NFPA®

# 1452

## Guide for Training Fire Service Personnel to Conduct Community Risk Reduction for Residential Occupancies

2020

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**NFPA® 1452**

**Guide for**

# Training Fire Service Personnel to Conduct Community Risk Reduction for Residential Occupancies

**2020 Edition**

This edition of NFPA 1452, *Guide for Training Fire Service Personnel to Conduct Community Risk Reduction for Residential Occupancies*, was prepared by the Technical Committee on Fire Prevention Organization and Deployment. It was issued by the Standards Council on April 28, 2019, with an effective date of May 18, 2019, and supersedes all previous editions.

This edition of NFPA 1452 was approved as an American National Standard on May 18, 2019.

## Origin and Development of NFPA 1452

This text was developed by the Committee on Fire Service Training and processed in accordance with NFPA Regulations Governing Committee Projects. This guide was a revision of and replacement for the NFPA booklet, *How to Train Fire Fighters to Make Dwelling Inspections*.

The 2000 edition of this document was a complete revision of the 1993 edition. It included updated statistics and public safety and educational information that had not been included in prior editions.

The 2005 edition was a complete revision of the 2000 edition. The previous numbering of chapters and paragraphs was changed to reflect requirements of the *Manual of Style for NFPA Technical Committee Documents*.

The 2010 edition brought terminology up to date, revised Chapter 9, Wildland/Urban Interface Fire Safety, and added a new Chapter 10 on All Hazards Education.

For the 2015 edition, the name was changed to *Guide for Training Fire Service Personnel to Conduct Community Risk Reduction* to reflect the change in the guide to an all-hazards approach.

Much of NFPA 1452 was reorganized for the 2020 edition. Many redundant and irrelevant details were removed, and many informational points were abridged or consolidated to make chapters more concise. Some emerging issues and technologies were added into common hazards that exist around a residential occupancy. In addition, terminology was changed throughout the guide for consistency with related standards and professional field terminology. This includes changing the title to *Guide for Training Fire Service Personnel to Conduct Community Risk Reduction for Residential Occupancies*. Annex language was added to inform the user that while the title and chapters refer to fire service personnel, the guide can be used and applied by any organization that conducts community risk reduction programs in residential occupancies.

## Technical Committee on Fire Prevention Organization and Deployment

**Ronald R. Farr,** *Chair*
Plainwell Fire Department, MI [SE]

**Anthony C. Apfelbeck,** Altamonte Springs Building/Fire Safety Division, FL [E]

**Michael Bodnar,** JENSEN HUGHES, Canada [SE]

**E. Keith Chambers,** Chesterfield County Fire & EMS, VA [U]

**Lisa M. Cockerill,** Region of Peel, Canada [U]

**Kwame Cooper,** Los Angeles City Fire Department, CA [U]

**Connie Forster,** Minnesota Department of Public Safety, MN [E]
Rep. International Association of Fire Chiefs

**Hugh H. Gibson, IV,** Verisk Analytics/Insurance Services Office, Inc., NJ [I]

**Randall Hormann,** Campus Fire Safety Com LLC, OH [SE]

**David Jacobowitz,** Whitesboro, NY [L]
Rep. National Volunteer Fire Council

**Jim Jessop,** Toronto Fire Service, Canada [E]
Rep. Canadian Association of Fire Chiefs

**Aaron Johnson,** Rural/Metro Corporation, FL [E]

**Martin M. King,** West Allis, WI [SE]

**Brett T. Lacey,** Colorado Springs Fire Department, CO [M]
Rep. International Fire Service Training Association

**Michael Larsen,** Amway Inc., MI [M]

**David D. Lynam,** Kitsap County Fire Marshal, WA [L]
Rep. Washington State Association of Fire Marshals

**Stephanie McKee,** Tualatin Valley Fire & Rescue, OR [L]
Rep. International Association of Fire Fighters

**Brian S. Meurer,** Louisville Fire Department, KY [E]
Rep. Metropolitan Fire Chiefs-IAFC/NFPA

**Randy P. Minaker,** Port Coquitlam Fire & Emergency Services, Canada [E]

**James G. Munger,** QDOT Engineering, LLC, PA [SE]

**Colleen Pennington,** Inspection Reports on Line, MI [M]

**Gene J. Pietzak,** T. J. Russo Consultants, NY [SE]
Rep. International Association of Arson Investigators, Inc.

**Guy J. Santelli,** Kenosha Fire Department, WI [L]
Rep. Wisconsin State Fire Inspectors Association

**A. Lynn Schofield,** Provo Fire & Rescue, UT [U]
Rep. NFPA Education Section

**Arthur Shaw,** A. Shaw & Associates, LLC, MI [L]
Rep. National Association of Towns and Townships

**Marcina J. Sunderhaus,** Chandler Fire, Health & Medical Department, AZ [L]
Rep. Arizona Fire Marshals Association

**Anthony D. Valdez,** South Metro Fire Rescue, CO [U]
Rep. Fire Marshal's Association of Colorado

**Larry T. Willhite,** Palm Beach County Fire Rescue, FL [U]

**Morgana Yahnke,** Cosumnes Fire Department, CA [E]
Rep. California Fire Chiefs Association

**Alternates**

**Bernard H. Arends,** Inspection Reports Online, IL [M]
(Alt. to Colleen Pennington)

**Michael W. Evans,** Brighton Area Fire Department, MI [E]
(Voting Alt.)

**Richard W. Jones, Jr.,** Forensic Investigations Group, LLC, LA [SE]
(Alt. to Gene J. Pietzak)

**Rick Merck,** QDOT Engineering LLC, PA [SE]
(Alt. to James G. Munger)

**Lori L. Moore-Merrell,** International Association of Fire Fighters, DC [L]
(Alt. to Stephanie McKee)

**Pamela C. Summers,** Palm Beach County Fire Rescue, FL [U]
(Alt. to Larry T. Willhite)

**Harold Thompson,** Oklahoma City Fire Department, OK [U]
(Voting Alt.)

**John Verbeek,** Hamilton Fire Service, Canada [U]
(Voting Alt.)

**Chelsea Rubadou,** NFPA Staff Liaison

*This list represents the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.*

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 the organization, operation, deployment, and evaluation of code enforcement, public fire and life safety education, plan review, and fire investigation operations. They shall also have responsibility for documents related to developing the process to conduct Community Risk Assessments and Reduction Programs.

