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8000 Marine Firefighting Plan

8100 Introduction

8110 *Authority*

Among the provisions of the Ports and Waterways Safety Act of 1972 (PWSA) (33 U.S.C. 1221 et seq.) is an acknowledgment that increased supervision of port operations is necessary to prevent damage to structures in, on, or adjacent to the navigable waters of the U.S., and to reduce the possibility of vessel or cargo loss, or damage to life, property, and the marine environment. This statute, along with the traditional functions and powers of the Coast Guard to render aid and save property (14 U.S.C. 88(b), is the basis for Coast Guard firefighting activities. 42 U.S.C. 1856-1856d provide that an agency charged with providing fire protection for any property of the United States may enter into reciprocal agreements with state and local firefighting organizations to provide for mutual aid. This statute further provides that emergency assistance may be rendered in the absence of a reciprocal agreement, when it is determined by the head of that agency to be in the best interest of the United States.

8120 Purpose

This document provides for a coordinated response by the U.S. Coast Guard and other federal, state, local, and civilian forces to major fires on board vessels or waterfront facilities. It provides policies, responsibilities, and procedures for coordination of on scene forces. It is designed for use in conjunction with other state, regional, and local contingency plans.

8130 Scope

This document is the primary firefighting instruction for the coastal region of Maine and New Hampshire for fires at facilities and/or on vessels. This plan further describes the responsibilities of all agencies involved. It is to be used to coordinate agency response and action. This plan also sets forth a command structure and a list of resources.

This document is not intended to be a marine firefighting technical handbook.

8140 Marine Firefighting Task Force (MFTF)

This task force will be comprised of subscribers to the contingency plan. The Task Force shall recruit and identify members of the port and firefighting community that will be pre-designated and accepted as technical experts. This group should include qualified firefighters, experts in shipboard systems, naval architects, marine engineers, and port operations with skills in public safety and regional communications. This group shall be called upon from time to time to support the planning process including inter-agency coordination. At the time of a marine disaster this group would assume an advisory role at the incident commanders command post.

8150 Policy

8151 Federal Policy

Federal Fire Prevention and Control Act of 1974(pl 93-498) states that fire prevention and control is and should remain a state and local responsibility, although the Federal government must help to reduce fire losses.

8152 Coast Guard Policy

Coast Guard Firefighting policy is established in the Coast Guard Marine Safety Manual Vol VI, chapter 8. It states that, where an organized fire department exists, the local Fire Chief is in charge of the firefighting operations on vessels and at facilities. The Coast Guard will render assistance as available, equal to each unit's level of training and adequacy of equipment. This is not intended to convey the impression that the Coast Guard is prepared to relieve local Fire Commanders of firefighting responsibilities.

8153 Marine Safety Office / Captain of the Port Policy

The Coast Guard Policy on firefighting does not relieve the Coast Guard Captain of the Port (COTP) of the responsibility for the overall safety of the port. It also does not restrict the lawful authority of the COTP to act in the best interest of the safety of life, property and the environment. Federal law gives the Captain of the Port authority to take full or partial control or direct the operation of any vessel within the territorial waters of the United States under his jurisdiction. This is done whenever it appears to the COTP that such action is necessary in order to secure such vessel from damage or injury, or to prevent damage or injury to any vessel or waterfront facility. The COTP, or his representative, will respond to assist as necessary, with waterside traffic control, minimum waterside firefighting assistance, and personnel familiar with shipboard construction, layout, common firefighting systems, and stability.

8154 State Policy

According to State Laws, the local fire chief has sole and exclusive power to perform all duties for the government pertaining to the management and extinguishment of all fires occurring within the jurisdiction of their department. The decision to declare a local fire disaster, necessitating the response of the local/county Response Plan remains with the local fire chief based on his evaluation of the situation.

Within the limits of the fire department's jurisdiction, it will respond to all notifications of fire as manpower, equipment, and training allow. This includes marine facilities located within its boundaries and vessels moored alongside those facilities. Further, it may involve fighting a vessel fire occurring in portions of the harbor within their jurisdiction.

8160 Responsibility

8161 USCG COTP Portland Responsibilities

The COTP exercises primary federal responsibility for the safety and security of the port. This responsibility is discharged by enforcing dangerous cargo regulations, marine terminal safety regulations, and pollution prevention regulations. In emergencies, the COTP may control the movement of ships and boats, establish safety zones and provide on scene forces. Responsibilities of the COTP include:

- Coordinate firefighting activities with the Incident Commander (IC).
- Assume Incident Commander for burning vessel underway or at anchor when:
    - the fire department with jurisdiction is unable to respond,
    - no fire department has jurisdiction.
- Coordinate all Coast Guard firefighting forces and equipment responding to the incident.
- Coordinate harbor safety and harbor traffic management with the Incident Commander. Control harbor traffic as necessary in the incident area to minimize the adverse impact of the fire on marine traffic and to facilitate firefighting operations. Establish safety or security zones as necessary.
- Provide information on the involved waterfront facilities.
- Provide information on the location of hazardous materials on the vessel or facility, if available.
- Provide technical data on ship's construction and stability.
- Respond to oil or hazardous materials discharges. Actual removal may be delayed until the firefighting operations are complete.
- Obtain tugs to assist in relocating moored or anchored vessels.
- Alert owners/operators of terminals or vessels at risk.

