

NFPA 1410

Standard on Training for Initial Emergency Scene Operations

2005 Edition



NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471
An International Codes and Standards Organization

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This edition of NFPA 1410, *Standard on Training for Initial Emergency Scene Operations*, was prepared by the Technical Committee on Fire Service Training and acted on by NFPA at its November Association Technical Meeting held November 13–17, 2004, in Miami Beach, FL. It was issued by the Standards Council on January 14, 2005, with an effective date of February 7, 2005, and supersedes all previous editions.

This edition of NFPA 1410 was approved as an American National Standard on February 7, 2005.

Origin and Development of NFPA 1410

The first edition of this standard on initial fire attack was officially adopted as NFPA 197 at the 1966 NFPA Annual Meeting. Prepared by the Committee on Fire Service Training, it had been tentatively adopted at the 1964 Annual Meeting. The 1966 edition was revised in 1979. The 1995 edition included the results of comprehensive and extensive field tests that were performed to validate the recommended maximum times for fireground evolutions in Appendix A. In deliberations during development of the 1995 edition of this standard, the committee did not choose the “best” times recorded in the field tests, but chose times that it felt are reasonably achieved with an appropriate effort of organization and training.

A new Chapter 7, “Required Performance for Truck Company Operations,” was included in the 2000 edition of the standard.

The 2005 edition of this standard features changes to the previous edition’s numbering of chapters and paragraphs to reflect requirements in the 2004 edition of the *Manual of Style for NFPA Technical Committee Documents*.

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NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

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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Standard on

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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.

A reference in brackets [] following a section or paragraph indicates material that has been extracted from another NFPA document. As an aid to the user, the complete title and edition of the source documents for mandatory extracts are given in Chapter 2 and those for nonmandatory extracts are given in Annex C. Editorial changes to extracted material consist of revising references to an appropriate division in this document or the inclusion of the document number with the division number when the reference is to the original document. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

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

Chapter 1 Administration

1.1 Scope.

1.1.1* This standard contains the minimum requirements for evaluating training for initial fire suppression and rescue procedures used by fire department personnel engaged in emergency scene operations.

1.1.2 This standard specifies basic evolutions that can be adapted to local conditions and serves as a standard mechanism for the evaluation of minimum acceptable performance during training for initial fire suppression and rescue activities.

1.2 Purpose.

1.2.1* This document is a training standard designed to provide fire departments with an objective method of measuring performance for initial fire suppression and rescue procedures using available personnel and equipment.

1.2.2 Nothing herein is intended to restrict any jurisdiction from exceeding these minimum requirements.

1.3 Units. In this standard, values for measurements are followed by an equivalent in parentheses, but only the first stated value should be regarded as the requirement, because the equivalent values might be approximate.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

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

NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, 2002 edition.

NFPA 1964, *Standard for Spray Nozzles*, 2003 edition.

2.3 Other Publications. (Reserved)

Chapter 3 Definitions

3.1 General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster's Collegiate Dictionary*, 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2 Shall. Indicates a mandatory requirement.

3.2.3 Should. Indicates a recommendation or that which is advised but not required.

3.2.4 Standard. A document, the main text of which contains only mandatory provisions using the word "shall" to indicate requirements and which is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions shall be located in an appendix or annex, footnote, or fine-print note and are not to be considered a part of the requirements of a standard.

3.3 General Definitions.

3.3.1 Apparatus.

3.3.1.1 Aerial Fire Apparatus. A vehicle equipped with an aerial ladder, elevating platform, aerial ladder platform, or water tower that is designed and equipped to support fire fighting and rescue operations by positioning personnel, handling materials, providing continuous egress, or discharging water at positions elevated from the ground. [1901, 2003]

3.3.1.2 Mobile Water Supply Apparatus (Tanker, Tender). A vehicle designed primarily for transporting (pickup, transporting, and delivering) water to fire emergency scenes to be applied by other vehicles or pumping equipment. [1901, 2003]

3.3.2 Company. The basic fire-fighting organizational unit staffed by various grades of fire fighters under the supervision of an officer and assigned to one or more specific pieces of apparatus.

3.3.2.1 Engine Company. A group of fire fighters who work as a unit and are equipped with one or more pumping engines that have rated capacities of 2840 L/min (750 gpm) or more.

3.3.2.2 Rescue Company. A group of fire fighters who work as a unit and are equipped with one or more rescue vehicles.

3.3.2.3 Truck Company. A group of fire fighters who work as a unit and are equipped with one or more pieces of aerial fire apparatus.

