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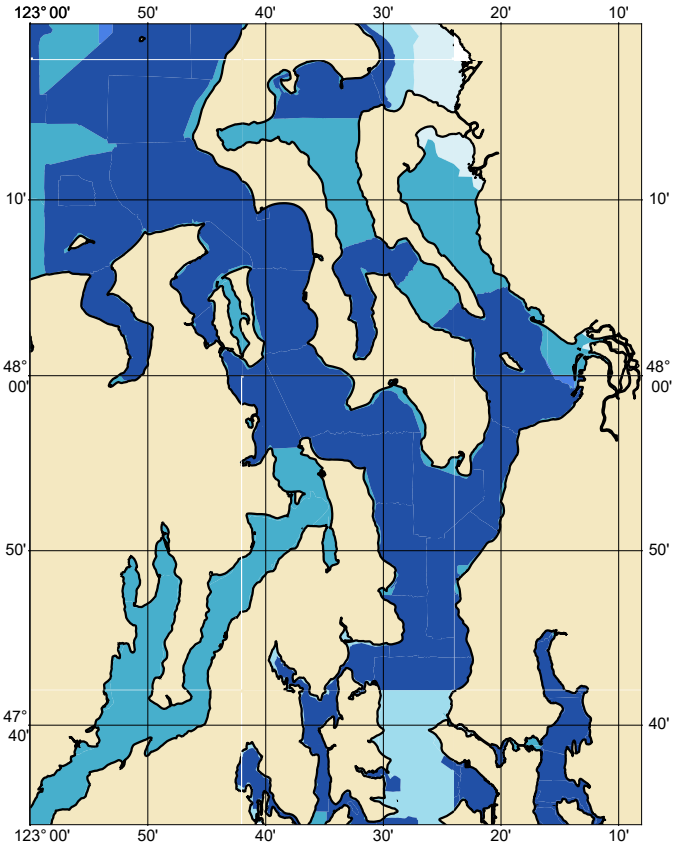
Zone of Confidence (ZOC) Diagram



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.		

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NOAA CUSTOM CHART
NOTES GEOSPATIAL DATABASE
VERSION 3.0C - 17 MARCH 2026

The records of the NOAA Custom Chart Notes Geospatial Database are current as of March 17, 2026. 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This NOAA Custom Chart contains up-to-date information only as of the time of creation, and will become outdated.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 10 for important supplemental information.

SOUNDING DATUM

Soundings in Lake Washington above the locks are referred to a Low Water of Lakes which is 20 feet / 6.1 meters above Mean Lower Low Water (MLLW).

VERTICAL DATUM

Overhead clearances in Lake Washington above the locks are referred to a Mean Water Level of the Lakes which is 21 feet / 6.4 meters above Mean Lower Low Water (MLLW).

COLREGS, 80.1390 (SEE NOTE A)

International Regulations for Preventing Collisions at Sea, 1972. The entire area of this chart falls seaward of the COLREGS Demarcation Line.

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

SOUNDING DATUM

Soundings referred to Mean Lower Low Water (MLLW).

VERTICAL DATUM

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

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 10. 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, 13th Coast Guard District in Seattle, WA or at the Office of the District Engineer, Corps of Engineers in Seattle, WA.

Refer to charted regulation section numbers.

COLREGS, 80.1385 (SEE NOTE A)

International Regulations for Preventing Collisions at Sea, 1972. The entire area of this chart falls seaward of the COLREGS Demarcation Line.

FLOATING SECURITY BARRIERS

Floating security barriers have been installed at various U.S. Naval installations throughout Puget Sound. The barriers are marked by numerous flashing yellow (FI Y 2s) Navy maintained lighted buoys and approximately mark the Restricted Areas surrounding the facility.

TRAFFIC SEPARATION SCHEME

One-way traffic lanes are RECOMMENDED for use by all vessels traveling between the points involved. They have been designated to aid in the prevention of collisions in the Strait of Juan De Fuca waters, but are not intended in any way to supersede or 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.

VESSEL TRAFFIC SERVICES (VTS)

The U.S. Coast Guard operates a mandatory Vessel Traffic Services (VTS) system in U.S. waters. Vessel operating procedures and designated radiotelephone frequencies are published in 33 CFR 161, in the U.S. Coast Pilot, and/or the VTS User's Manual.

COLREGS, 80.1395 (SEE NOTE A)

International Regulations for Preventing Collisions at Sea, 1972. The entire area of this chart falls seaward of the COLREGS Demarcation Line.

JUAN DE FUCA CVTS

A Cooperative Vessel Traffic Services (CVTS) system has been established by the United States and Canada within the adjoining waters in the Juan de Fuca Region. The appropriate Vessel Traffic Center (VTC) (Prince Rupert Traffic, Seattle Traffic, Victoria Traffic) administers the rules issued by both nations, however it will enforce only its own set of rules within its jurisdiction.

PRECAUTIONARY AREA

Precautionary Area have been established where major lanes merge and cross the traffic separation scheme. It is recommended that vessels proceed with caution in these areas. Where practicable, vessels entering or leaving the system should do so at these precautionary areas. For more information regarding Traffic Separation Scheme procedures and regulations, see 33 CFR 167 and/or chapter 2 of the U.S. Coast Pilot.

