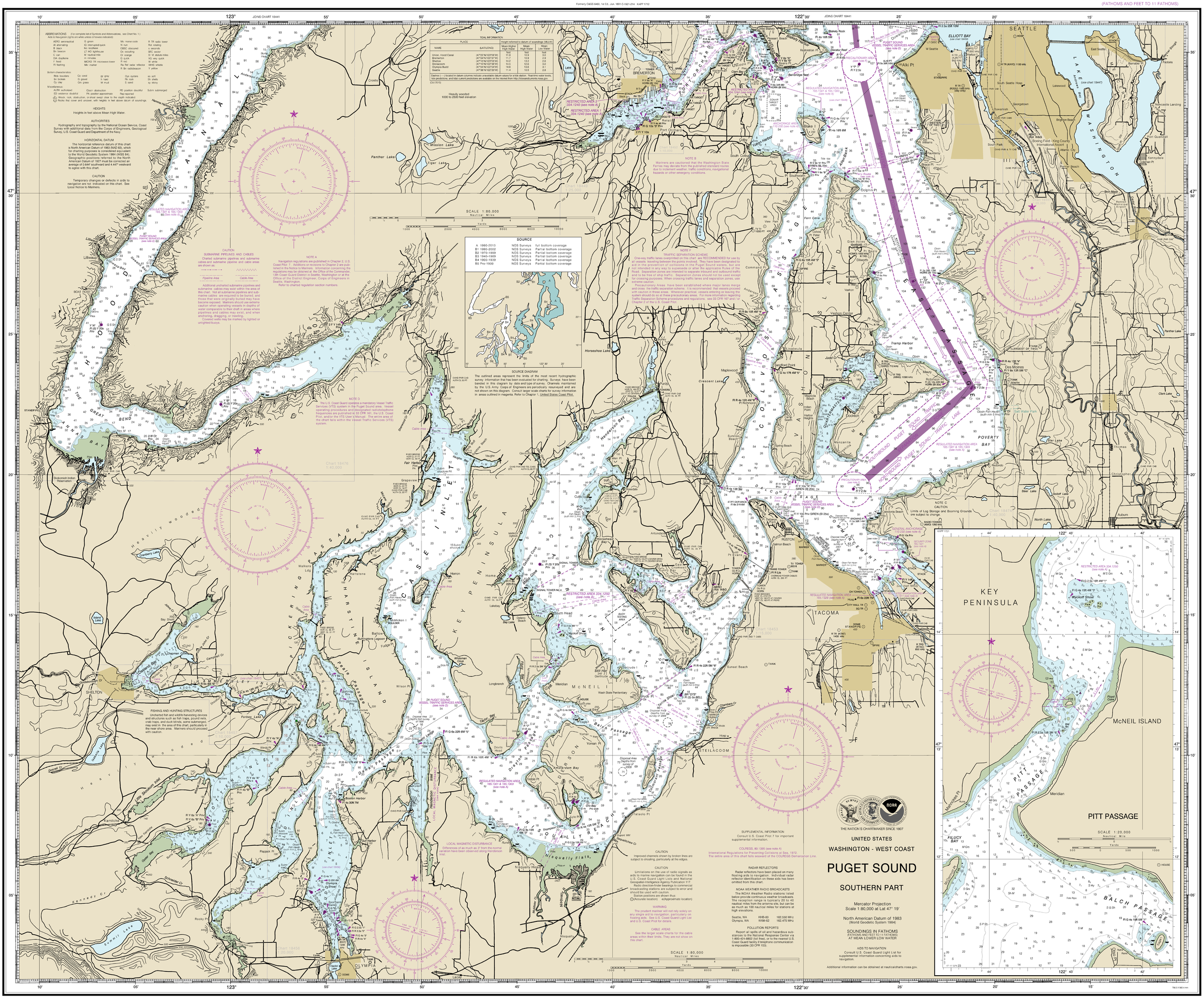
Formerly C&GS 6460, 1st Ed., Jun. 1891 C-1921-L214 KAPP 1712

SOUNDINGS IN FATHOMS
(FATHOMS AND FEET TO 11 FATHOMS)



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

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower		
Al alternating	IQ interrupted quick	N nun	Rot rotating		
B black	Iso isophase	OBSC obscured	s seconds		
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector		
C can	M nautical mile	Or orange	St M statute miles		
DIA diaphone	m minutes	Q quick	VQ very quick		
F fixed	MICRO TR microwave tower	R red	W white		
Fl flashing	Mkr marker	Ra Ref radar reflector	WHS whistle		
		R Bn radiobeacon	Y yellow		

Bottom-characteristics:

Bld boulders	Co coral	gy gray	Oys oysters	sc soft	
bn broken	G gravel	h hard	Rk rock	Sh shells	
Cy clay	Grs grass	M mud	S sand	sy stony	

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
Rocks that cover and uncover, with heights in feet above datum of soundings.