## Contents


**Chapter 1 Administration** ..... **1452–** 4
1.1 Scope. ..... **1452–** 4
1.2 Purpose. ..... **1452–** 4

**Chapter 2 Referenced Publications** ..... **1452–** 4
2.1 General. ..... **1452–** 4
2.2 NFPA Publications. ..... **1452–** 4
2.3 Other Publications. ..... **1452–** 4
2.4 References for Extracts in Advisory Sections. **1452–** 5

**Chapter 3 Definitions** ..... **1452–** 5
3.1 General. ..... **1452–** 5
3.2 NFPA Official Definitions. ..... **1452–** 5
3.3 General Definitions. ..... **1452–** 5

**Chapter 4 Program Benefits** ..... **1452–** 5
4.1 Education. ..... **1452–** 5
4.2 Organizational Community Image. ..... **1452–** 5
4.3 Identification of Hazardous Conditions. ..... **1452–** 5
4.4 Continuing Community Risk Reduction Programs. ..... **1452–** 5

**Chapter 5 Planning the Community Risk Reduction Program** ..... **1452–** 6
5.1 General. ..... **1452–** 6
5.2 Training. ..... **1452–** 6
5.3 Community Risk Reduction Considerations. . **1452–** 6
5.4 Public Relations. ..... **1452–** 6
5.5 Community Risk Reduction Procedures. ..... **1452–** 6
5.6 Documentation and Evaluation. ..... **1452–** 6

**Chapter 6 Common Hazards Found in Residential Occupancies** ..... **1452–** 7
6.1 General. ..... **1452–** 7
6.2 Open-Flame Devices. ..... **1452–** 7
6.3 Additional Items. ..... **1452–** 7
6.4 Notification of the Fire Department. ..... **1452–** 7
6.5 Electrical Installations. ..... **1452–** 7
6.6 Alternative Power Supplies and Storage Generators. ..... **1452–** 7
6.7 Flammable or Combustible Liquids. ..... **1452–** 8
6.8 Heating Systems and Appliances. ..... **1452–** 8
6.9 Housekeeping, Storage, and Rubbish Hazards. ..... **1452–** 8
6.10 Fire Safety Precautions in Earthquake-Prone Areas. ..... **1452–** 9

**Chapter 7 Life Safety Considerations** ..... **1452–** 9
7.1 Residential Fire Escape Planning. ..... **1452–** 9
7.2 Residential Fire Escape Drill Plan. ..... **1452–** 9
7.3 Close Your Door Program. ..... **1452–** 9
7.4 Residents Requiring Assistance. ..... **1452–** 9
7.5 Smoke Alarms and Other Early Warning Devices. ..... **1452–** 9
7.6 Carbon Monoxide Alarms. ..... **1452–** 9

**Chapter 8 Fire-Extinguishing Equipment** ..... **1452–** 9
8.1 Fire Extinguishers. ..... **1452–** 9
8.2 Residential Automatic Fire Sprinkler Systems. ..... **1452–** 9

**Chapter 9 Wildland/Urban Interface Fire Safety** ... **1452–** 10
9.1 General. ..... **1452–** 10
9.2 Precautions. ..... **1452–** 10
9.3 Emergency Evacuation Preparations. ..... **1452–** 10

**Chapter 10 All-Hazards Education** ..... **1452–** 10
10.1 General. ..... **1452–** 10
10.2 Emergency All-Hazards Evacuation Preparations. ..... **1452–** 10
10.3 All-Hazards Concerns. ..... **1452–** 10
10.4 Preparation. ..... **1452–** 10
10.5 Communications. ..... **1452–** 10

**Annex A Explanatory Material** ..... **1452–** 11

**Annex B Informational References** ..... **1452–** 16

**Index** ..... **1452–** 17

**NFPA 1452**

**Guide for**

# Training Fire Service Personnel to Conduct Community Risk Reduction for Residential Occupancies

**2020 Edition**



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. Extracted text may be edited for consistency and style and may include the revision of internal paragraph references and other references as appropriate. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

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

## Chapter 1 Administration

**1.1* Scope.** This guide identifies the elements needed to establish a community risk reduction program to address local risks for residential occupancies, including but not limited to, program benefits, program planning, common hazards, life safety considerations, wildland/urban interface, and all-hazards education.

Δ **1.1.1** It is essential that community risk reduction programs become an integral part of the total fire and life safety programs in a community. This guide can be applied to both rural and urban communities. Principles contained in this document can be applied to single-family as well as multifamily residential occupancies, such as apartments, town houses, condominiums, and manufactured housing, as local conditions dictate.

**1.1.2** This document is not intended to be a training manual or a fire inspection manual, but rather to serve as a guide for establishing a locally prepared community risk reduction program geared to address the specific problem(s) faced by the local fire service organizations.

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**1.1.3** Specific sections of this guide can be included or eliminated as local conditions dictate. There may be local ordinances or other regulations that mandate compliance with one or more portions of this guide.

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Δ **1.2 Purpose.** The purpose of this guide is to assist in designing and implementing a training program for risk reduction for residential occupancies.

Δ **1.2.1** An effective community risk reduction program is the primary method of prevention and mitigation of all hazards, with proven success in reducing loss of life, injury, and property damage in the community.

Δ **1.2.2*** In addition to reducing loss of life and property damage, an effective residential fire and life safety program can generate the following opportunities:

(1) Meeting residents of the community on a one-to-one basis and distributing various fire prevention literature and other fire safety information
(2) Installing smoke alarms and carbon monoxide alarms where none currently exist, are outdated, or are not functioning
(3) Engaging with the community in non-emergency settings
(4) Allowing fire service personnel to become better acquainted with street names and layouts, hydrant and water supply locations, community development, and home construction, as well as pre-incident planning
(5) Enhancing the professional development of fire service personnel engaged in the program's activities
(6) Improving the fire service relationship with community residents
(7) Creating the potential for a community partnerships

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## 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 10, *Standard for Portable Fire Extinguishers,* 2018 edition.

*NFPA 72®, National Fire Alarm and Signaling Code®,* 2019 edition.