8162 Local Fire Department

Local fire departments are responsible for fire protection within their jurisdictions. Fire department responsibilities include:

- Assume the position of Incident Commander. In this capacity, exercise overall control of firefighting operations for the incident.
- Establish an Incident Command Post.
- Establish and maintain communications between the Incident Commander and all participating units.
- Request necessary personnel and equipment, and appropriate medical aid.
- Determine the need for, and request mutual aid.
- Make all requests for Coast Guard/federal personnel, equipment, and waterside security through the COTP.
- Establish liaison with police department for land-side traffic and crowd control, scene security and evacuation.

8163 Vessel Master

This plan is not intended to relieve the Master of his command nor restrict his authority concerning normal shipboard operation. However, it must be recognized that the local fire chief normally has more experience in the art of fire fighting. In addition, the fire chief has the responsibility for the safety of his firefighters, equipment and to the community to contain and extinguish any fires. The success of the operation is contingent on one person being in charge of all the fire fighting aspects. In the case of shipboard fires, the local fire chief will be the person in charge of the fire fighting operation. The master plays a very important role in lending his experience and assisting the fire chief to insure a successful operation. The presence of the fire chief in no way relieves the master of command of his vessel.

However, the master shall not countermand any orders made by the fire chief in the performance of the fire fighting operation. The master, officers, and crew of the vessel shall assist in the fire fighting operation. The master shall be liaison between the fire chief and his crew. He shall furnish, if possible, the fire chief with any information requested. He should provide the fire chief with members of his crew to act as guides. The master shall control the actions of his crew. In the absence of the Master, the Chief Mate or Chief Engineer is expected to represent the vessel.

8164 Joint Responsibilities

The Coast Guard and local fire departments will cooperate and assist each other:

- In carrying out their respective duties. This includes, but is not limited to, sending representatives of both organizations to meetings and other functions relating to marine firefighting within the port area.
- Annually review the Marine Firefighting Plan maintained by USCG COTP Portland. Provide input as necessary to update and revise this plan.
- Coordinating a periodic operation to exercise components of the Marine Firefighting Plan.

8170 Procedures for Reviewing, Updating, and Exercising

8171 Responsibility

To ensure the validity of this plan, the Maine and New Hampshire Area Committee will appoint a working group to periodically review all arrangements, jurisdictional relationships, and information contained within the plan. Coastal fire departments will review the plan and provide input as necessary to update and revise this plan.

8172 Exercises

Drills will be conducted to test the adequacy of the plan. The working group will propose a scenario for each drill, as well as a timetable for drill events. The exercise will, at a minimum, test response communications

and pose challenging situations, which might prove to be major problem areas. Possible scenarios might include a passenger vessel fire involving the evacuation and medical treatment of a large number of people; a fire on a bulk petroleum carrier; a fire on a vessel at anchor, and drills on less accessible facilities. Exercises shall be conducted generally during the day, but nighttime exercises will be considered. The exercises and real-life events will be the basis for updating of this plan, generally through a post-event critique.

8173 Fire Department Training

Each fire department, which is responsible for fighting shipboard fires, should establish a training program within their unit. To the extent possible, familiarization training and exercises should be conducted on vessels that call on the port. MSO Portland and its Field Offices should coordinate familiarization training in conjunction with routine vessel inspections to allow fire department crews to tour vessels and become familiar with various vessel layouts.

8180 Abbreviations

CFR:	Code of Federal Regulations
COMDT:	Commandant, U.S. Coast Guard. Head of this federal agency.
COTP:	Captain of the Port; the Coast Guard officer responsible for the enforcement of port safety and security and marine environmental protection regulations.
CWA:	Clean Water Act
DCM:	Dangerous Cargo Manifest
EPA:	Environmental Protection Agency.
MSM:	Marine Safety Manual.
MSO:	U.S. Coast Guard Marine Safety Office
NRC:	National Response Center
OCMI:	Coast Guard officer who is responsible for the inspection of U.S. vessels to assure compliance with applicable laws and regulations relating to safe construction, equipment, manning and operation.
OPA 90:	Oil Pollution Act of 1990
OSC:	On Scene Coordinator; designated official who coordinates all Coast Guard forces and equipment during an emergency response.
PWSA:	Ports and Waterways Safety Act
SOLAS:	The International Conference on Safety of Life at Sea.

8190 Definitions

After (aft):	The direction towards the stern of the vessel.
Athwartship:	Side to side, at right angles to the fore and aft centerline.
Ballast:	A weight, liquid or solid, added to a ship to ensure stability.
Barge:	Means any non-self propelled vessel.
Bilge:	The lowest inner part of a ships hull.
Bottom Clearance:	The depth of water under the vessel's keel.
Break Bulk Terminal:	A terminal where commodities packaged in bags, drums, cartons, and crates are commonly palletized and loaded and unloaded.
Bulk Terminal:	A terminal where unpackaged commodities carried in the holds and tanks of cargo vessels and tankers are handled.
Bulkhead:	Upright vertical partitions dividing a ship into compartments(wall).
Bunkering:	A vessel taking on fuel oil or lube oil from a facility, truck, or barge.
Companionway:	An interior stair-ladder, usually enclosed.
Cargo Vessel:	Any of the following self-propelled vessels: • Bulk Cargo Ship • Container Ship • Tank Ship

