BookletChart™

Lake Washington Ship Canal
and Lake Washington
NOAA Chart 18447

A reduced-scale NOAA nautical chart for small boaters
When possible, use the full-size NOAA chart for navigation.

- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA’s Office of Coast Survey, the nation’s chartmaker
Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?
Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?
This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status
This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.


(Selected Excerpts from Coast Pilot)
Shilshole Bay is between Meadow Point and West Point. It is an open bight from which the Lake Washington Ship Canal is entered, and is the site of the largest marina in the Seattle area. Shilshole Bay Marina, the small-craft basin just N of the canal entrance, is administered by the Port of Seattle. A 4,400-foot breakwater, marked at each end by a light, protects the basin. Elliott Bay indents the E shore of Puget Sound just N of Duwamish Head. The entrance is between West Point on the N and Alki Point 5 miles S. The bay proper, lying E of a line between Magnolia Bluff and Duwamish Head, has a width of about 2 miles and extends SE for nearly the same distance. The bay is deep throughout most of its area.

A speed limit of 4 knots is enforced within the guide piers of the Hiram M. Chittenden Locks. A speed limit of 7 knots is enforced elsewhere in the Lake Washington Ship Canal, except in an area marked by four private buoys in the N part of Lake Union.

The Hiram M. Chittenden Locks, a double lock, and a fixed dam are at the narrows of the entrance to Salmon Bay, 1.2 miles in from the sound. The large lock, a two-chamber structure, has a clear length of 760 feet, width of 80 feet, lift of 26 feet, and depth over the lower miter sill of 29 feet. The small lock has a clear length of 123 feet, width of 28 feet, lift of 26 feet, and depth over the lower sill of 16 feet. Passage time is less than 30 minutes for large vessels and 5 to 10 minutes for small vessels. The lock tenders monitor VHF-FM channel 13, and can be contacted at 206-783-7000 for additional information.

A saltwater barrier extends across the E end of the E chamber of the large lock to reduce the intrusion of saltwater into Lake Washington and to conserve water. (See 207.750, chapter 2, for navigation regulations for Lake Washington Ship Canal, the Hiram M. Chittenden Locks, and the saltwater barrier.)

Salmon Bay extends for about 0.8 mile from the E end of the locks to the Ballard (15th Avenue) Bridge. There are numerous piers and floats with extensive small-craft facilities on the bay. Fishermen’s Terminal, operated by the Port of Seattle, is immediately W of the Ballard Bridge. The terminal is the home port of a large commercial fishing fleet. Depths of 14 to 28 feet are alongside the piers.

From Salmon Bay the canal leads SE to Lake Union, which is about 1 mile long in a N-S direction and about 0.5 mile wide. Depths in the lake range generally from 37 to 41 feet. There is an 11-foot shoal about 200 yards offshore from the SW end of the lake; it is marked by a buoy. Four private buoys in the N part of Lake Union mark an unrestricted speed zone, which is used by boat builders around the lake as a testing area. The buoys are frequently repositioned; caution is advised when transiting the area.

Lake Washington Ship Canal is crossed by five bascule bridges and two fixed bridges. Clearances of the drawspans are 14 to 43 feet. (See 117.1 through 117.59 and 117.1051, chapter 2, for drawbridge regulations.) The bridgetenders of the drawbridges monitor VHF-FM channel 16 and 13, and work on channel 13. The call signs are as follows: Burlington Northern Railroad, KCE-201; Ballard (15th Avenue), KJA-445; Fremont Avenue, KJA-442; University, KJA-441; Montlake, KJA-438. The fixed bridges have a least clearance of 127 feet. Cables crossing the canal have a least clearance of 155 feet.

State Route 520 pontoon bridge crossing the lake between Seattle and Evergreen Point has a fixed span at the E and W ends. The clearances are 57 feet at the E end and 44 feet at the W end. The floating drawspans at the center of the bridge provide an opening 100 feet wide. (See 117.1 through 117.59 and 117.1049, chapter 2, for drawbridge regulations.) The Interstate Route 90 pontoon bridges between Seattle and East Seattle, on the N end of Mercer Island, have fixed spans at the E and W ends with clearances of 29 feet. The underwater remains of the E and W piers of a former fixed bridge are just SE of the Interstate Route 90 bridge. Mariners should use caution when outside the main navigation channel.