NFPA 1144, *Standard for Reducing Structure Ignition Hazards from Wildland Fire,* 2018 edition.

NFPA 1300, *Standard on Community Risk Assessment and Community Risk Reduction Plan Development,* 2020 edition.

**2.3 Other Publications.**

*Merriam-Webster's Collegiate Dictionary,* 11th edition, Merriam-Webster, Inc., Springfield, MA, 2003.

**Δ 2.4 References for Extracts in Advisory Sections.**

*NFPA 72®, National Fire Alarm and Signaling Code®,* 2019 edition.

NFPA *101®, Life Safety Code®,* 2018 edition.

NFPA 1144, *Standard for Reducing Structure Ignition Hazards from Wildland Fire,* 2018 edition.

## Chapter 3 Definitions

**3.1 General.** The definitions contained in this chapter apply to the terms used in this guide. Where terms are not defined in this chapter or within another chapter, they should be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster's Collegiate Dictionary*, 11th edition, is 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* Authority Having Jurisdiction (AHJ).** An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

**3.2.3 Guide.** A document that is advisory or informative in nature and that contains only nonmandatory provisions. A guide may contain mandatory statements such as when a guide can be used, but the document as a whole is not suitable for adoption into law.

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

**3.3 General Definitions.**

**Δ 3.3.1 Carbon Monoxide Alarm.** A single- or multiple-station alarm responsive to carbon monoxide (CO). [**72,** 2019]

**3.3.2* Community Risk Reduction (CRR).** A process to identify and prioritize local risks, followed by the integrated and strategic investment of resources to reduce their occurrence and impact.

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**Δ 3.3.3* Home Ignition Zone.** The area around a home and associated accessory structures, including all vegetation that contains potential ignition sources and fuels that can affect ignition potential during an intense wildland fire.

**3.3.4* Radon.** A colorless and odorless radioactive gas that is derived from the decay of uranium.

***N* 3.3.5* Residential Occupancy.** An occupancy that provides sleeping accommodations for purposes other than health care or detention and correctional. [***101,*** 2018]

**3.3.6 Smoke Alarm.** A single- or multiple-station alarm responsive to smoke. [**72,** 2019]

**3.3.7 Wildland Fire.** An unplanned and uncontrolled fire spreading through vegetative fuels, including any structures or other improvements thereon. [**1144,** 2018]

**3.3.8* Wildland/Urban Interface.** An area where wildland fuels abut structures, with a clear line of demarcation between residential, business, and public structures and wildland fuels. [**1144,** 2018]

## Chapter 4 Program Benefits

**4.1 Education.**

***N* 4.1.1*** Conducting home safety surveys in residential occupancies provides one of the best means of delivering education through direct contact with residents of the community. Maximum effectiveness can be accomplished through educational programs directed at the local fire and life safety problems. Fire service personnel can explain specific items in the literature and answer questions that residents might have on specific community risk reduction (CRR) campaigns. Many organizations find it advantageous to print special cards, certificates, or door stickers to recognize residents whose homes are found to be in good, all-hazards safe condition.

***N* 4.1.2** Educational materials and programs can be used to deliver risk reduction training, and may include the following:

(1) Common fire causes and prevention
(2) Importance of fire extinguishers and how to use them
(3) Disaster preparedness
(4) Emergency planning and evacuation
(5) Importance and purpose of built-in fire protection features
(6) Water safety and drowning prevention
(7) Fall prevention
(8) Electrical safety

**4.2 Organizational Community Image.** Home safety surveys in residential occupancies for community risk reduction and all-hazards prevention may improve the organization's public image as a result of the interactions with members of the community.

***N* 4.3 Identification of Hazardous Conditions.** Conducting home safety surveys presents an opportunity for fire service personnel to identify safety hazards and refer them to the appropriate agency.

**4.4 Continuing Community Risk Reduction Programs.**

***N* 4.4.1** In the planning stages of a community risk reduction program, the AHJ should look beyond the immediate short-term benefits, anticipating its expansion into a community risk reduction plan as specified in NFPA 1300.

***N* 4.4.2** By utilizing fire service personnel in this capacity, organizations can achieve some or all of the following benefits:

(1) Increased productivity
(2) Increased community contact
(3) Familiarization with residential properties
(4) Encouragement of life safety practices
(5) Fire prevention
(6) Injury prevention
(7) Decreased crime
(8) More work with diverse cultures in a place of their comfort

***N* 4.4.3** Residents of the community also benefit by becoming aware of the following issues:

(1) Fire and life safety for residential occupancies
(2) Protective measures to improve the quality of life
(3) Public safety and awareness
(4) Existing conditions and life safety practices

## Chapter 5 Planning the Community Risk Reduction Program

### 5.1 General.

**5.1.1*** Careful planning and preparation are essential if a CRR program is to be successful. The CRR program should be based on the CRA.

**5.1.2** Organizational leadership should demonstrate a commitment to the planning and execution of the program. The leadership should identify the goals and objectives of the CRR program, which can include the percentage of residential occupancies to be surveyed, areas of operation, the schedule of home safety surveys, and other matters of general policy.

### 5.2 Training.

Δ **5.2.1*** Fire service personnel should be trained and knowledgeable in recognizing fire and life safety hazards and be informed about the recommended corrective actions and preventive methods. Training should be relevant with current recommended practices and methods. Fire service personnel should be trained to project an image and attitude that leaves a positive, lasting impression.

**5.2.2*** Training materials should include the following content:

(1) Proper methods for identifying who has the right to grant consent for entry for the home safety survey
(2) Proper methods of securing consent to perform the home safety survey—consent can be refused and revoked
(3) Proper methods of introduction and explanation of program rationale for the residents
(4) Common fire and life safety hazards expected in a residential occupancy and the relevant local code provisions

### *N* 5.3 Community Risk Reduction Considerations.

*N* **5.3.1** CRR home safety surveys should be done on a year-round basis. The program should contain elements to be emphasized during specific times of the year, such as access to fire hydrants or heating equipment problems during winter months.

*N* **5.3.2** Every effort should be made to provide information on and assistance with the installation of smoke alarms, carbon monoxide (CO) alarms, and residential sprinkler systems as well as the establishment of an escape plan and the importance of practicing it.

