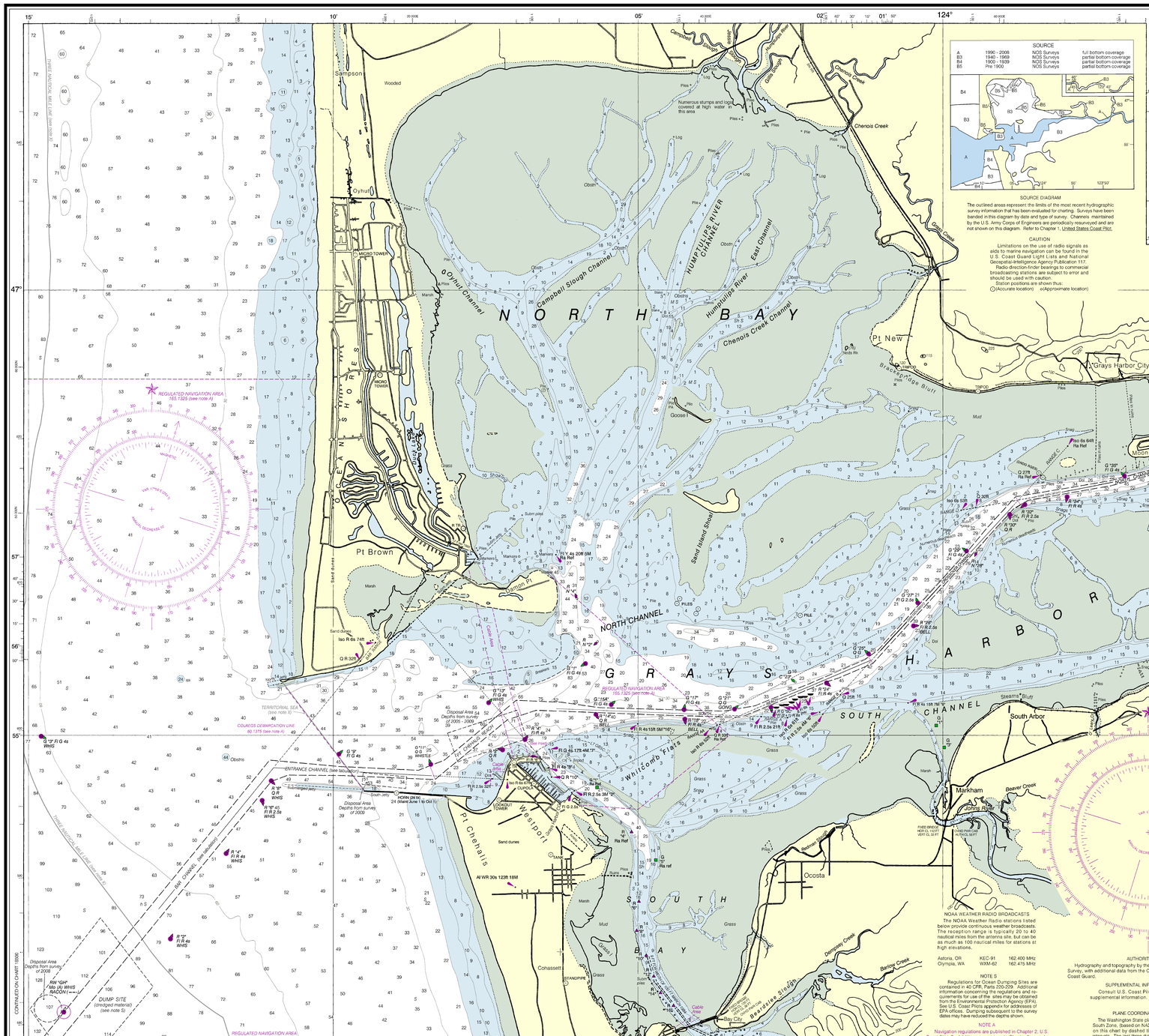
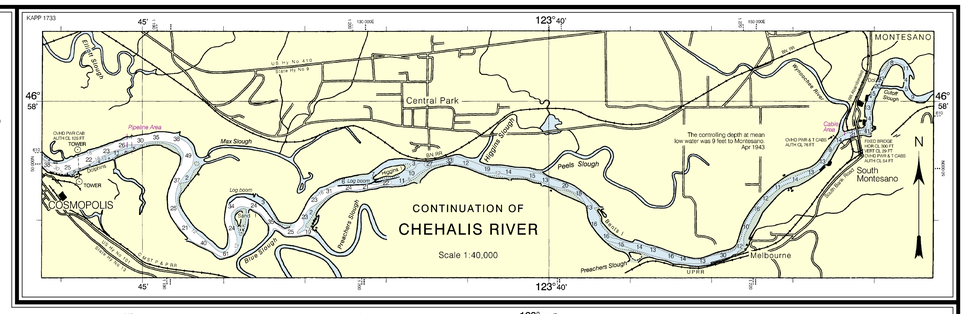
SOUNDINGS IN FEET

