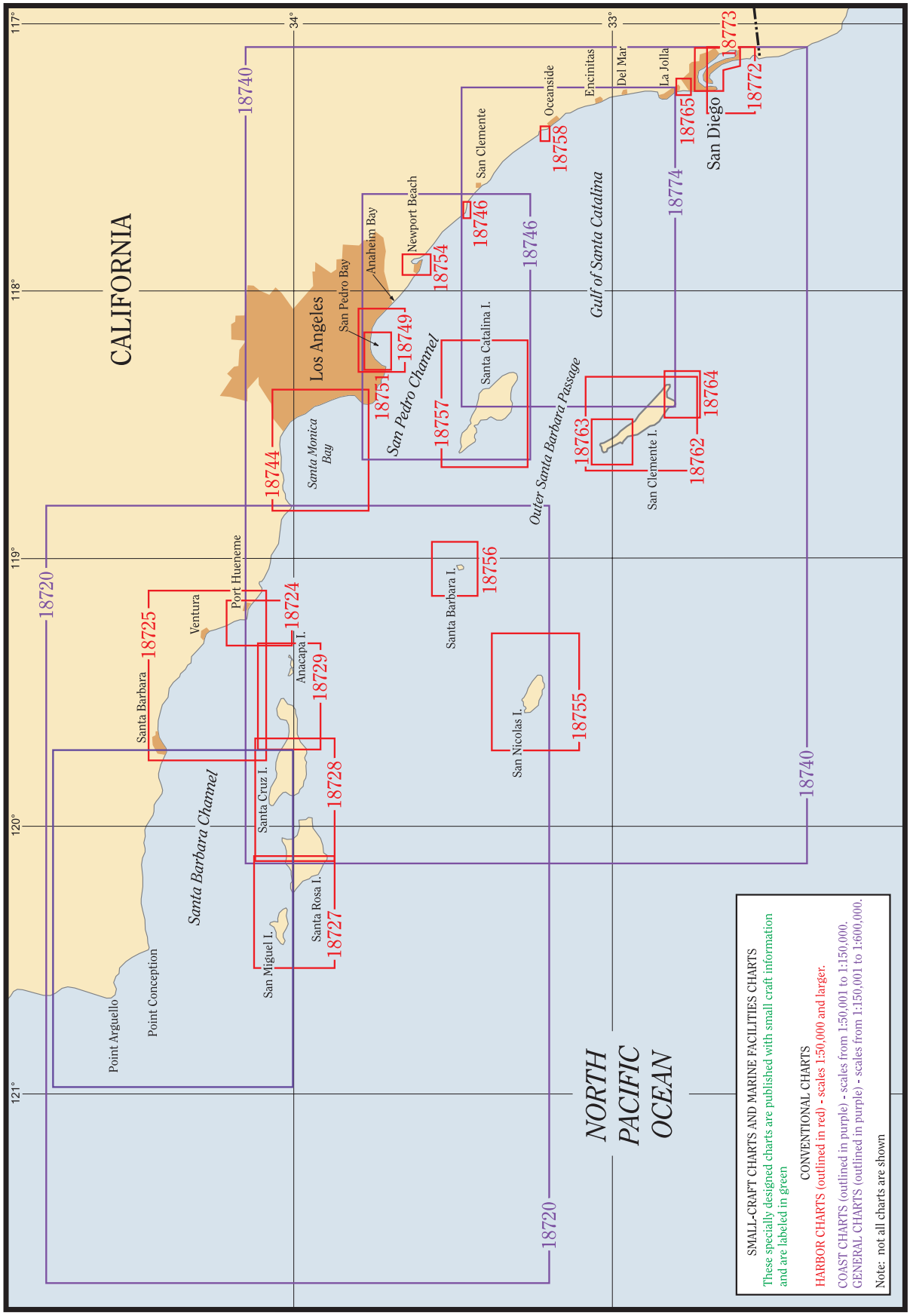
CALIFORNIA
Los Angeles
San Pedro Bay
Anaheim Bay
Newport Beach
San Clemente
Oceanside
Encinitas
Del Mar
La Jolla
San Diego
Santa Catalina I.
Gulf of Santa Catalina
San Pedro Channel
Outer Santa Barbara Passage
Santa Monica Bay
San Clemente I.
Santa Barbara I.
San Nicolas I.
Port Hueneme
Ventura
Santa Barbara
Anacapa I.
Santa Cruz I.
Santa Barbara Channel
Santa Rosa I.
San Miguel I.
Point Conception
Point Arguello
NORTH PACIFIC OCEAN
117°
118°
119°
120°
121°
34°
33°
18720
18740
18744
18746
18749
18751
18754
18757
18758
18762
18763
18764
18765
18772
18773
18774
18724
18725
18727
18728
18729
18755
18756
SMALL-CRAFT CHARTS AND MARINE FACILITIES CHARTS
These specially designed charts are published with small craft information and are labeled in green
CONVENTIONAL CHARTS
HARBOR CHARTS (outlined in red) - scales 1:50,000 and larger.
COAST CHARTS (outlined in purple) - scales from 1:50,001 to 1:150,000.
GENERAL CHARTS (outlined in purple) - scales from 1:150,001 to 1:600,000.
Note: not all charts are shown

San Diego to Point Arguello, California

(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 NW 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 recreational boating ports on San Pedro and Santa Monica Bays and along the Santa Barbara Channel.

COLREGS Demarcation Lines

(2) The lines established for this part of the coast are described in **80.1104 through 80.1126**, chapter 2.

Chart 18022

(3) There are several islands and dangers from 7 to 100 miles off the southern California coast; they are described in chapter 5.

(4) Many restricted and danger areas are in these waters. (See **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, D.C.

(5) Vessels are requested not to tow submerged objects across charted submarine transit lanes in use off the coast of southern California.

Weather, San Diego to Point Arguello

(6) 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 S through N, which help keep coastal temperatures up in winter and down in summer. Coldest average temperatures range from the middle to upper fifties (12.8° to 15.0°C), while summertime readings are most often in the seventies (22° to 16°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 E can drop temperatures to below freezing (<0°C). Winter is the rainy season, although not much rain falls along these coasts.

(7) Strong winds and rough seas, while less frequent than farther N, 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.

(8) 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 N of Santa Monica, and in fall and winter S of Santa Monica.

Charts 18740, 18765

(9) In clear weather, vessels coming from S will sight Table Mountain, and its surrounding high land, and Los Coronados before picking up the San Diego landmarks.

(10) **Table Mountain** (chart 18022), conspicuous and flat-topped, is in Mexican territory, 25 miles SE of Point Loma and 6 miles inland.

(11) **Los Coronados (Coronado Islands)** are four bare, rocky islands, extending 4.5 miles in a NW direction, 7 miles offshore in Mexican waters, and 15 miles S of Point Loma. These islands are prominent in clear weather, and the passage E 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.

(12) A light is shown from a white cylindrical masonry tower on the S end of the S island; it is obscured from certain directions by the N islands. Another light is

shown from a white square masonry tower near the N end of the S island; local fog sometimes obscures it.

(13) 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 S of the marker. A stone mound, 365 feet above the water and 1 mile E of the obelisk, marks another point on the boundary line. Directly N of the obelisk the mesa falls to the low marshy land S of San Diego Bay.

(14) About 1.5 miles N of the border at Imperial Beach is a fishing pier extending 400 yards to seaward.

(15) 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.

(16) 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.

(17) 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.

Charts 18773, 18772

(18) **San Diego Bay**, where California's maritime history began in 1542, is 10 miles NW of the Mexican boundary. In September of that year, Juan Rodriquez Cabrillo, the Spanish explorer, sailed his frail bark into the bay. The bay is considered 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 sandspit, which expands to a width of 1.6 miles at North Island on its NW end, separates the bay from the ocean.

(19) The city of **San Diego** is on the NE shore of the bay. **Coronado** is on the sandspit opposite San Diego. **National City** and **Chula Vista** are S of San Diego on the SE 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.

Prominent features

(20) **Point Loma**, on the W 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 N of the point. At a distance the point usually has the appearance of an island. **Point Loma Light** (32°39'54"N., 117°14'33"W.), 88 feet above the water, is shown from a black house on a 70-foot white square pyramidal skeleton tower at the S end of the point. The light has a fog signal. Thick kelp beds extend more than 1.5 miles S of the point, and a sunken wreck is about 0.5 mile S of the light.

(21) 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 NE 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 N from the light.

(22) **Ballast Point**, low and sandy, projects 0.4 mile NE from the E side of Point Loma, 1.3 miles N from Point Loma Light. **Ballast Point Light B** (32°41'10"N., 117°13'57"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; the light has a fog signal. Three piers of the Naval Submarine Base are just N of Ballast Point. A fog signal is on the middle pier.

(23) **North Island**, the filled NW end of the sandspit on the E side of the bay entrance, is Naval Base Coronado. On its SE 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 E of the entrance, the S tower of Hotel del Coronado 2.4 miles E 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 S approach.

COLREGS Demarcation Lines

(24) The lines established for San Diego Harbor are described in **80.1104**, chapter 2.

Channels

(25) A Federal project provides for a dredged channel with depths of 47 feet in the entrance and through North San Diego Bay to the turning basin on the NE side of North Island (near Pier K), thence 42 feet to just NW of the San Diego- Coronado Bay bridge, thence 37 feet to a basin SW of the National City Marine Terminal. (See Notice to Mariners and the latest editions of charts for controlling depths.)

Anchorages

(26) General anchorages, special anchorages, and anchorages for Government vessels have been established in San Diego Bay. (See **110.1, 110.90, and 110.210**, chapter 2, for limits and regulations.)

(27) Permission to use anchorage berths 212 through 216 and Mooring Buoy 19, S of Harbor Island, must be obtained from Navy Afloat Training Group Pacific at 619-556-0900.

(28) Vessels waiting outside the entrance for a pilot will find good anchorage in 36 feet or more SE 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 619-556-0900. For permission to use anchorage berths 124, 135, 146, and 170, contact Navy Region Southwest Port Operations at 619-556-1433. For permission to use all other anchorage berths off Silver Strand, contact COMNVBEACHGRU at 619-437-2476. The area in the lee of Point Loma, S of Ballast Point and W of the E line of the project channel, is reserved for pilot boats and harbor patrol or U.S. Government craft. (See **334.880**, chapter 2, for limits and regulations.)

Dangers

(29) A submerged jetty, marked by lights and a fog signal at the seaward end, extends 1 mile S along **Zuñiga Shoal** from **Zuñiga Point**, the SW 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."

(30) A submerged jetty, marked by lights with daymarks that read "DANGER SUBMERGED JETTY," extends about 220 yards W from Zuñiga Point.

(31) In 2000, a rock awash was reported about 80 yards NW of the northernmost degaussing platform on the W side of North Island.

(32) There are numerous wrecks and obstructions in the shallow area of SE San Diego Bay. Caution should be exercised when navigating outside the marked channels.

Regulated Navigation Areas

(33) **Restricted areas** are: in the waters off the entrance to San Diego Bay; in the lee of Point Loma and S of Ballast Point; between Ballast Point and Zuñiga Point (degaussing station); adjacent to the W side of North Island; 0.4 mile N of Ballast Point, W of the dredged channel; off the NE side of North Island surrounding the Navy Pier; adjacent to and extending SE from the entrance channel to Glorietta Bay. (See **33 CFR 334.860, 334.865, 334.870, 334.880 and 334.890**, chapter 2, for limits and regulations.)

(34) **Security zones** are: on the W side of the entrance to San Diego Bay immediately N of Ballast Point; adjacent to the W and NE sides of North Island; about 1 mile N of the Point just S of the entrance to Shelter Island Yacht Basin; surrounding the Navy Pier; surrounding the Naval Amphibious Base just S of the entrance channel to Glorietta Bay; surrounding the Naval Station along the waterfront of National City from Chollas Creek to Pier 14; within 25 yards of all piers, abutments, fenders, and pilings of the Coronado Bay Bridge. (See **33 CFR 165.1101 through 165.1105, 165.1110, 165.1120, and 165.1121**, chapter 2, for limits and regulations.)

(35) A series of floating protection barriers, anchored by lighted buoys, surrounds the Naval facilities within the security zones: on the W side of the entrance to San Diego Bay; just N of Ballast Point, on the NE side of North Island; and of the Naval Station along the waterfront of National City.