Damage stability data:	Data required by Regulation 7, Chapter II, SOLAS 1960 or Regulation 23, Chapter II-1, SOLAS 1974.
District Commander:	Coast Guard officer who has final authority for the performance of Coast Guard functions and missions within district boundaries. The COTP Portland zone lies within the First Coast Guard District office in Boston, MA.
Dry Bulk Terminal:	A terminal equipped to handle dry goods that are stored in tanks and holds on the vessel.
Dunnage:	Loose packing material (usually wood) protecting a ship's cargo from damage or movement during transport.
Fantail:	The stern overhang of a ship.
Fire Control Plans:	Plans required by Regulation 70, Chapter II, SOLAS 1960 or Regulation 20, Chapter II-2, SOLAS 1974.
Gangway:	Access to a vessel by means of a ladder meeting the requirements of 29 CFR 1918.11 (OSHA).
Gas-free:	Spaces certified by a recognized Marine Chemist as being gas free.
Gunwale:	The upper edge of a side of a vessel designed to prevent items from being washed overboard.
Incident Commander:	The local Fire Chief in charge of the firefighting operation.
International Shore Connection:	The fitting required by Regulation 55(h), Chapter II, SOLAS 1960 or Regulation 19, Chapter II.
Lay-up Status:	A vessel which is idle, awaiting orders, repairs, etc., and not in active operation.
Length:	Registered length of the vessel.
Lightering:	The offloading of petroleum cargo from a tank vessel or tank barge.
Local Key Technical Advisors:	Firefighters or emergency response coordinators that may be designated by a state, county or city organization who are familiar with this plan and have been trained as directed by the organization they represent. These people will be available to the local fire departments incident commander.
Master:	Captain of a merchant ship.
Mate:	A deck officer on a merchant vessel ranking below the master.
Nesting of Vessel:	Tying up a vessel offshore to a vessel which is moored to a berth.
Passageway:	A corridor or hallway.
Passenger Vessel:	Any vessel which carries passengers for hire.
Roll-on/Roll-off (Ro/Ro):	A form of cargo handling utilizing a vessel designed to load or unload cargo that rolls, such as autos or tractor trailer units.
Safety Watch:	Crewmember or other persons knowledgeable of the vessel with keys or other devices to open all locked spaces.
Shaft Alley:	A narrow, watertight compartment through the propeller shaft passes from the aft engine room bulkhead to the propeller.
Side Ports:	An opening in the vessel's hull below the main deck.
Stability data:	Data required by Regulations 19, Chapter II, SOLAS 1960 or Regulation 22, ChapterII-1, SOLAS 1974.
Stern:	The after end of the vessel.
Ullage hole:	An opening in a tank hatch that allows measuring of liquid cargo.
Waterfront Facility:	All piers, wharves, docks and similar structures to which vessels may be secured. This includes buildings on or contiguous to such structures and the equipment and materials on such structures.

8200 COMMAND

8210 Introduction

A major waterfront or shipboard fire will probably involve response teams from federal, state and local agencies. The nature of the fire will be the deciding element in determining which agency assumes overall

command or lead agency in a unified command. Overall command or lead agency must be determined as early as possible in the incident to ensure the effective and safe use of personnel and equipment.

8220 Command and Control

Under the Incident Command System (ICS), the Incident Commander assumes overall command and control of the incident response. Other responding agencies will, within limits of operational capabilities and internal policy, provide support to the Incident Commander by providing personnel, equipment and technical expertise. The location of the fire will be the primary determining factor in determining who shall be Incident Commander or the lead agency in a unified command,

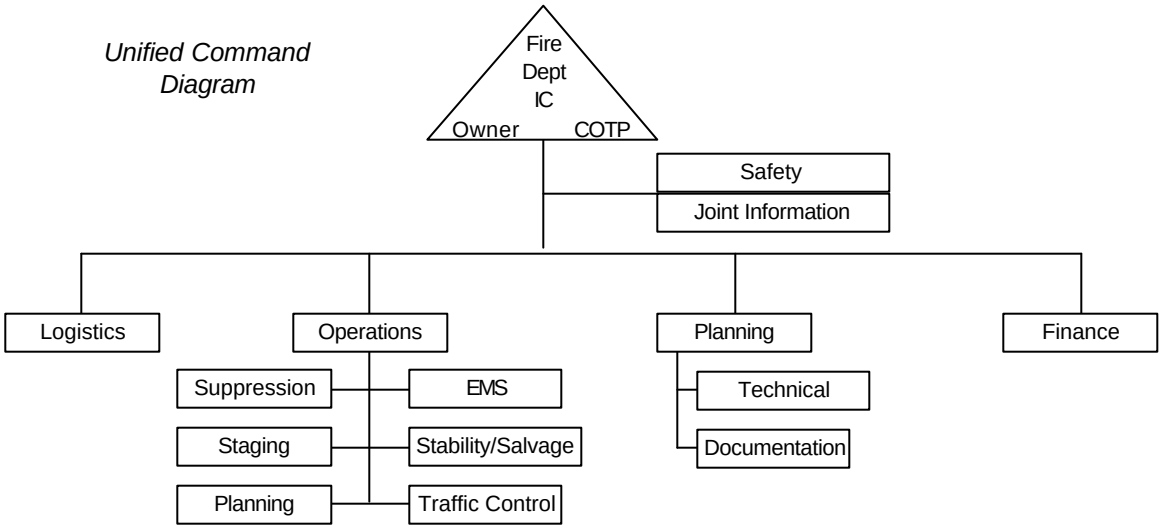
If the fire is at a facility, or on a vessel at a facility, the local fire department shall be Incident Commander or lead agency. If the vessel is underway or at anchor, Incident Commander is the Coast Guard COTP, until such time the vessel is brought to and secured at a pier, then Incident Command shall shift to the local fire department with concurrence between COTP and the fire department. If a vessel at a pier is subsequently moved, Incident Command shall shift from the fire department to COTP, or to the receiving fire department, again with concurrence between COTP and the fire departments.

