

SEATTLE HUMAN RESOURCES
2024 FINAL EXAMINATION BIBLIOGRAPHY FOR FIREBOAT PILOT

Final: April 8, 2024

The written examination for Fireboat Pilot will be held on Monday, July 8 at a location to be determined.

Candidates who pass the written and charting examination will be scheduled for the practical examination, tentatively scheduled for September 9 -13, 2024 (times and locations to be announced). Candidates must attend more than one day during this period. The practical examination exercises will be based on the 1) skills and abilities identified by the job analysis as critical for successful job performance as a Fireboat Pilot, 2) information from the Promotion Development Committee who serve as subject matter experts, and 3) reading materials in the bibliography. Therefore, the practical examination topics are not limited to materials in the bibliography.

Please contact the Seattle Department of Human Resources Fire and Police Exams Unit at Yoshiko.gracematsui@seattle.gov or (206) 615-0581 if you have any questions on the exam process.

Please view the Classification Specification for the Fireboat Pilot for the general scope of job duties and required knowledge, skills, and abilities.

GENERAL SCOPE: Boat handling, piloting, seamanship, standard and electronic navigation, bridge resource management, local knowledge, fireboat equipment, electronics, marine radios and their usage, emergency operations including search and rescue operations, marine firefighting, and salvage. Verbal and written communication, supervision of fireboat crew, interaction with personnel and members of the public, and compliance with Citywide policies. Maritime rules and regulations. Vessel characteristics of the SFD fireboats.

A bibliography of study materials on which the written examination, charting exercise will be based includes the following:

Source Title	Contents
Bridge Resource Management for Small Ships, Daniel S. Parrot, 2011	All
Chapman Piloting and Seamanship, 68 th Edition	All (Excluding chapters 2, 3, 4, 5, 19, 21, 24, 25)
Detroit Diesel Marine Electronic Controls Operating Instructions	All
Dutton's Nautical Navigation, Naval Institute Press, 15th Edition	Chapters 1 – 14, 17, 23, 36, and Appendices A, B, and D
Furuno Operator's Guide #FA-150	All
Furuno Operator's Manual #FA-150	Pages iii - viii and Chapter 1-Operation
Furuno Operator's Manual, FAR2127, 2107-BB	All
Furuno Operator's Manual, NavNet3D MFDBB	All
Furuno User's Manual, NavNet3D MFDBB	All

Hamilton Jet HJ364 MECS Control Manual R1A5	Chapter 3, System Operation
Hamilton Jet HJ364 Product Manual	Section 2
L3 Protec - M AIS Installation and Operation Manual	Section 1- Introduction, Section 3- Operation and Appendix A - STEDS Functionality
A Leaders Guide to Unconscious Bias: How To Reframe Bias, Cultivate Connection, and Create High Performing Teams Pamela Fuller, Mark Murphy, Anne Chow, Simon & Schuster (2020)	Chapters 1-8
Marine Firefighting for Land-Based Firefighters, IFSTA, 3 rd Edition 2019	All
NOAA Charts: Corrected through LNM Week 10/24	#18447, 30th Ed., Sept 2012 #18449, 21st Ed., Nov 2019 #18450, 20th Ed., Jan 2017 #18473, 10th Ed., Apr 2020 #18474, 11th Ed., Dec 2015
Northwest Marine Weather, by Jeff Renner, 1993	All
Policies and Operating Guidelines, SFD (July 2023)	All Operating Guidelines listed below and all Policies that relate to them.
	P 1007 -Code of Conduct (Policy only) 3003 – EEO 3004 – Ethics 3017 – Race and Social Justice Initiative
Puget Sound Harbor Safety Plan, Marine Exchange – January 2023	All
Radar Observer Manual, 6th Edition, MET	All
Radar Transfer Plotting Sheets 5089	All
Seattle Municipal Code	Harbor Code Title 16 - All
Sexual Harassment Prevention Training Manual for Managers and Supervisors, 3 rd Edition, by Paul Gibson, and Marjorie A. Johnson	All
The Ship Handler's Guide, Capt. R. W. Rowe, 1998	All (Excluding chapter 12)
U.S. Chart #1, 13th Edition, April 15, 2019	All
U.S. Coast Guard Light List, Volume VI, 2024– (without weekly LNM corrections)	Cover through xxxix (PDF page number 1-49), pages 146-151, 159-165
U.S. Coast Guard Navigation Rules Handbook - International, Corrected through LNM Week 10/24	All
U.S. Coast Guard Search and Rescue: A Guide for Boat Coxswains 01 October 2006 1 st edition	All
U.S. Coast Guard VTS Puget Sound, 2021 User's Manual	All
U.S. Coast Pilot 10: 4th Edition, 2023 (without weekly LNM corrections)	Chapters 1 – All 2 – highlighted sections, 3 - highlighted sections, 8 - highlighted sections
Vessel Characteristics, Seattle Fireboats	All, listed below

