

NFPA 295 Standard for Wildfire Control

1998 Edition



National Fire Protection Association, 1 Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101
An International Codes and Standards Organization

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NFPA 295

Standard for Wildfire Control

1998 Edition

This edition of NFPA 295, *Standard for Wildfire Control*, was prepared by the Technical Committee on Forest and Rural Fire Protection and acted on by the National Fire Protection Association, Inc., at its Annual Meeting held May 18–21, 1998, in Cincinnati, OH. It was issued by the Standards Council on July 16, 1998, with an effective date of August 5, 1998, and supersedes all previous editions.

This edition of NFPA 295 was approved as an American National Standard on August 6, 1998.

Origin and Development of NFPA 295

This complete rewrite of NFPA 295 was prepared by the Technical Committee on Forest and Rural Fire Protection. This edition emphasizes the incident command structure for wildfire control and reduces the amount of information on air operations. The Technical Committee recommends that personnel required to work around air operations for wildfire control receive special training and more information than could be reasonably included in this standard.

This edition replaces the previous edition (1991) and succeeds the 1985 and 1978 editions as well as other editions that bore the titles *Wildfire Control and Environmental Improvement* (1972); *Forest, Grass and Brush Fire Control* (1965); *Community Organization and Equipment for Fighting Forest, Grass and Brush Fires* (1956); and the original NFPA 295, *Community Forest Fire Equipment*, adopted by NFPA in 1934.

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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 documents on fire protection for rural, suburban, forest, grass, brush, and tundra areas. This Committee shall also have primary responsibility for documents on Class A foam and its utilization for all wildland and structural fire fighting. This excludes fixed fire protection systems.

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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 Appendix A.

Information on referenced publications can be found in Chapter 9 and Appendix C.

Chapter 1 Introduction

1-1 Scope. This standard presents fundamental information to fire protection organizations on the control of wildfire.

1-2* Purpose. The purpose of this standard is to specify management practices and policies necessary for a fire protection organization to develop an effective wildfire control program.

1-3 Definitions. For the purposes of this standard, terms have the following meanings.

Agency. A division of government with a specific function or a nongovernmental organization (e.g., private business) that offers a particular kind of assistance.

Apparatus. A motor-driven vehicle or group of vehicles designed and constructed for the purpose of fighting fires. Examples include fire engines, water tenders, and ladder trucks.

Approved.* Acceptable to the authority having jurisdiction.

Authority Having Jurisdiction.* The organization, office, or individual responsible for approving equipment, an installation, or a procedure.

Brush. A collective term that refers to a stand of vegetation dominated by shrubby, woody plants or by low-growing trees, usually of a type undesirable for livestock or timber management.

Command. The act of directing and/or controlling resources by virtue of explicit legal, agency, or delegated authority.

Company. An organized group of fire fighters under the leadership of a company officer or other designated official. Companies are often assigned to specific apparatus or stations. (*Also see Crew.*)

Company Officer. The officer or any other position of comparable responsibility in the department in charge of a fire department company or station.

Control a Fire. To complete a control line around a fire, any spot fire therefrom, or any interior island to be saved; to burn out any unburned area adjacent to the fire side of the control line and to cool down all hot spots that are an immediate threat to the control line.

Crew. An organized group of fire fighters under the leadership of a crew leader or other designated official. (*Also see Company.*)

Crew Boss (Leader). A person who is in supervisory charge of usually 10–20 fire fighters and who is responsible for their performance, safety, and welfare.

Finance. The incident management section responsible for all incident costs and financial considerations.

Forest Fire. An uncontrolled fire on lands covered wholly or in part by timber, brush, grass, grow, or other flammable vegetation.

Grass Fire. See Forest Fire.

Incident. An occurrence, either human-caused or a natural phenomenon, that requires action or support by emergency services personnel to prevent or minimize loss of life or damage to property and/or natural resources.

Incident Commander (IC). The individual responsible for the management of all incident operations at the incident site.