8230 Unified Command

In instances when several jurisdictions are involved or several agencies have a significant management interest or responsibility, a unified command with a lead agency designation may be more appropriate for an incident than a single command response organization. Generally, a unified command structure is called for when:

- The incident occurs within one jurisdiction but involves several agencies with management responsibility for it due to the nature of the incident or the resources needed to combat it. Such a circumstance would pertain for almost any fire at a facility or a vessel at pierside or anchorage in this area because of the similar responsibilities of fire departments and the Coast Guard for the protection of public health and safety.
- The incident is multi-jurisdictional in nature because it effects or has the potential to affect several jurisdictions. Shifting a burning vessel from one jurisdiction to another is such an example.

Unified Command Diagram



8240 Coordination of Special Forces

State and local special forces, including Mutual Aid responses, shall normally be requested by, and report to Incident Command. Federal special forces shall normally be requested through COTP, and shall come under direction and control of COTP and fire department Incident Commander.

8250 Termination of Response Actions

Once response operations have begun, they shall not be terminated until the fire is extinguished and the situation is under control. Termination of resources shall be by mutual agreement between fire department Incident Commander and COTP.

Should there be a pollution incident, or threat of one, along with the fire, fire department resources may be released once the fire is extinguished and their assistance is no longer needed. This termination should also be a mutual agreement between IC and COTP.

8300 OPERATIONS

8310 Vessel Actions

The four main concerns for a vessel experiencing a fire on board while in port are injury to personnel, extinguishing the fire, vessel sinking, and the fire spreading to other ships or facilities. Basic shipboard firefighting theory is to contain, cool adjacent spaces including above and below, and extinguish. This theory is considered valid by many firefighters, especially when dealing with fires on passenger vessels or other vessels with a large number of compartments. The following action should be taken (this list is not all inclusive):

- Sound crew alarm. Summon crew to scene with emergency equipment. Commence firefighting operations as warranted by the situation.
- Alert passengers, if any on board. Make announcement on public address system. Commence evacuation of passengers.
- Stop all ventilation, mechanical and natural, as well as air conditioning units.
- Close and seal all ports and other openings which may create a draft.
- Close all unneeded open side ports.
- Close all or selective fire screen doors.
- Close all watertight doors.
- Set up fire watch in compartments adjacent to the space on fire. This should include the spaces above and below the affected area.
- Close all fire dampers to ducts which may transmit flame, heat or smoke to other compartments.
- Shut down all electrical systems to affected area prior to the use of water and/or other electrical conductive matter.
- Evacuate unnecessary personnel (while having regard for the possible necessity of backup firefighting teams).
- Make announcement for persons not to use elevators.
- Account for the whereabouts of all passengers and crew members as soon as possible to determine if there are injured or trapped persons on board. Send out search parties IF APPROPRIATE.
- Activate fixed firefighting systems. INSURE COMPARTMENT IS EVACUATED AND SEALED BEFORE ACTIVATION!
- Notify local fire department and provide the following information:
    - Name and telephone number of person reporting.
    - Nature of the emergency/extent of fire.
    - Location of the incident.
    - Exact locations of the fire, by compartment and deck.
    - Whether or not there is anyone trapped or injured.
    - Details as best as possible as to class of fire (what is burning?)
    - Is there any hazardous cargo in or near the fire?
    - What, if any, firefighting efforts are in progress?
    - What is the vessels capability to maneuver?
    - Amount and type of bunkers.
- Notify Coast Guard/Captain of the Port.

8311 Entry Restrictions

Any vessel at sea experiencing a fire on board while under the jurisdiction of the COTP Portland is not allowed to enter the navigable waters of the United States unless prior permission is granted by the COTP.

8320 MSO Portland Notifications

Once MSO Portland receives a report of a fire, the following agencies shall be notified:

- Appropriate Fire Department
- Maine Department of Environmental Protection – oil pollution
- Maine Emergency Management Agency and/or New Hampshire Office of Emergency Management
- USCG Group Portland or Group Southwest Harbor
- Vessel/Facility Owner/Operator
- Local Police agencies
- First Coast Guard District
- Any other agency deemed necessary by IC or COTP.

8330 Coast Guard Initial Actions

On receipt of this information, the COTP will notify and consult with other interested parties, determine the movement of the vessel to be allowed and initiate a plan of action. The COTP's duties will include the following:

- Responsible for the overall safety of the port.
- Continuous monitoring of the entire incident.
- Coordinate Coast Guard forces with appropriate Coast Guard Group Commander.
- Provide a liaison or On-Scene Commander, in order to coordinate efforts with the fire chief and provide the necessary assistance.
- Provide a source of portable means of communications, i.e. MX300 hand held radios, cellular phones, etc.

8340 Fire Department Actions

Upon arriving at the scene, the fire chief assumes charge of all aspects of the firefighting operation. This action does not relieve the master of his command of his vessel. However, the master shall place himself and his crew at the disposal of the fire chief. At no time shall the vessel's crew or other agencies or groups, either from shoreside or waterside, engage in independent firefighting activities without the consent of the fire chief. The fire chief's duties include the following as appropriate:

- In charge of all firefighting operations, both from the shoreside and waterside.
- Formulate a plan for fighting the fire that also addresses the safety of personnel and property.
- Procure needed firefighting equipment, material and manpower.
- Direct the activities of all personnel and equipment engaged in firefighting.
- Obtain damage control plans, damage stability data and stability information from the vessel.
- Request assistance from local police for traffic and crowd control.
- Request assistance from the local bridge authority to control bridge openings during the transport of injured persons.
- Request assistance of local hospitals and doctors for medical requirements.
- Request assistance of Red Cross units for aid to survivors.
- Request ambulance service, and activate mass casualty plans as appropriate.
- Consider the adverse effects to the vessel’s stability due to the introduction of firefighting water into the vessels interior.
- Establish a workable communication system with units engaged in firefighting operations, police department, civil defense and other agencies directly engaged in the overall operation.

