

NFPA®

1405

Guide for
Land-Based Fire Departments That
Respond to Marine Vessel Fires

2020



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NFPA® 1405

Guide for

Land-Based Fire Departments That Respond to Marine Vessel Fires

2020 Edition

This edition of NFPA 1405, *Guide for Land-Based Fire Departments That Respond to Marine Vessel Fires*, was prepared by the Technical Committee on Fire Service Training. It was issued by the Standards Council on November 4, 2019, with an effective date of November 24, 2019, and supersedes all previous editions.

This edition of NFPA 1405 was approved as an American National Standard on November 24, 2019.

Origin and Development of NFPA 1405

This guide was developed in response to a recognized need in fire-fighter training. Marine vessel fires constitute one of the greatest challenges that structural fire fighters can face. The Technical Committee on Fire Service Training helped to establish a subcommittee of experts on the subject of shipboard fire fighting. The results of the subcommittee's efforts were in the first edition of NFPA 1405 in 1990.

The 1996 edition contained some minor updates to the original edition.

The 2001 edition contained updates to the original edition, including material about responder safety, vessel familiarity, vessel detection systems, incident command considerations, and a reminder that every vessel response should be treated initially as a hazardous materials incident. Some material from Appendix A was moved into a new Appendix B, Pre-Fire Survey Guide, to provide more visibility for this important sample survey.

The 2006 edition contained editorial changes and included new International Maritime Organization (IMO) Graphical Symbols for Shipboard Fire Control Plans. This edition also featured technical changes related to definitions, vessel stability, and draft marks.

The title of the 2011 edition was changed from *Guide for Land-Based Fire Fighters Who Respond to Marine Vessel Fires* to *Guide for Land-Based Fire Departments That Respond to Marine Vessel Fires* to eliminate confusion with NFPA 1005, *Standard for Professional Qualifications for Marine Fire Fighting for Land-Based Fire Fighters*.

The 2016 edition was revised to internationalize the terminology in the document. A chapter on legal issues, Chapter 17, was deleted.

For the 2020 edition, the committee reviewed the document and updated it to better align with the NFPA *Manual of Style* as well as updated the referenced and extracted material in the document. Also, the committee made many changes to update and align with current U.S. Coast Guard regulations based on its recent organizational changes and existing regulations.

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Committee Scope: This Committee shall have primary responsibility for all fire service training techniques, operations, and procedures to develop maximum efficiency and proper utilization of available personnel. Such activities can include training guides for fire prevention, fire suppression, and other missions for which the fire service has responsibility.

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NFPA 1405

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Land-Based Fire Departments That Respond to Marine Vessel Fires

2020 Edition

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NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

Information on referenced publications can be found in Chapter 2 and Annex E.

Chapter 1 Administration

1.1 Scope.

1.1.1 This guide identifies the elements of a comprehensive marine fire-fighting response program including, but not limited to, vessel familiarization, training considerations, pre-fire planning, and special hazards that enable land-based fire fighters to extinguish vessel fires safely and efficiently. In general, the practices recommended in this publication apply to vessels that are covered by the Safety of Life at Sea (SOLAS) agreement or that call at United States ports.

1.1.2 This document does not consider offshore terminals or vessels on the high sea.

1.2 Purpose. (Reserved)

1.3 General Information.

1.3.1 The tactics and strategies utilized to attack a fire aboard a vessel are in many ways similar to those used routinely in structural fire fighting. However, there are many aspects of marine fire fighting that warrant special attention because of the unique environment encountered aboard a vessel. Ships often are compared to high-rise buildings. This is not an altogether inappropriate comparison. However, the ventilation of a vessel fire can be more difficult to achieve and the spread of a fire more difficult to check. The fire fighter's natural response when confronted with a structure fire is to act immediately.

This is because most structure fires exhibit similar characteristics that have been encountered before and thus there is a source of knowledge and experience from which to draw. However, a major fire aboard a ship seldom occurs, and very few fire fighters have experienced such a fire. Therefore, fires aboard ship should be approached in a quick but safe and prudent manner. Fire fighters have come to realize that when they approach hazardous material incidents, it is preferable to proceed slowly rather than to react too quickly, thus increasing risks and jeopardizing success. The same is also true when fighting vessel fires.

1.3.2 Unlike structure fires, hazardous material incidents, and many other fireground operations for which there is extensive written material available for fire service personnel to study, there is relatively little information available to land-based fire fighters concerning the management of a fire aboard a vessel. The absence of this type of information often leads fire fighters to apply strategies and tactics associated with structure fires to fires aboard vessels. Although these strategies and tactics are similar, it is important to recognize that there are distinct differences in the two types of fires. Incidents in the marine environment are usually larger in scale than those encountered on land. For example, some fire departments are prepared to deal with an incident involving an 8000-gallon (30,283 L) tank truck fire. A bulk liquid barge can easily hold several million gallons of product. Tank vessels may hold as much as 84 million gallons (317,974,590 L) and be almost a quarter mile in length. These types of incidents require planning and resources that far exceed a routine fire department response.

1.3.3 NFPA, at the request of and in cooperation with the USCG, and with the assistance of the fire service and maritime communities, has undertaken the task of developing this guide for use by local fire-fighting organizations that could be confronted with a fire aboard a vessel.

1.3.4 Because there is extensive written material available concerning structure fires, hazardous material incidents, and other fireground operations, this guide provides only limited discussion of those aspects of vessel fire-fighting procedures that are similar. Those aspects that are different are emphasized and highlighted throughout this document.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this guide and should be considered part of the recommendations of this document.

2.2 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 11, *Standard for Low-, Medium-, and High-Expansion Foam*, 2016 edition.

NFPA 12A, *Standard on Halon 1301 Fire Extinguishing Systems*, 2018 edition.

NFPA 14, *Standard for the Installation of Standpipe and Hose Systems*, 2019 edition.

NFPA 1500™, *Standard on Fire Department Occupational Safety, Health, and Wellness Program*, 2020 edition.