(36) **Security zones** are in effect around all cruise ships entering, leaving, or anchored in the Port of San Diego Bay. (See **33 CFR 165.1108**, chapter 2, for limits and regulations.)

(37) **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 N of Ballast Point, extending E across the channel to the W shore of North Island. (See 3**3 CFR 165.1122** and **165.1107**, chapter 2, for limits and regulations.)

(38) A **safety zone** is E of Harbor Island on the N side of the bay. (See **33 CFR 165.1106**, chapter 2, for limits and regulations.)

Bridges

(39) A fixed highway bridge linking San Diego and Coronado crosses San Diego Bay 0.3 mile SE of the Tenth Avenue Marine Terminal. The bridge has clearances of: 195 feet for a width of 660 feet between piers 18-19; 214 feet for a width of 660 feet between piers 19-20; 175 feet for a width of 500 feet between piers 20-21; 156 feet for a width of 194 feet between piers 14-15. Racons and fog signals mark the bridge at pier 19.

Tides

(40) The mean range of tide is 4.0 feet at San Diego, and the diurnal range of tide is 5.7 feet. A range of about 8 feet may occur at the time of maximum tides. Daily predictions are given in the Tide Tables.

Currents

(41) 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. S 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.

(42) 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 Tables for daily predictions.)

Weather, San Diego

(43) 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, fog signals indicate that in general it is foggier around the entrance to the bay than it is in the N sections. For example, in December, the fog signal at Point Loma is operating about 20 percent of the time, compared to 10 percent at Ballast Point.

(44) Temperatures are moderate. The average high is 71°F (21.7°C) and the average low, 57°F (14°C). August is the warmest month with an average temperature of 72.2°F (22.3°C). Absolute extremes range 82°F (27.8°C) from an all-time high of 111°F (43.8°C) recorded in September 1963 to an absolute minimum of 29°F (1.7°C) in January 1949. Every month has seen temperatures of 90°F (32°C) or greater except January and December. Only January has recorded below freezing (0°C) temperatures.

(45) Precipitation is light and falls, on average, only 71 days each year. January is the wettest month when an average of just over two inches (51 mm) can be expected. January through March is the rainiest period where an average of eight days each month records precipitation. July is the driest month and June through October comprise the dry season. On average, only two one-hundredths (0.5 mm) of an inch falls in July while August is the most rain-free month when an average of only two days during the month records measurable rainfall. Annual precipitation measures less than ten inches (<254 mm) each year. The wettest year on record, 1978, documented 19.48 inches (495 mm) of precipitation and the driest year, 1953, saw only 3.41 inches (87 mm) of rainfall. Only trace amounts of snowfall have occurred on several occasions during the months of December and January.

(46) 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 W and E. Winds along the coast are often affected by local topography, particularly when the flow is off the land. For example, at Imperial Beach, E winds blow 15 to 20 percent of the time from November through March. At Lindbergh Field Municipal Airport, prevailing winds are out of the N through NE during this period. W through NW winds are also common at both places. They become increasingly more frequent by March. During the late spring and summer, SW through NW winds prevail at both locations. However, at the more exposed Imperial Beach, W 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.

(47) 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.

(48) The National Weather Service maintains an office at Lindbergh Field Municipal Airport; barometers may be compared there or by telephone.

(49) (See page 674 for **San Diego climatological table**.)

Pilotage, San Diego

(50) 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.

(51) 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.

(52) Pilotage and berthing requirements for naval vessels are coordinated by Naval Base San Diego Port Operations, 619-556-1433.

(53) San Diego Bay is served by the San Diego Bay Pilots Association, Inc., which maintains an office at the Tenth Avenue Marine Terminal. 626 Switzer Street, San Diego, CA 92101. 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.

(54) The San Diego Bay Pilots have two pilot boats; a 65-foot white vessel with the word PILOT on the front of the fly bridge and a 38-foot white monohull with the word PILOT on the front of the wheelhouse. Both boats display the International Code flag 'H' while engaged in pilotage duties during daylight hours and white over red lights at night.

(55) 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 request incoming vessels contact them at least 1 hour prior to arrival and provide estimated time of arrival and draft.

(56) Pilots board vessels in the vicinity of San Diego Bay Approach Lighted Whistle Buoy SD (32°37'18"N., 117°14'48"W.) When approaching San Diego, vessels should pass to the S and E 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 above the water on the lee side.

(57) 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.

Towage

(58) Tugs to 3,500 hp are available from commercial operators in the San Diego area. Naval tugs handle navy vessels, but will assist commercial vessels in emergencies.

(59) San Diego is a **customs port of entry**.

Quarantine, customs, immigration, and agriculture quarantine

(60) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.) 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 report directly to the Broadway Pier (32°42'57"N., 117°10'36"W.) for inspection. Small commercial vessels and fishing boats are boarded at the Broadway Pier. At either location, only the master may leave the vessel to contact the U.S. Customs Service in order to request an inspector respond to Shelter Island or Broadway Pier. 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. United States Customs can be reached at 619-557-5370 during normal business hours and 619-557-5132 24-hours a day.

(61) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

Coast Guard

(62) San Diego Coast Guard Station, Air Station, and a Marine Safety Office (see Appendix A for address) are on the mainland just NE of the E end of Harbor Island.

Harbor regulations

(63) 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 or fax 619 686-6354.

(64) 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.

(65) 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.

(66) 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).

(67) 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.

Wharves

(68) 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, repairing vessels, and for mooring and fueling small craft. Only the deep-draft commercial facilities are described. The alongside depths given for each facility described are reported depths. (For information on latest depths, contact the Port of San Diego.) For a complete description of the port facilities, refer to Port Series No. 27, published and sold by the U.S. Army Corps of Engineers. (See Appendix A for address.)

(69) 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. Mobile cranes up to 165 tons and floating cranes up to 150 tons are available.

(70) In the port area, the San Diego Unified Port District and private companies operate warehouses having a total of more than 848,000 square feet of dry storage space and more than 1,680,000 cubic feet of cold storage space. A large amount of transit shed space and open storage is available.

(71) **San Diego Unified Port District, B Street Pier, Cruise Ship Terminal:** (32°43'02"N., 117°10'28"W.): 400-foot face, 30-35 feet alongside; 1,000-foot N and S sides, 35 to 37 feet alongside; deck height, 13 feet; berthing cruise vessels.

(72) **San Diego Unified Port District, Broadway Pier, S of B Street Pier:** 130-foot face, 35 feet alongside; 1,000-foot N and S sides, 35 feet alongside; deck height 13 feet; berthing cruise vessels and other miscellaneous craft.

(73) **Navy Pier**, S of Broadway Pier: owned and operated by the Port District.

(74) **G Street Mole Pier**, S of Navy Pier: berthing of tuna seiners and commercial fishing vessels.

(75) **San Diego Unified Port District, Tenth Avenue Marine Terminal, Berths 1 and 2:** concrete bulkhead, 1,120 feet of berthing space; 31 feet alongside; deck height, 13 feet; pipelines extend from four steel storage tanks at the rear, total capacity 167,850 barrels; receipt and shipment of containerized and conventional cargo and perishable food commodities; bunkering vessels.

(76) **San Diego Unified Port District, Tenth Avenue Marine Terminal, Berths 3-6:** concrete bulkhead, 2,580 feet of berthing space; 34 to 35 feet alongside; deck height, 13 feet; approximately 3.5 acres of concrete-surfaced open storage area are located at rear; one six inch pipeline extends from three steel storage tanks, total capacity 3,000,000 gallons, formerly used for molasses, palm oil, and vegetable oil; cement unloader with maximum unloading capacity of 800 tons per hour; warehouse storage for 48,000 metric tons of cement.

(77) **San Diego Unified Port District, Tenth Avenue Marine Terminal, Berths 7 and 8:** 920 feet of berthing space, 41 feet alongside; deck height, 13 feet; one 14-inch pipeline extends from wharf to storage tanks; bulk loader with a maximum loading capacity of 2,000 tons per hour; 12 concrete silos and two steel tanks located in rear with a total capacity of 33,000 metric tons; receipt and shipment of miscellaneous dry bulk commodities, conventional and containerized general cargo; bunkering vessels.

(78) **Crosby Street Berthing Pier**, S of Tenth Avenue Marine Terminal: concrete pier with wood fender pilings; 575 feet in length; depths ranging from 43 feet at W end to 10 feet at E end; berthing for tuna seiners, commercial fishing vessels, tugs, and miscellaneous vessels.

(79) **San Diego Unified Port District, National City Marine Terminal, Berths 24-1 and 24-2:** concrete bulkhead; 1,400 feet long, 20 to 35 feet alongside; deck height, 13 feet; about 188 acres of paved open storage; receipt and shipment of general cargo and automobiles in foreign and domestic trade.

(80) **San Diego Unified Port District, National City Marine Terminal, Berths 24-3 and 24-4, and 24-5:** concrete bulkhead; 1,000 feet of berthing space and 35 to 37 feet alongside at Berths 24-3 and 24-4; 1,025 feet of berthing space and 42 feet alongside at Berth 24-5; deck height, 13 feet; receipt and shipment of general cargo and automobiles in foreign and domestic trade.

(81) **San Diego Unified Port District, National City Marine Terminal, Berths 24-10 and 24-11:** concrete bulkhead; 1,500 feet of berthing space 35 feet alongside; deck height, 13 feet; 36 acres of open lumber storage; additional 40 acres open storage; available as required at rear of National City Marine Terminal; receipt and shipment of conventional general cargo and

automobiles in foreign and domestic trade; receipt of lumber; shipment of cattle.

Supplies

(82) 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.

Repairs

(83) There are shipbuilding and repair yards in San Diego with floating drydocks, the largest of which has a lifting capacity of 25,000 tons. The largest marine railway can handle craft up to 1,400 tons. Complete shipyard facilities are available for all types of repair work.

(84) 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 NW of the Navy graving dock, has a clear length of 998 feet and an entrance width of 176 feet.

Communications

(85) San Diego has transcontinental railroad connections to the N and E. 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.

Small-craft facilities

(86) **Shelter Island**. across the channel from North Island and 1.5 miles above Ballast Point, includes the **Shelter Island Yacht Basin** on the S and the **Americas Cup Harbor** on the N. 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. 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.

(87) In September 1988, several uncharted dangerous wrecks were reported about 0.4 mile SW of the entrance to the basin.

(88) **Harbor Island**, about 0.5 mile NE 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 W end of the island.

(89) A **090°–270° measured nautical mile** is off the S side of Harbor Island. Each range is marked by two diamond-shaped markers.

(90) **Glorietta Bay**, on the S 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 August 2002, the reported centerline controlling depth in the channel was 15 feet; thence in 1981, depths of 8 to 10 feet were reported in the basin except for lesser depths along the edges. A 5 mph **speed limit** is enforced in Glorietta Bay. Water, ice, and a launching ramp are available.

(91) A **restricted area**, marked by buoys, is outside the SE limit of the channel into Glorietta Bay. (See **334.860**, chapter 2, for limits and regulations.)

(92) A **security zone** is also outside the SE limit of the channel into Glorietta Bay, within the restricted area off the Naval Amphibious Base. (See **165.1 through 165.8, 165.30, 165.33, and 165.1120**, chapter 2, for limits and regulations.)

(93) **Speed Control Lights** cross South San Diego Bay, near the head, N of Chula Vista.

(94) **Chula Vista Harbor** is on the E 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.

Chart 18740

(95) 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.

(96) 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.

(97) About 1 mile N of Point Loma Light is a submerged sewer outfall line extending about 1 mile to the W.

(98) **Ocean Beach**, 5 miles N of Point Loma, has a large Y-shaped fishing pier with a private fog signal on the end.

Weather, Gulf of Santa Catalina

(99) 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.

(100) 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 S of 40°N. generate W 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.

Chart 18765

(101) **Mission Bay**, entered between two jetties 5.5 miles N of Point Loma, is a recreational small-craft harbor administered by the city of San Diego. A light and a fog signal are at the outer end of the N jetty. A prominent feature when approaching the harbor is the municipal fishing pier at Ocean Beach, 0.3 mile S of the entrance. The lighted 338-foot tower at Sea World is prominent 1.8 miles E of the entrance. Fog 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 E and W sides of the channel, respectively, are entered about 1 mile above the entrance.

