Office 1325 J Street Room 1513 Sacramento, CA 95814	*www.spk.usace.army.mil*
San Francisco District Office 1455 Market Street San Francisco, CA 94103-1398	*www.spd.usace.army.mil*

(55)

Environmental Protection Agency (EPA) Offices

(56)

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*
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*

(57)

U.S. Coast Guard Navigation Center (NAVCEN)

(58) 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.

(59) For further information and/or operational questions regarding GPS and DGPS, visit *navcen.uscg.gov*, or contact:

(60)

Commanding Officer
U.S. Coast Guard Navigation Center
NAVCEN MS 7310
7323 Telegraph Road
Alexandria, VA 20598-7310

(61)

Coast Guard District Offices

(62)

Districts and Boundary Description	Contact Information
Eleventh Coast Guard District Ocean area bounded by a line from the California-Oregon state line westerly to 40°N., 150°W., thence southeasterly to 5°S., 100°W., thence northeasterly to the border between Guatemala and Mexico on the Pacific Coast (14°38'N., 92°19'W.).	Coast Guard Island, Building 50-3, Alameda, CA 94501-5100. 510–437–2970

(63)

Coast Guard Sector Offices

(64) Note: A Sector Office combines the functions of the Captain of the Port and Marine Inspection Office.

(65)

Sectors	Contact Information
Eleventh Coast Guard District	
Sector Humboldt Bay	1001 Lycoming Way McKinleyville, CA 95519-9309
Sector Los Angeles/Long Beach	1001 S. Seaside Avenue, Building 20 San Pedro CA 94501-5100.
Sector San Diego	2710 Harbor Drive North San Diego, CA 92101-1028
Sector San Francisco	1 Yerba Buena Island San Francisco, CA 94130-9309

(66)

Coast Guard Stations

(67) 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 22. 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.

(68)

California	
Station San Diego	In North San Diego Bay, 700 yards northeast of the east end of Harbor Island.
Station Los Angeles/Long Beach	On the west side of Reservation Point.
Station Channel Islands	On the east side of the harbor about 0.4 mile above the entrance.
Station Morro Bay	At the foot of the USCG and Harbormasters Office pier.
Station Monterey	At the foot of the Coast Guard pier.
Station Golden Gate	At entrance to Horseshoe Bay, about 0.4 mile north-northeast of Golden Gate Bridge.
Station San Francisco	On the east side of Yerba Buena Island.
Station Vallejo	2.5 miles above the entrance to Mare Island Strait just below the Vallejo-Mare Island causeway lift bridge.
Station Rio Vista	On the west side of the Sacramento River, 0.9 mile below bridge.
Station Lake Tahoe	On west shore of the lake, about 1.3 miles west of Dollar Point.
Station Bodega Bay	On the east side of the channel 0.8 mile inside Bodega Harbor.
Station Noyo River	On the south bank of the river, just below Noyo Basin.
Station Humbolt Bay	East side of North Spit at the entrance to Humboldt Bay.

(69)

Coast Guard Radio Broadcasts

(70) 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:

(71) **Scheduled broadcasts**–U.S. Coast Guard stations make scheduled broadcasts on a prepublished schedule of 12-hour intervals. After the preliminary announcements on VHF-FM channel 16, the station advises shifting to working frequency VHF-FM channel 22.

(72) **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.

(73) **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.

(74)

Coast Guard Radio Station	Scheduled Broadcast Times (UTC)
Humboldt Bay, CA (NMC-11)	1615, 2315, on receipt
San Francisco, CA (NMC, NMC-17)	1630, 1900, 2130, on receipt
Long Beach, CA (NMC, NMQ-9)	0200, 1800, on receipt
San Diego, CA	On receipt

(75)

U.S. NAVTEXTransmitting Stations

(76) NAVTEX is an international automated medium frequency direct-printing service informing mariners of navigational and meteorlogical 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.

(77)

Station	Range (NM)	Broadcast Schedule (UTC)
Kodiak (NOJ) *Areas east of Kodiak*	200	0100, 0500, 0900, 1300, 1700, 2130
Kodiak (NOX) *Areas west of Kodiak*	200	0300, 0700, 1100, 1500, 1900, 2350
Astoria (NMW)	216	0300, 0700, 1100, 1500, 1900, 2340
San Francisco (NMC)	350	0000, 0400, 0800, 1200, 1600, 2020
Cambria (NMQ)	350	0200, 0600, 1000, 1400, 1800, 2240
Guam (NRV)	100	0300, 0700, 1100, 1500, 1900, 2330
Honolulu (NMO)	350	0200, 0600, 1000, 1400, 1800, 2220

(78)

Customs Ports of Entry

(79) 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 are listed below.