*N* **5.3.3** An introductory letter from the community's mayor, city manager, or equivalent high official supporting the CRR program is a useful tool during home safety surveys.

*N* **5.3.4** Partnerships are important for optimum success of a CRR program. Community partnerships allow the organization to meet common shared goals with other community organizationsand help achieve broader reach.

**5.4 Public Relations.** All organizational personnel are responsible for educating the community about the benefits of the program. Multiple communication and media methods should be used to publicize the program.

### 5.5 Community Risk Reduction Procedures.

**5.5.1** When conducting home safety surveys, fire service personnel should do the following:

(1) Follow departmental procedures and policies
(2) Dress professionally
(3) Have proper identification
(4) Conduct home safety surveys with a minimum of two personnel

**5.5.2** Fire service personnel should introduce themselves to the resident, show proper identification, explain the purpose of the home safety survey, and ask for consent to enter. They should also ensure that the resident understands the home safety survey is not required but is a courtesy.

**5.5.3** If consent to enter is denied or revoked, fire service personnel should thank the resident and leave appropriate educational materials. They should also ensure that the resident understands the home safety survey is not required but is a courtesy. Fire service personnel should leave contact information in the event the resident reconsiders having a home safety survey conducted.

**5.5.4** If no one is home, information should be left explaining that the home safety survey was attempted and asking the resident to contact the organization to schedule the home safety survey.

**5.5.5** Fire service personnel should ask the resident to accompany them for a home safety survey of the residence. However, if the resident objects to visiting certain rooms, the resident's wishes should be respected. Closets and cabinets should be opened by the resident rather than the fire service personnel. If the resident is unable to accompany the fire service personnel, the home safety survey should be rescheduled for a more convenient time.

Δ **5.5.6*** Fire and life safety hazards identified should be documented as a list only of recommendations, not of violations. The purpose of the home safety survey is to eliminate hazards to life and property, and all conversations should be directed toward that goal.

**5.5.7** Prior to leaving the premises, fire service personnel should make sure the resident understands any fire and life safety hazards that have been identified and how those hazards can be remedied. Information should be provided, and the resident should be thanked for allowing the home safety survey. If no hazards are found during the home safety survey, the resident should be complimented for his or her efforts.

### 5.6 Documentation and Evaluation.

**5.6.1 General Procedures.** The home safety survey should be documented in accordance with the requirements of the AHJ. Particular attention should be given to the legal considerations of the documentation. Any document that is utilized should be reviewed and approved by legal counsel.

*N* **5.6.1.1*** To fully document the types of fire and life safety hazards in residential occupancies and to ensure complete coverage of the community, a system of reports and records should be established for the CRR program. It is desirable to retain home safety survey information by census tracts to create target populations while maintaining confidentiality for the residences surveyed.

**5.6.1.2** The program should be evaluated on a predetermined schedule. Program evaluation should be conducted in accordance with NFPA 1300.

*N* **5.6.2 Confidentiality of Results.** The results of individual home safety surveys should be retained and disclosed only in

accordance with the state and local record management laws. Sample home safety survey forms are included in Annex A. *(See Figure A.5.6.1.1.)*

*N* **5.6.3 Retaining Results.** The home safety survey should be filled out completely and follow a logical sequence from start to finish. It should be documented following local procedures and a copy of the survey should be given to the responsible party.

## Chapter 6 Common Hazards Found in Residential Occupancies

**6.1 General.**

**6.1.1** The explanations of fire and life safety hazards in this chapter should be adapted to local regulations and codes and should be included in a home safety survey report form designed to apprise the resident of hazards found, corrective measures required, and other recommendations of the home safety survey team.

**6.1.2** Other hazards that can be a problem in the specific community should also be described on the form.

**6.1.3** Fire service personnel should carry fire and life safety pamphlets, along with a copy of the home safety survey report form, for distribution at the completion of the home safety survey.

**6.2 Open-Flame Devices.** The following open-flame devices should be noted during a home safety survey:

(1) Candles
(2) Smoking materials
(3) Matches or lighters

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**6.3 Additional Items.** The following additional items should be covered in a home safety survey:

(1) Poison potential of residential cleaning and other common household products
(2) Fall hazards
(3) Tripping hazards
(4) Scalding risks with cooking and bathing
(5) Combustible items within 3 ft (1 m) of a heat source
(6) Radon checks

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*N* **6.4 Notification of the Fire Department.** The resident should be told to notify the fire department of all fires in and around the residence, even if they seem minor, so that appropriate documentation can be made.

**6.5 Electrical Installations.** The following electrical installations should be noted during a home safety survey:

(1) Overcurrent protection
(2) Grounded receptacles
(3) Outdoor electrical service

**6.5.1 Other Common Electrical Hazards Found in the Residential Occupancy.**

Δ **6.5.1.1** Heat buildup occurs in wiring when there is resistance to electrical current. Loose wire nuts or cable connections, especially in aluminum wiring, or doorways, carpeting, furniture, or other heavy objects through or under which wiring might run can cause unusual wear to insulation, producing this condition.

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**6.5.1.2** Dirty, poorly maintained electric motors or missing covers on junction boxes can eventually result in a short circuit or a fire. All unused openings (i.e., knockouts) in boxes and cabinets (i.e., panel boards) should be properly closed.

**6.5.1.3** Extension cords—even though UL listed—can be too small for certain electrical loads, such as irons and air conditioners. Extension cords should never be used for permanent connections; they should be used only temporarily. If fire service personnel are to provide worthwhile guidance to the resident, they should be trained to match the current-carrying capability of the extension cord with the current demand of the electrical loads connected to it.

**6.5.1.4*** Listed relocatable power taps with integral overcurrent protection should be recommended to replace extension cords being used for permanent wiring and multiplug adaptors.

**6.5.1.5** Wiring insulation that is damaged is unsafe, and its breakdown could be imminent. Damaged insulation is often a problem, especially on powered hand tools. It should be recommended that such wiring be replaced.

**6.5.2** To avoid possible ignition should a gas leak occur, electrical outlets or fuse panels should not be located adjacent to gas meters or gas diaphragms.

**6.5.3** The use of appliances, fixtures, and wiring that are not listed by a testing laboratory should be discouraged.

**6.5.4** The use of child safety covers should be recommended on all electrical outlets in residences that have young children. Such plugs are intended to cover the receptacle openings so that a child cannot insert a conductive object.