(102) In August 2006, the controlling depth was 13 feet in the dredged channel to the highway bridge (except for lesser depths to 8 feet along the edges of the channel); general depths of 14 to 15 feet were available in Mariners Basin with lesser depths along the edges and a depth of 20 feet was available in Quivira Basin. A jetty marked on its outer end by a light, extends about 125 yards NW from the S side of the entrance to Quivira Basin. The inner bay has depths of about 6 feet.

(103) The entrance to Mission Bay can be difficult to navigate while surf is high. 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.

No-Discharge Zone

(104) 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 by (see NOAA chart 18765 for the zone limits).

(105) 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).

COLREGS Demarcation Lines

(106) The lines established for Mission Bay are described in **80.1106**, chapter 2.

(107) Two fixed highway bridges cross Mission Bay. The first, crossing above the entrance between Ventura Point and Sunset Point, has a clearance of 38 feet. The second, connecting Vacation Isle with Crown Point to the N and Dana Landing to the S, has a clearance of 31 feet under the N span and 38 feet under the S span.

(108) An aerial tramway cable, with a clearance of 42 feet, crosses the entrance to **Perez Cove**, immediately SE of Dana Landing.

(109) The San Diego City Lifeguard Headquarters and the San Diego Police Department, Mission Bay Harbor Unit, are on the S 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 S, to Blacks Beach, about 3 miles N of Point La Jolla to the N, 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.

Anchorages

(110) **Special anchorages** are along the W side of Mission Bay in **San Juan Cove**, **Santa Barbara Cove**, **Bonita Cove**, Mariners Basin, and Quivira Basin. (See **110.1 and 110.91**, chapter 2, for limits and regulations.)

(111) **Mission Beach**, 6.5 miles N of Point Loma, is an amusement place with prominent buildings. From seaward the highest part of the roller coaster looks like a dome.

(112) **Pacific Beach**, 8 miles N 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.

(113) A 2-mile rounding rocky point, 9 miles N of Point Loma, is the first high land N of San Diego Bay. The point is a spur from 822-foot **Soledad Mountain**. The S end of this headland is called **False Point**, and the N 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.

(114) **Scripps Institution of Oceanography**, one of the leading institutions in research in oceanography and marine biology, has extensive facilities 12 miles N of Point Loma. The institution maintains a long pier for observation purposes.

(115) Just N 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.

(116) A **000°–180° measured nautical mile** has been established 13.5 miles N of Point Loma; each range is marked by two steel towers.

(117) **Del Mar**, 18 miles N of Point Loma, is a resort city.

(118) The coast from Del Mar N 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 N part, the high ridges of the interior are much nearer the coast. Paralleling this coast are U.S. Highway 101 and the Atchison, Topeka and Santa Fe Railway.

Charts 18740, 18774, 18758

(119) **Carlsbad**, 30 miles N of Point Loma, is a resort area with a number of hotels and motels. The stack of the San Diego Gas and Electric Co. near the S end of town is very prominent. The stack is marked by flashing white lights during the day and by fixed and flashing red lights at night. The company maintains a lighted bell buoy about 0.9 mile offshore. Mariners are cautioned to pass W of the lighted bell buoy because it marks the seaward end of a submerged pipeline. Near the N edge of town the low white square tower on the W end of the San Diego Army and Navy Academy is distinctive.

(120) The pleasure pier at **Oceanside**, 32.5 miles N of Point Loma, has a fish haven covered 10 feet around its seaward end. The pier is marked by lights.

(121) **Oceanside Harbor**, at the N end of the city, 1.2 miles NW 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 N.

(122) 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 E side of the harbor, a lighted tower on the SE side of the harbor resembling a lighthouse, and a hotel in the vicinity of the harbor entrance.

(123) The common entrance to Oceanside Harbor and Del Mar Boat Basin is between two jetties. The long W jetty is marked by a single light at the seaward end, and the short E jetty has a N and S extension. The S

extension has a light and fog signal at the seaward end; a light is at the outer end of the N extension. 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 N of the entrance channel to Oceanside Harbor, is marked by a danger buoy at its outer end.

No-Discharge Zone

(124) 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 (see NOAA chart 18758 for the zone limits).

(125) 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).

COLREGS Demarcation Lines

(126) The lines established for Oceanside Harbor are described in **80.1108**, chapter 2.

Channels

(127) A dredged channel leads from deep water through the entrance jetties, thence branches E to Oceanside Harbor and N 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.

Harbor regulations

(128) The harbor is under the control of the City of Oceanside, Department of Harbor and Beaches. The harbor headquarters building is on the E 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.

Weather, Oceanside

(129) 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.

(130) Swells are most frequent from January through April.

Supplies

(131) Gasoline and diesel fuel are pumped at the fuel dock. Marine supplies, ice, and pumpout facilities are available.

Repairs

(132) A repair yard just N 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.

(133) **Del Mar Boat Basin (Camp Pendleton)**, just N of Oceanside Harbor, is part of the U.S. Marine Corps reservation. (See 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 **334.900**, chapter 2, for limits and regulations.)

(134) A **military exercise area** extends about 3 miles seaward from about 2 miles NW 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.

(135) A **restricted area** is within the military exercise area and centered about 4.5 miles NW of Del Mar Boat Basin entrance. (See **334.905**, chapter 2, for limits and regulations.)

(136) A red and white checkered elevated tank, 1.7 miles NE 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 W of the tank, also are prominent. A large white building nearly 7 miles NW of the boat basin is conspicuous from seaward.

(137) **San Onofre Mountain**, 44 miles N of Point Loma and 1.5 miles inland, is the highest of the coastal range in the area.

(138) **San Mateo Point**, locally known as **Cottons Point** and 47 miles NW of Point Loma, ends in cliffs 60 feet high and is the N head at the mouth of **San Mateo Creek**. Both San Mateo Creek and **Arroyo San Onofre**, a mile SE, are crossed by a trestle. Two large domes of a nuclear powerplant are 2.3 miles SE of San Mateo

Point. A smaller dome-shaped building is on top of the bluff a few hundred yards SE.

(139) **San Mateo Point Light** (33°23.3'N., 117°35.8'W.), 63 feet above the water, is shown from a pole on San Mateo Point.

Charts 18740, 18774, 18746

(140) From San Mateo Point to Dana Point, 7.5 miles NW, the land is higher and more rugged, and is broken by **San Juan Creek** about 1.5 miles E 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.

(141) **San Clemente**, 2 miles N 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 NW of the pier.

(142) **Dana Point**, 8 miles NW 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**, 10 feet high and about 50 feet in extent, is 340 yards S of the highest point on the cliff, and a rock covered 2 fathoms is 2.4 miles SE of the point.

Charts 18740, 18746

(143) **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 E between two breakwaters each marked by a light on the seaward end. A fog signal is at the S light. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16. 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 E of the S breakwater light. A rock, covered 7½ feet and marked by a lighted buoy, is about 300 yards NE of the S 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 SE swell.

(144) Numerous uncharted private racing buoys are off the entrance to the harbor.

(145) In June 2007, the controlling depths were 14.7 feet in the entrance (except for lesser depths along the S breakwater), thence 10.0 feet in the channel that leads WNW to the W basin (except for shoaling to bare in the SW half of the channel opposite Daybeacon 14); the channel to the E basin had a depth of 8.5 feet. The harbor is well protected from all sides.

(146) The harbor's E and W basins are separated by a fixed highway bridge with a 45-foot channel span and a clearance of 20 feet. Berths in the E basin can accommodate over 1,400 vessels, and berths in the W basin can accommodate over 1,000 vessels. A **harbormaster** assigns berths in the harbor.

(147) 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.

(148) A **speed limit** of 5 mph is enforced in Dana Point Harbor. A swimming area, marked by private buoys, is in the NW corner of the harbor.

Anchorage

(149) A **special anchorage** is in the W part of the harbor. (See **110.1 and 110.93**, chapter 2, for limits and regulations.)

No-Discharge Zone

(150) 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 NOAA chart 18746 or 18774 for the zone limits).

(151) 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).

COLREGS Demarcation Lines

(152) The lines established for Dana Point Harbor are described in **80.1110**, chapter 2.

Supplies and repairs

(153) Most supplies and repairs are available at the marinas and service facilities at the harbor. Lifts to 25 tons are available.

(154) **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.

(155) 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 NW of Dana Point.

(156) Four private lighted buoys, about 4.1 miles SW of Laguna Beach, mark an area used to moor equipment and netting. Mariners should not attempt to pass between these buoys.

(157) **Santiago Peak**, 17.5 miles NE 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.

Chart 18754

(158) **Newport Bay**, 64 miles NW 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**, E of the entrance.

Prominent features

(159) 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 N of the harbor entrance, are the most conspicuous. The memorial hospital building, 0.3 mile N of the turning basin, and the light-colored concrete school buildings and tall tower on the high ground 1 mile back from the beach are also conspicuous.

(160) The entrance to Newport Bay is between jetties 275 yards apart with lights at their outer ends. A fog signal is at the W jetty light. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16. A lighted bell buoy is off the entrance.

(161) A **111°37'–291°37' measured nautical mile** is in San Pedro Channel, about 1.3 miles W of the entrance to Newport Bay. The E 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 W range is marked by daymarks on shore at Newport Beach. Another 950-foot pleasure pier is 2.8 miles NW of the W jetty.

COLREGS Demarcation Lines

(162) The lines established for Newport Bay are described in **80.1112**, chapter 2.

Channels

(163) A Federal project provides for a 20-foot main channel from the entrance to a turning basin of the same depth NW of Lido Isle and a 10-foot Balboa Island North Channel extending N from the entrance along the E and N sides of Balboa Island. (See Notice to Mariners and latest editions of charts for controlling depths.)

Anchorages

(164) Special anchorages are in Newport Bay. (See **110.1, 110.95, and 110.212**, chapter 2, for limits and regulations.) Assignments are made by the harbormaster.

Dangers

(165) A **speed limit** of 5 m.p.h. in Newport Bay has been established by the Orange County Harbors, Beaches, and Park District. The upper reaches of the bay are extremely shoal and have been closed by the Health Department because of contamination.

(166) In January 1986, a sunken wreck was reported in the channel about 300 yards S of the U.S. Coast Guard pier in about 33°36'N., 117°53'W.

Bridges

(167) There are no bridges over the main channel. None of the bridges to the islands in the bay restrict passage to the anchorage areas.

Tides

(168) The mean range of tide is 3.7 feet at Newport Bay entrance, and the diurnal range of tide is 5.4 feet.

Weather, Newport Bay

(169) Severe storms are rare. The Santa Ana is an exceptional wind that blows from the NE or E with great violence, although of short duration. (See Weather, Los Angeles, indexed as such, this chapter for discussion of Santa Ana winds.)

Harbor regulations

(170) The Orange County Harbors, Beaches, and Parks District controls the movement and berthing of vessels under the direction of a harbormaster, who has an office on the E side of the bay about 0.8 miles from the entrance. Patrol and assistance craft operate from the harbor office on a 24-hour basis. The harbor office may be contacted by telephone 949-723-1002 or VHF-FM channels 12 and 16. The patrol boats monitor VHF-FM channel 16.

Coast Guard

(171) A search and rescue craft of the U.S. Coast Guard is stationed at the pier adjacent to the Harbor District Headquarters.

Wharves

(172) 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 NW end of the turning basin.

Supplies

(173) Fuel, water, and marine supplies are available at most of the facilities in the bay.

Repairs

(174) 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.

Communications

(175) The city is served by State Route 1.

Chart 18746

(176) 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.

(177) **Huntington Beach State Park** is a recreational area that extends 2 miles NW along the coast from the mouth of **Santa Ana River**, which is 4.5 miles NW 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 NW 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.

(178) A submerged oil pipeline extends nearly 1.2 miles seaward, 2 miles NW of Santa Ana River; mooring buoys are off the end of the pipeline. **Huntington Beach**, a resort 5 miles NW of Newport Beach, is identified by its many oil derricks. The city has a fishing and pleasure pier which has a fish haven covered 10 feet around its seaward end. **Sunset Beach** is a small town 5 miles NW of Huntington Beach. An elevated tank is near the W extremity of the town.