Incident Management System.* A system that provides structure and coordination to the management of emergency incident operation in order to provide for the safety and health of fire department members and other persons involved in those activities.

Labeled. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

Liaison. The coordination of activities with assisting agencies.

Listed.* Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets identified standards or has been tested and found suitable for a specified purpose.

Logistics. The incident management section responsible for providing facilities, services, and materials for the incident.

Operations. The incident management section responsible for all tactical operations at the incident.

Planning. The incident management section responsible for the collection, evaluation, and dissemination of tactical information related to the incident and for preparation and documentation of incident management plans.

Prevention. Activities — including public education, law enforcement, personal contact, and reduction of fuel hazards — directed at reducing the incidence of fires.

Rural. Any area wherein residences and other developments are scattered and intermingled with forest, range, or farmland and native vegetation or cultivated crops.

Shall. Indicates a mandatory requirement.

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

Unified Command. A team effort that allows all agencies with jurisdictional responsibility, either geographical or functional, to manage an incident by establishing a common set of objectives and strategies. This shall be accomplished without

loss of or abdication of authority, responsibility, or accountability.

Wildfire. An unplanned and unwanted fire requiring suppressive action; an uncontrolled fire, usually spreading through vegetative fuels and often threatening structures.

Wildland/Urban Interface. The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

Chapter 2 General Policy

2-1 Wildfire Control Policies.

2-1.1 Where wildfire could constitute a threat to the jurisdiction, the fire protection organization shall be organized to perform fire prevention and control activities in order to protect life and property from wildfire. The fire organization's goal shall be to minimize wildfire loss through the establishment of effective policies, planning, fire prevention, personnel, infrastructure, training, communications, operational systems, safety, and coordination.

2-1.2 The authority having jurisdiction (AHJ) shall develop a policy for managing the organization in all aspects of wildfire control. As a minimum, the policy shall establish — in accordance with legal mandates — department priorities, planning procedures, incident management, personnel safety and training, and cooperative agreements. Additional policy items shall be included as determined necessary by the AHJ.

Chapter 3 Organization

3-1* Organizational Structure. The AHJ shall structure an organization in a manner to provide for effective wildfire control. Each of the following functions shall be addressed regardless of the size and complexity of the incident. On a small incident, one person shall handle all of these functions.

- (a) Command
- (b) Operations
- (c) Planning
- (d) Logistics
- (e) Finance

Chapter 4 Command

4-1* Incident Command. In the management of wildfire incidents, the AHJ shall utilize an incident management system as specified in NFPA 1561, *Standard on Fire Department Incident Management System*.

4-2 Unified Command. When wildfire control efforts involve a multiagency or multijurisdictional incident, the AHJ shall utilize a unified command approach to incident management.

4-3 Strategic Considerations. The command function shall develop strategic goals for the control of wildfire incidents.

4-4 Command Staff. The incident commander (IC) shall provide for public information, safety, and liaison functions. Each function shall be filled as needed depending on the size and complexity of the incident.

4-4.1 Public Information Function. The AHJ shall prepare a written public information plan to guide the department and the public information officer in executing the organization's

responsibilities to inform the public of the danger of wildfire. The plan shall consider the following.

4-4.1.1 Pre-Incident Public Information. The plan shall include the following:

- (a) Familiarization of local press and media representatives with the wildfire danger problem
- (b) Dissemination of fire prevention materials, including the development and use of public service announcements
- (c) Appointment of a public information officer (PIO) whose duties shall include executing the public information plan (The PIO shall be provided with appropriate training in public information and public/media relations.)

4-4.1.2 Incident Public Information. The plan shall include the following:

- (a) A media alert system to inform media of wildfire events in a timely manner
- (b) A method of safely allowing media representatives to approach the fire scene to take photographs, to record video, and/or to conduct interviews

4-4.1.3 Post-Incident Public Information. The plan shall include the following:

- (a) Follow-up contacts with public and press/media to ensure an unimpeded flow of information to the public
- (b) A process for allowing the public and residents to return to evacuated areas

4-4.2 Safety Function.