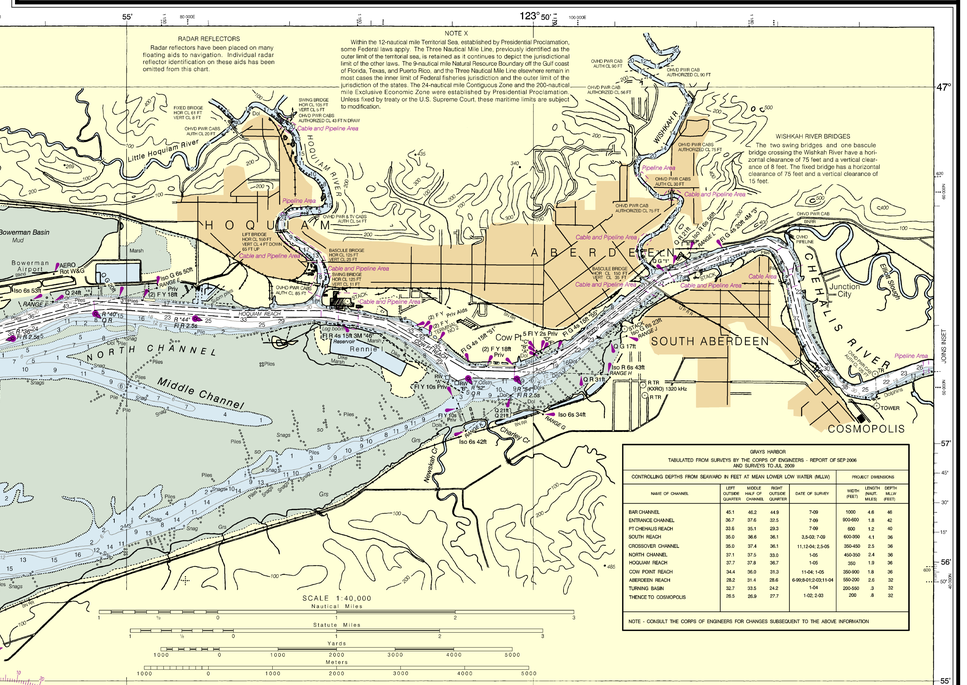
18502

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

Formerly C&GS 6195, 1st Ed., June 1892 C-1940-576 KAPP 1731







SOURCE

A	1990 - 2006	NOS Surveys	full 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. Refer to Chapter 1, United States Coast Pilot.

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) ○(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 X

Within the 12-nautical mile Territorial Sea, established by Presidential Proclamation, some Federal laws apply. The Three Nautical Mile Line, previously identified as the outer limit of the territorial sea, is retained as it continues to depict the jurisdictional limit of the other laws. The 9-nautical mile Natural Resource Boundary off the Gulf coast of Florida, Texas, and Puerto Rico, and the Three Nautical Mile Line elsewhere remain in most cases the inner limit of Federal fisheries jurisdiction and the outer limit of the jurisdiction of the states. The 24-nautical mile Contiguous Zone and the 200-nautical mile Exclusive Economic Zone were established by Presidential Proclamation. Unless fixed by treaty or the U.S. Supreme Court, these maritime limits are subject to modification.

WISHKAH RIVER BRIDGES

The two swing bridges and one bascule bridge crossing the Wishkah River have a horizontal clearance of 75 feet and a vertical clearance of 8 feet. The fixed bridge has a horizontal clearance of 75 feet and a vertical clearance of 15 feet.

