

Maritime Fire Service Operator Standards Professional Qualifications, Edition of 2019

Chapter 1 Administration

1.1 Scope This standard identifies the minimum job performance requirements for maritime fire service personnel.

1.2 Purpose The purpose of this standard is to specify the minimum job performance requirements for maritime fire service personnel.

It is not the intent of this standard to restrict any jurisdiction from exceeding these minimum requirements.

This standard shall cover the requirements for maritime fire service personnel of all fire department boats engaged in water related activities.

1.3 General

1.3.1 All Maritime fire service personnel shall meet the requirements of certification in Basic First Aid as adopted by the authority having jurisdiction.

1.3.2 All Maritime fire service personnel shall meet the requirements of certification in CPR as adopted by the authority having jurisdiction.

1.3.3 Fire service support personnel that are not normally assigned to a fire department boat but may work with or on such a craft in emergency situations shall meet the job performance requirements defined in Section 2-2 Basic Awareness.

1.3.4 Public fire service personnel can become accredited by meeting prescribed requirements in any one or combination of the following ways:

- a) Successful completion of accredited training through fire departments, colleges and universities, or special schools, courses, and seminars.
- b) Assessment of experience and documented training, which shows a professional value equal to specific requirements.

1.3.5 Individuals seeking accreditation should contact DPSST personnel for assistance.

1.3.6 Credit may be given for training received in other states providing it has been approved or accredited by the states involved, and provided the training is judged equivalent to Oregon standards.

1.3.7 Boat Operators shall have the unimpeded capacity to command and control the immediate operation of the craft he or she is operating, unless relieved by a qualified operator of equal or better training.

1.3.8 Maritime fire service personnel shall have a working knowledge of the National Interagency Incident Management System adopted by the State Fire Marshal.

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1.4 Definitions For the purpose of this standard, the following terms shall have the meanings given below. Where conflicts arise, this document subscribes to the definitions adopted by reference ORS 830 (small craft) and OAR 250 (Oregon State Marine Board).

Aquatic Stability Basic knowledge and skills of floating, treading water, and self-rescue techniques by all who are near the water.

Authority Having Jurisdiction The "authority having jurisdiction" is the organization, office, or individual responsible for "approving" equipment, installation, or a procedure.

NOTE: The phrase "authority having jurisdiction" is used in NFPA documents in a broad manner since jurisdictions and "approval" agencies vary as due their responsibilities. Where public safety is primary, the "authority having jurisdiction" may be a Federal, State, Local or other regional department or individual such as Fire Chief, Fire Marshal, Chief of a Fire Prevention Bureau Labor Department: Health Department, building official, electrical inspector, or others having statutory authority. For training purposes, state/provincial, regional, or local training agencies may assume the responsibility of authority having jurisdiction. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the "authority having jurisdiction". In many circumstances the property owner or his designated agent assumes the role of the "authority having jurisdiction"; at government installations, the commanding officer or departmental official may be the "authority having jurisdiction".

Boat Every description of watercraft including a seaplane on the water and not in flight, used or capable of being used as a means of transportation on the water, but does not include boathouses, floating homes, air mattresses, beach, and water toys or single inner tubes.

Buoy Any public or private floating devices used as a waterway marker or a sign for the purpose of a navigation aid.

Crew Member Any individual assigned to perform the tasks of one or more positions on a boat.

Deck Hand Any MFSP assigned to perform tasks associated with line handling, and/or operating above/below deck systems, and not assigned to another position.

Fire Boat A boat intended to carry personnel, and/or equipment for marine fire-fighting. Refer to the current edition of NFPA 1925.

IAW In Accordance With

Maritime Fire Service Personnel (MFSP) Any fire service personnel operating on the water of the State of Oregon.

Motorboat Any boat propelled in whole or in part by machinery, including boats temporarily equipped with detachable motors.

NASBLA National Association of State Boating Law Administrators

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Navigable waters of the United States Those waters of the United States, including the territorial seas adjacent thereto, the general character of which is navigable, and which, either by themselves or by uniting with other waters, form a continuous waterway on which boats or vessels may navigate or travel between two or more states, or to and from foreign nations.

Oregon Boater Education Card Card issued by the Oregon State Marine Board for the operation of a 10+ horse power watercraft or PWC. Holders of a US Coast Guard Captain's License are exempt.

Operate To navigate or otherwise use a boat.

Operator The person who operates or who has charge of the navigation or use of a boat.