**6.5.5** Clear access should be maintained to and around all electrical panels.

**6.5.6** Heat tapes used in manufactured housing and other residences should be examined by the resident once a year in the fall. Burn marks, damaged insulation, or evidence that an animal has been chewing on the insulation are signs that the heat tapes should be replaced or repaired. Heat tapes should be plugged in before freezing temperatures are anticipated and unplugged in the spring.

Δ **6.5.7** Where fire service personnel encounter lighting fixtures with halogen bulbs, the resident should be advised of the hazard presented by the high temperature of such bulbs and the need to keep combustibles away from them.

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*N* **6.5.8*** Manufacturer's instructions should be followed when using electronic devices and chargers. Battery chargers should be placed on hard surfaces and unplugged when not in use. Care should be taken when charging electronic devices to avoid overcharging and battery damage, resulting in fire. Items should be charged only when occupants are home and awake.

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*N* **6.6 Alternative Power Supplies and Storage Generators.** The following alternative power supplies and storage generators should be noted during a home safety survey:

(1) Generators
(2) Solar panels
(3) Residential battery backup systems
(4) Electric vehicle charging systems

**6.7 Flammable or Combustible Liquids.**

**6.7.1 Storage and Dispensing Practices.**

**6.7.1.1** Flammable or combustible liquids, such as gasoline, should be stored only in listed safety containers.

**6.7.1.2** Flammable or combustible liquids should not be placed on high shelves that could allow the containers to fall and spill their contents on the floor. Storing excessive quantities of flammable or combustible liquids should be discouraged. Flammable or combustible liquids should not be stored in basements or near potential sources of ignition.

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**6.7.1.3** Greasy or oil-paint–soaked rags and brushes can also cause fire from spontaneous ignition. They should be cleaned and washed after each use and air-dried outside. Manufacturers' instructions should be consulted regarding cleanup and disposal.

**6.7.2 Other Flammable or Combustible Liquid Hazards.**

**6.7.2.1** Using flammable or combustible liquids in the residence for dry-cleaning purposes should be discouraged.

**6.7.2.2** Smoking when using flammable or combustible liquids should be discouraged.

**6.7.2.3** Using flammable or combustible liquids to start fires in stoves or fireplaces is a dangerous practice and should be discouraged.

**6.7.2.4** The use of liquid charcoal starters should be restricted to products marketed specifically for that purpose. Applying these products after ignition is achieved, whether or not live flame is noted, is extremely hazardous. Flame can be transmitted to the container contents, with resultant ignition and pressure explosion.

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**6.8 Heating Systems and Appliances.**

**6.8.1 General Hazards.**

Δ **6.8.1.1** The area around any heating appliance should be kept free of combustibles. Heating units also require sufficient space around them to provide adequate ventilation for proper combustion.

**6.8.1.2** Flues, vents, and chimneys can constitute a hazard, and should be kept in good condition with adequate clearance from any combustibles. Flue and fireplace cleaning recommendations should be based on use.

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**6.8.2* Types of Heating Systems.** Follow all manufacturers' recommendations and applicable codes and standards for use and operation of heating systems. The following types of heating systems should be noted during a home safety survey:

(1) Gas-fueled systems
(2) Oil-fired systems
(3) Small oil or kerosene heaters
(4) Solid-fuel appliances
(5) Fireplaces
(6) Other heating devices

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**6.8.3 Cooking Appliances and Venting Systems.**

*N* **6.8.3.1** Generally, fire hazards in cooking appliances and venting systems are associated with poor housekeeping practices. Unless an obvious accumulation of grease or residue is present, general statements regarding the extinguishment of grease fires should serve as a reminder.

*N* **6.8.3.2** Fire service personnel should inform the resident about the dangers and effects of careless cooking, more popularly termed "food on the stove" problems. Recently tested cooking safety messages such as "Keep an eye on what you fry" proved to be very effective in educating residents.

*N* **6.8.3.3** Cooking appliances should not be used for residential heating.

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**6.9 Housekeeping, Storage, and Rubbish Hazards.**

**6.9.1** There is an emerging awareness of safety hazards caused by compulsive hoarding. If fire service personnel become aware of this type of situation, strong consideration should be given to making a referral to the building official, health inspector, fire prevention staff, or community mental health professionals.

**6.9.2** Large quantities of trash and leaves around the exterior of a residence are also a fire hazard. If the resident burns household trash on the premises, fire service personnel should check the place of burning, type of incinerator, and condition and use with respect to local burning regulations.

*N* **6.9.3** There is an increased risk of exterior fire spread to combustible exterior surfaces from combustible mulch, wood shavings, wood products, pine needles, or similar combustible landscaping materials. Fire service personnel should explain the risk of combustible landscaping adjacent to combustible exterior walls. It is recommended that the distance between the materials and wall be sufficient to resist ignition.

*N* **6.9.4** If smoking must occur outside the building, fire service personnel should recommend that it be done as far away from the building as possible and that appropriate noncombustible receptacles be used and cleaned regularly. Fire service personnel should explain the risk that smoking materials may cause ignition of combustible mulch, potting soil, and other vegetative material and that such fires can spread to the structure.

**6.9.5** Garages, both attached and unattached, should be included in any home safety survey. Even if unattached to the residence, garages often represent exposure fire and carbon monoxide potential and afford many storage hazards.

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**6.9.6** Use of portable residential barbecue grills should be restricted to the outdoors, at a minimum of 10 ft (3 m) away from structures. Charcoal briquettes should always be allowed to cool naturally and then be properly discarded. Charcoal should be stored in a dry area, because damp or wet charcoal is sensitive to spontaneous heating once dried.

**6.9.7** If a residential occupancy has a pool, hot tub, pond, or other water-related hazard, fire service personnel should review with the resident the need for, and maintenance of, fences, gates, locking devices, and other safety equipment to minimize drowning, poisoning, and electric shock risks. In addition, fire service personnel should advise the resident to maintain proper containment, handling, separation, and storage of pool chemicals to minimize fire risk.