3.3.3 Effective Operation. The accomplishment of or ability to accomplish the intended task.

3.3.4 Effective Stream. A fire stream that has achieved and sustained the proper flow.

3.3.5 Engine. A fire department pumper that has a rated capacity of 2840 L/min (750 gpm) or more.

3.3.6 Evolution. A set of prescribed actions that result in an effective fireground activity.

3.3.7 gpm. Gallons per minute.

3.3.8 Immediately Dangerous to Life or Health (IDLH). Any condition that would pose an immediate or delayed threat to life, cause irreversible adverse health effects, or interfere with an individual's ability to escape unaided from a hazardous environment. [1670, 2004]

3.3.9 kPa. Kilopascals.

3.3.10 Large-Diameter Hose. A hose 89 mm (3.5 in.) or larger that is designed to move large volumes of water to supply master stream appliances, portable hydrants, manifolds, standpipe and sprinkler systems, and fire department pumpers from hydrants and in relay.

3.3.11 Line. One or more lengths of connected fire hose.

3.3.11.1 Attack Line. A hose line used primarily to apply water directly onto a fire and operated by a sufficient number of personnel so that it can be maneuvered effectively and safely.

3.3.11.2 Backup Line. An additional hose line used to reinforce and protect personnel in the event the initial attack proves inadequate.

3.3.11.3 Initial Attack Line. The first hose stream placed in service by a company at the scene of a fire in order to protect lives or to prevent further extension of fire while additional lines are laid and placed in position.

3.3.11.4* Leader Line. A hose line supplying one or more smaller lines, as in a wyed line.

3.3.11.5 Preconnected Line. A discharge hose line already attached to an engine outlet.

3.3.11.6 Supply Line. One or more lengths of connected fire hose, also called a leader line, used to provide water to wyed lines or to the intake of a pump.

3.3.12 L/min. Liters per minute.

3.3.13 psi. Pounds per square inch gauge.

3.3.14* Rapid Intervention Team (RIT). Two or more fire fighters assigned outside the hazard area at an interior structure fire to assist or rescue at an emergency operation.

3.3.15 Rescue. Those activities directed at locating endangered persons at an emergency incident, removing those persons from danger, treating the injured, and providing for transport to an appropriate health care facility. [1500, 2002].

3.3.16 Rescue Vehicle. A special vehicle, also known as a heavy rescue or squad, equipped with tools and equipment to perform one or more types of special rescue such as building collapse, confined space, high angle, vehicle extrication, and water rescue.

3.3.17 Residual Pressure. The pressure that exists in the distribution system, measured at the residual hydrant at the time the flow readings are taken at the flow hydrants.

3.3.18 Truck. A common fire service term for aerial fire apparatus.

Chapter 4 Methods of Evaluation

4.1 Standard Evolutions.

4.1.1* The evolutions specified in this standard shall be used to measure the initial capability of a department's first responding unit(s) and personnel.

4.1.2 The evolutions used shall be those the department normally uses in its regular fire suppression and rescue operations.

4.1.3 The hose layouts and hydrant connections used shall provide the flow necessary to supply the requirements of each evolution, and correct hose connections shall be made between the hydrant(s) or other water source(s) and the engine(s) and inlets.

4.1.4 The engine and truck company operations shall provide a mechanism to measure the performance of routine tasks that are required to support an effective fire suppression operation in a structure.

4.2 Hose Loads and Layouts.

4.2.1 Hose shall be loaded in the manner utilized by the department, and hose lays and carries used during the evolutions shall be those normally used by the department.

4.2.2 The initial attack lines shall be preconnected to an engine outlet, supplied through a wye from another line, or connected to an engine outlet at the scene.

4.2.3* Direct hydrant streams shall not be used unless the desired flow is available at the hydrant with a residual pressure of 700 kPa (100 psi) or greater.

4.2.4 Depending on the size of the hose lines to be used and the quantity of water to be delivered, the number of personnel shall be assigned to ensure the safety of all personnel involved, and the number shall be in compliance with Section 8.4 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*.

4.2.5 A minimum of two fire fighters shall be used on each hose line to keep interior attack lines under control.

4.3 Ground Ladders.

4.3.1 Ladders shall be loaded or carried on the apparatus in the manner utilized by the department, and ladder raises and carries used during the evolutions shall be those normally used by the department.

4.3.2* Depending on the size of the ladder to be used and the evolution to be performed, the correct number of personnel shall be assigned to ensure the safety of all personnel involved.

Chapter 5 Logistics

5.1 Facilities.

5.1.1 Evolutions shall be conducted in an area of sufficient size so that supply hose can be laid to or from the water source and attack lines can be laid from an engine or wye.