4-4.2.1* Pre-Incident Safety Requirements. The AHJ shall develop pre-incident safety requirements that include the following:

(a) The AHJ shall develop a safety program that includes all aspects of wildfire incident operation, personnel welfare, and the use of personal protective clothing and equipment. The program shall be established in accordance with jurisdictional policies and procedures and reflect the established guidance provided by NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*.

(b) The safety officer's function shall be to carry out duties in accordance with established wildfire incident procedures and to carry out criteria as outlined in NFPA 1521, *Standard for Fire Department Safety Officer*.

(c) Protective safeguards shall be developed for appropriate apparatus and equipment used during wildfire incidents. Equipment operators shall be properly trained as outlined in NFPA 1002, *Standard for Fire Department Vehicle Driver/Operator Professional Qualifications*.

(d) The AHJ shall follow the medical examination standards established in NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*.

4-4.2.2 Incident Safety Requirements. The AHJ shall develop incident safety requirements that include the following:

(a)*During wildfire suppression activities protective clothing shall, as a minimum, include approved head protection, gloves, protective footwear, and flame-resistant clothing as defined in NFPA 1977, *Standard on Protective Clothing and Equipment for Wildland Fire Fighting*.

(b) Protective safeguards shall be developed for apparatus and equipment used during wildfire incidents. Equipment operators shall be properly trained in accordance with NFPA 1002, *Standard for Fire Department Vehicle Driver/Operator Professional Qualifications*.

(c)*All fireline actions shall be in compliance with the Ten Standard Fire-Fighting Orders and the 18 "Watch Out!" Situations.

4-4.2.3 Post-Incident Safety Critique. The AHJ shall conduct a review and critique of the safety actions following each incident.

4-4.3 Liaison Function. The incident commander of a wildfire incident shall provide the liaison with any and all assisting or cooperating agencies.

Chapter 5 Operations

5-1 Operations. The operations function shall be responsible to the command function for carrying out the strategic and tactical plans of the incident. The operations function shall include incident and post-incident planning and actions. (See also Section 6-1.)

5-2 Resource Evaluation. When a wildfire incident occurs, the incident commander shall evaluate available resources.

5-2.1 Personnel Resources. The incident commander shall evaluate the number of qualified and properly equipped people available, their physical condition, their experience and skill levels, and the daytime and evening hours they are available.

5-2.2* Equipment. The IC shall evaluate the types and amount of equipment and apparatus normally available within an acceptable response time, where the resources are located, how quickly and easily they can be transported to the incident, and the suitability of such equipment for use in wildfire control considering terrain and other local conditions. All members of the fire protection organization shall be acquainted with the standards set by the AHJ for the safe operation of equipment.

5-2.3* Aviation/Air Operations. At a minimum, all members of the fire protection organization shall be acquainted with basic air operations including safety considerations.

5-3 Size-Up. Upon arrival at a fire incident, the IC shall determine the extent of the fire and its potential for becoming a major event. The IC shall immediately report the fire size-up to the communications center and request additional resources, as necessary. The following conditions shall be addressed:

- (a) Special or unusual hazards or potential hazards
- (b) Type and amount of fuel
- (c) Terrain
- (d) Present and predicted weather conditions
- (e) Fire intensity and behavior
- (f) Available resources
- (g) The need for specialized personnel and equipment to address special or unusual hazards

5-4 Fire Attack and Control.

5-4.1* The IC shall deploy personnel and equipment to the incident according to strategic and tactical plans, within the priorities established for the incident, and with consideration for the safety of civilians and fire-fighting personnel.

5-4.2* Once the threat to life and property is minimized, the IC shall plan for and execute tasks necessary for the containment, control, and mop-up of the remainder of the fire. The plan of containment and control shall address the following:

- (a) Available resources
- (b) Fireline location
- (c) Method of fireline construction
- (d) Application of water and chemicals from the air and on the ground

5-5 Mop-Up and Demobilization

5-5.1 Once the fire is controlled, the IC shall develop plans for the thorough mop-up of the fire scene and for demobilization of personnel and equipment. The plan shall assure that the fire is completely out.

