18447 29TH ED

NO	SMALL CRAFT FACILITY	CHART SIDE	APPROACH-FEET (REPORTED)	ALONGSIDE-FEET (REPORTED)	BERTHS-MOORINGS-ELECTRICITY (TRANSIENTS)	RAMP SURFACED-NATURAL	REPAIRS HULL-MOTOR-RADIO	MARINE RAILWAY-FEET	LIFT CAPACITY-TONS	BOAT RENTAL CANOE-ROW-MOTOR-KAYAK	CHARTER-HOUSE-SAIL	FOOD-LODGING-CAMPING	TOILETS-SHOWERS-LAUNDRY PUMP-OUT STATION	WINTER STORAGE WET-DRY	NAUTICAL CHART SALES	WATER-ICE	GROCERIES-HARDWARE	BAIT-TACKLE	DIESEL OIL-GASOLINE
1	SHILSHOLE BAY MARINA	A	14	14	B E	S	HM		35	R	C S	F	TSLP	WD	C	WI	GH	BT	DG
73	YARROW BAY MARINA	B	40	6	B E		HMR		9	M			T P	WD	C	WI	H		DG

THE LOCATIONS OF THE ABOVE PUBLIC MARINE FACILITIES ARE SHOWN ON THE CHART BY MAGENTA NUMBERS AND LEADERS.
THE TABULATED "APPROACH-FEET (REPORTED)" IS THE DEPTH AVAILABLE FROM THE NEAREST NATURAL OR DREDGED CHANNEL TO THE FACILITY.
THE TABULATED "PUMP-OUT STATION" IS DEFINED AS FACILITIES AVAILABLE FOR PUMPING OUT BOAT HOLDING TANKS.

NOAA WEATHER RADIO BROADCASTS

CITY	STATION	FREQ. (MHz)	BROADCAST TIMES
Seattle, Wash.	KHB-60	162.550	24 hours daily
Olympia, Wash.	WXM-62	162.475	24 hours daily

MARINE WEATHER FORECASTS

NATIONAL WEATHER SERVICE	TELEPHONE NUMBER	OFFICE HOURS
Seattle, WA	(206) 526-6087	8am to 3pm M-F*

*Recorded forecasts only at other times.

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
Port Angeles	(48°08'N/123°26'W)	7.1	6.5	1.9
Port Townsend	(48°07'N/122°45'W)	8.5	7.8	2.5
Seattle	(47°36'N/122°20'W)	11.4	10.5	2.8

Dashes (- - -) 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.
(Aug 2012)

BROADCASTS OF MARINE WEATHER FORECASTS AND WARNINGS BY MARINE RADIOTELEPHONE STATIONS

CITY	STATION	FREQ.	BROADCAST TIMES - PST	SPECIAL WARNING
Seattle, Wash.	NMW-43	157.1 MHz	9:30 AM	*On receipt

* Preceded by announcement on 2182 kHz and 156.8 MHz
Distress calls for small craft are made on 2182 kHz or channel 16 (156.80 MHz) VHF.

NOTE E

Numerous obstructions, located within the parameters from 47° 30' 27.3" N/ 122° 12' 57.4"W to 47° 30' 27.7"N/122° 12' 42.6"W to 47°30'10.0N"/122°12'38.1"W to 47° 30' 09.2"N/122° 12' 55.6"W to 47° 30' 08.6"N/122° 12' 55.2"W are not considered hazards to surface navigation and are not charted.

Numerous obstructions, located within the parameters from 47° 31' 00.5" N/ 122° 12' 32.9"W to 47° 30' 54.5"N/122° 12' 50.4"W to 47°30'38.7"N/122°12'36.9"W to 47° 30' 44.7"N/122° 12' 21.0"W to 47° 30' 56.2"N/122° 12' 28.1"W are not considered hazards to surface navigation and are not charted.

Numerous obstructions, located within the parameters from 47° 30' 41.5" N/ 122° 12' 15.1"W to 47° 30' 35.4"N/122° 12' 36.8"W to 47°30'15.9"N/122°12'13.3"W, to 47°30'18.0"N/122°12'08.1"W, are not considered hazards to surface navigation and are not charted.

PUBLIC BOATING INSTRUCTION PROGRAMS

The United States Power Squadrons (USPS) and U.S. Coast Guard Auxiliary (USCGAUX), national organizations of boatmen, conduct extensive boating instruction programs in communities throughout the United States. For information regarding these educational courses, contact the following sources:
USPS - Local Squadron Commander or USPS Headquarters, Post Office Box 30423, Raleigh, N. C. 27612, 919-821-0281.
USCGAUX - 13th Coast Guard District, 915 Second Ave., Seattle, WA 98174-1067, Tel. 206-553-7390 or USCG Headquarters (G-BAU), Washington, D.C. 20593-0001.