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**6.9.8** Fire service personnel should check the outside of the residential occupancy for rubbish accumulations, defective electrical equipment, flammable or combustible liquid storage, or other hazards. On the perimeter walk with the resident, storage at least 3 ft (1 m) from the residential occupancy should be recommended. Recommendations should also be made to eliminate storage under decks, if applicable. Tree limbs should not overhang the residence or touch the structure. Dryer vents

and gas meter relief valves should be cleared of brush or vegetation. Any evidence of improper disposal of smoking materials should be pointed out to the resident and corrected.

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**6.9.9** Hazardous chemicals (e.g., herbicides, pesticides, vehicle fluids, painting materials, swimming pool chemicals, cleaning fluids) are often found in the course of home safety surveys. The resident should be advised to keep these materials in secure cabinets and to keep only the minimum amount actually needed. The resident should be advised about how to properly dispose of excess hazardous materials.

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**6.10 Fire Safety Precautions in Earthquake-Prone Areas.**

**6.10.1** Water heaters, appliances, and furniture should be secured according to manufacturer's instructions to prevent toppling or falling.

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**6.10.2** Fire service personnel should ask the resident whether he or she knows the location of the main gas and water shutoffs and has the tools necessary to turn them off.

**6.10.3** Fire service personnel should advise the resident of the importance of emergency supplies of food and water and on the proper actions to take during and immediately after an earthquake.

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## Chapter 7 Life Safety Considerations

**7.1 Residential Fire Escape Planning.**

**7.1.1** Fire service personnel should explain the importance of knowing two ways out of the residence.

**7.1.2** Particular attention should be given to windows that are inoperable or are blocked by security bars or air-conditioning units as these may hinder escape in an emergency. Security concerns should be installed with a quick-release from the inside to allow residents to escape. All exits and exit pathways should be kept clear from storage or debris.

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**7.2* Residential Fire Escape Drill Plan.** Fire service personnel should discuss the importance of having and practicing a fire escape plan that includes a family meeting place outside the residence.

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*N* **7.3 Close Your Door Program.** Fire service personnel should provide education on the benefits of sleeping with closed doors and of closing doors when exiting a structure on fire. Closing doors while sleeping will provide additional protection to the resident from heat, smoke, and gases. Residents should still attempt to exit immediately when smoke alarms are activated or there are indications of fire. When exiting, closing the door will help reduce the rapid spread of fire. Fire service personnel can utilize educational materials to educate the resident on closing doors during a fire.

**7.4 Residents Requiring Assistance.**

**7.4.1** Fire service personnel should discuss evacuation routes and precautions for those that require assistance.

**7.4.2** The use of stickers or decals on the exterior of the residence to indicate the presence of people with disabilities, children, or pets is discouraged.

**7.4.3** Premise information may be available in the organization's preincident plans or premise history, if applicable.

**7.5 Smoke Alarms and Other Early Warning Devices.**

**7.5.1** Fire service personnel should discuss the importance of approved smoke alarms and other early warning devices during home safety surveys.

**7.5.2** Smoke alarms should be tested during the home safety survey. Any that are inoperable or that are older than 10 years should be replaced Special care should be taken with systems that are tied to monitoring services, and appropriate notification must be made before performing tests on such systems.

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Δ **7.5.3** Installation of smoke alarm devices in residences should be in accordance with the manufacturer's recommendations and *NFPA 72*.

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**7.6 Carbon Monoxide Alarms.** Carbon monoxide alarms should be installed in residences that have a carbon monoxide source (e.g., attached garage, fuel-burning appliances, or fireplaces). The hazards associated with carbon monoxide and proper actions to be taken in case of an alarm should also be discussed, and carbon monoxide alarms should be installed and maintained in accordance with manufacturer's recommendations and *NFPA 72*.

## Chapter 8 Fire-Extinguishing Equipment

**8.1 Fire Extinguishers.**

**8.1.1** If no fire extinguisher is found in the course of a home safety survey, fire service personnel should recommend that one be purchased and installed.

**8.1.2** If fire extinguishers are encountered, fire service personnel should check that the rating and classification are appropriate and that the units have the listing mark of a nationally recognized testing laboratory. If the extinguishers are single-use units, the fire service personnel should check for expiration dates. Inspection tags on rechargeable extinguishers should be checked for up-to-date servicing.

**8.1.3** Fire service personnel should be able to answer questions such as the following pertaining to the purchase, installation, maintenance, and use of household fire extinguishers:

(1) Which kind, which rating, and how many are necessary?
(2) What is the cost?
(3) Where should they be placed, and how should they be mounted?
(4) When is the proper time to use a fire extinguisher, and what is the proper method of operation, such as pull, aim, squeeze, sweep (PASS)?
(5) How are fire extinguishers maintained and inspected?

**8.1.4** Installation of portable fire extinguishers in residential buildings should be in accordance with NFPA 10.

**8.2 Residential Automatic Fire Sprinkler Systems.**

**8.2.1** If a fire sprinkler system is found in a residential occupancy, fire service personnel should conduct a visual examination of the system to ensure all valves are open, the system is not visibly damaged, and the pressure gauge indicates there is water pressure in the system.

Δ **8.2.2*** Automatic fire sprinkler systems are becoming more common in residences due to code changes and increased resident awareness. Fire service personnel should be alert to any conditions in the residence, such as obstructions of sprinklers

or painted sprinkler heads, that might impair the performance of the system during a fire.

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## Chapter 9 Wildland/Urban Interface Fire Safety

**9.1 General.** The increasing presence of residential occupancies in areas subject to wildland fire requires additional precautions for fire safety due to the exterior threat from fire, heat, and, especially, embers (i.e., firebrands). Residents in those areas should take special measures to reduce the risk that their residences will be ignited by a rapidly spreading fire in vegetated areas. Often, residents need to be educated about such precautions.

Δ **9.2 Precautions.** Residents can mitigate hazards within an area around their residence as well as adjacent structures. This area is known as the "home ignition zone."