5-5.2 During mop-up activities, the IC shall begin an orderly demobilization of resources used on the fire.

5-5.3 The IC shall complete all necessary and appropriate documentation for financial and fire reporting purposes. The completed reports shall be properly submitted to the AHJ.

5-6 Post-Incident Review.

5-6.1 The AHJ shall conduct a review of actions taken on the incident as soon as reasonably possible after the completion of the incident.

5-6.2 Appropriate personnel from all operational areas of the fire shall be in attendance to provide for a thorough review of the operation.

5-6.3 The AHJ shall review all activities related to the fire incident, including safety practices and provisions; strategy and tactics; the deployment of personnel, equipment, and apparatus; and the overall management of the fire.

5-6.4 The AHJ shall take corrective actions in all areas where deficiencies exist or problems occurred.

Chapter 6 Planning

6-1 General. The planning function is responsible to the IC for the preparation of all plans necessary to safely, efficiently, and effectively carry out the purpose and goals of the fire control organization.

6-2* Pre-Incident Planning. The AHJ shall develop a written pre-incident plan(s) for wildfire control consistent with fire fighter and public safety. The plan shall be based on life safety, followed by resource/property values to be protected, as well as the political, social, economic, environmental, and other concerns of the local jurisdictions. This plan shall be reviewed annually and, as a minimum, include the following:

- (a) An identification of specific wildfire hazards and risks and hazard areas within the jurisdiction and other hazards that can negatively affect wildfire control efforts
- (b) An identification of fire protection features such as lakes, rivers, water points, natural fire breaks, and other areas or features that can be beneficial to wildfire control efforts
- (c) A listing of resources including personnel, apparatus, and equipment
- (d) A listing of all cooperating agencies and other mutual aid resources and the procedures for requesting assistance from these agencies and resources
- (e) A reference to any and all existing mutual aid agreements, contracts, and other protection agreements applicable to wildfire control efforts
- (f) A list of specific objectives relating to training, safety, response times, and staffing levels

- (g) A list of other resources that can provide an analysis of fire cause, identification of special fire hazards and risks, an assessment of wildland/urban interface and intermix fire protection problems, and proposed measures to reduce fire occurrence

6-2.1 Coordination and Cooperation. The AHJ shall cooperate with other entities involved in wildfire control and protection and coordinate with those entities for the purpose of expanding their capability to protect the public from wildfire.

6-2.2 Cooperative Agreement Planning. The AHJ shall prepare a written coordination and cooperative agreement plan that includes entities affected by or involved in wildfire protection and related cooperative procedures, such as the following:

- (a) Neighboring fire organizations
- (b) Police organizations
- (c) Public works agencies
- (d) Service/support organizations
- (e) Public utilities
- (f) Medical/health facilities
- (g) Media and the general public
- (h) Dispatch/communications centers and procedures
- (i) Command procedures
- (j) Reimbursement procedures
- (k) Liability issues
- (l) Operating procedures

6-2.3 Cooperative Agreements. Each cooperative agreement shall include provisions to enhance safety, effectiveness, and efficiency in wildfire control. The AHJ shall use the following as the basis for establishing new and reviewing existing cooperative agreements:

- (a) Cooperation in prevention, pre-incident, and suppression operations
- (b) Coordination in development and implementation of wildfire control plans, protection standards, strategies, tactics, and procedures
- (c) Identification of parties responsible for implementing various aspects of the agreement
- (d) A command structure (In order to facilitate a cooperative effort on a wildfire incident, a system to manage the incident shall be used, as outlined in NFPA 1561, *Standard on Fire Department Incident Management System*. If the incident involves multiple jurisdictions, a unified command shall be implemented. Command of the incident can also be delegated from the agency with jurisdiction to the cooperating agency by mutual agreement, as necessary.)
- (e) Communications (Command radio frequencies shall be designated and limited to command purposes.)
- (f) Minimum qualification requirements (Fire suppression personnel shall meet the minimum requirements as outlined in NFPA 1051, *Standard for Wildland Fire Fighter Professional Qualifications*.)
- (g) An annual operating plan, used to define and update specific operating procedures prior to each fire season

6-2.4* Fire Danger Rating. The AHJ shall obtain weather observations and determine the wildfire danger rating or shall obtain the information daily from the state forester or federal or provincial wildfire control agency.

