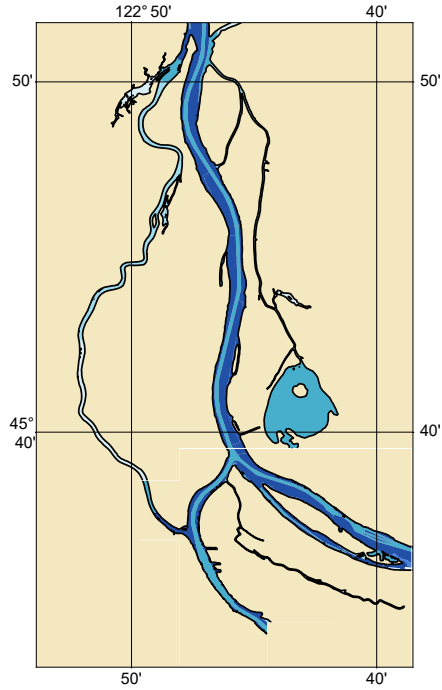


Zone of Confidence (ZOC) Diagram



ZOC CATEGORIES

ZOC	COLOR	POSITION ACCURACY	DEPTH ACCURACY	SEAFLOOR COVERAGE
A1		$\pm 5 \text{ m} + 5\% \text{ depth}$ $\pm 16.4 \text{ ft} + 5\% \text{ depth}$	$= 0.50 \text{ m} + 1\% \text{ d}$ $= 1.6 \text{ ft} + 1\% \text{ d}$ $= 0.3 \text{ fm} + 1\% \text{ d}$	All significant seafloor features detected.
A2		$\pm 20 \text{ m}$ $\pm 65.6 \text{ ft}$	$= 1.00 \text{ m} + 2\% \text{ d}$ $= 3.3 \text{ ft} + 2\% \text{ d}$ $= 0.6 \text{ fm} + 2\% \text{ d}$	All significant seafloor features detected.
B		$\pm 50 \text{ m}$ $\pm 164.0 \text{ ft}$	$= 1.00 \text{ m} + 2\% \text{ d}$ $= 3.3 \text{ ft} + 2\% \text{ d}$ $= 0.6 \text{ fm} + 2\% \text{ d}$	Uncharted features hazardous to surface navigation are not expected but may exist.
C		$\pm 500 \text{ m}$ $\pm 1640.4 \text{ ft}$	$= 2.00 \text{ m} + 2\% \text{ d}$ $= 6.6 \text{ ft} + 2\% \text{ d}$ $= 1.1 \text{ fm} + 2\% \text{ d}$	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 2.0B - 29 MARCH 2024

CAUTION
AUTOMATED CHART GENERATION

The records of the NOAA Custom Chart Notes Geospatial Database are current as of May 1st, 2023. 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This NOAA Custom Chart contains up-to-date information only as of the time of creation, and will become outdated.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/weekly_updates/ to check for weekly updates, and to render a new NOAA Custom Chart when information 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/>.

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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.

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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 the Columbia and Willamette Rivers at Portland are referred to Columbia River Datum, or Mean Lower Low Water (MLLW) during lowest river stages.

VERTICAL DATUM

Overhead clearances in the Columbia River east of Harrington Point are referred to Columbia River Datum.

VERTICAL DATUM

Overhead clearances in the Columbia River below Bonneville Dam are referred to the Columbia River Datum.

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 in the Columbia River east of Harrington Point are referred to Columbia River Datum, or Mean Lower Low Water (MLLW) during lowest river stages.

SOUNDING DATUM

Soundings in the Columbia River below Bonneville Dam are referred to the Columbia River Datum, or Mean Lower Low Water (MLLW) during lowest river stages.

VERTICAL DATUM

Overhead clearances in the Columbia and Willamette Rivers at Portland are referred to Columbia River Datum.

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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 Portland, OR.

Refer to charted regulation section numbers.

CAUTION

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

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.

LOCAL MAGNETIC DISTURBANCE

Differences of as much as 8° from the normal variation have been observed along this section of the Columbia River.

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.

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.

STATUTE MILES COLUMBIA RIVER

Mileage distances along the Columbia River are in Statute Miles eastward from the mouth. Tables for converting Statute Miles to International Nautical Miles are given in Coast Pilot 10.

CAUTION

NUMEROUS OBSTRUCTIONS

Numerous obstructions found in 2009, consisting mainly of submerged snags and ruined piles, are not charted in the Willamette River and Swan Island Basin. These obstructions do not present a hazard to surface navigation, but should be taken into consideration for ground fishing and anchoring.

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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.

Portland,OR KIG-98 162.55MHz