Charts 18746, 18749

(179) **Anaheim Bay**, 14 miles NW 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 E and W sides of the channel. (See **334.930 and 110.215**, chapter 2, for limits and regulations.) The Navy has implemented a protection barrier at the Naval Weapons Station in the bay. This barrier consists of alternating orange and white spherical buoys connected by wire rope. All boating traffic is required to stay within the small craft channel at all times.

(180) In July 2007, the controlling depth was 32.4 feet in the entrance channel to the turning basin (except for shoaling to 26.2 feet in the right outside quarter of the channel near the outer end of the E jetty), thence depths of 32 to 41 feet were available in the basin. 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 fog signal is at the W jetty light. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16.

(181) In Anaheim Bay, during a flooding tide, the current 50 to 75 yards from the Naval Weapons Station's pier flows E to W as opposed to the normal flow of W to E. 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 N of Anaheim Bay during an ebbing tide increases the rate of ebb up to 5 knots with resultant swirls and countercurrents.

COLREGS Demarcation Lines

(182) The lines established for Anaheim Bay are described in **80.1114,** chapter 2.

(183) **Huntington Harbour**, a small-boat basin, is just S 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.

(184) 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, Calif. (See **334.930**, chapter 2, for regulations governing passage.)

(185) The **Harbor Patrol** office is adjacent to the boat launch ramp in the NW 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 NW and SE corners of the harbor.

(186) **Seal Beach**, just NW 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.

(187) **Alamitos Bay**, 15 miles NW 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 S between two jetties each marked by a light on the seaward end. A fog signal is at the W jetty light. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16.

(188) A dangerous wreck is about 0.5 mile SSW of the entrance to Alamitos Bay. In 1983, a sunken wreck was reported about 0.2 mile W of the entrance in about 33°44.2'N., 118°07.5'W.

(189) In September 1973, depths of about 17 feet were reported in the entrance channel to the fueling station about 0.9 mile N of the jetty lights, with about 10 feet in the channel from the fueling station to the slips in the NE part of the bay.

(190) A **nonanchorage area** has been designated at the mouth of the entrance channel to Alamitos Bay. (See **110.214 (a) (16) and (b)**, chapter 2, for limits and regulations.)

(191) 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 11 feet crosses the junction of the W waterway and Marine Stadium. A fixed bridge, with a clearance of 11 feet, crosses the E waterway off Marine Stadium that leads to a NE basin. A fixed bridge, with a clearance of 4 feet, crosses the W 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.

(192) 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 E side of the entrance channel near the end of the point about 500 yards above the bend in the channel.

Supplies and repairs

(193) 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.

(194) A pleasure pier on the W side of Belmont Shore, 1.7 miles NW of Alamitos Bay entrance, extends about 340 yards from the beach. A fog signal is on the end of the pier, and a fish haven is 100 feet off the seaward end. A reported wreck covered 16 feet is about 940 yards S of the end of Belmont Pier.

Charts 18751, 18749

(195) **San Pedro Bay**, between Seal Beach on the E and Point Fermin on the W, is 82 miles NW 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 NW 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.

(196) **Long Beach Harbor**, in the E part of San Pedro Bay, includes the City of Long Beach and part of Terminal Island.

(197) **Los Angeles Harbor**, at the W end of San Pedro Bay, includes the districts of **San Pedro, Wilmington**, and a major part of Terminal Island.

(198) 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.

(199) Four oil production islands, marked by lights, are to the N and E of Long Beach Pier J. A fog signal is sounded from the S end of each island.

(200) 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. Some of the principal exports are bulk petroleum, bulk coke, steel and steel products, bulk potash, grains, fresh fruits, scrap steel, animal feed, and copper concentrate. Some of the principal imports are crude petroleum, steel and steel products, motor vehicles and parts, machinery, bulk gypsum, newsprint, lumber, bulk salt, bananas, plywood, and bulk molasses.

(201) 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.

Prominent features

(202) **San Pedro Hill** (chart 18746), 3.3 miles NW of Point Fermin, is the distinguishing feature for making San Pedro Bay from SE or W. 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.

(203) 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.

(204) **Point Fermin**, the SE extremity of San Pedro Hill, is a bold cliff about 100 feet high. Point Fermin Light, 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 N of the light.

(205) **Signal Hill**, Long Beach, rises to a height of 355 feet about 2 miles from the beach, and is readily recognized because of several radio towers around it.

(206) In Long Beach Harbor, prominent charted objects are a green hotel tower (marked by a large blue letter "b") located just N of the Municipal Auditorium, and the white stone tower of another hotel 0.4 mile E, and the lighted large white dome on the S side of the entrance to Queensway Bay. The derricks on the artificial oil islands E of Long Beach Pier J are constructed to appear as high-rise apartment buildings.

(207) Prominent charted objects in Los Angeles Harbor which are of use to the navigator are the green and white tank near the S end of Pier 1, the lighted radio tower atop San Pedro City Hall, and the stack on Terminal Island.

(208) **Long Beach Light** (33°43'23"N., 118°11'12"W.), 50 feet above the water, is shown from a 42-foot white rectangular tower on a white building on the E end of Middle Breakwater; a fog signal is at the light.

(209) **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.

(210) **Los Angeles Light**, (33°42'30"N., 118°15'05"W.), 73 feet above the water, is shown from a 69-foot white cylindrical tower on a concrete block on the outer end of the San Pedro Breakwater. A fog signal is at the light.

COLREGS Demarcation Lines

(211) The lines established for San Pedro Bay are described in **80.1114**, chapter 2.

Traffic Separation Scheme

(212) **Traffic Separation Scheme, Los Angeles/Long Beach**, also known as **Traffic Separation Scheme, Gulf of Santa Catalina**, is in the approaches to Los Angeles/Long Beach. The Scheme leads from the Gulf of Santa Catalina through San Pedro Channel and Santa Barbara Channel to Point Arguello. (See charts 18022, 18740, 18720, 18725, 18746, 18721.) This Traffic Separation Scheme is recommended for use by all vessels traveling between the points involved, and is composed basically of four elements; **(1) Northbound Lanes, (2) Separation Zone, (3) Southbound Lanes, and (4) a Precautionary Area**. Traffic Lanes have been designed 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 N and S traffic lanes, to be free of ship traffic, and should not be used except for crossing purposes. Mariners should use extreme caution when crossing traffic lanes and separation zones. Rule 10 of the collision regulations apply to this Traffic Separation Scheme.

(213) 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.)

(214) **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.

Vessel Traffic Service

(215) The **Vessel Traffic Service (VTS) Los Angeles/Long Beach**, operated by the Marine Exchange in cooperation with the U.S. Coast Guard, has been established within the approaches to the ports of Los Angeles and Long Beach.

(216) The Vessel Traffic Service is a California State mandatory service and a federally mandated Vessel Movement Reporting System (VMRS), and is designed to enhance navigational safety in the main approaches to the ports of Los Angeles and Long Beach. Mandatory participation and monitoring of VHF-FM channel 14 is required by state and federal law for participating vessels.

(217) **VTS Area:** The VTS Area consists of Los Angeles and Long Beach Harbors (inside the breakwater), and the waters of San Pedro Bay and San Pedro channel, including Santa Monica Bay, within a 25 nautical mile radius of Point Fermin Light. This includes all of the

Precautionary Area and portions of the Traffic Separation Scheme Lanes.

(218) **VTS Communications:** The responsibility of information exchange 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.

(219) 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 or 74. All stations monitor VHF-FM channels 16 and 13.

(220) If arrival/departure information has been given and new data is received by the VTS, the VTS will attempt to contact vessels to pass the updated information. In addition, a traffic advisory broadcast is given on VHF-FM channel 14 every hour on the quarter hour. Other navigational information may be given on a case by case basis.

(221) The **Marine Exchange** of Southern California records, classifies, and disseminates information on ship arrivals to, departure from, and movement within the Los Angeles/Long Beach harbors. The Exchange, about 0.4 mile N of Point Fermin, is manned 24-hours a day. It has a visual lookout, VHF-FM radiotelephone, visual communication capability, and a battery of landline telephones. The station, call sign KGW-299, monitors VHF-FM channel 16 and 13, and uses channel 14 for working.

Active User (VMRS)

(222) The following vessels are required to comply with Vessel Movement and Reporting Procedures:

(223) (a) Every power driven vessel 40 meters (approximately 131 feet) or more in length while navigating;

(224) (b) Commercial towing vessels 8 meters (approximately 26 feet) or more in length that are towing alongside, astern, or by pushing ahead;

(225) (c) Every vessel certified to carry 50 or more passengers for hire while engaged in trade, under sail or power.

Passive User (VTS)

(226) These vessels are required to monitor VHF-FM channel 14 and must respond when hailed by the VTS and must comply with operating rules;

(227) (a) Power driven vessels of 20 meters (approximately 65 feet) or more in length;

(228) (b) Vessels of 100 gross tons or more carrying one or more passengers for hire, while engaged in trade, regardless of length, whether under sail or power;

(229) (c) Every dredge or floating plant.

Non Participant

(230) Vessels that do not fall into the active or passive user categories such as fishing boats, yachts, and recreational boats can greatly enhance the safety of navigation in the VTS area by listening on VHF-FM channel 14 and by maintaining a sharp lookout. It is not necessary to participate actively.

Vessel Movement and Reporting Procedures:

(231) All participating vessels when underway and entering the VTS Area from sea shall contact the VTC on VHF-FM channel 14 and report the following information:

(232) (a) Vessel name/call sign.

(233) (b) Course and speed.

(234) (c) Vessel destination.

(235) (d) State whether taking on a pilot or being piloted by master/commanding officer.

(236) (e) ETA breakwater sea buoy/pilot station.

Entering the Precautionary Area:

(237) Prior to entering the Precautionary Area, all participating vessels shall:

(238) (a) Contact the VTC and report that the master/commanding officer is on the bridge and the vessel is being steered by hand.

(239) (b) Vessels under 40 meters subject to USCG/IMO standards shall have the senior licensed or certified person on board to be in charge of the navigation of the vessel when underway within the Precautionary Area.

(240) (c) Vessels of 40 meters or greater, when in the Precautionary Area, shall not exceed 12 knots.

(241) (d) Vessels when underway within the Precautionary Area should maintain a minimum vessel separation of .25 nautical mile (460 meters).

(242) (e) Vessels crossing the Precautionary Area, maneuvering in an unusual manner (i.e. compass/RDF calibration or drills/exercises), and arriving/departing anchorages outside the breakwater shall notify the VTC and advise of their intentions.

Entering the Pilot Areas:

(243) (a) All vessels shall contact the appropriate pilot stations prior to entering the pilot areas to receive vessel traffic information inside the breakwater. Vessels shall provide the following information to pilot stations:

(244) (1) Vessel name/call sign.

(245) (2) ETA breakwater or sea buoy/pilot station.

(246) (3) Vessel destination.

Departing Berth or Anchorage:

(247) (a) All vessels shall contact the appropriate pilot station prior to departing a berth or anchorage to

receive vessel traffic information inside the breakwater. Provide the following information to the pilot station:

(248) (1) Vessel name/call sign.

(249) (2) Advise who is piloting vessel.

(250) (3) Vessel destination, whether to sea or destination within harbor.

(251) (b) All outbound vessels shall notify VTC on VHF-FM channel 14 at least 15 minutes prior to passing breakwater entrance, including Anaheim Bay, and provide the following information:

(252) (1) Vessel name/call sign.

(253) (2) Vessel destination port or direction of departure, and advise if the vessel will be using or crossing the Traffic Separation Scheme.

(254) (3) Advise VTC when leaving the Precautionary Area and when leaving the VTS Area.

(255) All vessels shall comply with Navigation Rules (having particular regard for rules for vessels operating in and near Traffic Separation Schemes) and with the rules of the Regulated Navigation Area in San Pedro Bay (See **165.1 through 165.13 and 165.1152**, chapter 2, for limits and regulations.)

(256) Participating vessels are to ensure that a copy of the **VTS Users Manual** is available on board the vessel when operating within the VTS area. The manual is available at no charge from Executive Director, Marine Exchange of Southern California, P.O. Box 1949, San Pedro, CA 90733, phone (310) 832-6411 or can be viewed and downloaded from the Internet at **www.mxsocal.org**.