(80)

Field Operations Office	Contact Information
San Diego	610 West Ash Street Suite 1200 San Diego, CA 92101 619–652–9966 ext.100
Los Angeles	1 World Trade Center Suite 705 Long Beach, CA 90831 562–980–3100
San Francisco	33 New Montgomery Street Suite 1600 San Francisco, CA 94105 415–744–1530 ext. 221

(81)

Public Health Service Quarantine Stations

(82)

Quarantine Stations and Addresses
CDC Los Angeles Quarantine Station 380 World Way Box N-19 Los Angeles, CA 90045
CDC San Francisco Quarantine Station San Francisco International Airport P.O. Box 280548, SFIA San Francisco, CA 94128-0548
CDC San Diego Quarantine Station 3851 Rosecrans Street Suite #715 San Diego, CA 92110-3115

(83) 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.

(84)

Food and Drug Administration (FDA) Regional Offices

(85) **Northeast Region** (New York, Maine, Connecticut, New Hampshire, Vermont, Rhode Island): 830 Third Avenue, Brooklyn, NY 11232.

(86) **Mid-Atlantic Region** (Delaware, Pennsylvania, Virginia, Maryland, Ohio, New Jersey): U.S. Customhouse, 2nd and Chestnut Streets, Philadelphia, PA 19106.

(87) **Southeast Region** (South Carolina, North Carolina, Georgia, Alabama, Louisiana, Mississippi, Florida, Puerto Rico): 60 Eighth Street, N.E., Atlanta, GA 30309. Midwest Region (Illinois, Indiana, Michigan, Wisconsin): 20 N. Michigan Avenue, Chicago, IL 60602.

(88) **Southwest Region (Texas)**: 3032 Bryan Street, Dallas, TX 75204.

(89) **Pacific Region** (California, Hawaii, Alaska, Washington, Oregon): 50 U.N. Plaza, San Francisco, CA 94102.

(90)

Department of Agriculture, Animal and Plant Health Inspection Service (APHIS)

(91) 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. See *https://www.aphis.usda.gov* for more information.

(92)

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
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)

(93)

Immigration and Naturalization Service Offices

(94) **California:**

(95) Los Angeles: 300 North Los Angeles Street 90012.

(96) Sacramento: Federal and U.S. Courthouse Bldg., 650 Capitol Mall 95814.

(97) San Diego: 880 Front Street 92188.

(98) San Francisco: Appraisers Bldg., 630 Sansome Street 94111.

(99) San Luis Obispo: Frontage Road South Highway 101, 93406.

(100) San Pedro: Terminal Island 90731.

(101) Stockton: U.S. Post Office Bldg., 401 North San Joaquin Street 95202.

(102)

Federal Communications Commission Offices

(103) **District field offices:**

(104) San Diego, CA: Interstate Office Park, 4542 Ruffner St., Room 370 San Diego, CA 92111-2216.

(105) Los Angeles, CA: Cerritos Corporate Tower, 18000 Studebaker Rd., Room 660, Cerritos, CA 90701-3684.

(106) San Francisco, CA: 5653 Stoneridge Drive, Suite 105, Pleasanton, CA 94588-8543.

(107) Telephone toll-free: 888–225–5322: (888–CALLFCC) to report radio communciations interference issues.

(108)

Radio shore stations providing medical advice

(109) Messages to shore stations may be transmitted in code groups or plain language; messages should be signed by the master and be prefixed: "RADIOMEDICAL." The following stations will provide radio services for medical advice. (See Medical advice, Chapter 1.)

(110) **NMC**, San Francisco, CA, U.S. Coast Guard, and

(111) **NMO**, Honolulu, HI, U.S. Coast Guard on HF single-sideband radiotelephone channels 424(4134 kHz), 601(6200 kHz), 816(8340 kHz), or 1205(12242 kHz).

(112) **NOJ**, Kodiak, AK, U.S. Coast Guard, and

(113) **KLB**, Seattle, WA, Mobile Marine Radio, Inc.

(114)

Measured courses

(115) 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.

(116) Channel Islands Harbor, on the breakwater north of the entrance; 18725.

(117) Long Beach Harbor, on Long Beach Breakwater; 18749.

(118) Marina del Rey, just north of entrance; 18744.

(119) Newport Harbor, west side of harbor entrance.

(120) Blacks Beach, 3 miles north of Point La Jolla.

(121) Sacramento River, on northeast side of river north of Walnut Grove; 18662.

(122) San Clemente Island, south of West Cove; 18762.

(123) San Diego Bay, on south side of Harbor Island; 18773.

(124) The pages in the text describing the courses can be obtained by referring to the index for the geographic places; the chart number follows the names.

Weekly Record of Updates

Week of	Action	Chapter	Paragraph(s)	User notes
22 MAY 2024				U.S. Coast Pilot 7, 56th Edition has been issued.
26 MAY 2024	**No Correction**			
02 JUN 2024	**Change**	5	112	
09 JUN 2024	**No Correction**			
16 JUN 2024	**No Correction**			

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.

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