Passenger Every person on board a boat who is not assigned to the boat as the Deck Hand, Operator, Crewmember or other person engaged in any capacity in the business of the boat.

Person on Board Every person being carried on board or being towed by a boat.

Personal Protective Equipment Equipment used for the protection from the environment encountered, work performed, and the potential hazards.

Rescue Boat A boat intended to carry personnel and/or equipment for rescuing people and/or property.

Rescue Device Equipment other than a rescue boat intended to be used in a rescue.

Rules of the Road Statutory and regulatory rules governing navigation of vessels.

Safe Boater Education Course Any education course recognized by the National Association of State Boating Law Administrators (NASBLA) such as a course taught through the U.S. Coast Guard Auxiliary, U.S. Power Squadrons and Oregon State Marine Board.

Seaplane Includes any aircraft designed to maneuver on the water.

Self-Rescue Knowledge, skills, and ability to extricate self from immediate hazard.

Service Equipment Orientation Personal familiarity with equipment in/on the boat related to assigned duty.

State Waters Those waters entirely within the confines of this state that have not been declared navigable waters of the United States.

Underway When a boat is not at anchor, or moored or made fast to the shore, or aground.

Waters of This State All waters within the territorial limits of the state, the marginal sea adjacent to this state and the high seas when navigated as part of a journey or ride to or from the shore of this state.

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Restricted Visibility Any condition in which visibility is restricted by fog, mist, falling snow, heavy rainstorms, sandstorms or any other similar causes.

Chapter 2 General Requirements - Awareness

2.1 General Prior to service on fire department boats and/or engaging in water related activities; the MFSP shall meet the job performance requirements defined in Section 2.2.

2.2 Basic Awareness The MFSP shall meet the requirements as set forth by their jurisdiction in the following topics.

- a) Personal Protective Equipment appropriate for the operating environment
- b) Self Rescue as determined by authority having jurisdiction
- c) Service Equipment Orientation as determined by authority having jurisdiction

Chapter 3 General Requirements - Deck Hand

3.1 Having met the requirements of Chapter 2 and prior to certification as a Deck Hand on fire department boats and/or engaging in water related activities, the MFSP shall meet the job performance requirements defined in Sections 3-1 through 3-11. Maritime fire service personnel shall possess an Oregon Boater Education Card.

3.1.1 General The Deckhand Level should be considered a key position for the operation of the boat as an extension of the Operator. The Deckhand provides the eyes, ears, and hands to work in unison with the Operator to navigate and position the boat. It is important that this level understands the boat and what the Operator must know to operate the boat safely and in accordance with the navigational rules.

3.2 Boat Orientation Understanding the fire department boat nomenclature, on-board systems, and special equipment.

3.3 Boat Maintenance Perform routine checks, inspections, and servicing functions on systems and components so that the operational status of the boat is verified.

3.3.1 Prerequisite Knowledge

Of a fire department's boat and IAW manufacturer's specifications.

3.3.2 Requisite Skill

Document the routine tests, inspections, and servicing functions, given maintenance and inspection forms, so that all items are checked for proper operation and deficiencies are reported.

3.4 Personal Safety Personal protective equipment, clothing, and practices needed to enhance the MFSP's personal safety during boat operations.

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- 3.5 Navigation Rules** Knowledge of Federal, State, and local waterway marking systems.
- 3.6 Marlin Spike** Knowledge of line handling, appropriate knots, and use of ground tackle.
- 3.7 Trailing** Knowledge of trailing equipment and safety practices with a trailered boat if applicable to the AHJ.

3.7.1 Prerequisite Skills

Performance skills including transport, launch, and retrieval of a boat using a trailer.

- 3.8 Emergency Procedures** Knowledge of emergency procedures including on-board fire suppression, visual distress signals, and communication procedures as determined by authority having jurisdiction for the following situations:

- a) On-Board Fire
- b) Hull Breach
- c) Loss of Power
- d) Loss of Steering
- e) Collision/Obstruction Avoidance
- f) Communication/Signaling Devices
- g) Grounding
- h) Person Overboard

- 3.9 Towing On Water** Knowledge of boat towing techniques, rigging, concepts, safety, liability to safely take a boat in astern and alongside tow.

- 3.10 Beaching and Anchoring** Knowledge of beaching, anchoring techniques, rigging, and docking and mooring procedures.

