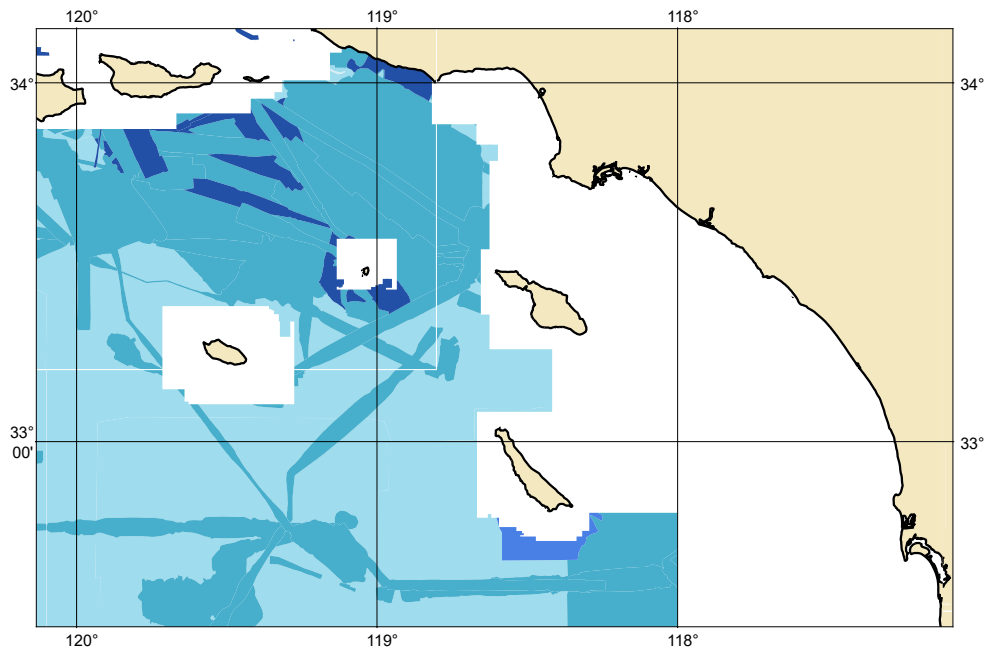


Zone of Confidence (ZOC) Diagram



ZOC CATEGORIES

ZOC	COLOR	POSITION ACCURACY	DEPTH ACCURACY	SEAFLOOR COVERAGE
A1		± 5 m + 5% depth ± 16.4 ft + 5% depth	= 0.50 m +1% d = 1.6 ft +1% d = 0.3 fm +1% d	All significant seafloor features detected.
A2		± 20 m ± 65.6 ft	= 1.00 m +2% d = 3.3 ft +2% d = 0.6 fm +2% d	All significant seafloor features detected.
B		± 50 m ± 164.0 ft	= 1.00 m +2% d = 3.3 ft +2% d = 0.6 fm +2% d	Uncharted features hazardous to surface navigation are not expected but may exist.
C		± 500 m ± 1640.4 ft	= 2.00 m +2% d = 6.6 ft +2% d = 1.1 fm +2% d	Depth anomalies may be expected.
D		Worse than ZOC C	Worse than ZOC C	Large depth anomalies may be expected.
U		Unassessed - The quality of the bathymetric data has yet to be assessed.		

NOAA CUSTOM CHART
NOTES GEOSPATIAL DATABASE
VERSION 3.0B - 20 FEBRUARY 2025

The records of the NOAA Custom Chart Notes Geospatial Database are current as of February 20, 2025. Subsequent additions and refinements are to be expected. Please refer to all available navigational publications for complete information about the charted area.

CAUTION
CHART UPDATES

This NOAA Custom Chart contains up-to-date information only as of the time of creation, and will become outdated. Mariners are advised to visit <https://distribution.charts.noaa.gov/navigation-updates/> to check for critical and routine updates, and to render a new NOAA Custom Chart when the ENC data used to make the chart is updated. Notices to Mariners are not issued for corrections to this NOAA Custom Chart.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, U.S. Coast Guard and National Geospatial-Intelligence Agency.