8350 Firefighting Alternatives

A major vessel fire may occur at anchor, away from the resources necessary to combat it. On the other hand, a vessel fire may get out of control and endanger the facility where it is moored. Vessels, other than those aground or involved in a collision, may be maneuvered away from further damage or brought to a location that will optimize access for firefighting equipment. It is prudent to consider as a planning step, the selection of several areas to fight a vessel fire. Both marine terminals and anchorages should be considered so as to cover the possibility of a vessel fire getting out of hand, necessitating the moving of the vessel to an isolated area. The Captain of the Port is the controlling authority for permitting or directing the movement of a vessel and will, when feasible, work with impacted municipalities on positioning burning vessels within the harbor.

8360 Initial Fire Response Checklist

The following checklist is not all inclusive. It should be used as a guide for initial considerations at an incident.

- ☐ Establish a identify Command Post location.
- ☐ Establish Incident Command System (ICS).
- ☐ Establish security perimeter (waterside and shore side).
    - Determine if hazardous materials are involved
- ☐ Identify and communicate Offensive or Defensive tactical considerations.

Offensive Plan:

- Fire can be controlled or extinguished
- Fire can be confined to part of the vessel
- Property can be protected or saved on the vessel
- Lives can be saved, persons can be rescued on the vessel

Defensive Plan:

- Fire out of control
- Incident situation drastically changes and forces a move to Defensive Plan:
    - Explosion, rapid fire spread
    - Hazardous Materials involved
    - Drastic stability situation
    - Death or serious injury to response personnel
- Surround and drown
- Let incident stabilize itself
- Move vessel to a less impacted location
- Beach, ground or scuttle vessel - consult Coast Guard, Corps of Engineers

- ☐ Identify Objectives.
- ☐ Rescue endangered persons.
- ☐ Perform actions to keep incident from enlarging, and protect exposures.
- ☐ Stop cargo transfer, bunkering or dangerous cargo operations.
- ☐ Contact responsible persons for information and assistance.
    - Master/Chief Mate/Chief Engineer
        - General arrangement of vessel
        - cargo situation
        - stability
        - operation of ship's systems
        - fire protection equipment and systems
        - fuel/ballast tanks
        - utility shutoffs
        - generators
        - dewatering
    - Terminal Manager/Owner
- ☐ Obtain sources of information about the vessel.

- Fire Plan (found near top of gangway in water-tight container or in Master's/Chief Mate's office)
- General Arrangement Plan
- Capacity Plan
- Dangerous Cargo Manifest (found near bridge or in Chief Mate's office)
- Cargo Stowage Plan
- Trim and Stability Booklet
- Stability and liquid cargo computer programs
- Crew and passenger lists
- Material Safety Data Sheets for Hazardous and Dangerous Cargo
- Vessel Response Plan

☐ Investigate fire and gather needed information to deal with the incident.
☐ Determine life hazard situation.
☐ Determine if stability, flooding or related damage control problems exist.
☐ Determine fire situation.
☐ Determine status and condition of ship's fire protection systems and equipment

- Fire Main
  - International shore connection and manifold location
  - Supplement ship's fire main system with shoreside water and pressure
  - Firestation location and equipment (types of couplings/threads)
  - Compatibility with fire department's equipment
  - Fire pumps
- Water spray or sprinkler systems
- Foam systems
- HALON localized and total flooding systems
- Carbon Dioxide localized and total flooding systems
- Dry Chemical systems, twin agent systems
- Steam smothering
- Fixed monitors
- Emergency gear and Damage Control lockers and contents
- Heat detection systems, Smoke detection systems
- Fire rated bulkheads, zones, doors
- Identify locations of control valves, agent storage containers
- Determine methods of operation of fire protection systems
- Remote water-tight and fire doors
- Inert Gas systems

☐ Take control of ship's fire protection systems.
☐ Determine status and take control of ship's other systems (Ventilation, propulsion, cargo)
☐ Contact outside additional resources for assistance and expertise.
☐ Review cargo considerations, if applicable.
☐ Expand Incident Command System as needed to handle incident.
☐ Continually reevaluate operations and make changes as required.

8370 Firefighting Operations

- Establish water supply to vessel
- Set fire boundaries
- Use minimum amount of water to accomplish task
- Take actions to remove/dewater firefighting water
- Continually investigate all areas of fire boundary for fire spread
- Consider using thermal imagers and taking temperature readings
- Secure ventilation and all openings to fire area
- Secure utilities, electrical and any fuel supplies to fire area
- Install floating booms around vessel or incident scene to contain debris and pollution

- Monitor vessel stability throughout incident
- Note changes in draft marks, inclinometers, etc.
    - Beware of large accumulations of water above vessel's waterline
    - Secure openings in hull to prevent water entering vessel should list occur
    - Obtain technical assistance to determine stability situation and recommend corrective actions
    - Begin adequate dewatering operations
- Mobilized and position sufficient personnel and hoselines, appliances, and extinguishing agents to control and extinguish fire
- Coordinate ventilation of fire area with fire attack
- Provide for sufficient rotation of personnel to maintain continuous extinguishing effort
- Beware of pressure buildup in secured spaces and maintain escape routes
- Begin necessary salvage operations
- When possible, set fire watch and begin overhaul and fire cause investigation

8380 Machinery & Engineering Space Fire

These types of spaces and compartments usually have extensive amounts of fuel piping, lubricating oils, and electrical systems and wiring. There are also numerous sources of ignition and reignition. These spaces also may have large, open areas that can encompass several decks.

