

USCG CHARTAGE REQUIREMENTS
Mariners should use the latest NOAA electronic navigational charts for navigation. This NOAA Custom Chart does not meet U.S. Coast Guard carriage requirements in several sections of title 33 and 46 of the Code of Federal Regulations (CFR) for commercial vessels to maintain "currently corrected marine charts."

AUTOMATED CHART GENERATION
This chart has been automatically generated from NOAA Electronic Navigational Chart (ENC) data. While this chart is a reproduction of the ENC and has not been individually quality checked or adjusted for optimal use for navigation.

HEIGHTS
Regardless of the units for depths, heights – including bridge and other overhead clearances – shown on this chart are in meters. Multiply meters by 2.28 to convert to feet.

CHART EXPIRATION
Notice to Mariners are not issued for this NOAA Custom Chart. Users are strongly encouraged to replace this chart every six months.

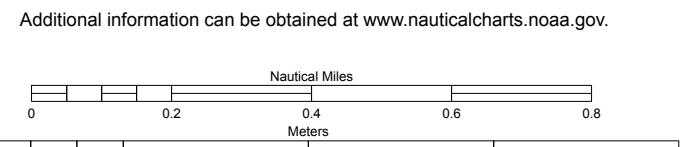
WARNING
The product manager will not verify the any single aid to navigation, particularly its sounding data. The U.S. Coast Guard Light List and U.S. Coast Pilot for details.

AUTHORITIES
Hydrography and topography by the National Ocean Service, Coast Survey, and other overhead clearances – shown on this chart are in meters. Multiply meters by 2.28 to convert to feet.

COLLISION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (oil free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (23 CFR 155).

TIDAL INFORMATION
For tidal information see the NWS Tide Table publication or go to <https://tidesandcurrents.noaa.gov/>

Projection Information
WGS 1984 World Mercator (Calculated)
SCALE 1:20000 at Lat. 37°47.00'
GCS WGS 1984



AIDS TO NAVIGATION
Consult the U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners. During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details, see U.S. Coast Guard Light List.

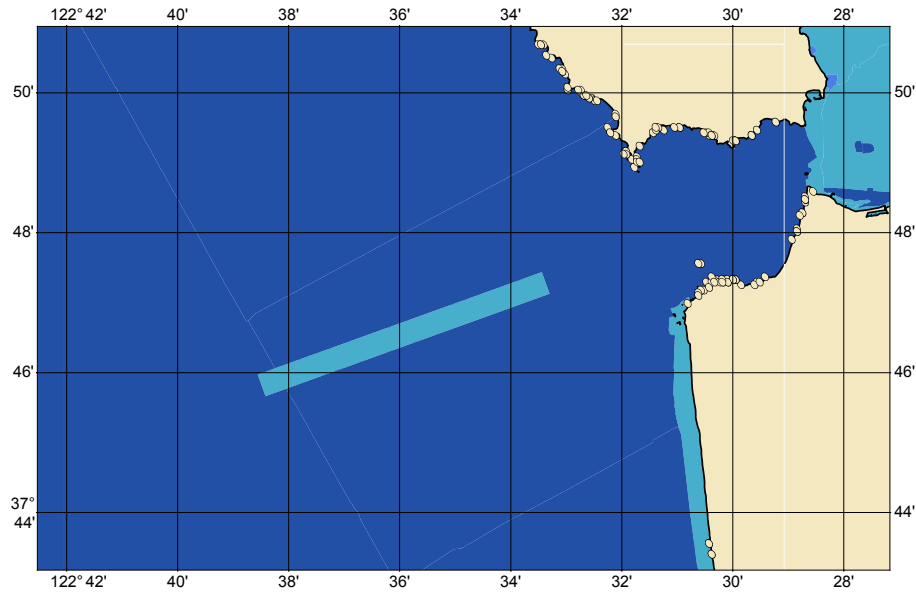
RADAR REFLECTORS
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

CAUTION
Limitations on the use of radio signals as aids to navigation are not indicated on this chart. See U.S. Coast Guard Light List 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.

