

**SEATTLE DEPARTMENT OF HUMAN RESOURCES
PROPOSED EXAMINATION BIBLIOGRAPHY FOR FIREBOAT PILOT 2020**

Final: April 8, 2020

The written and charting examination for Fireboat Pilot will be held Wednesday, July 8, 2020 (time and location to be announced). The Fireboat working practical exams are tentatively scheduled for September 14 -18, 2020 (times and locations to be announced).

The proposed bibliography of study materials on which the written examination, charting exercise, and/or practical will be based on is outlined below

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.

Candidates who pass the written and charting examination will be scheduled for the practical examination, tentatively scheduled for September 14 -18, 2020 (times and locations to be announced).

Please contact the Seattle Department of Human Resources Fire & Police Exams Unit via email at yoshiko.gracematui@seattle.gov if you have any questions on the bibliography or the exam process.

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
Marine Firefighting for Land-Based Firefighters, IFSTA, 1st Edition 2001	All
NOAA Charts: Corrected through LNM Week 09/20	#18447, 30th Ed., Sept 2012 #18449, 21st Ed., Nov 2019 #18450, 20th Ed., Jan 2017 #18473, 9th Ed., Apr 2016 #18474, 11th Ed., Dec 2015
Northwest Marine Weather, by Jeff Renner, 1993	All
Puget Sound Harbor Safety Plan, Marine Exchange – June 2017	All
Race and Social Justice Initiative, SFD – RSJI Materials (binder)	Tab B: Overview Tab D: Why Lead with Race? Tab E: Race Inequity Definitions Tab F: Disparities 2011: Impacts of Institutional Racism Tab J: RSJI 2019 – 2021 Strategy Tab L: Inclusive Outreach and Public Engagement Guide (pages 4 – 6)
Radar Observer Manual, 6th Edition, MET	All
Radar Transfer Plotting Sheets 5089	All
Seattle Municipal Code	Habor 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, 2020– Corrected through LNM Week 9/20	Cover to xxxiii, pages 147-151, 162-165
U.S. Coast Guard Navigation Rules Handbook - International, Corrected through LNM Week 09/20	All
U.S. Coast Guard VTS Puget Sound, 2019 User’s Manual	All
U.S. Coast Pilot 7: 51st Edition, 2019 through LNM Week 09/20	Chapters 1, 2, 3, 13
Vessel Characteristics, Seattle Fireboats	All, listed below
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 through 9.12 Trolling

Vessel Characteristics of the Seattle Fireboats:

Fireboat Chief Seattle: Semi-displacement hull with a gross tonnage of 108, horsepower total of 3,044 at 2,450 RPM from two MTU Model 10V2000M93, operating two independent propellers. Overall dimensions of 96' 6" length, 23' width, and a draft of 7'; an all-aluminum boat with speeds capable of 22 knots and a pumping capacity of 10,000 gallons a minute.

Fireboat Leschi: Length – 108'; Beam - 27' ; Draft – 10'; Speed - 14 Knots; Capacities: Fuel 20,940 gallons, Water 1200 gallons, Foam Concentrate 6,000 gallons Novacool; Propulsion - Conventional Twin Screw; Main Engines: 2 - MTU 8V4000, M71 1550 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.

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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Fireboat Pilot-90.46 Hrs

Class Code:
41300

Bargaining Unit: Fire Fighters, IAFF Local
27

CITY OF SEATTLE
Established Date: Sep 18, 1969
Revision Date: Aug 29, 1991

SALARY RANGE

\$51.21 - \$53.53 Hourly

DESCRIPTION:

DEFINITION:

Positions in this rank are responsible for the safe navigation and piloting of a fireboat; supervise and participate in routine upkeep and maintenance; and, under direction of the Fire Officer, perform fire suppression duties as assigned.

EXAMPLES OF DUTIES:

EXAMPLES OF DUTIES:

- Operates the pilot house and all bridge equipment while underway, or in preparation to get underway; takes the helm, gives engine orders, and operates jet controls, radar, compass, radio, and related communication and navigation equipment.
- Positions fireboat in location designated by a fire officer and maintains position while fire suppression measures are taken; participates in firefighting at the scene of the fire as practicable.
- Issues orders to the deck crew and engine room personnel as required in maneuvering, mooring, anchoring or other underway movements involving the safe navigation and operation of the fireboat.
- Takes effective damage control measures to save personnel and equipment in the case of casualty or emergency affecting the fireboat such as collision, grounding, foundering, explosion or fire.
- Supervises and participates in cleaning, scaling, painting, minor repair, and alterations to topside areas, holds and firefighting and deck equipment; cares for and performs or arranges for required maintenance of a variety of deck and navigation equipment.
- Instructs personnel in deck duties and piloting; conducts fireboat tours; performs routine duties of a Fire Fighter as required on the fireboats.
- Performs related work as required.

MINIMUM QUALIFICATIONS:

Must be currently assigned to the Seattle Fireboats for a minimum of three years with no less than 135 shifts worked on the Seattle Fireboats. Must pass City of Seattle Fire Boat pilot exam and successful placement on the promotion register.

KNOWLEDGE, SKILLS AND ABILITIES REQUIRED:

Thorough knowledge of the rules of the road and other applicable piloting and navigation instructions and directives.

Thorough knowledge of the United States Coast Guard Local Notices to Mariners and characteristics of local waters, tides, currents, winds, weather and general hydrographs.

Skill in ship handling, navigation, and seamanship, and ability to use charts, compass, fathometer, and other navigational aids available on a Seattle Fireboat.

Ability to perform routine fire control duties; ability to train and supervise Fire Fighters in the deck duties required to operate a fireboat.

Ability to establish and maintain effective relations with other employees and the general public.

Ability to complete all necessary reports, correspondence, and documentation as required in the performance of assigned duties.

Ability to objectively and productively supervise and manage the work of employees.

WORK ENVIRONMENT/PHYSICAL DEMANDS:

Exposure to extreme heat, wet conditions, and adverse atmospheric and hazardous conditions.

LICENSE, CERTIFICATION AND OTHER REQUIREMENTS:

Successful completion of in-house (Acting Pilot qualification program workbook) for all fireboats, prior to promotion to the Fireboat Pilot rank is required. Valid Washington State driver's license and a positive driving record required. Must abide by the SFD Drug and Alcohol Testing Policy. Must maintain EMT certification throughout employment. A master's license for vessels of up to 200 tons, including a pilot endorsement for Puget Sound and adjacent inland waters, is desirable.

COMMENTS:

This description was prepared to indicate the kinds of activities and levels of work difficulty required of positions in this class. It is not intended as a complete list of specific duties and responsibilities.

SALARY EFFECTIVE DATE:

12/28/16 (2017 rate)