Chapter 4 General Requirements – Operator

- 4.1** Having met the requirements of Chapter 3 and prior to being certified as a Boat Operator, the MFSP shall meet the job performance requirements defined in Sections 4-1 through 4-10.

4.1.1 General. The Operator Level builds on the Deckhand knowledge and skills with a main focus on controlling the movement of the boat to proficiently pilot the boat in the service area, under varying environmental conditions; and to know the performance limits of the crew and boat. The Operator has ultimate determination of responding in extreme weather conditions and it is essential that they know how the boat will respond and the safety of the crew is ensured. The department will determine risk benefit response parameters for the boat and crew for inclement weather or incident requirements beyond their capabilities.

- 4.2 Close Quarter Maneuvering** Perform safe speed, proper steering techniques and proper throttle shift control to exhibit skill performing the following: Docking, Backing, Close Quarter Maneuvering at appropriate speeds and emergency stops. Please refer to the Maritime Task Book Appendix A.

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4.2.1 Prerequisite Knowledge

Identification of the general characteristics of the fire department boat.

4.2.2 Prerequisite Skill

Efficient and safe operation of the fire department boat on the waterways within the jurisdiction.

4.3 Planning Speed Maneuvering Perform at safe speed with proper steering techniques, throttle and shift control to accelerate to planning speed and decelerate safely. Properly trim the boat for planning speed; avoid (collision or unexpected event while at planning speed. Safely maneuver boat through a series of opposing turns while at planning speed.

4.3.1 Prerequisite Knowledge

Specific navigation routes and applications on local and regional waterways. Characteristics of static and dynamic waters including the influences on them by topography, geography, and the environment.

4.4 Towing Safely approach and take a disabled boat according to department procedures in Astern and Alongside Tow, tow with proper trim to both vessels, and then secure towed boat to the designated dock.

4.5 Restricted Visibility Operate at safe speed with a proper lookout in a restricted visibility environment.

4.5.1 Prerequisite Knowledge

Identification and operation of the navigational aids available on the fire department boat.

4.6 Emergency Procedures As the Operator, implement immediate action to an emergency on the department boat so that the safety of the crew is ensured and the damage to the boat is minimized.

4.6.1 Prerequisite Knowledge (SEE MASTER LIST IN 4.6 TB)

Emergency procedures for the specific body of water or waterway, topography, safe ports, access from land, and hazards of the response area for the following:

- a) On-Board Fire
- b) Hull Breach
- c) Loss of Power
- d) Loss of Steering
- e) Collision/Obstruction Avoidance
- f) Communication/Signaling Devices
- g) Grounding

4.6.2 Prerequisite Skills

Recognize an emergency situation and in a timely manner, perform the correct emergency procedure for the following situations:

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- a) On-Board Fire
- b) Hull Breach
- c) Loss of Power
- d) Loss of Steering
- e) Collision/Obstruction Avoidance
- f) Communication/Signaling Devices
- g) Grounding

4.7 Personnel Recovery Demonstrate the ability to safely and effectively retrieve people in man overboard situations both rescue and non-rescue situations.

4.7.1 Prerequisite Knowledge

Of various retrieval techniques and rescue devices, and application and limitations of such. Able to recognize local hazardous conditions and what the effect will be on the rescues.

4.7.2 Prerequisite Skills

Of retrieving victims or personnel from floating positions, pick off locations, and response area hazardous locations.

4.8 Anchoring

Safely perform effective anchor deployment, set, and retrieval.

4.9 Beaching

Demonstrate ability to locate an acceptable beaching location and successfully beach the boat without causing damage.

4.10 Navigation Rules Knowledge of the "rules of the road" IAWVSCG MI 6672B Navigation rules as they apply to the jurisdiction's waterways.

Chapter 5 General Requirements - Rescue Boat Operator

5.1 Having met the requirements of Chapter 4 and prior to certification as a Rescue Boat Operator, the MFSP shall meet the job performance requirements defined in Sections 5-1 through 5-5.

5.1.1 General Rescue Boat Operator relies on the knowledge and experience of the incident risks, local water environment, and the resources available to respond to the search and rescue of lost or injured victims. The department will determine risk benefit response parameters for the boat and crew for inclement weather or incident requirements beyond their capabilities. Some of the skills of chapter 5 have been demonstrated in the previous levels of this Task Book and are not repeated here.

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5.1.2 Rescue Boat Operators shall meet the specialized water rescue skills, body of water response area, techniques and equipment requirements as set forth by the authority having jurisdiction. Please refer to the Maritime Guide to Certification for further information.