6-2.5* Training and Qualifications. Each organization having wildfire control responsibility shall develop and conduct a training and qualification program that ensures the safety and

effectiveness of all personnel, as outlined in NFPA 1051, *Standard for Wildland Fire Fighter Professional Qualifications*.

6-3 Incident Planning. The IC shall establish objectives for the overall incident management strategy, specific tactical actions, and supporting information for the operational period. The plan, written or oral, shall include incident objectives, organization, current and predicted fire weather and behavior, resource assignments, communications, safety, transportation, logistics, incident map, and air operations.

6-4 Post-Incident Activities.

6-4.1* Fire Reporting. The AHJ shall complete and properly file an appropriate fire report for every incident. Where applicable, suitable wildland fire reports shall be completed in addition to standard incident/casualty reports. Such reports, whether hard copy or electronic, shall be filed in a timely manner with appropriate state, provincial, or federal agencies.

6-4.2 Reviews and Evaluations. All reviews and evaluations shall be conducted as constructive critiques to determine the facts related to a specific incident. As a minimum, evaluations shall cover the following:

- (a) Examine the progress of an ongoing incident and confirm effective decisions or correct deficiencies.
- (b) Identify new or improved procedures, techniques, or tactics.
- (c) Examine incidents in order to determine cause(s) and contributing factors, and, where applicable, recommend corrective actions.

Chapter 7 Logistics

7-1* Logistics Function. The logistics function shall be responsible to the IC for providing support resources that meet the goals and purposes of the wildfire control effort. Each logistics chief shall assess and determine its need for facilities, communications, support services, and supplies and equipment.

7-2* Facilities. The logistics function shall determine the need for and locate appropriate facilities required for the use of the fire control organization.

The logistics function shall evaluate the physical facilities and usable space required to meet pre-incident planning objectives. Where relevant, such plans shall identify locations for apparatus storage, equipment and personnel staging, base camp operations, lodging of personnel, and support services sites.

7-3* Communications.

7-3.1 The AHJ shall establish a communications function to determine communication needs and required resources, including various radio networks (fixed and portable); land-line and cellular telephones; pagers, scanners, and other audible alert equipment; and computers, data, and fax capabilities.

7-3.2 The communications function shall also determine radio system needs, including frequency allocation, availability and compatibility of equipment between responding agencies, transmission and security priorities and procedures, and equipment assignment and accountability.

7-4* Support Services. The logistics pre-incident plan shall identify necessary support services that facilitate continual operations throughout the incident.

7-4.1 The logistics function shall determine the required level of emergency medical support and identify available resources. During incidents, appropriate emergency medical support — including transportation capabilities — shall be made available near the incident locations.

7-4.2* The logistics function shall determine the required level of food services support and identify available resources. Applicable health standards must be reviewed and placed in perspective with the size and complexity of anticipated incident activity. The pre-incident plans must include identification of providers and probable location sites including available utilities, tentative operation schedules, and contract prices.

7-4.3* The logistics function shall determine the required level of sanitation services — including resources for ample toilets — with cleaning, inspection, and maintenance schedules; trash and garbage collection and removal to approved sites; and ample replacement of consumable supplies.

7-4.4* The logistics function shall determine the requirements for potable water and identify sources and a system of water distribution.

7-4.5* The logistics function shall determine the requirements for ground support for personnel, equipment, and supplies.

7-4.6 The logistics function shall determine and provide for adequate security for personnel and equipment.

7-5 Supplies and Equipment. The logistics function shall provide supplies and equipment as requested to support the incident.

7-6 Demobilization. The logistics function shall plan for and carry out demobilization activities in support of and in cooperation with command, operations, planning, and finance.