Δ **9.2.1** Precautions against ignition from wildfires within the home ignition zone include, but are not limited to, the following:

(1) Maintaining a defensible space (i.e., buffer zone) around the dwelling, including removing highly combustible vegetation next to the residence
(2) Installing noncombustible roofs—the roof is most vulnerable to showers of embers (i.e., firebrands) that can be borne by winds from fires up to a mile away and blown into cracks and crevices that may exist between shingles and other structural assemblies
(3) Maintaining roof and gutters clear of debris, such as pine needles and dead leaves
(4) Installing high-moisture, low-flammability, or drought-resistant plants near the dwelling
(5) Placing ⅛ in. (3 mm) mesh metal screens over foundation and eave vents
(6) Enclosing sides of stilt foundations and decks to prevent the intrusion of embers (i.e., firebrands)
(7) Providing metal screens or spark arresters of ½ in. (13 mm) or smaller mesh on chimneys
(8) Providing access to emergency water supply sources (e.g., swimming pools, wells, ponds, lakes, and so on) for use by fire service personnel
(9) Obeying open-burning regulations

**9.2.2** Additional wildfire safety education information can be obtained from local, state, or national forestry agencies, and links to their websites and others can be found at www.firewise.org. In areas with specific problems of wildland/urban interface, the organization should be familiar with NFPA 1144.

Δ **9.3 Emergency Evacuation Preparations.** Fire service personnel should recommend the residents take prefire preparations, including the following:

(1) Know the community plan for evacuation, including possible routes for leaving the community, locations of community shelters, or make preparations to stay in the residence
(2) Inventory residence and possessions with photographic or videotape support
(3) Store important documents, photographs, and valuables in a secure off-premises location such as a safe-deposit box
(4) Select and mark a manageable number of treasured items to take along in the event of a wildfire evacuation
(5) Maintain a small bag of personal care items that can be useful at an evacuation shelter
(6) Establish an emergency plan for all animals and livestock

## Chapter 10 All-Hazards Education

**10.1 General.** Today, residents are concerned about more than only fire hazards. All-hazards issues are constantly emerging and result in queries to organizations for hazard mitigation, response, and recovery.

Δ **10.2* Emergency All-Hazards Evacuation Preparations.** Fire service personnel should recommend that residents make all-hazards evacuation preparations, including the following:

(1) Know the community plan for evacuation, including possible routes for leaving the community, locations of community shelters, or preparations needed to stay in the residence
(2) Inventory residence and possessions with photographic or videotape support
(3) Store important documents, photographs, and valuables in a secure off-premises location such as a safe-deposit box
(4) Select and mark a manageable number of treasured items to take along in the event of an evacuation
(5) Maintain a small bag of personal care items that can be useful at an evacuation shelter
(6) Establish an emergency plan for all animals and livestock

**10.3 All-Hazards Concerns.** Relevant information should be provided for typical non–fire hazard queries that concern the following:

(1) Earthquakes (including the hazards indicated in Section 6.10)
(2) Hurricanes
(3) Tornados
(4) Floods
(5) Volcanoes
(6) Hazardous materials (including the hazards in Section 6.9)
(7) Public health issues/pandemics
(8) Terrorist incidents
(9) Personal disaster preparedness techniques
(10) Extreme heat and cold
(11) Falls
(12) Choking, suffocation, and strangulation, especially among infants
(13) Poisoning
(14) Drowning
(15) Scalds and burns
(16) Firearms safety

**10.4* Preparation.** Fire service personnel should be prepared to provide basic all-hazards information, as applicable to the jurisdiction, when requested by the public.

*N* **10.5* Communications.** Fire service personnel should be prepared to provide information to residents on mass notification methods utilized by local officials.

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## Annex A Explanatory Material

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

**N A.1.1** While this guide is titled for fire service personnel, the guidance can be applied to any organization that conducts community risk reduction programs in residential occupancies.

For development and implementation of comprehensive community risk reduction programs and plans, organizations should follow NFPA 1300 and complete a formal community risk assessment.

**A.1.2.2** Each of these potential benefits help empower both the organization and the community residents to engage in community risk reduction efforts to improve safety and reduce the burden on emergency services.

**A.3.2.1 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.3.2.2 Authority Having Jurisdiction (AHJ).** The phrase "authority having jurisdiction," or its acronym AHJ, 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.3.3.2 Community Risk Reduction (CRR).** CRR integrates emergency response with prevention. CRR involves identifying and prioritizing risks, selecting and implementing strategies, monitoring and evaluating activities, and involving community partners, all in an effort to better protect residents and fire fighters.

**A.3.3.3 Home Ignition Zone.** The "zone" includes the structures and their immediate [0–200 ft (0–60 m)] surroundings. Under some conditions, 100 ft (30 m) or less around structures may be enough distance to treat, while intense fire potential in heavier fuels may require the surroundings to extend to 200 ft (60 m) from the structure. The area and shape of the structure ignition zone is site-specific.

**A.3.3.4 Radon.** When inhaled, radon gives off radioactive particles that can damage the cells that line the lung. Long-term exposure to radon can lead to lung cancer. Radon is the number one cause of lung cancer in nonsmokers and the number two cause of lung cancer in smokers.

**N A.3.3.5 Residential Occupancy.** This includes one- and two-family dwellings, lodging and rooming houses, hotels, motels, and dormitories, and apartment buildings (i.e., multifamily dwellings). Residential occupancies may also be referred to as homes.

**Δ A.3.3.8 Wildland/Urban Interface.** The term *wildland/urban interface* can distort the perception of the primary issue. It can direct attention to "where" structures are located (e.g., at the edge of communities near the wildland) rather than if they are highly ignitable. And if so, the focus on "where" can result in a concern about things that will not make a big difference in reducing structure loss (i.e., how fire fighters and equipment get there, what type of fire equipment is needed, and the location of fire hydrants and water sources). How wide the roads are and where the fire hydrants are located become of little value if there are more structures at risk than equipment to protect them, or if it is too dangerous to safely be there with fire-fighting forces.

The essence of this issue is not where structures and domestic landscapes adjoin wildland, but the location, density, and availability of ignitable structures. Which structures are at the greatest risk, ignition-resistant homes bordering the wildland, or a dense subdivision with wood shingle roofs several miles away from wildland fuels? The wildland/urban interface is not geographic location, but rather a set of conditions that can exist in many communities. [**1144,** 2018]

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**N A.4.1.1** NFPA publishes free educational materials, including safety tip sheets that address many of the hazards found in residential occupancies. These can be used to help educate residents on identified hazards. Safety tip sheets are available at www.nfpa.org/safetytips.