- Determine cause of fire
    - Leaking fuel
    - Electrical
    - Other
- Shut off all fuel flow to the space
- Secure electrical power to the space
- Close and secure all doors, hatches, ventilation ducts, dampers, and other openings to the space
- Determine fire conditions
- Interview the crew
- Visual indicators
- Actual investigation
- *Quick Attack*: fire is small enough to extinguish with portable extinguishers, large fixed extinguishers and/or 1-2 hoselines. Conditions include minimum smoke, heat, and adequate visibility.
- *Fire too large for Quick Attack*:
    - Rescue any trapped persons, if possible
    - Secure all openings to space until minimal smoke is escaping
    - Establish primary and secondary fire boundaries
    - Activate Fixed Fire Extinguishing System for involved space, if available:
        - Carbon Dioxide, HALON, Foam, Sprinklers, etc.
        - May involve several valves in different locations to discharge the agent
        - Use a vessel engineering officer, if available, or other experienced person from marine community to activate the system
        - If any smoke is escaping from the involved space, so will the extinguishing agent
        - Consider supplementing the fixed system with shore-side supplies of extinguishing agent

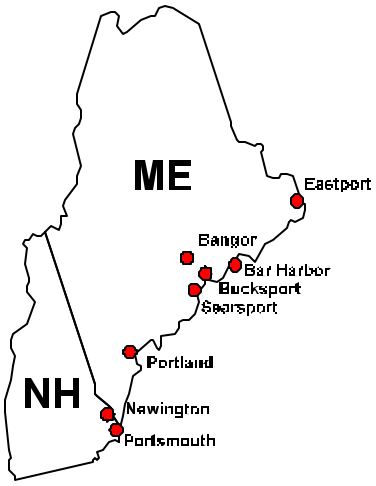
8400 PLANNING

8410 Area Summary

8411 Transportation Patterns

There is a considerable amount of foreign and domestic traffic in the ports within the Maine and New Hampshire area, including petroleum products, seafood products, wood and wood pulp, paper, various freight and manufacturing materials, passenger, and pleasure and recreation traffic. A vessel traffic summary for a typical year (1999) is as follows:

Eastport		**Searsport**	
Freight Vessels:	37	Freight Vessels:	29
Passenger Vessels:	0	Passenger Vessels:	0
Tank Barges:	0	Tank Barges:	29
Tank Vessels:	0	Tank Vessels:	41
Bar Harbor		**Portland**	
Freight Vessels:	0	Freight Vessels:	82
Passenger Vessels:	30	Passenger Vessels:	15
Tank Barges:	0	Tank Barges:	105
Tank Vessels:	0	Tank Vessels:	260
Bangor		**Newington**	
Freight Vessels:	0	Freight Vessels:	17
Passenger Vessels:	0	Passenger Vessels:	0
Tank Barges:	54	Tank Barges:	25
Tank Vessels:	23	Tank Vessels:	65
Bucksport		**Portsmouth**	
Freight Vessels:	1	Freight Vessels:	37
Passenger Vessels:	0	Passenger Vessels:	0
Tank Barges:	46	Tank Barges:	22
Tank Vessels:	13	Tank Vessels:	33



8412 High Risk Areas

The port areas of Portsmouth, Portland, Searsport/Bucksport and Eastport pose the highest level of risk due to the higher amount of vessel traffic and the concentration of waterfront facilities

8413 Historical Considerations

On August 22, 1996 a major fire struck the Portland Welding facility in South Portland, ME. Even though this facility was not located on the waterfront, it had an impact on Portland Harbor. Due to the hazardous nature of the contents of the building, oxygen, acetylene, and other bottled gases, COTP Portland closed Portland Harbor during the height of the fire. COTP and USCG Station South Portland established safety zones. Evacuations of civilian personnel from residences and boats were conducted from the waterside by Station South Portland. Portland FD's fire boat was placed in service at Portland Pipe Line.

On September 22, 1996, the T/V Julie N struck the south side of the Million Dollar Bridge. The Julie N was carrying 8.8 million gallons of # 2 fuel oil. Even though no fire resulted, Portland and South Portland fire departments responded quickly and were on scene before CG units arrived.

On February 5, 1997, the T/B BFT 39 overfilled while at Gulf Oil Terminal in South Portland, spilling an estimated 26,000 gallons of gasoline into Portland Harbor. Again, even though no fire resulted, the fire department responded due to the extreme hazard of the gasoline fumes.

On August 22, 1997, the fishing vessel CELTIC PRIDE II caught fire while conducting hotwork while moored at the Fish Pier in Portland. The Portland Fire Department initially fought the vessel fire and quickly determined the fire posed a threat to the facility and nearby vessels, and, with COTP approval, the vessel was towed and beached on a mudflat in South Portland. The South Portland Fire Department continued firefighting efforts until the fire was extinguished after 9 hours of combined firefighting efforts.

8414 Hydrological and Climatic Considerations

The Maine and New Hampshire coast experiences a wide range of weather conditions that must be taken into consideration during any incident response. Winters have sub-zero temperatures and occasional blizzards. Spring has late freezes and seasonal rain storms. Summer has high humidity and periodic fog. Fall has seasonal rains and a few early snow storms.