Chapter 8 Finance

8-1 General. The finance function is responsible to the IC for all aspects of financial management in support of the fire protection organization.

8-2 Pre-Incident. The financial element of the operational plan shall include, as a minimum, the contractual agreements to provide for the following services:

- (a) Fuel, oil, and lubricants
- (b) Medical services, including injury reports
- (c) Catering, food, and drinking water
- (d) Personnel hiring and hourly pay
- (e) Outside services, including lodging and communications
- (f) Equipment maintenance
- (g) Specialized fire-fighting equipment
- (h) Purchasing agreements and systems
- (i) Incident support
- (j) Insurance notification systems

8-3 Incident. Pre-incident plans shall be followed to accurately account for all expenditures during the incident. A methodology for the timely and accurate disbursement of funds shall be followed.

8-4 Post-Incident. The AHJ shall prepare and distribute, as required, a summary report that will assure that all accounts are paid and reimbursable costs are billed.

Chapter 9 Referenced Publications

9-1 The following documents or portions thereof are referenced within this standard as mandatory requirements and shall be considered part of the requirements of this standard. The edition indicated for each referenced mandatory document is the current edition as of the date of the NFPA issuance of this standard. Some of these mandatory documents might also be referenced in this standard for specific informational purposes and, therefore, are also listed in Appendix C.

9-1.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

NFPA 1002, *Standard for Fire Department Vehicle Driver/Operator Professional Qualifications*, 1998 edition.

NFPA 1051, *Standard for Wildland Fire Fighter Professional Qualifications*, 1995 edition.

NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, 1997 edition.

NFPA 1521, *Standard for Fire Department Safety Officer*, 1997 edition.

NFPA 1561, *Standard on Fire Department Incident Management System*, 1995 edition.

NFPA 1977, *Standard on Protective Clothing and Equipment for Wildland Fire Fighting*, 1998 edition.

Appendix A Explanatory Material

Appendix A is not a part of the requirements of this NFPA document but is included for informational purposes only. This appendix contains explanatory material, numbered to correspond with the applicable text paragraphs.

A-1-2 The current text is designed to help the thousands of small community organizations existing in the rural and forested areas of North America. Many of these communities are exposed to the dangers of a large fire involving many acres of natural fuels, such as forest, grass, or brush. To prepare effectively for such emergencies, the responsive fire protection organizations and individuals must be informed of the most recent and useful wildland fire control techniques, equipment, training, and operations.

Additional information on large equipment, heavy power tools, specialized wildfire-fighting equipment, and techniques is available in other publications. This standard includes a list of mandatory requirements that must be met if fire fighters are to be safe and effective in the prevention and suppression of wildfires.

It is suggested that fire organizations consider the adoption of this standard through a vote by the fire department members or by citizens of the protected area. Legal counsel should be consulted to explain how the adoption of this standard affects the department and its members.

In many rural and wildland areas, forest, grass, crop, and brush fires are a continual problem. These fires, if not controlled, can endanger human life and cause serious damage to property, natural resources, and the environment. Careful evaluation of wildfires in the United States and Canada for many years has shown that fire damage can be prevented or minimized if such fires are aggressively attacked by trained fire fighters in the early stages of fire development.

A-1-3 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of

installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

A-1-3 Authority Having Jurisdiction. The phrase “authority having jurisdiction” is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do 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 a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. 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 or her 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.

A-1-3 Incident Management System. See NFPA 1561, *Standard on Fire Department Incident Management System*.

A-1-3 Listed. The means for identifying listed equipment may vary for each organization concerned with product evaluation; some organizations do not recognize equipment as listed unless it is also labeled. The authority having jurisdiction should utilize the system employed by the listing organization to identify a listed product.

A-3-1 In order to provide fire prevention and control and to protect life and property from wildfire, a community should establish the following:

(a) An officially designated formal organization headed by a fire chief or fire warden charged with the responsibility of prevention and suppression of wildland fires. The chief is in charge of the entire departmental operation. The chief should be appointed by the governing body, if one exists, or elected by the membership on the basis of merit and ability. The chief can be a paid professional, a part-time paid employee, or a volunteer.