(257) 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 on the Internet at **www.dfg.ca.gov/Ospr** or can be obtained from the California Office of Spill Prevention and Response 24-hour Communications Center at (916) 445-0045.

(258) 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 long tons of oil) entering the port should ensure proper implementation of the Displacement Ton/Tug Braking Force Table listed below. In addition, to meet the requirements of the **Force Selection Matrix**, tractor tugs shall be tethered, inbound and outbound. Conventional tugs may be tethered or untethered inbound, but shall be tethered outbound. Inbound, laden Oil and Chemical Tank Vessels shall not proceed closer than two nm from the Federal Breakwater entrance unless the prescribed escort tug(s) are in position at the southern boundary of the pilot operating areas. Masters shall also ensure the anchors are ready for letting go prior to entering the pilot operating areas. The tank vessel master/pilot shall hold a "pre–escort conference" that should at a minimum include:

(259) 1. Contacting the escort tug operator to confirm the number and position of the escort tug(s); and

(260) 2. Establishing the radio frequency to be used; and

(261) 3. Establishing the destination of the tank vessel; and

(262) 4. Discussing any other pertinent information that the master/pilot and escort tug operator deem necessary.

(263) These standards reflect favorable circumstances and conditions. Adverse weather, unusual port/traffic congestion or other conditions/circumstances may require additional tugboat assistance.

(264) 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.

(265) (See **33 CFR 157**, chapter 2, for regulations for Tank Vessels Carrying Oil in Bulk and Maneuvering Performance Capability.)

(266) **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):

(267) The Port of Long Beach asks every vessel entering or leaving the port to observe the **voluntary 12-knot speed limit** that extends seaward 20 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.

Section 851.27 Force Selection Matrix

TANKER DISPLACEMENT	TRACTOR TUGS			CONVENTIONAL TUGS				
	AHEAD FORCES FOR TUGS USING STERN LINE (VSP) ASTERN FORCES FOR TUGS USING HEADLINE (ASD)		2ND TUG RATIO	AHEAD FORCES		2ND TUG RATIO	ASTERN FORCES	
LONG TONS	KIPS	SHORT TONS	RT2	KIPS	SHORT TONS	RC2	KIPS	SHORT TONS
0<60,000	20	10	2.7	50	25	1.2	30	15
60,000<100,000	40	20	2.7	60	30	1.3	50	25
100,000<140,000	50	25	2.7	80	40	1.4	80	40
140,000<180,000	60	30	2.8	120	60	1.4	100	50
180,000<212,000	90	45	3.8	220	110	1.6	120	60
212,000<220,000	100	50	3.8	250	125	1.6	120	60
220,000<260,000	120	60	5.3	410	205	1.6	140	70
260,000<300,000	140	70	5.4	480	240	1.6	160	80

Small Tank Barge Matrix

Total Displacement Tonnage of the Tank Barge and the Primary Towing Tug	Minimum Required Escort Tug(s) Static Bollard Pull in Short Tons	
0 to 20,000 displacement tons	**Tethered Escort Tug(s)**	**Untethered Escort Tug(s)**
	10 short tons	15 short tons
>20,000 displacement tons	**Tethered Escort Tug(s)**	
	A total astern static bollard pull (in pounds) equal to or greater than the sum of both the primary towing tug and the barge's total displacement tonnage. For example, 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.	

(268) 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.

(269) Vessels awaiting a pilot should stay well to seaward and E of the outer fairway buoys.

(270) **San Pedro Breakwater** extends about 0.9 mile in a SE direction from the E side of Point Fermin, then turns ENE for another 0.9 mile to Los Angeles Light. **Middle Breakwater** extends ENE for 2.1 miles from the Los Angeles entrance, thence E for 1 mile to the Long Beach entrance, and is marked at both ends by lights. **Long Beach Breakwater** extends E 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.

(271) **Kelp beds** are along the inside edge of the W 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.

(272) **Fish Harbor**, on the S side of Terminal Island near its W 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 E and depths of 11 to 14 feet W of the dredged channel.

Channels

(273) **Long Beach Channel** leads NW from W of Long Beach Breakwater for 2.2 miles to **Middle Harbor**, thence N to **Back Channel** and the **Inner Harbor**. A **restricted harbor** entrance area has been designated in the channel and side areas which extends from about 1 mile N of the breakwater to inside Middle Harbor; regulations of the Board of Harbor Commissioners, Port of Long Beach, grant priority to outbound vessels and stipulate a **6-knot speed limit** in this restricted area.

(274) 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.)

(275) **Los Angeles Main Channel** leads NW from E of the San Pedro Breakwater for about 1 mile, thence N to the Inner Harbor turning basin, thence NE through **East Basin Channel** and **Cerritos Channel**. About 0.6 mile NW of the breakwater, **Super Tanker Channel** leads W 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.)

(276) Los Angeles Main Channel is marked by a **296°** lighted range.

(277) Los Angeles Main Channel, Inner Harbor turning basin, West Basin, East Basin Channel, East Basin, and part of Cerritos Channel are currently undergoing extensive dredging through March 2005. Mariners are advised to exercise caution in the areas and to consult the Captain of the Port LA/LB for more detailed information.

(278) 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 (156.675 MHz) or Long Beach Pilot Station of VHF-FM channel 74 (156.725 MHz).

Anchorages

(279) Limits and regulations of general, naval, explosives, and special anchorage areas in San Pedro Bay are given in **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.

(280) The shallow water habitat along the E side of Pier 400 and about 0.4 mile S 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.

(281) Vessels are cautioned against anchoring in the vicinity of pipeline and cable areas shown on the charts.

Dangers

(282) A shoal area, with a rock covered 3 feet and a rock awash near the outer end, extends about 0.3 mile S of the shore just E of Point Fermin Light. A lighted whistle buoy is about 300 yards SW from the S end of the shoal area.

Regulated navigation areas

(283) A **regulated navigation area** has been established in the waters S of the Los Angeles-Long Beach breakwater encompassing the approaches to both Los Angeles and Long Beach harbors, the pilot areas, and Commercial Anchorage G. (See **165.1 through 165.13 and 165.1152**, chapter 2, for limits and regulations.)

(284) **Safety zones** have been established in San Pedro Bay, including around the oil drilling platforms, in

(285) 33°35'45"N., 118°08'27"W (**Platform Edith**);

(286) 33°35'00"N., 118°07'40"W (**Platform Elly**);

(287) 33°34'57"N., 118°07'42"W (**Platform Ellen**); and

(288) 33°33'50"N., 118°07'00"W (**Platform Eureka**). (See **147.1 through 147.20, 147.1104, 147.1108, and 147.1111**, chapter 2 for limits and regulations and chapter 3 under 'Oil well structures' for additional information.)

(289) A **naval restricted area** is in the West Basin off the S shore of Terminal Island inside the jetty of the Naval Base Mole (See 334.990, chapter 2, for limits and regulations.)

(290) A **restricted area** is off the E side of Reservation Point. (See 334.938, chapter 2, for limits and regulations.)

Bridges

(291) The Vincent Thomas Bridge, a highway suspension span with a clearance of 185 feet over the center 500-foot width, crosses Los Angeles Main Channel just

below the turning basin, 3.2 miles above the entrance breakwater.

(292) Two bridges cross Cerritos Channel on the N side of Terminal Island: Schuyler F. Heim Highway Bridge with span clearance of 38 feet down and 163 feet up; and Henry Ford (Badger) Avenue railroad bridge 25 yards W with authorized span clearances of 6 feet down and 165 feet up. The Henry Ford (Badger) Avenue railroad bridge is maintained in the down position. The bridgetender of the Schuyler F. Heim bridge monitors VHF-FM channel 13; call sign WHX-947. (See **117.1 through 117.59 and 117.147**, chapter 2, for drawbridge regulations.)

(293) It is reported that clearance gages have been established on a pier flanking the navigable span of the Schuyler F. Heim Bridge and on the dolphins flanking the Henry Ford Avenue railroad bridge. The gages indicate the vertical navigational clearance beneath each of the bridges at any height of tide.

(294) Near the E end of Cerritos Channel are several power cables that have a clearance of 155 feet. Vessels are required to have a clearance of at least 6 feet under the cables to avoid the danger of arcing.

(295) The Gerald Desmond Bridge, across Back Channel between Long Beach Inner Harbor and Middle Harbor, has a fixed span with a clearance of 155 feet.

(296) The Queen's Way (Magnolia Avenue) Bridge, crossing **Queensway Bay** 0.8 mile W of oil **Island Grissom**, is a fixed span connecting downtown Long Beach with the terminal facilities of Piers F, G, H, and J; clearances are 36 feet for the 500-foot main channel span or 45 feet at the center, and 31 feet elsewhere.

Tides

(297) The mean range of tide in Los Angeles Harbor is 3.8 feet, and in Long Beach inner and outer harbors the mean range is 3.7 feet. The diurnal range of tide is about 5.4 feet for these harbors. A range of about 9 feet may occur at times of maximum tides. The time of tide is about the same for Los Angeles and Long Beach Harbors. Daily predictions are given in the Tide Tables.

Currents

(298) The tidal currents follow the axis of the channels and rarely exceed 1 knot.

Surge

(299) 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 E end of Terminal Island, the hourly surge is very prominent, causing velocity variations which 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 E end of Terminal Island usually reaches a greater velocity than through the channel W 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.

Weather, Los Angeles

(300) 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.

(301) 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 NE to E flow over southern California. The air streams through Cajon Pass into the Great Valley, swings toward the SW, and follows either the Santa Ana River Canyon through the Santa Ana Mountains or moves directly over the low mountains S 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.

(302) 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.

(303) Winter storms are also responsible for strong winds over San Pedro Bay, particularly from the SW through NW. Winds of 17 knots or greater occur about 1 to 2 percent of the time from November through May. Winter winds often have an E component, although WNW winds are most frequent at Long Beach. At Los Angeles International Airport, W and NE winds are the most common, while at Los Alamitos, NE, E, and SW winds are frequent. However, at both locations, calm conditions are as common or more so from fall through spring. SW through W 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.

(304) The average temperature for Los Angeles is 63°F (17.2°C). The average high is 70°F (21.1°C) and the average low is 55°F (12.8°C). Every month has recorded temperatures in excess of 90°F (32.2°C) except January. The all-time maximum is 110°F (43.3°C) recorded in September of 1963. The all-time minimum is 27°F (-2.8°C) recorded in January of 1949. April, June, September, October, and November have each had temperatures in excess of 100 F (37.8°C). August is the warmest month and January the coolest.

(305) The average annual precipitation at Los Angeles is just under twelve inches (305 mm). The average number of days with precipitation is 60 each year. The driest month is July when only 0.02 inches (0.51 mm) can be expected and the wettest month is January with an average monthly rainfall of 2.88 inches (71.1 mm). July and August each average only two days per month with measurable precipitation while January and March average eight days each with measurable rainfall. The driest year on record is 1947 when only 3.11 inches (79 mm) of rain fell and the wettest year on record is 1983 when 29.46 inches (748 mm) of precipitation was recorded. Only trace amounts of snowfall have been recorded in Los Angeles and January is the only month of this occurrence.

(306) The National Weather Service maintains an office at Long Beach Airport, Los Angeles International Airport, and downtown Los Angeles (see Appendix A for address). Barometers may be compared at these locations or by telephone.

(307) (See page 675 for **Los Angeles climatological table**.)

Pilotage, Port of Los Angeles

(308) 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.

(309) 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 SE 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.

Pilotage, Port of Long Beach

(310) 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.

(311) 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 S of Long Beach Approach Lighted Whistle Buoy LB. Large deep-draft vessels are boarded 2 miles or more S of the approach buoy. The pilot boats, POLARIS and VEGA, have yellow hulls and white cabins with LONG BEACH PILOTS displayed on each side. The pilot station is at the NW end of Pier F. Pilotage can be arranged by telephone (562-432-0664), fax (562-432-3597) and VHF-FM channels 12 and 74. 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.

Towage

(312) 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.

(313) Los Angeles and Long Beach are both **customs ports of entry**.

Quarantine, customs, immigration, and agricultural quarantine

(314) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(315) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

Coast Guard

(316) A **marine safety office** is located in the Los Angeles/Long Beach Harbor complex. (See Appendix A for addresses.)