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 Department of the Navy.

HORIZONTAL DATUM
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.644" southward and 4.447" westward to agree with this chart.

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

TIDAL INFORMATION

PLACE NAME	(LAT-LONG)	Height referred to datum of soundings (MLLW) Mean Higher High Water	Mean High Water	Mean Low Water
		feet	feet	feet
Union, Hood Canal	(47°20'N:123°05'W)	11.8	10.9	3.0
Bremerton	(47°34'N:122°37'W)	11.7	10.9	2.9
Shelton	(47°12'N:123°13'W)	14.2	13.2	2.6
Steilacoom	(47°10'N:122°36'W)	13.5	12.6	3.0
Olympia Budd	(47°06'N:122°54'W)	14.6	13.6	3.1
Seattle	(47°36'N:122°20'W)	11.4	10.5	2.8

Datums (---) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the internet from http://tidesandcurrents.noaa.gov

(Oct 2015)

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 A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 13th Coast Guard District in Seattle, Washington or at the Office of the District Engineer, Corps of Engineers in Seattle, Washington.
Refer to charted regulation section numbers.

NOTE B
Mariners are cautioned that the Washington State Ferries may deviate from the published standard routes due to inclement weather, traffic conditions, navigational hazards or other emergency conditions.

NOTE C
CAUTION
Limits of Log Storage and Booming Grounds are subject to change.

NOTE D
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. The entire area of the chart falls within the Vessel Traffic Services (VTS) system.

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 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.
Precautionary Areas have been established where major lanes merge and cross the traffic separation scheme. It is recommended that vessels proceed with caution in these areas. Wherever practical, 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.

SOURCE

A 1990-2013	NOS Surveys	full bottom coverage
B1 1990-2002	NOS Surveys	Partial bottom coverage
B2 1970-1989	NOS Surveys	Partial bottom coverage
B3 1940-1969	NOS Surveys	Partial bottom coverage
B4 1900-1939	NOS Surveys	Partial bottom coverage
B5 Pre-1900	NOS Surveys	Partial bottom coverage

SOURCE DIAGRAM
The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Consult larger scale charts for survey information in areas outlined in magenta. Refer to Chapter 1, United States Coast Pilot.

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

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.
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
⊙Accurate location) o(Approximate location)

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.

CABLE AREAS
See the larger scale charts for the cable areas within their limits. They are not show on this chart.

LOCAL MAGNETIC DISTURBANCE
Differences of as much as 3° from the normal variation have been observed along Henderson Inlet.

FISHING AND HUNTING STRUCTURES
Unchartedfish and wildlife harvesting devices and structures such as fish traps, pound nets, crab traps, and duck blinds, some submerged, may exist in the area of this chart, particularly in the near shore area. Mariners should proceed with caution.

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

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.

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.

NOAA WEATHER RADIO BROADCASTS
The NOAA Weather Radio stations listed below provide 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	KWIB-60	162.550 MHz
Olympia, WA	WXM-62	162.475 MHz

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).

THE NATION'S CHARTMAKER SINCE 1807

UNITED STATES

WASHINGTON - WEST COAST

PUGET SOUND

SOUTHERN PART

Mercator Projection
Scale 1:80,000 at Lat 47° 19'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FATHOMS
(FATHOMS AND FEET TO 11 FATHOMS)
AT MEAN LOWER LOW WATER

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

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

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

36th Ed., Dec. 2015. Last Correction: 12/7/2016. Cleared through:
LNM: 4916 (12/6/2016), NM: 5016 (12/10/2016), CHS: 1116 (11/25/2016)

To ensure that this chart was printed at the proper scale, the line below should measure six inches (152 millimeters).
If the line does not measure as stated, this copy is not certified safe for navigation.

NOAA encourages users to submit inquiries, discrepancies or comments about this chart at http://www.nauticalcharts.noaa.gov/staff/contact.htm.

SOUNDINGS IN FATHOMS
(FATHOMS AND FEET TO 11 FATHOMS)

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U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

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Puget Sound, Southern Part
SOUNDINGS IN FATHOMS - SCALE 1:80,000