U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies

RCC Seattle           Commander
13th CG District      (206) 220-7001
Seattle, WA
NOAA's navigation managers serve as ambassadors to the maritime community. They help identify navigational challenges facing professional and recreational mariners, and provide NOAA resources and information for safe navigation.

For additional information, please visit nauticalcharts.noaa.gov/service/navmanagers.

To make suggestions or ask questions online, go to nauticalcharts.noaa.gov/inquiry.
To report a chart discrepancy, please use ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx.

Lateral System As Seen Entering From Seaward
on navigable waters except Western Rivers

PORT SIDE

ODD NUMBERED AIDS

- GREEN LIGHT ONLY
- FLASHING (2)
- FLASHING OCCULTING
- QUICK FLASHING ISO

PREferred CHANNEL
NO NUMBERS – MAY BE LETTERED

PREFERRED CHANNEL TO STARBOARD TOPMOST BAND GREEN

PREFERRED CHANNEL TO PORT TOPMOST BAND RED

GREEN LIGHT ONLY

COMPOSITE GROUP FLASHING (2+1)

STARBord SIDE

EVEN NUMBERED AIDS

- RED LIGHT ONLY
- FLASHING (2)
- FLASHING OCCULTING
- QUICK FLASHING ISO

For more information on aids to navigation, including those on Western Rivers, please consult the latest USCG Light List for your area. These volumes are available online at http://www.navcen.uscg.gov
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Note: Chart grid lines are aligned with true north.
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 MLW in Puget Sound.

North American Datum of 1983
(Federal Geodetic System 1994)
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AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

CAUTION

WARNING CONCERNING LARGE VESSELS
The "Rules of the Road" state that recreational boats shall not impede the passage of a vessel that can navigate only within a narrow channel or fairway. Large vessels may appear to move slowly due to their large size but actually transit at speeds in excess of 12 knots, requiring a great distance at which to maneuver or stop. A large vessel's superstructure may block the wind with the result that cabin tops and other objects may unexpectedly find themselves unable to maneuver. Bow and stern waves can be hazardous to small vessels. Large vessels may not be able to see small craft close to their bows.

PLANE COORDINATE GRID

WASHINGTON STATE GRID
North zone, is indicated on the chart at 5,000 foot intervals.

The last three digits are omitted.

HIGHTS
Vertical clearances above the locks are referenced to Mean Water Level of the lakes which is 21 feet above MLLW.
Vertical clearance for the bridge and canal of the Burlington Northern R.R. (elev. 14'4" or 18'23") are referenced to MHW.

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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 the 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 that draft in areas where pipelines and cables may exist, and which anchoring, dragging, or trawling. Covered wells may be marked by lighted or unlighted buoys.

Note: Chart grid lines are aligned with true north.
VHF Marine Radio channels for use on the waterways:
Channel 6 – Inter-ship safety communications.
Channel 9 – Communications between boats and ship-to-coast.
Channel 13 – Navigation purposes at bridges, locks, and harbors.
Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.
Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.
Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.
http://www.nws.noaa.gov/nwr/

Quick References
- Nautical chart related products and information — http://www.nauticalcharts.noaa.gov
- Interactive chart catalog — http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml
- Chart and chart related inquiries and comments — http://ocsdata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs
- Chart updates (LNMM and NM corrections) — http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html
- Coast Pilot online — http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm
- Tides and Currents — http://tidesandcurrents.noaa.gov
- National Data Buoy Center — http://www.ndbc.noaa.gov/
- NowCoast web portal for coastal conditions — http://www.nowcoast.noaa.gov/
- National Hurricane Center — http://www.nhc.noaa.gov/
- Pacific Tsunami Warning Center — http://ptwc.weather.gov/
- Contact Us — http://www.nauticalcharts.noaa.gov/staff/contact.htm

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This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.