GRAYS HARBOR
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF SEP 2006 AND SURVEYS TO JUL 2009

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)					PROJECT DIMENSIONS			
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH MLLW (FEET)	
BAR CHANNEL	45.1	42.2	44.9	7-09	1000	4.6	48	
ENTRANCE CHANNEL	36.7	37.6	33.3	7-09	300-600	1.8	42	
PT CHEHALIS REACH	33.6	35.1	29.3	7-09	600	1.2	40	
SOUTH REACH	35.0	36.6	36.1	3,5-07, 7-09	600-300	4.1	36	
CROSSOVER CHANNEL	35.0	37.4	36.1	11-12-04; 2,3-05	350-450	2.5	36	
NORTH CHANNEL	37.1	37.5	33.0	1-05	450-350	2.4	36	
HOQUIAM REACH	37.7	37.8	36.7	1-05	350	1.3	36	
COW POINT REACH	34.4	36.0	35.3	11-04; 1-05	350-300	1.8	36	
ABERDEEN REACH	28.2	31.4	28.6	6-00;9-01;2-03;11-04	550-200	2.5	32	
TURNING BASIN	32.7	33.5	24.2	1-04	200-600	.3	32	
THENCE TO COSMOPOLIS	28.5	26.9	27.7	1-02; 2-03	200	.8	32	

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

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.

Astoria, OR	KEC-91	162.400 MHz
Olympia, WA	WXM-62	162.475 MHz

NOTE S

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.

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.

CAUTION

BASCULE BRIDGE CLEARANCES

For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers and U.S. Coast Guard.

SUPPLEMENTAL INFORMATION

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

PLANE COORDINATE GRID

The Washington State plane coordinate grid, South Zone, (based on NAD 1927) is indicated on this chart by dashed ticks at 10,000 foot intervals. The last three digits are omitted.

The Corps of Engineers and local plane coordinate grid is shown by dotted ticks at 10,000 foot intervals. The origin is East Base, 1909.

Both grids are shown on the Westhaven Cove inset at 2,000 foot intervals.

CAUTION

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

CAUTION

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

AIDS TO NAVIGATION

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

HEIGHTS

Heights in feet above Mean High Water.

LOGARITHMIC SPEED LOGS

To find SPEED, place one point on distance run (in any unit) and the other on minutes run. Without changing divider spread, place right point on 60 and left point will then indicate speed in units per hour. Example: with 4.0 nautical miles run in 15 minutes, the speed is 16.0 knots.

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 0.67s'southward and 4.61s" westward to agree with this chart.

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 - WEST COAST

WASHINGTON

GRAYS HARBOR

Mercator Projection
Scale 1:40,000 at Lat 46° 56'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

Additional information can be obtained at nauticalcharts.noaa.gov

TIDAL INFORMATION

PLACE		Height referred to datum of soundings (MLLW)		
NAME	(LAT.&LONG)	Mean Higher High Water	Mean High Water	Mean Low Water
		feet	feet	feet
Montesano, Chehalis River	(46°58'N/123°36'W)	8.2	7.7	0.9
Aberdeen, Grays Harbor	(46°58'N/123°51'W)	10.1	9.4	1.3

Daylines (- -) 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.

LM (2011)

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

Aids to Navigation (lights are white unless otherwise indicated)

AERO aeronautical	Q green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Ro 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
DA daphone	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

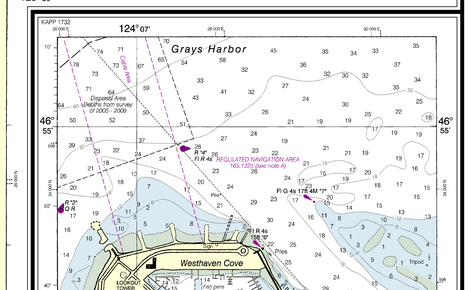
Bottom characteristics:

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

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	Pk 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.
COLREGS: International Regulations for Preventing Collisions at Sea, 1972.
Demarcation lines are shown thus: — — — —



8th Ed., Sep./ 11 ■ Corrected through NM: Sep. 24/11
Corrected through LNM Sep. 13/11

18502

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.

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.

PRINT-ON-DEMAND CHARTS

NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 2-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at http://ocsdata.ncd.noaa.gov/dnc/inquiry.asps, or OceanGrafix at 1-877-56CHART or http://www.oceangrafix.com.

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

SOUNDINGS IN FEET

FATHOMS	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
FEET	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
METERS	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Grays Harbor, Wash
SOUNDINGS IN FEET - SCALE 1:40,000

18502

Corrected through
LNM: 0314 (1/21/2014), NM: 0514 (2/1/2014), CHS: 1213 (12/27/2013)

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 six inches (152 millimeters), this copy is not certified safe for navigation.

NGA REFERENCE No. 18BHA18502
NSN 7642014015174