This region also experiences tidal variations of several feet between high and low tides. Information on tides and tidal currents can be found in the Tide Tables and the Tide Current Tables. Information on each port and their approaches can be found in the U.S. Coast Pilot.

8420 Considerations in Selecting a Shoreside Location to fight a Shipboard Fire

The first consideration should be that the pier is noncombustible. Consideration should also be given to the location, so as to not place adjacent areas in danger. A large area should be available for staging equipment and briefing firefighters. Public access should be easily controllable. The depth of the water alongside the pier should be enough at low tide to allow for the navigation of all vessels involved. The depth should however, not be so deep as to cover the burning vessel's main deck in the event of sinking. The bottom contour should be level or nearly so, and if possible be of a sandy composition. A sloping bottom may allow a sunken vessel to slide off into deeper water, where it might capsize. Pre-designated locations have not yet been developed but are intended to be in later revisions of this plan.

8430 Considerations in Selecting Firefighting Anchorages

The considerations for the selection of a shoreside firefighting location may also be applied to a firefighting anchorage. Additional requirements are that the anchorage be located so as not to constitute a hazard to navigation and so that firefighting resources can reach anchorage. A main objective is to select a location which will be as accessible as possible and will facilitate salvage operations, yet not place port facilities in jeopardy.

8440 Vessel Information

8441 Lay-up Status

Vessels which fail to depart within the normal time frames and vessels requesting entry to port for repairs or for other reasons not involving cargo operations, may be treated as a vessel in a "lay-up" status. Vessels in this category will need the approval of the COTP to remain in port or to enter port. They must meet the requirements for a vessel in a "lay-up" status. The requirements include contingency plans pertaining to firefighting, tugboat assistance and emergency communications plans between shore and shipkeeping crews. A profile of all vessels that are categorized as vessels in lay-up status are located at MSO Portland.

8442 Plans and Vessel Data

Passenger ships of over 100 gross tons which have staterooms for more that 50 passengers must have plans available for the following:

- Damage Stability, as required by Regulation 7, Chapter II, SOLAS 1960 or Regulation 8, Chapter II-1, SOLAS 1974.
- Stability Information, as required by Regulation 19, Chapter II, SOLAS 1960 or Regulation 22, Chapter II-1, SOLAS 1974.
- Damage Control Plans, as required by Regulation 20, Chapter II, SOLAS 1960 or Regulation 23, Chapter II-1, SOLAS 1974.
- Fire Control plans, as required by Regulation 70, Chapter II, SOLAS 1960, or Regulation 20, Chapter II-2, SOLAS 1974.

In all ships, a duplicate set of fire control plans or a booklet containing such plans shall be permanently stored in a prominently marked weathertight enclosure outside the deckhouse for the assistance of shoreside firefighting personnel as required by Regulation 20, Chapter II-2, SOLAS 1974.

8443 International Shore Connection

All passenger ships of 100 gross tones and more and/or more than 250 feet in length, when moored to a berth, shall have sufficient length of fire hose to reach from the ship to the pier. One end of the hose shall be connected to the ship's fire main system at all times and, in accordance with Regulation 55(h), Chapter II, SOLAS 1960, shall be equipped with an international shore connection.

8444 Passenger Ship in Port Fire Watch

The need for prompt reaction to the presence of smoke or fire on board passenger ships requires that critical systems be capable of immediate use. The bridge and engine room control spaces are the main center of communications (internal and external) throughout the vessel. While passengers are on board, the bridge and engine room control spaces will be manned by qualified individuals of sufficient training and experience to initiate a prompt and effective response to the detection of smoke and/or fire on board the vessel which includes the sounding of crew and passenger alarms.

8500 LOGISTICS

8510 Local Response Resources

8511 General Resources

8511.11 Captain of the Port

Responsible for safety of harbor and facilities. The COTP can mobilize Coast Guard resources to control vessel traffic, provide limited waterside firefighting capability, assist in firefighting planning and hazardous material assessment and conduct stability assessment in the case of a vessel fire. Coast Guard representative will control all Coast Guard forces and maintain liaison with the fire chief. The Captain of the Port is the controlling authority for the movement of a vessel and firefighting activities which may affect the stability of vessel or present a greater threat to the port.

8511.12 Police Department (Law Enforcement)

Responsible for crowd and traffic control. Maintains law and order. Assists in shoreside evacuations and shoreside safety zones.

8511.13 Vessel Master

Ultimately responsible for vessel and, as such, must assist fire department in every way possible. He/she can provide vessels stability information, damage stability data and fire control plans.

8511.14 Terminal Manager

Ultimately responsible for facility, and as such must assist fire department in every way. The Terminal Manager can provide detailed information on layout, location of cargo, and provide additional personnel to assist firefighters.

8511.15 Vessel Agents

Arranges for pilots and tugs, environmental protection, equipment or other assistance when directed by vessel owner or master.

8511.16 Marine Chemist

Marine Chemists are consultants paid for health and safety advice. They have the equipment and expertise to obtain temperature readings, check for the presence and concentrations of gases and, in some instances, provide needed advice to the firefighting forces concerning the nature of chemical related hazards encountered.

8511.17 Corps of Engineers

Responsible to maintain navigable channels for commerce. A representative will be consulted if planning is made to position a distressed vessel within the harbor. The Corps of Engineers and Captain of the Port will consult in the placement of the vessel so as not to create a hazard to navigation.