(b) A well-organized, equipped, and trained fire company or crew who will operate under the authority of the chief, fire warden, or subordinate officer. Most small wildfires can be handled by a well-trained squad or company of two to five fighters if attacked quickly. Large or rapidly spreading fires require more fire fighters, more equipment, expert supervision, and extensive radio and telephone communications.

(c) Three or four small companies or squads of five or six fire fighters, with leaders, can be grouped together under the command of a crew leader or company officer. This leader can be one of several crew leaders commanding similar groups, and all personnel under his command, and others concerned, will know who the crew leader is and the scope of the leader's authority. The crews or companies can be assigned to action only on a designated portion of the main fire. This designated portion of the fire is commonly called a sector or division.

A-4-1 The first responsible authority ranger, warden, company officer, crew leader, or other officer who arrives at the emergency is the incident commander until someone with higher authority

specifically assumes command. Whenever a new incident commander assumes command, all officers, crew leaders, and others on the incident should be notified immediately. The incident commander is responsible for planning and directing the fire control efforts; assembling crews of fire companies and telling them where and how to work; making the best use of personnel; arranging for communications, rest periods, and relief crews; making the best use of equipment and tools; obtaining supplies; and ensuring that the fire is completely extinguished before the last crews are released from the scene. In other words, the incident commander is responsible for all activities and operations at an emergency incident. The incident commander delegates more and more responsibility to assistants as the needed organizational effort grows, but the incident commander is always the final authority and bears total responsibility.

A-4-4.2.1 Fire fighting requires fast action, sustained effort, and greater energy than most other work. Fire fighting is always potentially hazardous. In the United States, fire fighting has one of the highest accident rates of any occupation. Wildfire control can be particularly hazardous unless the necessary safety procedures and principles are constantly practiced and obeyed. Most accidents can be prevented by careful procedures and training before emergencies. The safety and welfare of the entire fire-fighting organization are the responsibility of the incident commander. All persons in authority are likewise responsible for the safety of the personnel under their direction.

A-4-4.2.2(a) A safety hard hat with chin strap must be worn on the fireline. A standard fire fighter's helmet shall be permitted to be worn as an alternative. Hard hats greatly reduce the number of serious injuries. Lightweight “bump” hats are unacceptable because they do not provide adequate protection in wildfire control.

Footwear should be leather lace-up boots. It is recommended that boots be without steel toes except for those used by chain saw operators. The boots should have slip-resistant soles, such as a hard rubber lug-type or tractor tread. This feature allows for maximum traction and prevents melting when exposed to normal fireline conditions. Soles should not be made of composition rubber or plastic, which have low melting points. This does not preclude the use of boots with smooth, hard rubber soles or those with a well-defined tread. However, the disadvantage of these soles is their tendency to slip on smooth rock, logs, dry grass, and pine needle surfaces, which are often encountered on wildfires. The height of boot tops should be a minimum of 6 in. (15.2 cm), with at least 8 in. (20.3 cm) or greater preferred. Low-quarter boots or shoes should not be worn because they do not provide ankle support or keep out sparks and dirt. Pull-on type boots, such as structural fire-fighting rubber boots, cowboy boots, or engineering boots, are not recommended because they do not provide adequate ankle support, do not keep out sparks and dirt, and are loose-fitting and can cause blisters.

If available, flame-resistant clothing specially designed for wildfire fighting should be worn. If flame-resistant clothing is not available, fire fighters should wear loose, cuffless trousers and shirts made of cotton or wool. Loose-fitting clothing reduces chafing and affords more protection. Collars and cuffs should be buttoned to protect the arms and neck from heat, burns, scratches, and insects.

Fire shelters, if available, should be worn by all fire fighters engaged in suppression activities.

Gloves should be worn to protect hands and make hand work easier. Fire fighters should wear goggles for eye protection when encountering excessively smoky or dusty environments.