JOINS CHART 18010

Formerly C&GS 5020, 1st Ed., May 1940 C-1940-532 KAPP 1656

SOUNDINGS IN FATHOMS

THE NATION'S CHARTMAKER SINCE 1807

UNITED STATES - WEST COAST

CALIFORNIA

SAN DIEGO TO SAN FRANCISCO BAY

Mercator Projection
Scale 1:868,003 at Lat. 35°00'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

(For offshore navigation only)

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

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)
Aids to Navigation (Lights are white unless otherwise indicated):

AERO aeromarine
Al alternating
Bn beacon
C can
Dia. diaphone
F fixed
Fl flashing
G green
Gp group
Iso isophase
Mo(A) morse code "A"
Mo morse code
Oc occulting
Or orange
Q quick
R red
Ra Ref. radar reflector
Rb radiobeacon
R Tr radio tower
Ro rotating
S seconds
SEC sector
St M statute miles
VQ very quick
W white
WHD whistle
Y yellow

Bottom characteristics:

Blds boulders
Bk broken
Cy clay
Co coral
G gravel
Grs grass
gy gray
h hard
M mud
Oys oysters
R rock
S sand
sc soft
Sh shells
sy sticky

Miscellaneous:

AUTH authorized
ED exclusive district
Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.
Obstn obstruction
PA position approximate
PD position doubtful
Rep reported
Subm submerged

HEIGHTS
Heights in feet above Mean High Water.

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.

AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.
See National Geospatial-Intelligence Agency List of Lights and Fog Signals for information not included in the United States Coast Guard Light List.

LOCAL MAGNETIC DISTURBANCE
Differences of as much as 3° from the normal variation have been observed in the vicinity of San Clemente Island and as much as 4° in the vicinity of Sistymile Bank.

WARNING
San Clemente Island is a NAVAL RESERVATION and is closed to the public.

NOTE E
CHEMICAL MUNITIONS DUMPING AREA - RESTRICTION
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 AMENDED TRAFFIC SEPARATION SCHEME
Portions of the traffic separation scheme shown on this chart have been amended by the IMO. See IMO COLREG.2/Circ.64. Please be advised that those 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.

NOTE F
TRAFFIC SEPARATION SCHEME
One-way traffic lanes overprinted on this chart 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.
A Precautionary Area has been established at San Pedro Bay. It is recommended that vessels proceed with caution in this area.

NOTE G
TRAFFIC SEPARATION SCHEME
Recommended traffic lanes have been established for the approaches to San Francisco Bay. See charts 18645, 18680, and 18640.

NOTE H
NATIONAL MARINE SANCTUARIES
& MARINE PROTECTED AREAS
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 Cordell Bank National Marine Sanctuary and Greater Farallones 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.

NOTE I
Regulations for Ocean Dumping Sites are contained in 40 CFR, Parts 220-229. Additional information concerning the regulations and requirements for use of the sites may be obtained from the Environmental Protection Agency (EPA). See U.S. Coast Pilots appendix for addresses of EPA offices. Dumping subsequent to the survey dates may have reduced the depths shown.

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 7, Chapter 3 for details.

NOTE C
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.
Oil well structures, submarine pipelines, and cables are charted only where outside of the indicated limits of charts 18746, 18725, and 18721.

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).

RACING BUOYS
Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other private buoys are not all listed in the U.S. Coast Guard Light List.

CAUTION
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. Due to frequency congestion, some commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
○(Accurate location) ⊖(Approximate location)

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.

NOTE K
The U.S. Coast Guard operates an Offshore Vessel Movement Reporting System (OVMRS) covering the seaward approaches to San Francisco Bay. All commercial vessels over 300 gross tons and all tugs with tows are requested to contact Vessel Traffic Service San Francisco on VHF-FM channel 12 (156.60 MHz) when entering this area. All vessels in the area are encouraged to listen on channel 12 at fifteen and forty-five minutes past each hour for broadcast reports of known shipping traffic in the area. Additional information on the OVMRS is published in Coast Pilot 7 and information concerning specific operating procedures is available from the VTS.