HEIGHTS

Vertical clearances above the locks are referenced to Mean Water Level of the lakes which is 21 feet above MLLW.

AUTHORITIES

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

SUPPLEMENTAL INFORMATION

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

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.

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 0.646" southward and 4.450" westward to agree with this chart.

THE NATION'S CHARTMAKER SINCE 1807

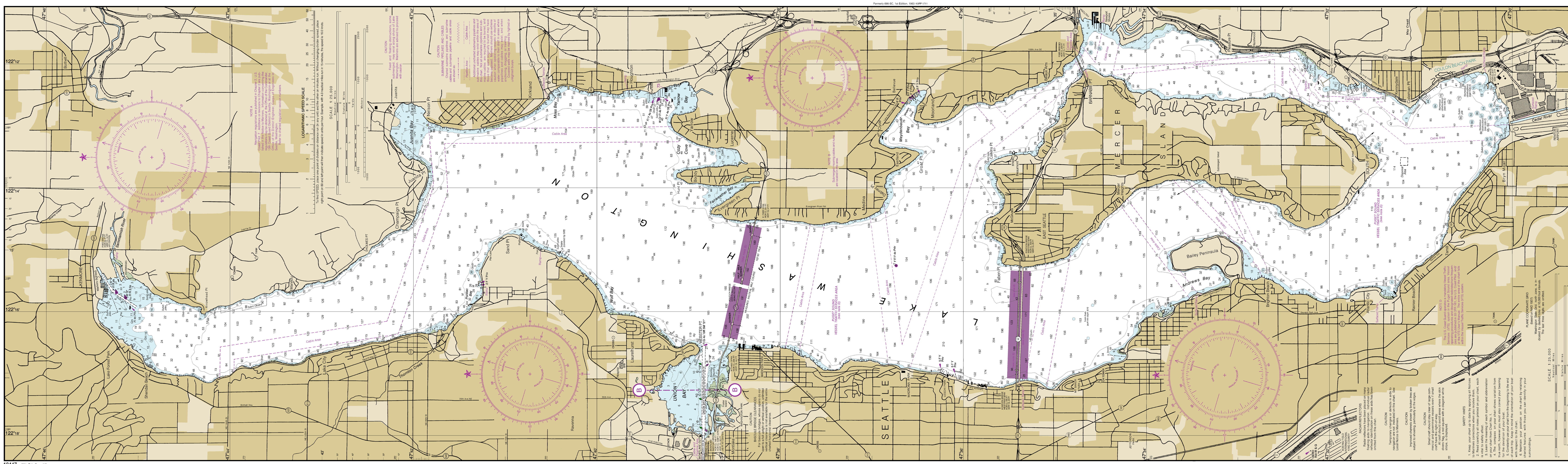
NAUTICAL CHART 18447

WASHINGTON
LAKE WASHINGTON SHIP CANAL AND LAKE WASHINGTON

Chart 18447 30th Ed., Sep. /12
Corrected through NM Sep. 15/12, LNM Sep. 04/12
Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