(317) **Los Angeles/Long Beach Coast Guard Station** is on the E side of Main Channel at **Reservation Point**.

Harbor regulations

(318) 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.

(319) 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 on Pier "G" at 925 Harbor Plaza, Long Beach. The **speed limit** for Middle Harbor and Inner Harbor is 6 knots.

(320) 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.

(321) Copies of the regulations may be obtained from the local office concerned.

Wharves

(322) 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. For a complete description of the port facilities refer to Port Series No. 28, published and sold by the U.S. Army Corps of Engineers. (See Appendix A for address.) 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.

(323) 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.

(324) The office of the chief wharfinger is at 425 South Palos Verdes Street, San Pedro

Wharves

(325) 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. For a complete description of the port facilities refer to Port Series No. 28, published and sold by the U.S. Army Corps of Engineers. (See Appendix A for address.) 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.

(326) The famous passenger liner QUEEN MARY, retired in 1967 and purchased by the Port of Long Beach, is moored on the NE 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.

(327) The large lighted white dome S 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.

Supplies

(328) 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.

Facilities in the Port of Los Angeles

#	Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Mechanical Handling Facilities and Storage	Purpose	Operated by
1	POLA Liquid Bulk Terminal (Berths 45-47)	33°42'53"N., 118°16'31"W.	1063	47	16	2 hydraulic unloading arms	Crude oil	Port of Los Angeles
2	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
3	SSA (Berths 54-55	33°43'29"N., 118°16'34"W.	1340	35	14	transit shed (211k sq feet)	Imported meats, Imported fruits	Stevedoring Services of America
4	Westway (Berths 70-71)	33°43'29"N., 118°16'29"W.	800	35	14.8	tank storage (593k barrels)	Liquid bulk	Westway Terminal Company
5	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
6	West Basin Container Terminal (Berth 100)	33°45'09"N., 118°16'30"W.	1200	45-53	15	-4 Panamax cranes -open storage (75 acres)	General cargo in containers	West Basin Container Terminal LLC
7	Kinder Morgan Liquid Terminal	33°45'22"N., 118°16'51"W.	825	3500	13	tank storage (498k barrels)	Petroleum products	Kinder Morgan, Inc.
8	West Basin Container Terminal (Berths 121-131)	33°45'39"N., 118°16'33"W.	3500	35-45	15	-8 Panamax cranes -open storage (186 acres)	General cargo in containers	West Basin Container Terminal LLC
9	TraPac Terminal (Berths 135-139)	33°46'00"N., 118°16'25"W.	4050	35-53	15.7	-11 Panamax cranes -open storage (173 acres)	General cargo in containers	Trans Pacific Container Service Corp.
10	ConocoPhillips Terminal (Berths 148-151)	33°45'18"N., 118°16'22"W.	1328	37	15.2	tank storage (825k barrels)	Petroleum products	ConocoPhillips
11	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
12	Valero (Berth 163)	33°45'36"N., 118°16'03"W.	888	40	13.7	tank storage (1.5m barrels)	Petroleum products	Valero
13	Ultramar (Berth 164)	33°45'35"N., 118°16'03"W.	888	40	13.7	tank storage (947k barrels)	Petroleum products	Ultramar
14	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.
15	Shell Oil (Berths 167-169)	33°45'18"N., 118°16'04"W.	1238	40	13	tank storage (580k barrels)	Petroleum products	Shell Oil

Facilities in the Port of Los Angeles								
#	Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Mechanical Handling Facilities and Storage	Purpose	Operated by
16	Pasha (Berths 174-181)	33°45'43"N., 118°15'40"W.	3300	35-45	15	-3 cranes (40 tons) -transit shed (235k sq. feet)	Steel	Pasha Properties Inc.
17	Vopak (Berths 187-191)	33°45'50"N., 118°15'35"W.	2336	38	15	-tank storage (700k barrels) -covered storage (86k sq. feet)	Liquid bulk chemical products	Vopak
18	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.
19	POLA Container Terminal (Berths 206-209)	33°45'46"N., 118°14'55"W.	2180	40-45	15.5	-4 gantry cranes -open storage (86 acres)	General cargo in containers	Port of Los Angeles
20	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.
21	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.
22	Seaside Terminal (Berths 226-236)	33°44'32"N., 118°16'26"W.	4700	38-45	13-15	-8 Panamax cranes -open storage (205 acres)	General cargo in containers	Seaside Transportation Services, LLC
23	ExxonMobil (Berths 238-240C)	33°44'01"N., 118°16'21"W.	903	37	14	tank storage (2.3m barrels)	Petroleum products	ExxonMobil
24	LAXT (Berth 301)	33°43'51"N., 118°15'46"W.	1000	72	16	-open and domed storage -enclosed conveyor system	Petroleum coke	Los Angeles Export Terminal, Inc.
25	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
26	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

* The depths given above are reported. For information on latest depths contact the port authorities or the private operators.

Facilities in the Port of Long Beach

#	Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Mechanical Handling Facilities and Storage	Cargo Handled	Operated by
1	Pier J (Berths 266-270)	33°44'11"N., 118°11'24"W.	2711	45	15	-16 gantry cranes -open storage (64 acres)	General cargo in containers	SSA Marine
2	Pier J (Berths 243-247)	33°44'36"N., 118°11'44"W.	3300	36-40	16	-open storage (57 acres) -covered storage (100k sq. feet)	General cargo in containers	SSA Marine
3	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 (70k sq. feet)	General cargo in containers	International Transportation Service
4	Pier G (Berths 212-215)	33°44'52"N., 118°12'23"W.	1900	50	18-19	-2 traveling shiploaders -covered storage (540 tons)	Petroleum Coke, Coal, Potash, Borax, Soda ash, Concentrates, Prilled sulfer	Metropolitan Stevedore Company
5	Pier F (Berths 211A and 209)	33°45'02"N., 118°12'24"W.	800	43	19	-pipeline system -tank storage (425k barrels)	Petroleum products	Chemoil Marine Terminal
6	Pier F (Berth 211)	33°45'02"N., 118°12'28"W.	1100	40	19	-receipt and storage of petroleum coke -terminal services for bulk materials	Petroleum coke	Koch Carbon, Inc.
7	Pier F (Berth 210)	33°44'59"N., 118°12'34"W.	700	40	19	belt conveyor system	Bulk salt	Morton Salt Company
8	Pier F (Berth 208)	33°44'54"N., 118°12'44"W.	420	29-33	19	-storage space (50k feet^2) -belt conveyor system	Bulk cement	MCC-Lucky Cement Company
9	Pier F (Berths 206-207)	33°44'46"N., 118°12'43"W.	1200	32	18.5	-open storage (12.2 acres) -covered storage (190k sq. feet)	Steel products, Plywood, Lumber, Large machinery	Crecent Terminal (SSA)
10	Pier F (Berths 204-205)	33°44'38"N., 118°12'32"W.	1265	36	18.5	-open storage (5.5 acres) -covered storage (180k sq. feet)	Steel products, Plywood, Lumber	Cooper/T. Smith Stevedoring
11	Pier F (Berths 6-10)	33°45'15"N., 118°12'40"W.	2750	50	14.4	-7 gantry cranes -240 reefer outlets	General cargo in containers	Long Beach Container Terminal, Inc.

Facilities in the Port of Long Beach

#	Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Mechanical Handling Facilities and Storage	Cargo Handled	Operated by
12	Pier E (Berths 24-26)	33°45'35"N., 118°12'50"W.	2100	48	17.7	-5 gantry cranes -open storage (58 acres) -400 reefer outlets	General cargo in containers	California United Terminals
13	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.
14	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.
15	Pier T (Berths 132-140)	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.
16	Pier T (Berth 122)	33°45'17"N., 118°13'08"W.	600	40	23	-open storage (7.7 acres) -covered storage (15k sq. feet)	Lumber and Lumber products	Fremont Forest Group Corp.
17	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
18	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	Pacific Coast Recycling Co.
19	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
20	Pier D (Berth 46)	33°46'10"N., 118°12'44"W.	640	40	17.2	-belt-conveyor system -storage shed (40k tons)	Gypsum	G-P Gypsum Corp.
21	Pier D (Berths 50-54)	33°46'16"N., 118°12'36"W.	2370	36	10-17	–open storage (6.9 acres) –transit shed (495k sq feet)	Newsprint and Lumber	Forest Terminals
22	Pier C (Berths 60-62)	33°46'13"N., 118°13'00"W.	1800	42	14.5	–3 gantry cranes –open storage (57 acres)	General cargo in containers & Automobiles	SSA Marine-Matson Terminal
23	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

Facilities in the Port of Long Beach								
#	Name	Location	Berthing Space (feet)	Depths* (feet)	Deck Height (feet)	Mechanical Handling Facilities and Storage	Cargo Handled	Operated by
24	Pier B (Berths 82-83)	33°46'28"N., 118°13'05"W.	1060	38	14.4	–tank storage (410k barrels) –open storage (110 acres) –transit shed (150k sq. feet)	Petroleum products and Automobiles	Petro-Diamond and Toyota
25	Pier B (Berths 84-87)	33°46'20"N., 118°13'21"W .	1980	52	16.8	tank storage (245k barrels)	Crude oil, Petroleum products, Bunker fuel	Shell Oil Products
26	Pier A (Berths 88-96)	33°46'09"N., 118°13'54"W.	3600	50	14.2	–10 gantry cranes –open storage (90 acres) –652 reefer outlets	General cargo in containers	SSAT Long Beach Terminal

* The depths given above are reported. For information on latest depths contact the port authorities or the private operators.

Repairs

(329) Los Angeles Harbor is well equipped with marine repair plants. The largest marine railway, at Berth 264 in the NE 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.

(330) 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.

Communications

(331) Los Angeles and Long Beach Harbors have connections to the extensive freeway system which 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 N, S, and E. 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.

(332) While the Ports of Los Angeles and Long Beach are separate entities, their harbor facilities are closely interrelated.

Small-craft facilities

(333) The major small-craft facilities in Long Beach are Long Beach Marina in Alamitos Bay and the Downtown Marina on Queensway Bay, W 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.

(334) Los Angeles Harbor has small-craft facilities on both sides of Cerritos Channel from the Heim lift bridge to East Basin, on the E side of East Basin, in Watchhorn Basin, and along the W 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.

Chart 18746

(335) From Point Fermin the coast trends in a general W direction 6.5 miles to Point Vicente, and forms the N shore of San Pedro Channel, which is discussed in chapter 5. From Point Vicente the shoreline curves N. The coast is free of off-lying dangers and is well marked by kelp.

(336) The Traffic Separation Scheme between Point Fermin and Point Conception is discussed earlier in this chapter.

(337) Several submarine sewers extend 1.3 miles offshore near **White (Whites) Point**, 1.3 miles NW from Point Fermin.

(338) **Point Vicente**, 6.3 miles NW 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 SW 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 E of the point.

(339) **Point Vicente Light** (33°44.5'N., 118°24.6'W.), 185 feet above the water, is shown from a 67-foot white cylindrical tower on the SW end of the point; a fog signal is at the station.

Danger zone

(340) A **danger zone** for practice firing extends off Point Vicente. (See **334.940**, chapter 2, for limits and regulations.)

Charts 18740, 18744

(341) **Palos Verdes Point**, 2 miles NNW of Point Vicente, is a bold, bluff point, 120 feet high, rising abruptly to the W 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 W of the point.

(342) **Lunada Bay** is a small bight on the S side of Palos Verdes Point. **Resort Point** forms the S side of this bay.

(343) **Flat Rock Point**, 1.7 miles NE of Palos Verdes Point, is on the S 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 S side of Flat Rock Point. The beach is covered with boulders.

(344) **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.

(345) **Malaga Cove**, just N of Flat Rock Point, is used occasionally by fishing boats with local knowledge, but it is open to the prevailing W winds. Boats enter through a break in the kelp and anchor inside in 6 to 7 fathoms, with the S point of the cove bearing 207°.

(346) **King Harbor**, 4.5 miles NNE 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.

Prominent features

(347) At the N 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.

COLREGS Demarcation Lines

(348) The lines established for Redondo Harbor are described in **80.1116**, chapter 2.