COMMENTS REQUESTED

NOAA encourages users to submit inquiries, discrepancies, or comments about this chart via NOAA's ASSIST tool at <https://nauticalcharts.noaa.gov/customer-service/assist/>.

CAUTION
AUTOMATED CHART GENERATION

This NOAA Custom Chart has been automatically rendered from NOAA Electronic Navigational Chart (NOAA ENC®) data. Mariners using this NOAA Custom Chart are advised that this is a static reproduction of the NOAA ENC®. This NOAA Custom Chart has not been individually quality checked or adjusted for optimal use for navigation. The portrayal may be at a different scale from that of the original NOAA ENC®. Mariners are advised to use caution when using this NOAA Custom Chart for navigation and are encouraged to use the latest NOAA ENC® to access the most up-to-date information. Mariners must also comply with all applicable regulatory requirements.

HEIGHTS

Heights of fixed aids to navigation and vertical clearances of overhead obstructions will be shown in feet if the units are set to feet or fathoms. If units are set to meters, heights will be shown in meters. Land elevation values are shown in meters only.

WATER LEVELS, CURRENTS, AND TIDES

Real-time water levels, tide predictions, and tidal current predictions are available on the internet from NOAA's Center for Operational Oceanographic Products and Services (CO-OPS) at https://tidesandcurrents.noaa.gov/water_level_info.html and https://tidesandcurrents.noaa.gov/currents_info.html.

ABBREVIATIONS

For complete list of Symbols and Abbreviations, see Chart No. 1.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 7 and NGA Publication 153 for supplemental information.

SOUNDING DATUM

Soundings referred to Mean Lower Low Water (MLLW).

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 11th Coast Guard District in Alameda, CA or at the Office of the District Engineer, Corps of Engineers in Los Angeles, CA.

Refer to charted regulation section numbers.

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

ADDITIONAL INFORMATION

Additional information can be obtained at www.nauticalcharts.noaa.gov

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 7 for important supplemental information. Refer to charted regulation section numbers.

VERTICAL DATUM

Overhead clearances are referred to Mean High Water (MHW).

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MINERAL DEVELOPMENT STRUCTURES

Obstruction lights and sound (fog) signals are required for fixed mineral development structures, subject to approval by the District Commander, U.S. Coast Guard (33 CFR 67).

VESSEL TRANSITING

The U.S. Coast Guard and the Pacific States/British Columbia Oil Spill Task Force endorse a system of voluntary measures and minimum distances from shore for certain commercial vessels transiting along the coast anywhere between Cook Inlet, Alaska, and San Diego, California. See U.S. Coast Pilot, Chapter 3 for details.

TRAFFIC SEPARATION SCHEME

One-way traffic lanes are RECOMMENDED for use by all vessels traveling between the points involved. They have been designed to aid in the prevention of collisions at the approaches to major harbors and along heavily traveled coastal waters, but are not intended in any way to supersede or to alter the applicable Rules of the Road. Separation zones are intended to separate inbound and outbound traffic and to be free of ship traffic. Separation zones should not be used except for crossing purposes. When crossing traffic lanes and separation zones use extreme caution.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

CAUTION

Outbound vessels have priority over incoming vessels in Long Beach Channel. Speed limit is six knots.