VESSEL TRAFFIC MANAGEMENT AND INFORMATION SYSTEM

For information governing the VESSEL TRAFFIC MANAGEMENT AND INFORMATION SYSTEM for the coastal waters of southern British Columbia, see National Geospatial-Intelligence Agency Publication 154, Sailing Directions (en route) for British Columbia, and the Sailing Directions British Columbia Coast (South Portion) Volume 1, published by the Canadian Hydrographic Service.

TRAFFIC SEPARATION SCHEME

One-way traffic lanes are RECOMMENDED for use by all vessels traveling between the points involved. They have been designated to aid in the prevention of collisions in the Admiralty Inlet and Puget Sound waters, but are not intended in any way to supersede or 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
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.

TRAFFIC SEPARATION SCHEME

One-way traffic lanes are RECOMMENDED for use by all vessels traveling between the points involved. They have been designated to aid in the prevention of collisions in the Puget Sound waters, but are not intended in any way to supersede or 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.

VESSEL TRAFFIC SERVICES (VTS)

The U.S. Coast Guard operates a mandatory Vessel Traffic Services (VTS) system in the Puget Sound area. Vessel operating procedures and designated radiotelephone frequencies are published in 33 CFR 161, the U.S. Coast Pilot, and/or the VTS User’s Manual.

CAUTION
FERRY ROUTES

Mariners are cautioned that ferries may deviate from their published standard routes due to inclement weather, traffic conditions, navigational hazards, or other emergency situations.

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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.

CAUTION

All vessels are warned that seaplanes may be taking off or landing on Lake Union.

SUBMARINE OPERATIONS

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

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.

NAVAL OPERATING AREAS

Mariners should use caution as naval craft may be maneuvering within the areas. For further information consult Local Notices to Mariners.

CAUTION
UNEXPLODED ORDNANCE

Unexploded ordnance areas in Ostrich Bay were reported in 2015.

CAUTION

Obstructions prevent navigation under the Spokane Street bridges.

CAUTION

Submerged mooring cables are located in the vicinity of Hood Canal Bridge.

CAUTION

Submerged mooring cables and ruins surround the Route 90 pontoon bridge.

CAUTION

Strong currents on both flood and ebb tide in entrance channel to Port Gamble Bay. Channel constricted by shoals on both sides. The two lights on the E side of the channel are in shoal water and do not mark the edge of the channel.

CAUTION

Improved channels are subject to shoaling, particularly at the edges.

TEST AREA

Test area Unrestricted speed limits exist within the test area in Lake Union. However, vessel owners are responsible for wake damage.

SMALL ARMS SAFETY ZONE

Naval Air Station small arms range operates 7 days a week. Red flashing light and flags are displayed during live fire exercises. Use caution when transiting near the zone.

NATIONAL WILDLIFE REFUGE

Smith and Minor islands are closed to the public to protect breeding colonies of seabirds, endangered and threatened species, and marine mammals. Boaters are requested to stay at least 183 meters/200 yards away from these islands to avoid disturbance to these animals.

PROTECTION ISLAND

The area is closed to the public to protect breeding colonies of seabirds, endangered and threatened species, and marine mammals. Boaters are requested to stay at least 183 meters/200 yards away from the island to avoid disturbance to these animals.

COLMAN FERRY TERMINAL FOG SIGNAL

The light showing fixed white and siren is privately maintained and operated during fog only.

SETTLING BASIN

There is a settling basin in Snohomish River south of Summit Avenue bridge. The area is subject to continuous change.

STRONG CURRENTS

Strong tidal current anomalies may exist within the area of Port Townsend Canal. Refer to Coast Pilot 10 and use local knowledge when transiting the area.

PUGET SOUND HARBOR SAFETY PLAN

The US Coast Guard and the Puget Sound Harbor Safety Committee have developed and adopted a Harbor Safety Plan that formally established a set of Standards of Care for Puget Sound and surrounding waters. These Standards of Care are intended to supplement existing regulations by documenting good marine practices for a variety of operations including tug escorts, pilotage, anchoring, lightering, and provides additional information on required charts, Aids to Navigation and Emergency Response. If your vessel does not already have a copy of the Puget Sound Harbor Safety Plan, visit https://marexps.com/membership/puget-sound-harbor-safety-committee/ or contact the Marine Exchange of Puget Sound at (206) 443-3830.

NAVY-MAINTAINED WARNING LIGHTS

Yellow or alternating white and yellow
- Proceed with caution.
- Range operations are in progress but no torpedoes or testing is occurring.
- Be prepared to shut down engines when lights change to red.

Red or alternating white and red
- Range operations are in progress and submarine torpedo and/or sound testing are occurring.
- Stop engines until red beacons have been shut off, showing test is completed.
- Follow the advice of Naval Guard Boats when in or near the range area.

Operational Periods
- Typically, boat passage is permitted between tests when the yellow beacons are operating.
- Normally, tests and torpedo runs are confined to periods of less than 30 minute durations.
- Submarine operations can occur for longer periods.

SCUBA DIVING AREA

Numerous wrecks and obstructions are located within the Edmonds Dive Park.

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.

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.
Puget Sound Marine, WA WWG-24 162.425 MHz

LOG STORAGE

There is a log storage area in southeastern Miller Bay.

MOORING BUOYS

Numerous uncharted mooring buoys are located south of Union Bay Reach.

LOCAL MAGNETIC DISTURBANCE

Differences of as much as 2° from the normal variation have been observed in Hood Canal at Point Hannon.

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.
Seattle, WA KHB-60 162.550 MHz