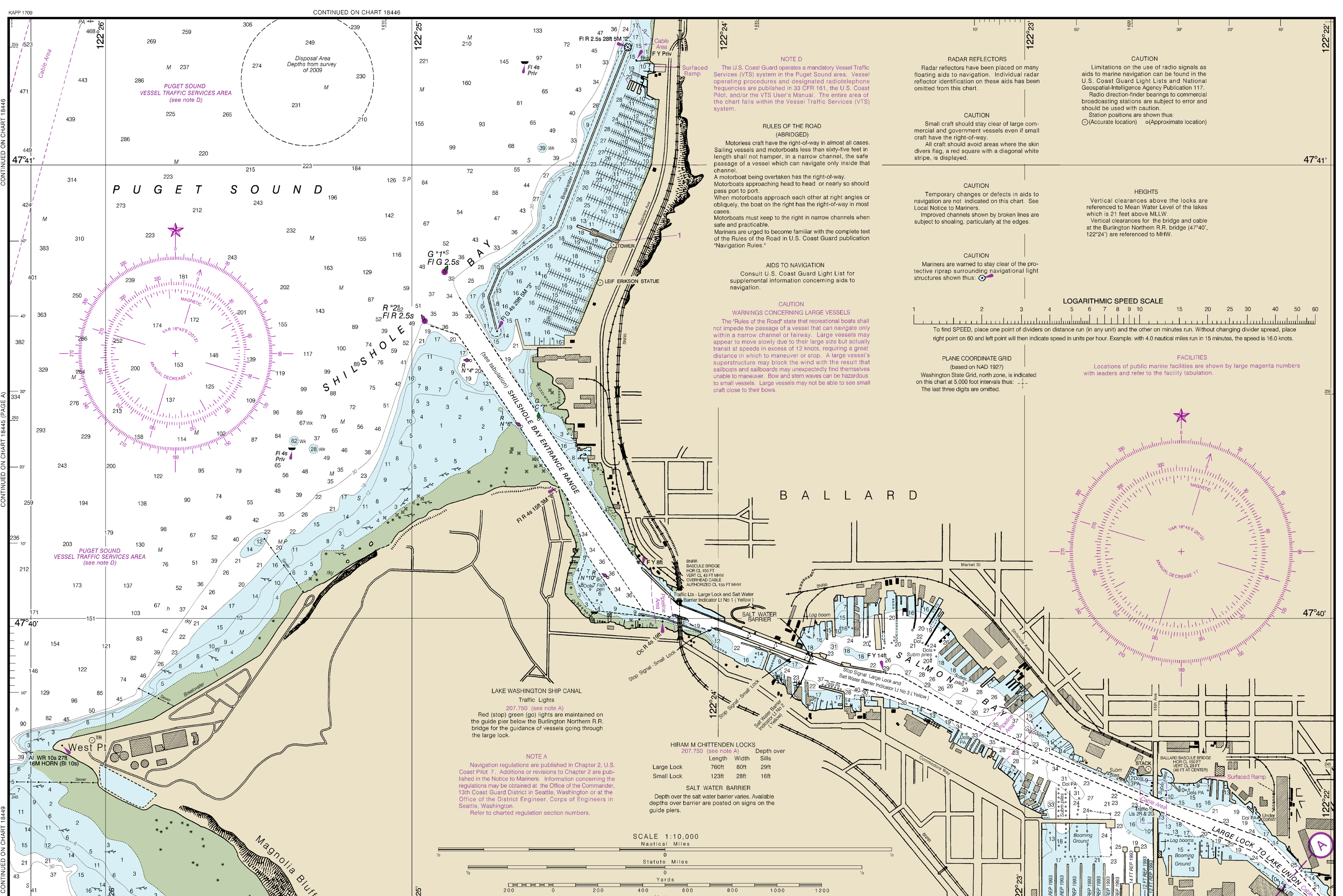
MERCATOR PROJECTION AT SCALE 1:10,000 & 1:25,000
SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER below the locks AND AT LOW WATER OF LAKE which is 20 FEET above the plane of MLLW in Puget Sound.
North American Datum of 1983
(World Geodetic System 1984)