5.2 Water Rescues

5.2.1 Develop an action plan for different types of in-water rescue applications in accordance with the authority having jurisdiction.

5.2.1.1 Prerequisite Knowledge

To differentiate between the following terms:

- a) Rescue vs. Recovery
- b) Risk vs. Benefit
- c) Static vs. Dynamic Waters

5.2.2 Recognize and identify hazardous water conditions and/or areas and use this information in developing an action plan.

5.2.2.1 Prerequisite Knowledge

Local and regional water target hazards.

5.2.3 Identify applicable water rescue resources available to the jurisdiction.

5.2.3.1 Prerequisite Knowledge

Local and regional water rescue resources, and the basic applications and limitations of these resources.

5.3 Special Considerations

5.3.1 Demonstrate the ability to recognize and operate their rescue boat in adverse conditions. Examples of adverse conditions are as follows:

- a) Impaired visibility
- b) Extreme dynamic water
- c) Natural and manmade obstructions
- d) Weather
- e) Geography

5.3.2 Demonstrate the application of specialized navigational aids and equipment as they apply to the rescue operation.

5.3.2.1 Prerequisite Knowledge

A working knowledge of "industry standard" water rescue geographical terminology and operational visual/audible signals equal but not limited to:

- a) Hand signals
- b) Whistle commands
- c) Local geographical names

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d) Applicable charts and graphs

5-4 Rescue Operations

5.4.1 Operator will coordinate the boat and crew involvement with the incident management system established on scene and provides accountability for the crew and boat in large scale or multi-company incidents.

5.4.2 Implement boat based water rescue search techniques in various water-related locations.

5.4.2.1 Prerequisite Knowledge

Basic knowledge of victim search techniques involving persons on the water surface, submerged and on the shores of water bodies. Of proper lookouts and safety margins while personnel and equipment are in the water. All primary and secondary water rescue communications.

5.4.3 Demonstrate the ability to safely and efficiently deploy people in both rescue and non-rescue situations.

5.4.3.1 Prerequisite Knowledge

Of various techniques and safety considerations for deploying personnel as it pertains to the boat and the situation.

5.4.4 Initiate and perform a rescue boat operation i.e., perform a victim rescue from the waters of the department response area. This may include a conscious or unconscious victim in the water or on the shore.

5.4.4.1 Prerequisite Knowledge

Water rescue operations and the application and limitations of boat based rescues.

5.4.4.2 Prerequisite Skills

Of efficient, safe and effective performances of applicable water rescue operations.

Chapter 6 General Requirements – Fire Boat Operator

6.1 Having met the requirements of Chapter 4 and prior to certification as Fire Boat Operator, the MFSP shall meet the job performance requirements defined in Sections 6-1 through 6-3.

6.1.1 General The Fireboat Operator JPRs focus attention to the operation and control of the boat in support of marine-based firefighting, whether operating as a single unit or as part of a multi-company/agency event and with extended operational periods involving various environmental changes. The department will determine risk benefit response parameters for the boat and crew for inclement weather or incident requirements beyond their capabilities.

6.2 Boat Maintenance

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6.2.1 Perform and document routine tests, inspections, and servicing functions listed below, in addition to those specified in 3-3, given a fire department marine firefighting boat, so that the operational readiness of the boat is verified.

- a) Fire-fighting systems
- b) Fire-fighting equipment

6.3 Fire Pump Operation

6.3.1 Produce effective hand or master streams, utilizing draft, so that the pump is safely engaged, all pressure control and boat safety devices are set, the rated flow of the nozzle is achieved, and the vessel is continuously monitored for potential problems.

6.3.1.1 Prerequisite Knowledge

Hydraulic calculations for friction loss and flow using both written formulas and estimation methods. Safe operation of the pump.

6.3.1.2 Prerequisite Skills

Method(s) of power transfer from on-board engine to pump, drafting operations, operation of pump pressure control systems, operation of auxiliary cooling systems, and assembly of hose lines, nozzles, valves, and appliances.

6.3.2 Pump a supply line of 2.5 in. (65mm) or larger, given a relay pumping evolution, the length and size of the line, and desired flow, so that the proper pressure and flow are provided to the next pump in the relay.

6.3.3 Produce a foam fire stream, given foam-producing equipment, so that properly proportioned foam is provided.

6.3.4 Approach and operate a master stream on a predetermined point or 'object from set points at 0°, 90°, 180°, and 270° from object.