8511.18 Naval Architect

Determines stability and conditions of ship in consultation with the Master, Chief Mate and/or Chief Engineer. When there is a question of stability the Captain of the Port may recommend that operations be curtailed and require the ships master to have the ship inspected by a Naval Architect/Surveyor before allowing resumption of firefighting operations.

8511.19 Pilots Association

Pilotage laws require that a pilot be on board for all large vessel movements. Local pilots associations should be contacted to determine the best method of shiphandling and the possible location for firefighting staging areas, given current weather conditions.

8512 Firefighting Equipment Summary

New Hampshire

Mutual Aid agreements
- 10-15 Engines (750-1500 gpm)
- 4 Aerials (75-100 ft)

USCG Portsmouth Harbor Station
- 41' UTB (250 gpm fire pump)
- 44' MLB (200 gpm fire pump)

Portsmouth Naval Shipyard
- Firefighting tug and crew

External Foam supply
- Essex County Foam Bank, Danvers, MA

York County, Maine

County-wide Mutual Aid agreement
- 10-15 Engines (750-1500 gpm)
- 4 Aerials (75-100 ft)

Kennebunk Fire Boat
- 26 ft (300 gpm)

Biddeford Fire Boat
- 22 ft (125 gpm)

Note: Portsmouth Naval Shipyard Tug and Crew on Mutual Aid Agreement

USCG
- Coverage from Portsmouth Harbor Station and Portland resources listed under Cumberland County

Cumberland County, Maine

County Task Force
- 20 Engines (1000-1500 gpm)
- 6 Aerials (75-100 ft)
- 13 Tankers (2000-5000 gallons)

Portland Fire Boat
- 68 ft (7000 gpm)

USCG
Station South Portland
- 41' UTB (250 gpm fire pump)

USCGC SHACKLE
- 65 ft (300 gpm pump)

USCGC WRANGLE
- 110 ft (two - 250 gpm pumps)

USCGC JEFFERSON ISLAND
- 110 ft (two - 250 gpm pumps)

Foam
- 6000 gallons Protein/AFFF available at terminals in South Portland

Sagadahoc County, Maine

Mutual Aid agreements
- 8-10 Engines (750-1000 gpm)
- 4 Aerials (75-100 ft)
- 2 Tanks (2000 gallons)

USCG
- Coverage from units listed under Cumberland and Lincoln Counties

Lincoln County, Maine

Mutual Aid agreements
- 10-15 Engines (750-1250 gpm)
- 2 Aerials (75 ft)
- 5 Tankers (2000-3000 gallons)

USCG Station Boothbay Harbor
- 41' UTB (250 gpm fire pump)
- 44' MLB (200 gpm fire pump)

Knox County, Maine

Mutual Aid agreements
- 10-15 Engines (750-1250 gpm)
- 3 Aerials (60-100 ft)
- 4 Tankers (2000-3000 gallons)

Foam
- Rockland Fire Department (115 gal)
- South Thomaston FD (105 gal)
- Thomaston FD (140 gal)

USCG
Station Rockland
- 41' UTB (250 gpm fire pump)

USCGC TACKLE
- 65 ft (300 gpm)

USCGC THUNDER BAY
- 140 ft (300 gpm)

Waldo County, Maine

Mutual Aid agreements

USCG
Station Southwest Harbor
- 41' UTB (250 gpm fire pump)
- 44' MLB (200 gpm fire pump)

USCGC BRIDLE
- 65ft (300 gpm)

Washington County, Maine

Mutual Aid agreements

USCG
SARDET Eastport
- 41' UTB (250 gpm fire pump)
- Coverage listed under Hancock County

8520 Communications

8521 Marine Communications

All Coast Guard forces employed in support of a fire fighting effort, whether afloat or ashore, will be equipped with radios to communicate on VHF-FM channels. Channel 81A (157.05) will be the primary working channel between Coast Guard units. Channel 12 VHF-FM, primary, and Channel 21 VHF-FM, secondary, shall be used between Coast Guard, Navy, commercial vessels fighting fire, and FD's Fire boat. Note that Channel 12 and Channel 21 VHF-FM are non-secure channels.

8522 Harbor Traffic Control

Coast Guard units will direct vessel traffic on Channel 21 and/or Channel 22 VHF-FM.

8523 Shore Communications

The on scene frequency will be that of the controlling fire department. Inter-department communications will initially result from existing mutual assistance agreements, for example, the statewide mutual aid frequency for Maine is (154.310).

8600 Finance

8611 General

In most cases, each responding agency will be responsible for funding their own efforts. This may include a fire department billing the owners of the vessel or terminal for resources used during the response. In situations where the fire poses a threat or causes a release of oil or hazardous materials, the Coast Guard can access federal funds to mitigate the pollution threat. Depending on the situation, mitigation may include funding firefighting efforts.

8620 Federal Funds

In the event that the fire involves a threat or release of oil or hazardous materials, the Coast Guard COTP, acting in his role as the pre-designated Federal On Scene Coordinator (FOSC) for oil and hazardous material spills for the coastal zone, may access federal funds to mitigate the pollution threat. Federal funds can be accessed if the FOSC determines that the vessel or terminal owner/operator lacks funding to provide response resources or refuses to fund resources. In such a situation, the FOSC will access the Oil Spill Liability Trust Fund (OSLTF) for oil or the CERCLA Fund, otherwise known as "the Superfund" for hazardous material releases.

Once a federal fund is opened, it can be used to fund other agency efforts. A Pollution Removal Funding Authorization will be established with that agency which will provide them a ceiling amount for the agency to work under. Forms will be provided to the agency for processing billing invoices.