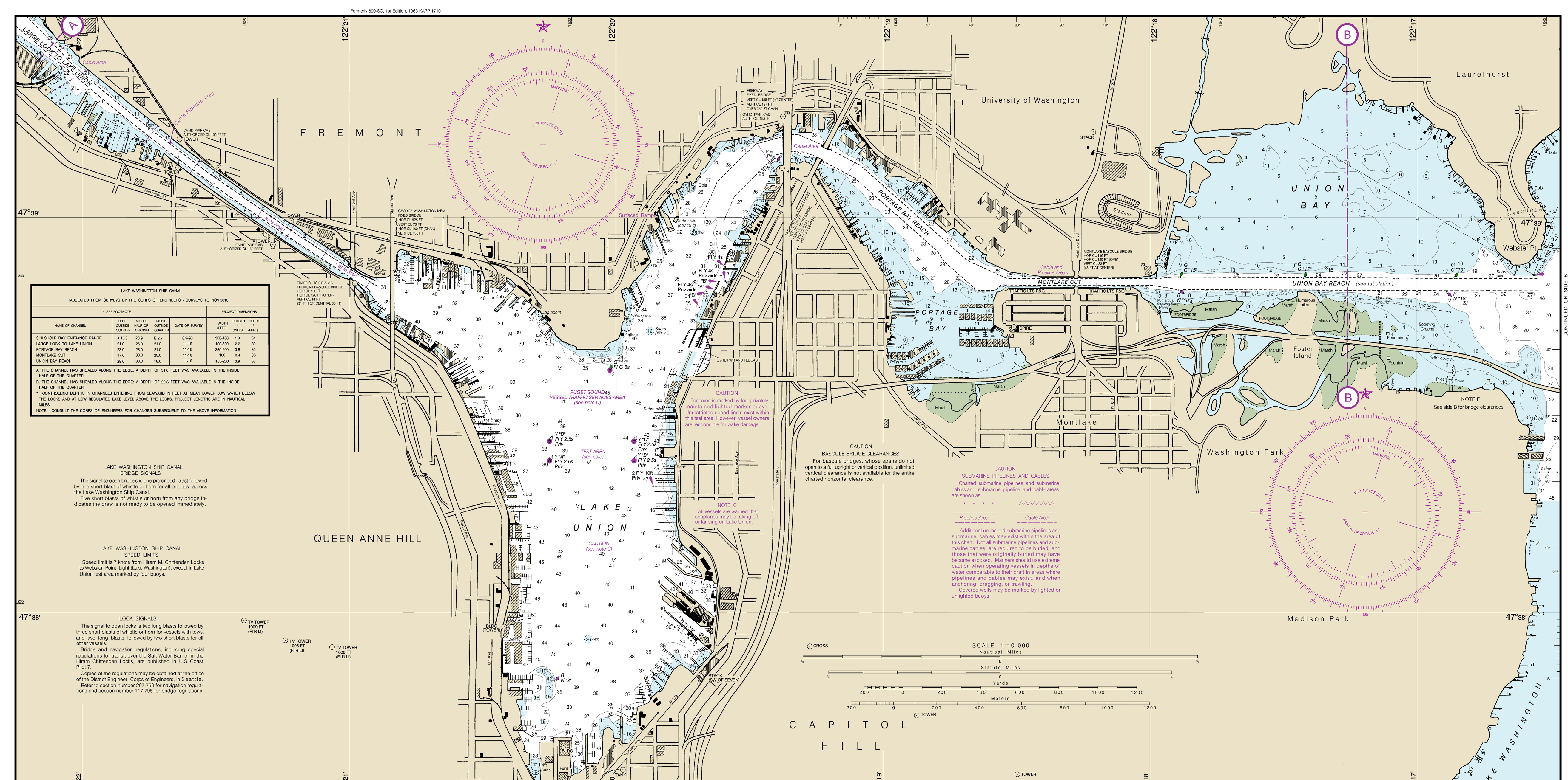
SIDE B



18447 30th Ed., Sep. /12

18447





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	WHIS 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	PA position approximate	Rep reported	

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

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.

DETERMINATION OF WIND SPEED FROM SEA CONDITION

Wind Speed (knots)	Wind Description	Sea Conditions	Wind Force (Beaufort)	Probable Wave Height (feet)
0-1	Calm	Sea smooth and mirror-like.	0	-
1-3	Light air	Scale-like ripples without foam crests.	1	¼
4-6	Light breeze	Small, short wavelets; crests have a glassy appearance and do not break.	2	½
7-10	Gentle breeze	Large wavelets; some crests begin to break; foam of glassy appearance. Occasional white foam crests.	3	2
11-16	Moderate breeze	Small waves, becoming longer; fairly frequent white foam crests.	4	4
17-21	Fresh breeze	Moderate waves, taking a more pronounced long form; many white foam crests; there may be some spray.	5	6
22-27	Strong breeze	Large waves begin to form; white foam crests are more extensive everywhere; there may be some spray.	6	10
28-33	Near gale	Sea heaps up and white foam from breaking waves begin to be blown in streaks along the direction of the wind; spindrift begins.	7	14
34-40	Gale	Moderately high waves of greater length; edges of crests break into spindrift; foam is blown in well-marked streaks along the direction of the wind.	8	18

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).

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.

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.

SIDE A

18447 30th Ed., Sep. /12 Corrected through NM Sep. 15/12, LNM Sep. 04/12

Last Correction: 10/22/2014. Cleared through:
LNM: 3715 (9/15/2015), NM: 3915 (9/26/2015), CHS: 0715 (7/31/2015)

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.

This chart was distributed as a PDF (Portable Document Format). Printing PDFs may alter the chart scale, color, or legibility that may impact suitability for navigation. Printed charts provided by NOAA certified Print on Demand (POD) providers fulfill a vessel's requirement to carry a navigational chart "published by the National Ocean Service" in accordance with federal regulations, including but not limited to 33 C.F.R. 164.33(a), 33 C.F.R. 164.72(b), and 46 C.F.R. 28.225(a). POD charts meet stringent print standards and can be recognized by an official certification of authenticity printed on the chart. A list of POD providers can be found at: nauticalcharts.noaa.gov/pod

18447