(349) The entrance is between two lights at the ends of the breakwaters at the S end of the harbor. A fog signal is at the light on the E side of the entrance. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM Channel 16. A lighted bell buoy is 230 yards SSW of the S end of the W 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 March 1977, shoaling was reported on the S side of the entrance to Basin 3, and in June 1989, rocks awash were reported near the N side of the entrance to the basin.

(350) In February 1988, numerous uncharted sunken wrecks were reported in the harbor.

Harbor regulations

(351) 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.

Supplies

(352) There is a fuel dock that has gasoline and diesel fuel; most other small-craft supplies are available.

(353) A yacht club is in Basin 3.

Repairs

(354) A boatyard here can handle craft up to 50 feet and 60 tons for all general repairs.

Caution

(355) 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.

(356) Sport fishing barges usually anchor 1 or 2 miles offshore during the summer; caution is advised to avoid them.

Submarine oil seepage

(357) 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 NW 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.

Charts 18740, 18744, 18748

(358) **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 N of Redondo Beach and extends about 275 yards from shore; a private fog signal is at the outer end. The Manhattan Beach pier, 2.5 miles N of Redondo Beach, extends almost 175 yards from shore.

(359) **El Segundo**, about 2 miles N of Manhattan Beach, has extensive oil refineries with several large oil tanks on high ground being prominent. Other prominent features are: an aero light N of El Segundo at Los Angeles International Airport, two 334-foot striped stacks in about 33º55'06"N., 118º25'39"W., and a power plant with four stacks about 0.6 mile SSE of the striped stacks. A rock groin, marked at its outer end by a private light, extends seaward from the N end of the power plant.

(360) An offshore oil terminal with two multi-buoy sea berths is about 1.3 miles W 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 W 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 WSW 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.

Caution

(361) 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.

(362) A **restricted area** extends about 7 miles offshore at El Segundo. (See **162.195**, chapter 2, for limits and regulations.)

(363) **Marina del Rey**, 7.6 miles NNW of Redondo Beach and King Harbor, is a large manmade small-craft harbor. It has a capacity for over 6,000 pleasure craft.

COLREGS Demarcation Lines

(364) The lines established for Marina del Rey are described in **80.1118**, chapter 2.

(365) A detached breakwater parallel to the shore is just to seaward of the jetties protecting the entrance channel.

Channels

(366) A dredged entrance channel leads NE from the detached breakwater for about 0.7 mile, then the harbor channel continues N for about 0.6 mile to the N 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. In March 2006, the controlling depths were 13.4 feet in the entrance channel to just past Basins B and H, thence 10 feet to Basin E at the head of the harbor. The N and S ends of the detached breakwater and the outer ends of the jetties are marked by lights. A fog signal is at the light on the outer end of the N jetty. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16.

(367) A **restricted area** governing navigation inside the detached breakwater has been established. (See **162.200**, chapter 2, for limits and regulations.)

(368) **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.

Anchorage

(369) A **special anchorage** is in the upper reach of the harbor channel. Anchoring is permitted only during storm, stress, or other emergency. (See **110.1 and 110.111**, chapter 2, for limits and regulations.)

Coast Guard

(370) A search and rescue craft is stationed at the pier just S of the harbor office, on the E side of the bend in the entrance channel.

Harbor regulations

(371) 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 E side of the bend in the entrance channel. Guest berths are available further down the channel at Burton Chace Park.

(372) The Sheriff's Harbor Patrol operates the office on the E 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.

Supplies

(373) 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.

Repairs

(374) There are two boatyards in the harbor that have hull and engine repair facilities. The largest lift can handle vessels to 100 tons.

(375) Fish havens, marked by private buoys, are about 1.1 miles W of the light at the N end of the detached breakwater.

Charts 18740, 18744

(376) About 1 mile N of the entrance to **Marina del Rey** is the 1,100-foot-long Los Angleles city public fishing pier at Venice; a fish haven covered 10 feet surrounds its seaward end. The marina del Rey harbormaster advises that in dense fog the pier fog signal is occasionally mistaken for Marina del Rey entrance. The characteristics of these fog signals should be checked to avoid this error.

(377) A **144°40'-324°40' measured nautical mile** is off Marina del Rey. The S range is two triangular white and orange markers located at the midpoint of Marina del Rey detached breakwater. The N range is an orange and white triangle located on the centerline of Los Angeles city public fishing pier.

(378) **Santa Monica**, 3.5 miles NW of Marina del Rey, has a large pleasure pier, but there is no water commerce. A private fog signal is on the outer end of the pier. A 0.3-mile-long breakwater, submerged at high tide and marked on each end by private buoys, is off the outer end of the pier and parallel to the beach. A lighted bell buoy is about 550 yards S of the breakwater.

(379) 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.

(380) 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.

(381) 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 W of Point Dume.

(382) **Kellers Shelter**, 9 miles W of Santa Monica at **Malibu Beach**, is an open bight offering protection from N and W winds in 2 to 7 fathoms, sandy bottom. A reef marked by kelp extends a short distance offshore about 0.5 mile W of the anchorage.

(383) A fishing and pleasure pier, 700 feet long with 15 feet of water at its outer end, is on the W side of Kellers Shelter. Twin white buildings are prominent marks at the outer end of the pier. Private mooring buoys are maintained E of the pier for the use of sport fishing boats which leave for the nearby fishing grounds. Frequently the headlights of automobiles on the highway along the beach are directed toward the sea.

(384) **Paradise Cove**, 2 miles NE 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 NW side of Paradise Cove. A rescue vessel is moored in Paradise Cove.

(385) In November 1985, hazardous submerged pilings were reported about 300 yards SSW of the fishing pier in about 34°01.1'N., 118°47.1'W.

(386) **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 E and W. A small bare rock is 150 yards S of the point, and a reef that uncovers is 150 yards farther out. Foul ground extends about 500 yards E of the reef. A lighted bell buoy is 0.5 mile off the point.

(387) A rescue boat is moored at **Zuma Beach**, about 1 mile NW 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.

(388) **Dume Canyon** (see also chart 18740) is a submarine valley with extremely steep slopes running about 0.3 mile offshore from Point Dume, and extending NW roughly parallel to the beach. Moderately strong currents of a confused directional nature have been observed in the vicinity of this submarine valley.

Chart 18720

(389) The 14-mile coast between Point Dume and Point Mugu is very rugged, and there are no known outlying dangers. About 2 miles E 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."

(390) **Point Mugu**, the seaward termination of the Santa Monica Mountains, is prominent because of the lowland of the Santa Clara Valley to the W. The cuts and fills of the highway which skirt the shore from Point Mugu E are prominent. Aluminum-colored twin tanks, 1.5 miles NW of the point and on the W slopes of Laguna Peak, show well from SE through W. 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.

Weather, Point Mugu

(391) Fog hampers visibilities most often from July through December, when the fog drops below 0.5 mile on about 5 to 8 days per month; September is usually the worst month. N through NE winds are common from October through March, while W 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 ENE. Calm conditions are frequent all year round, but particularly from May through October.

Caution

(392) The U.S. Navy advises navigation interests and others that continuous guided-missile firing operations may take place in the Pacific Missile Range, Point Mugu, Calif., Sea Test Range, Monday through Sunday. The test area extends for 170 miles in a SW direction from Point Mugu and is up to 100 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.)

Danger zone

(393) **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 **334.1120** and **334.1125**, chapter 2, for limits and regulations.)

(394) **Mugu Canyon** is a submarine valley with its head near Mugu Lagoon. The 50-fathom curve is about 0.5 mile offshore.

(395) **Santa Barbara Channel** is discussed in chapter 5.

Chart 18724

(396) **Point Hueneme** (pronounced: y-nee-me), 22 miles WNW of Point Dume is low, rounding, and sandy. It is the outermost point of the low land of the Santa Clara Valley.

(397) **Point Hueneme Light** (34°08.7'N., 119°12.6'W.), 52 feet above the water, is shown from a 48-foot white square tower on the point. A fog signal is on the point about 70 yards SW of the light. A fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16. A sewer outfall line, about 1.4 miles SSE of Point Hueneme Light, extends about 1 mile from shore.

Weather, Point Hueneme

(398) 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.

(399) **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 SE 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.

Prominent features

(400) The most prominent objects around the shores of the harbor are two red and white striped stacks at a powerplant, 2.4 miles SE of the harbor, are prominent, and the aerobeacon at Oxnard, 3 miles N of the harbor, is a good night mark.

COLREGS Demarcation Lines

(401) The lines established for Port Hueneme are described in **80.1120**, chapter 2.

(402) A **Safety Fairway** leading to the channel has been established. (See **166**, chapter 2, for limits and regulations.)

Channel

(403) 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 SW of the outer end of the E jetty. Lighted buoys and a **037°** lighted range mark the channel.

(404) 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.

Anchorage

(405) 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 S of Port Hueneme Light. This location offers no protection in heavy weather.

Dangers

(406) A **naval restricted area** is in Port Hueneme. (See **334.1 through 334.6 and 334.1127**, chapter 2, for limits and regulations.)

Tides and currents

(407) The mean range of tide at Port Hueneme is 3.7 feet, and the diurnal range of tide is 5.4 feet. A range of about 9 feet may occur on days of maximum tides. The lowest low water is about 1.6 feet below mean lower low water. 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.

Pilotage, Port Hueneme

(408) 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 1.5 to 2.0 miles from the sea buoy. When pilots are boarding, vessels should stay on the range line and reduce speed to 5 knots or less.

(409) 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.

(410) 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.

(411) 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 off-shore when calling pilots because dock space must often be cleared.

Towage

(412) 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.

Quarantine, customs, immigration, and agricultural quarantine

(413) (See chapter 3, Vessel Arrival Inspections, and Appendix A for addresses.)

(414) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter.)

Customs

(415) Port Hueneme is a U.S. Customs port of entry, telephone (805) 488-8574.

Agricultural quarantine

(416) 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.

Harbor regulations

(417) 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 E 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.

(418) 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.

Wharves

(419) 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 W end of the port property adjacent to the entrance channel. It is 379 feet long with 15 to 18 feet alongside.

(420) 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.

(421) 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.

Supplies

(422) Water and most marine supplies are available. Bunker fuel from dockside pipeline at commercial berths and diesel oil are obtainable.

Repairs

(423) Minor repairs may be made in the port. Machine shops in Ventura and Oxnard are qualified for normal voyage repair work.

Communications

(424) Oxnard has good rail, air, and highway connections with Los Angeles and points N.

Chart 18725

(425) **Channel Islands Harbor**, 1 mile NW of Port Hueneme and 5.8 miles SE 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.

No-Discharge Zone

(426) 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 NOAA chart 18725 for the zone limits).

(427) 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).

COLREGS Demarcation Lines

(428) The lines established for Channel Islands Harbor are described in **80.1122**, chapter 2.

Channels

(429) 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 fog signal is at the seaward end of the S jetty. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16.

(430) The areas SE of the entrance channel and NW of the N jetty are subject to rapid and uncertain shoaling. Mariners are advised to approach the entrance channel from the S and to exercise caution when approaching the harbor at night.

(431) The entrance channel leads NE from the breakwater then turns N into the entrance basin; an inner basin is just N of the entrance basin. In September 2006-January 2007, the controlling depths were 15.7 feet in the entrance channel and 13.8 feet in the entrance basin, thence a depth of 10.0 feet was available in the inner basin.

Coast Guard

(432) The Channel Islands Harbor Coast Guard Station is just S of the harbormaster's office. Search and rescue vessels are stationed here.

Harbor regulations

(433) The harbor is administered by the Harbor County Department, Ventura County, and is under control of a **harbormaster**, who has an office on the E side of the harbor about 400 yards N 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.

Supplies

(434) Gasoline and diesel fuel are pumped at a fueling dock on the E side of the harbor just N of the harbor office. Water, ice, and most marine supplies are available.

Repairs

(435) Two full-service marine repair yards are on the E side of the channel, about 0.5 mile N of the harbormaster's office. Mobile lifts can handle craft to 25 tons, and a fixed lift can handle vessels to 60 tons.

(436) A **147°51'–327°51' measured nautical mile** is off the breakwater and beach just N of the harbor entrance. The S range is marked by the breakwater S light and the S jetty light. The N range is marked by less visible poles on the beach.

(437) A row of cottages extends NW along the beach for 2 miles from Point Hueneme. From the point, low sand beaches and dunes trend NW for 9 miles to the mouth of **Ventura River**.