--This is the list of characteristics that test questions are drawn from, not other documents.	
ZF 3000 Marine Gear Operating Instructions	Sec. 5.2 Shift Procedure, Sec. 5.3 Trailing Operation, Sec. 6.1 Trolling
ZF BW 460 Series Marine Gear Operating Instructions	Sec. 7.1 Normal Operation, Sec. 7.2 Trailing Operation, Sec. 9 - 9.1.2 Trolling
Zip Wake, Series E, Operator's Manual	All

Vessel Characteristics of the Seattle Fireboats:

Fireboat Chief Seattle: Length – 96’ 6”; Beam – 23’; Draft – 7’; Speed – 22 Knots; Fuel 1425 gallons at 95%; Water 2 – 50 gallon tanks; Foam Concentrate 950 gallons Novacool; Semi-displacement hull with a gross tonnage of 108, Propulsion - Conventional Twin Screw; Main Engines: 2 - MTU 10V2000, M93 1500 hp at 2450 RPM, ZF 3000 gears with 42 inch 5 blade propellers; Thrusters: Key Power Hydraulic (2 - 50 hp Bow only); Electrical: 2 - 65 KW Northern Lights Generators 480VAC 3-phase; Firefighting: 4 - 2500 GPM Fire Pumps driven by 2 C18 Caterpillar 715 hp at 2100 RPM, Pump Capacity 10,000 GPM supplying 6 monitors (5 foam capable), 10 - 4 inch discharges, and stern jets. (LIST UPDATED 2/23/2024)

Fireboat Leschi: Length – 108’; Beam - 27’ ; Draft – 10’; Speed - 14 Knots; Capacities: Fuel 21,940 gallons at 98%, Water 1190 gallons, Foam Concentrate 6,004 gallons Novacool; Propulsion - Conventional Twin Screw; Main Engines: 2 - MTU 8V4000, M71 1556 hp at 2,000 RPM, ZF W4610 gears with 72 inch 4 blade propellers; Thrusters: Key Power Hydraulic (200 hp Bow , 100 hp Stern); Electrical: 2 - 99 KW Northern Lights Generators 480VAC 3-phase; Firefighting: 4 - 5,000 GPM Fire Pumps driven by 2 MTU 8V 4000 M71 1,556hp at 2000 RPM, Pump Capacity 20,000 GPM supplying 8 - foam capable monitors, 12- 4 inch and 4- 2 1/2 inch discharges; Crane Ladder: 55 feet with pre-plumbed waterway; CBRN crew protection and decon. (LIST UPDATED 2/23/2024)

Fireboat 1: Length - 50’; Beam – 16’ 6”; Draft – 30”; Speed - 30 Knots; Capacities: Fuel - 486 gallons, Water - 42 gallons, Foam Concentrate - 204 gallons Novacool; Propulsion - Twin 364 Hamilton jets; Main Engines - 2 - C-18 Caterpillar 715 hp at 2300 RPM; Electrical: 2 - 270 amp engine driven alternators and 1 - 10 KW northern Lights Generator; Firefighting: 2 - 3,000 GPM Hale BG8 centrifugal pumps driven off front of main engines, 6,000 GPM total pumping capacity, 2 - 2,000 GPM Elkhart remote operated monitors, 4 - 4" discharge ports, 4 - 2 1/2" discharge ports, Bow Monitor and forward discharge ports are foam capable, CBRN crew protection and decon.

Fireboat 2: Length - 50’; Beam – 16’ 9”; Draft – 30”; Speed - 42 Knots; Capacities: Fuel - 600 gallons, Water - 45 gallons, Foam Concentrate - 200 gallons Novacool; Propulsion - Twin 364 Hamilton jets; Main Engines - 2 - C-18 Caterpillar 1001 hp ; Electrical: 2 – 105 amp engine driven alternators and 1 - 9 KW northern Lights Generator; Firefighting: 2 - 3,000 GPM Hale centrifugal pumps driven off front of main engines, 6,000 GPM total capacity, 2 - 2,000 GPM Elkhart remote operated monitors, 4 - 4" discharge ports, 4 - 2 1/2" discharge ports, Bow Monitor and forward discharge ports are foam capable, CBRN crew protection and decon.

Types of vessels and physical comparisons to the Seattle fireboats:

Gross tonnage 24 to 300
Horsepower 1430 to 3100
Engines, single and double

Propulsion, twin propeller and twin jet

Speeds up to 42 knots

Operating in depths up to 800' of water with experience in congested waters; including harbors, rivers, and inland waters

Comparable vessels would be harbor tugs, patrol boats similar to Coast Guard 82 and 95' foot boats, both propeller and jet driven pilot boats, crew boats, patrol and military vessels

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