VESSEL TRAFFIC MANAGEMENT SYSTEM
(VTMS)

The Vessel Traffic Service of Los Angeles-Long Beach, jointly operated by the U.S. Coast Guard and Marine Exchange, has been established within the approaches to San Pedro Bay. The working frequency for the VTS is channel 14 VHF/FM (156.7 MHz) and the call sign is "San Pedro Traffic." Upon entering the VTS area, within a 25 nautical mile radius of Pt. Fermín (LAT 33°42.3'N, LONG 118°17.6'W), all inbound vessels shall report on channel 14 their vessel name, call sign, position, course and speed, destination, estimated time of arrival to their destination, and whether or not their vessel will be taking on a pilot. Outbound vessels shall report 15 minutes prior to reaching the breakwater. To obtain information on the movement of deep draft vessels inside the Federal Breakwater, contact the Los Angeles Pilot Station on channel 73 (156.675 MHz)/phone 310-732-3805 or Long Beach Pilot Station on channel 74 (156.6 MHz)/phone 562-432-0664.

LOS ANGELES DEEP DRAFT PILOT AREA

Vessels with 15.2 meters/50 foot draft or less will be boarded south of RACON Buoy 3. Vessels with a draft greater than 15.2 meters/50 feet will be boarded south of Buoy 1.

CAUTION
LIMITATIONS ON THE
USE OF RADIO SIGNALS

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

CAUTION

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 as per Inland Navigation Rules, Rule 9. To obtain information on the movement of deep draft vessels inside Federal Breakwater contact the Los Angeles Pilot Station on channel 73 (156.675 MHz) / ph 310-732-3805 or Long Beach Pilot Station on channel 74 (156.6 MHz) / ph 562-432-0664.

CAUTION

There are rock outcroppings in northern General Anchorage N. Use caution.

CAUTION

The shoaling in the entrance to Oceanside Harbor is causing severe surf conditions.

CAUTION

This area is reserved exclusively for use by vessels owned or operated by the Federal Government. Permission to enter the area must be obtained from the Commanding General, U.S. Marine Corps Base, Camp Pendleton, California, or by such agencies as they may designate.

CAUTION

Vessels should not enter the Pilot Operating Area unless entering or departing Los Angeles Channel.

CAUTION

Vessels should not enter the Pilot Operating Area unless entering or departing Long Beach Channel. Vessels entering Long Beach Channel should pass eastward of lighted whistle buoy "LB", and vessels departing should pass westward.

CAUTION

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.

CAUTION

Depths in the entrance channels to Del Mar Boat Basin and Oceanside Harbor are subject to frequent change due to continuous shoaling. Local knowledge is required for safe navigation in these areas. Latest available depth information may be obtained from the Public Works Officer, Camp Pendleton California.

CAUTION
UNDERWATER INSTALLATION

Anchoring, dredging, fishing, and other activities which might foul underwater installations are prohibited. All vessels entering the RESTRICTED AREA shall proceed across it by the most direct route and without unnecessary delay.

CAUTION
AMPHIBIOUS ASSAULT AREA "CPAAA"

The obstruction area in the Gulf of Santa Catalina is used for large scale amphibious training exercises by craft not easily maneuvered when concentrated in large numbers. At such times, vessels are to remain clear and exit the area in a direction given them when approached or hailed by naval craft. Mariners must consult Local Notice to Mariners for information concerning amphibious activities conducted in this area.

NOTE Z
NO-DISCHARGE ZONE, 40 CFR 140

Under the Clean Water Act, Section 312, all vessels operating within a No-Discharge Zone (NDZ) are completely prohibited from discharging any sewage, treated or untreated, into the waters. All vessels with an installed marine sanitation device (MSD) that are navigating, moored, anchored, or docked within a NDZ must have the MSD disabled to prevent the overboard discharge of sewage (treated or untreated) or install a holding tank. Regulations for the NDZ are contained in the U.S. Coast Pilot. Additional information concerning the regulations and requirements may be obtained from the Environmental Protection Agency (EPA) website: <https://www.epa.gov/vessels-marinas-and-ports>.

AREAS TO BE AVOIDED

All ships, except those bound to and from ports on one of the islands within the areas, engaged in the trade of carrying cargo, including but not limited to tankers and other bulk carriers and barges, should avoid the areas (MSC, IMO 59/33 Annex 21).