(438) A striped 209-foot stack having a bright flashing red light on top is 0.6 mile N of **Mandalay Beach** and is conspicuous throughout the area. A private lighted buoy is 1.1 miles W of the stack, and a group of mooring buoys are about 0.3 mile E of the lighted buoy. A submarine pipeline runs from the mooring buoys to shore.

(439) **Ventura** is 8.5 miles N 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.

(440) Freshwater is piped to the pier, and gasoline is available in the town.

(441) Two fish havens are about 2.3 miles SW and 1.7 miles S, respectively, from Ventura Pier.

(442) 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.

(443) The most prominent features around Ventura are the lighted microwave tower, atop a hill 1.8 miles NE of the seaward end of Ventura Pier, and the tall Holiday Inn Motel (sign lighted at night), about 300 yards W of the pier. Also prominent are the railroad trestle crossing Ventura River, just W of town, and **Padre Junipero Serra Cross**, on a 350–foot hill immediately NW of the center of town. There are several aluminum-colored tanks and many oil derricks high up the slopes of the hills NW of town.

(444) **Ventura Harbor**, 6.7 miles N of Point Hueneme and just N 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. In February 2001, a submerged rock was reported in about 34°15.3'N., 119°16.4'W. Caution is advised.

COLREGS Demarcation Lines

(445) The lines established for Ventura Harbor are described in **80.1124**, chapter 2.

(446) The entrance to Ventura Harbor is between two jetties protected by a 1,800-foot detached breakwater. The S end of the breakwater and the seaward ends of both jetties are marked by lights. A fog signal is at the S jetty light. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16.

(447) Dangerous breakers can develop in the approach area to the entrance channel in winter when the prevailing winds are from the W. Inbound and outbound vessels are advised by local interests to run a direct course between Ventura Entrance Lighted Whistle Buoy 2V and the breakwater entrance.

Channels

(448) The dredged entrance channel leads NE between the jetties, then turns E into the harbor. The private buoys in the entrance channel and harbor are not charted because the positions are changed frequently due to the shifting shoals. Mariners are advised to exercise extreme caution and to contact the harbormaster for the latest channel and harbor conditions prior to entering.

(449) A channel leads NE from the N part of the harbor to a private waterfront home development called **Ventura Keys**. In March 2000, depths of 14 feet were reported in the development.

Harbor regulations

(450) Ventura Harbor is administered by the Ventura Port District and is under the control of a **harbormaster**, who has an office on the point N 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.

Supplies

(451) Gasoline and diesel fuel are available just E of the harbormaster's office and at the S end of the harbor. Water, ice, and marine supplies are available. Two yacht clubs are on the shores of the harbor.

Repairs

(452) 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.

(453) From Ventura River, the **Santa Ynez Mountains** extend to Point Conception and Point Arguello. For 11 miles W 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.

(454) **Pitas Point**, 5.5 miles NW of Ventura, is the first bold point W of Ventura River. A very steep gulch is on the W side. E 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 E of the point.

(455) A fish haven, marked by a buoy, is about 1.4 miles SE of Pitas Point.

(456) **Punta Gorda**, 9 miles NW of Ventura, is low at its outer extremity, but rises rapidly to prominent **Rincon Mountain**. E of the point is a long pier supporting several oil pumps. Oil tanks are conspicuous on the outer end of the pier. Tanks and numerous derricks are along the highway just E of the pier. W of this pier a causeway extends S from Punta Gorda for 0.5 mile to an artificial island used for oil operations. A private light and fog signal are on the island.

(457) **Rincon Point,** 11 miles NW of Ventura, is low and sandy. **Sand Point**, 3.5 miles W of Rincon Point, is low and rounding, with the narrow opening to **El Estero**, a lagoon of no importance lying close under and E of it. A rock that uncovers is 550 yards offshore from Sand Point. Oil-drilling platforms are off Sand Point.

(458) A Standard Oil installation is prominent on the E side of **Carpinteria**, 8 miles E of Santa Barbara. A submerged pipeline leads to offshore oil drilling platforms and to mooring buoys about 0.6 mile offshore where tankers are loaded. A pier is used to load support boats operating to and from the oil platforms. Many storage tanks are back of and on each side of the pier. One tank with an aluminum-colored dome may be seen from seaward.

(459) **Ortega Hill**, just W of **Summerland** and 18 miles NW 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.

(460) **Santa Barbara**, 29 miles NW 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.

(461) **Santa Barbara Light** (34°23.8'N., 119°43.4'W.), 142 feet above the water, is shown from a 24-foot white tower about 2 miles W of the harbor entrance. **Lavigia Hill**, 0.6 mile NE of the light is 459 feet high and the distinguishing feature in approaching Santa Barbara from the E or W.

(462) Submerged shellfish structures are about 0.7 mile SE of Santa Barbara Light in about 34°23'15"N., 119°42'45"W.

(463) **Santa Barbara Point**, 1 mile E of the light, is a high cliff at the SE limit of the narrow tableland extending from Lavigia Hill. The point is the beginning of a sand beach extending 0.6 mile E to **Point Castillo**, the W point of the breakwater forming Santa Barbara Harbor.

(464) Conspicuous landmarks are the neon-lighted hotel tower on the beach 1 mile E 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 W by Lavigia Hill.

COLREGS Demarcation Lines

(465) The lines established for Santa Barbara Harbor are described in **80.1126**, chapter 2.

(466) The harbor has a 500-yard breakwater extending NE from **Point Castillo** to an extensive sandbar which forms the S side of the harbor. A jetty extends across the sandbar about 400 yards N from the NE end of the breakwater. A light is at the end of the jetty and a light and fog signal mark the connection between the breakwater and jetty; the fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16. The NE side of the harbor is formed by Stearns Wharf; the wharf is marked by a light at the S end. A groin, about 125 yards long, extends S from shore about 0.3 mile W of Stearns Wharf. At night, sometimes the lights are difficult to see against the background of city lights.

Channels

(467) A dredged entrance channel leads NW between the breakwater and Stearns Wharf then turns SW into the harbor. The channel is marked by buoys. The harbor buoys are not charted because their positions are frequently changed. The entrance and harbor are subject to rapid shoaling. The harbormaster advises that the entrance channel has a tendency to shoal after SE storms. Mariners should contact the harbormaster on 2182 kHz or on VHF-FM channel 16 for channel conditions and assistance in entering.

Anchorage

(468) A special anchorage area is in the basin behind the breakwater. (See **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 E of Stearns Wharf; the mooring area contains several mooring buoys. Anchorage is prohibited within 300 feet E 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).

Caution

(469) The long sandbar N 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.

Weather, Santa Barbara

(470) 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 E through WSW. NE winds, common throughout the year, are the most frequent winds from November through February, though a distant second to calm conditions.

Coast Guard

(471) A Coast Guard rescue vessel is stationed at the city pier in the SW part of the harbor, and a Coast Guard Marine Safety Detachment is on the W side of the harbor.

Harbor regulations

(472) 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 SW 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.

(473) 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.

(474) **Sterns Wharf** had alongside depths of 5.1 feet at the foot and 18.6 feet at the head in May 2000. The City Pier, inside the harbor, has diesel fuel, gasoline, commercial ice, water, and a hoist with a maximum lift of two tons. The area east of the wharf is reported to be heavily congested.

Supplies

(475) Marine supplies are available.

Repairs

(476) There is a boatyard on the SW 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. And there are several boat builders and repair yards in the city of Santa Barbara.

Communication

(477) Communication is by rail, motor vehicle, and by airplane. The Santa Barbara Municipal Airport is at **Goleta**, 7 miles W of the harbor.

Chart 18721

(478) The 8-mile coast from Santa Barbara W 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.

(479) **Goleta Point**, 6.2 miles W 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 N of the point and are dominated by a lone tower. The aerolight 1.5 miles N and the two lighted radio towers 1.5 miles NE of the point are good marks at night. A 1,475-foot pleasure pier is in the bight E of the point. A 4-ton hoist is available.

(480) The 32-mile coast from Goleta Point to Point Conception is more rugged than that Eastward. **Cañada de la Gaviota**, 12 miles E of Point Conception, is a conspicuous break in the mountains back of this coast. A railroad skirts the shore over trestles and embankments which 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.

(481) 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.

Safety zones

(482) Safety zones have been established around oil drilling platforms and an offshore storage and treatment vessel mooring area, about 13 miles W of Goleta Point, in

(483) 34°23'27"N., 120°07'14"W. (**Platform Hondo**);

(484) 34°22'36"N., 120°10'03"W. (**Platform Harmony**);

(485) 34°21'01"N., 120°16'45"W. (**Platform Heritage**); and

(486) 34°24'19"N., 120°06'00"W. (**vessel mooring area**). (See **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.)

(487) Temporary drilling platforms can be found along this coastline and may be moved periodically. Mooring buoys for tankers are SW of Coal Oil Point and S of Gaviota.

(488) **Coal Oil Point**, 1.8 miles W 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.

(489) Pilings of former piers and ruins of a drilling rig may exist from Coal Oil Point for about 2.5 miles NW to the pier at **Ellwood**. The private 2,300-foot pier is owned by Arco Oil. Passage without local knowledge is not advisable.

(490) A rock covered 13 feet is 3.7 miles W of Coal Oil Point and 0.9 mile offshore; it is surrounded by kelp. A reported rock covered 4 fathoms is 3.3 miles S of **San Augustine**. This rock is the outermost danger along the N side of the Santa Barbara Channel.

(491) **Capitan**, 7.5 miles W of Coal Oil Point, is in a small bight which offers little protection to small craft. A lone tank stands on a bare hill 500 feet high and 0.3 mile inland.

(492) **Refugio Beach** at **Orella**, 2.5 miles W 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.

(493) Oil is loaded from a submerged pipeline at **Gaviota**, 13.5 miles E of Point Conception. A number of large green storage tanks mark the inshore end of the pipeline. About 1 mile W 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.

(494) **Cojo Anchorage**, 1.5 miles E of Point Conception, affords protection off the mouth of the Cojo Valley from moderate W and NW 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 E of this anchorage known as Little (Old) Cojo, is foul and affords little protection.

(495) **Point Conception**, 118 miles NW of Point Fermin and at the W 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 N or E, it usually looks like an island.

(496) Point Conception has been called the **Cape Horn of the Pacific** because of the heavy NW 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.

(497) **Point Conception Light** (34°26.9'N., 120°28.2'W.), 133 feet above the water, is shown from a 52-foot white tower behind a building near the W part of the point; a fog signal is at the station. A low black rock, nearly awash at high tide, is 220 yards offshore, SW of the light.

Danger and Safety zones

(498) **Danger zones** extend offshore from Point Conception to Point Sal. (See **334.1130,** chapter 2, for limits and regulations.)

(499) **Safety zones** have been established around oil drilling platforms in

(500) 34°27'19.0"N., 120°38'47.0"W. **(Platform Hermosa)**;

(501) 34°28'09.5"N., 120°40'46.1"W. **(Platform Harvest)**; and

(502) 34°29'42.0"N., 120°42'08.0"W. **(Platform Hidalgo)**. (See (**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.)

(503) From Point Conception, the coast trends in a gentle curve NW 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.

(504) 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.

(505) **Espada Bluff** is a prominent cliff 378 feet high, 5.5 miles NNW of Point Conception. The cliffs on each side drop sharply to less than 100 feet in height.

(506) **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.

(507) **Rocky Point**, 1.2 miles S of Point Arguello, has numerous detached rocks extending in some cases 300 yards offshore.

(508) **Point Arguello** is a narrow, jagged, rocky projection, extending about 800 yards W 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 N and S sides. These form a saddle which, from N and S, looks like two heads. **Point Arguello Light** (34°34'37"N., 120°38'50"W.), 100 feet above the water, is shown from a 20-foot high post on the W end of the point.

Weather, Point Arguello

(509) 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 S. 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. During August the fog signal is operating more than 30 percent of the time, compared to 17 percent at nearby Point Conception.

Chart 18687

(510) **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.). **Restricted** and **anchorage areas** established by Federal regulations are in Lake Mead. (See **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, Nev. 89005.

(511) 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, free of charge, by making application to Commander, Eleventh Coast Guard District. (See Appendix A for address.)