AREAS TO BE AVOIDED
All ships, except those bound to and from ports on one of the islands within the area 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 09/33 Annex 21).

NOTE L
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.

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

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.

NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or changes to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 11th Coast Guard District in Alameda, California or at the Office of the District Engineer, Corps of Engineers in San Francisco, California.
Refer to charted regulation section numbers.

MAGNETIC VARIATION
Magnetic variation surveys are for 2011 derived from 2010 World Magnetic Model and accompanying secular change. If annual change is the same direction as variation it is additive and the variation is increasing. If annual change is opposite in direction to variation it is subtractive and the variation is decreasing.

HORIZONTAL DATUM
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for cartographic purposes is considered equivalent to the World Geodetic System of 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 do not require conversion to NAD 83 for plotting on this chart.

NOTE B
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.

CAUTION
SUBMARINE PIPELINES AND CABLES
Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

Pipeline Area — Cable Area

Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.
Covered wells may be marked by lighted or unlighted buoys.

NOTE D
ACOUSTIC RANGE FACILITY
Numerous shore connected bottom cables are located within the outlined area.

CAUTION
Mariners are cautioned that exploratory surveys and exploratory drilling operations may be in progress in, or adjacent to, the Traffic Separation Scheme and Separation Scheme. These operations may pose hazards to navigation. The most recent Eleventh Coast Guard District Local Notice to Mariners should be consulted for the schedule of current operations.

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

NOTE N
MARINER ACTIVATED SOUND SIGNAL (MRASS)
Horn is activated by keying the mic 5 times on VHF-FM Ch 81A - Horn will operate for thirty minutes.

NOTE O
MINERAL DEVELOPMENT STRUCTURES
Obstruction lights and sound (fog) signals are required for fixed mineral development structures shown on this chart, subject to approval by the District Commander, U.S. Coast Guard (33 CFR 67).

NOTE P
SEA OTTER REFUGE
The State of California Fish and Game Code prohibits the use of bows or firearms and the trapping of birds or mammals in the California Sea Otter Game Refuge.

NOTE Q
DAVIDSON SEAMOUNT MANAGEMENT ZONE
(protected area: see notes A and H)

NOTE R
MONTEREY BAY NATIONAL MARINE SANCTUARY
(protected area: 15 CFR 922: see notes A and H)

NOTE S
MONTEREY BAY NATIONAL MARINE SANCTUARY
(protected area: 15 CFR 922: see notes A and H)

NOTE T
GREATER FARALLONES NATIONAL MARINE SANCTUARY
(protected area: 15 CFR 922: see notes A and H)

NOTE U
CHANNEL ISLANDS NATIONAL MARINE SANCTUARY
(protected area: 15 CFR 922: see notes A and H)

NOTE V
CHEMICAL MUNITIONS DUMPING AREA
DISUSED (see note E)

NOTE W
EXPLOSIVES DUMPING AREA
DISUSED (see note E)

NOTE X
EXPLOSIVES DUMPING AREA
DISUSED

NOTE Y
IMO - adopted Recommended Tracks for vessels 300 gross tons and greater carrying oil, chemicals, hazardous cargo in bulk or dangerous cargo in packaged form.

NOTE Z
IMO - adopted Recommended Tracks for vessels carrying hazardous cargo in bulk, including but not limited to explosives, munitions, chemicals, liquefied gases, refined products, distillates or other non-persistent cargo. Vessels using these tracks should use the Western TSS when entering or leaving San Francisco.

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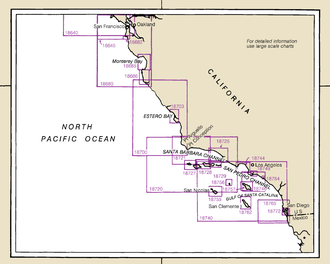

CAUTION
This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

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SOUNDINGS IN FATHOMS

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NATIONAL OCEAN SERVICE
COAST SURVEY

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FATHOMS / FEET / METERS

San Diego to San Francisco Bay
SOUNDINGS IN FATHOMS - SCALE 1:868,003

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