CAUTION

Mariners should use caution when navigating over the sewers extending seaward from El Segundo. The existence of submerged sewers presents a hazard to all types of craft.

ACOUSTIC RANGE FACILITY

Numerous shore connected bottom cables are located within the area south of Santa Cruz Island.

SECURITY ZONES

Designated by the U.S. Coast Guard Captain of the Ports, San Diego, California, to safeguard vessels or waterfront facilities from destruction, loss or injury from sabotage or other subversive acts, accidents or other causes of a similar nature. Under 33 CFR 165.33, no person or vessel may enter or remain in a Security Zone without the permission of the Captain of the Ports.

SUBMERGED SUBMARINE OPERATING AREAS

Submerged submarine operations are conducted at various times in the waters contained on this chart. Proceed with caution.

WARNING

San Clemente Island is a NAVAL RESERVATION and is closed to the public. All vessels are warned that the vicinity of the island is dangerous on account of gunfire and bombing.

MILITARY EXERCISE AREA

Mariners are cautioned against possible hazards due to military training activities. Normal hours of operation are 0600-2400 local time, daily. For extension of operating times and further information, consult U.S. Coast Guard Local Notice to Mariners.

NAVAL OPERATING AREA

Vessels should use caution while transiting this area due to naval test operations which involve frequent maneuvers in the vicinity of and around this location.

CHANNEL ISLANDS
NATIONAL MARINE SANCTUARY
(PROTECTED AREA: 15 CFR 922; SEE NOTE
A)

National Marine Sanctuaries are protected areas, administered by NOAA, which contain sensitive and diverse natural and cultural resources. These areas are particularly sensitive to environmental damage such as spills of oil and other hazardous materials, discharges and groundings. Exercise particular caution and follow applicable Sanctuary regulations when transiting these areas. A full description of Sanctuary regulations may be found in 15 CFR 922 and in the U.S Coast Pilot. A full description of the federal regulations governing the Marine Protected Areas located within Channel Islands National Marine Sanctuary boundaries may be found in 15 CFR 922 and 50 CFR 660. A full description of the state regulations governing the Marine Protected Areas located within Channel Islands National Marine Sanctuary boundaries may be found in Title 14 California Code of Regulations (CCR) section 632.

CHEMICAL MUNITIONS DUMPING
AREA DISUSED

Site was formerly used or designated for U.S. chemical munitions dumping. Such use has been discontinued. Designation of such area in no way constitutes authority for dumping.

IMO AMMENDED TRAFFIC SEPARATION
SCHEME

Portions of the traffic separation scheme have been amended by the IMO. See IMO COLREG.2/Circ.64. Please be advised that these portions have not been revised by the United States Coast Guard and that the corresponding changes have not been updated in the Code of Federal Regulations (33 CFR part 167). There are differences between the two traffic separation schemes and caution is advised.

NATURE RESERVE

Entry into the Marine Nature Reserve is affected by numerous restrictions and prohibitions. For further details, contact local authorities.

PRIVATE AIDS

Numerous uncharted private mooring buoys may exist in the general vicinity of Malibu Pier. Mariners should use caution when transiting this area.

MINERAL DEVELOPMENT STRUCTURES

Obstruction lights and sound (fog) signals are required for fixed mineral development structures, subject to approval by the District Commander, U.S. Coast Guard (33 CFR 67).

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NAVAL OPERATING AREA

See Coast Pilot 7, Chapter 5 for information pertaining to the Naval Operating Area in Bechers Bay.

LOCAL MAGNETIC DISTURBANCE

Differences of as much as 5° from the normal variation have been observed up to 3 miles off shore along the north, east and south coast of San Clemente Island.

SUBMARINE PIPELINES AND CABLES

Uncharted submarine pipelines and cables may exist in the vicinity of oil well structures, and between such structures and the shoreline. Mariners should use caution when anchoring.