Inquiries, discrepancies or comments about the application used to generate this chart may be submitted to: <https://noaa.gov/data-providers/requirements/requirements/ChartData>

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Zone of Confidence (ZOC) Diagram



ZOC CATEGORIES

| ZOC | COLOR | POSITION ACCURACY | DEPTH ACCURACY | SEAFLOOR COVERAGE |
|-----|-------|--|--|---|
| A1 | | ± 5 m ± 16.4 ft | = 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. | | |

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NOAA CUSTOM CHART
NOTES GEOSPATIAL DATABASE
VERSION 1.0 - 30 MARCH 2021

The records of the NOAA Custom Chart Notes Geospatial Database are current as of March 30, 2021. Subsequent additions and refinements are to be expected. Please refer to all available navigational publications for complete information about the charted area.

CHART EXPIRATION

Notice to Mariners are not issued for this NOAA Custom Chart. Users are strongly encouraged to replace this chart every six months.

HEIGHTS

Regardless of the units for depths, heights - including bridge and other overhead clearances - shown on this chart are in meters. Multiply meters by 3.28 to convert to feet.

TIDAL INFORMATION

For tidal information see the NOS Tide Table publication or go to <https://tidesandcurrents.noaa.gov>.

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).

USCG CARRIAGE REQUIREMENTS

Mariners should use the latest NOAA electronic navigational charts for navigation. This NOAA Custom Chart does not meet U.S. Coast Guard carriage requirements in several sections of titles 33 and 46 of the Code of Federal Regulations (CFR) for commercial vessels to maintain "currently corrected marine charts."

AUTOMATED CHART GENERATION

This chart has been automatically rendered from NOAA Electronic Navigational Chart (NOAA ENC®) data. Mariners using this chart must understand this is a static reproduction of the ENC and has not been individually quality checked or adjusted for optimal use for navigation.

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 REQUEST

Inquiries, discrepancies or comments about the application used to generate this chart may be submitted to: <https://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs>

SOUNDING DATUM

Soundings referred to Mean Lower Low Water (MLLW).

VERTICAL DATUM

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

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AIDS TO NAVIGATION

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

CAUTION

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

During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details, see U.S. Coast Guard Light List.

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.

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).

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 7 for important supplemental information.

Refer to charted regulation section numbers.

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.

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.

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.

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 San Francisco, CA.

Refer to charted regulation section numbers.

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COLREGS DEMARCATION LINE

The Inland Navigational Rules Act of 1980 is in effect for vessels transiting this area. The seaward boundaries of this area are the COLREGS demarcation lines. In the area seaward of the COLREGS demarcation lines, vessels are governed by COLREGS: International Regulations for Preventing Collisions at Sea, 1972. The COLREGS demarcation line is defined in COLREGS 33 CFR 80.1142.

CAUTION

SUBMERGED CABLES AND PIPELINES

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.

GREATER FARALLONES NATIONAL MARINE SANCTUARY (PROTECTED AREA: 15 CFR; SEE NOTE A)

National Marine Sanctuaries are protected areas, administered by NOAA which contain abundant and diverse natural resources such as marine mammals, seabirds, fishes, and tidepool invertebrates. 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 to avoid environmental impacts. A full description of Sanctuary regulations may be found in 15 CFR Part 922 and in the Coast Pilot.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

USACE conducts hydrographic surveys to monitor navigation conditions. These surveys are not intended to detect underwater features. Uncharted features hazardous to surface navigation are not expected but may exist in federal channels. For more information visit <https://navigation.usace.army.mil/Survey/Hydro>.

CAUTION RECREATION AREA

Recreation areas south of the San Francisco Regulated Navigation Area are intended primarily for use by recreation vessels. Such areas should not be used by vessels 300 gross tons or more except in case of emergency or special circumstances

CAUTION RECREATION AREA

Recreation areas in the vicinity of Richardson Bay and Angel Island are intended primarily for use by recreation vessels. Such areas should not be used by vessels 300 gross tons or more except in case of emergency or special circumstances.

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MONTEREY BAY
NATIONAL MARINE SANCTUARY
(PROTECTED AREA: 15 CFR 922; SEE NOTE
A)

National Marine Sanctuaries are protected areas, administered by NOAA which contain abundant and diverse natural resources such as marine mammals, seabirds, fishes, and tidepool invertebrates. 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 to avoid environmental impacts. A full description of Sanctuary regulations may be found in 15 CFR Part 922 and in the Coast Pilot.

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

San Francisco,CA KHB-49 162.4MHz