**N A.5.1.1** See NFPA 1300 for information on CRR program development and conducting a CRA.

**Δ A.5.2.1** There are also many good sources for training information available on the Internet, such as the National Fire Academy through the U.S. Fire Administration and the National Fire Protection Association. The Safe Kids Training Academy provides free self-tutorial training on CO, smoke alarms, falls, safe escape, and other fire and life safety education books and information. The department might also consider ride-alongs with other safety professionals such as those from gas and power companies, HVAC specialists, electricians, and so forth, to gain a better insight to community risks.

**N A.5.2.2** Home safety surveys should be made as a courtesy, not because of fire and building code regulations.

**A.5.5.6** Data gathered from residential home safety surveys should be collected and analyzed on the aggregate, not on an individual property basis. Residents want the assurance that information collected during a residential home safety survey is protected.

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*N* **A.5.6.1.1** If an existing fire inspection program for other properties is available, the system can be expanded to include the home safety surveys. The required information system might be as simple or as comprehensive as the local fire and life safety problems and situations dictate. The information should include the numbers and types of fire and life safety hazards discovered and locations surveyed. The information collected should be gathered for specific reasons if it is to be meaningful; for example, the number and type of fire and life safety hazards could be analyzed to determine the direction of public education efforts.

NFPA's home safety survey form is a good example of documentation routinely used as parts of residential fire and life safety programs and can be easily adapted by those organizations planning to establish such a program. See Figure A.5.6.1.1.

*N* **A.6.5.1.4** See Section 11.1 of NFPA 1.

*N* **A.6.5.8** Examples of electronic devices include cell phones, laptops, e-cigarettes, portable tools, robotic devices, and battery-operated toys and vehicles.

**A.6.8.2** Refer to NFPA 54 for specific requirements on gas-fueled systems.

Δ **A.7.2** The NFPA widely promotes its public education programs, including Learn Not to Burn® program for Preschool – Grade 2, the Remembering When™ fire and fall prevention program for older adults, and the annual Fire Prevention Week campaign (www.nfpa.org/public-education). Educational tip sheets, brochures, and digital materials are available from NFPA that can be provided to the residents of the dwelling.

*N* **A.8.2.2** For informational resources on residential fire sprinklers for both fire service and consumer use, see the NFPA Home Fire Sprinkler Initiative.

In most settings where there is a municipal water supply, sprinklers operate off the household water main. Where the water supply is a well or there is not enough water pressure, a holding tank is used. Fire sprinklers are linked by a network of piping, typically hidden behind walls and ceilings. The high temperature of an early stage fire [135°F–165°F (57°C–74°C)] causes the sprinkler to activate. Only this high heat initiates the sprinkler to flow water—neither smoke nor a smoke alarm activates a fire sprinkler. Only the sprinkler closest to the fire operates, flowing water directly on the flames in the area of the fire's origin. This quick action controls or extinguishes the flames, often before the fire department arrives. Fire sprinklers slow the spread of deadly heat and toxic smoke, preventing flashover. This also provides residents with more time to escape safely.

Wet-pipe fire sprinkler systems can be installed in climates where freezing conditions may occur. Several design options exist in NFPA 13D, including the use of proper insulation, heating of sprinkler piping areas, and installing sprinkler piping in interior walls.

*N* **A.10.2** For informational resources on evacuation planning, visit http://ready.gov.

**A.10.4** The information should be consistent with information provided by such agencies as the following:

(1) Federal Emergency Management Agency (www.fema.gov)
(2) National Fire Protection Association (www.nfpa.org)
(3) National Home Safety Council (www.homesafetycouncil.org)
(4) Home Fire Sprinkler Coalition (www.homefiresprinkler.org)
(5) State Emergency Management Agencies
(6) State homeland security agencies
(7) Centers for Disease Control and Prevention (www.cdc.gov)
(8) American Red Cross (www.redcross.org)
(9) SafeKids Worldwide (www.safekids.org)

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*N* **A.10.5** This could include social media accounts, websites, local radio and television stations, sirens, commercially available mass notification systems, or mobile phone applications.

NFPA

# Home Fire Safety Survey

## General

❑ Yes ❑ No Home has smoke alarms on every level.
❑ Yes ❑ No Home has a smoke alarm in every bedroom.
❑ Yes ❑ No Smoke alarms are located outside each separate sleeping area.
❑ Yes ❑ No Smoke alarms are located at least 10 feet from a stationary or fixed cooking appliance.
❑ Yes ❑ No For larger homes (where the interior floor area on a given level is greater than 1,000 square feet), there is an average of at least 1 smoke alarm for every 500 square feet. [See NFPA 72-2007 11.5.1.3, 29.5.1.3 (2010)]
❑ Yes ❑ No Smoke alarms are interconnected so when one sounds, they all sound. (Best protection)
❑ Yes ❑ No Home has ionization smoke alarms.
❑ Yes ❑ No Home has photoelectric smoke alarms.
❑ Yes ❑ No Home has combination (photoelectric and ionization) smoke alarms.
❑ Yes ❑ No All smoke alarms are working.
❑ Yes ❑ No Family has a home fire escape plan.
❑ Yes ❑ No Family practices the home fire escape plan at least twice a year.
❑ Yes ❑ No The home has occupant(s) that require assistance to escape. Occupants discuss escape planning and occupant requirements in case of a fire or emergency escape.
❑ Yes ❑ No House number is visible from the street.
❑ Yes ❑ No Windows used for escape open easily — not blocked by furniture, security bars or nailed/painted shut.
❑ Yes ❑ No Security bars, if present, have a quick release device.
❑ Yes ❑ No Home has a home fire sprinkler system. (Best protection)
❑ Yes ❑ No Home has a carbon monoxide alarm outside each separate sleeping area.
❑ Yes ❑ No Home has a carbon monoxide alarm on every level.
❑ Yes ❑ No Carbon monoxide alarms are working.

## Throughout the Home

❑ Yes ❑ No Smokers smoke outside the home.
❑ Yes ❑ No Large ashtrays are provided outside for smokers.
❑ Yes ❑ No Matches and lighters are stored in a secure cabinet.
❑ Yes ❑ No Lit candles are not left unattended.
❑ Yes ❑ No Flammable liquids, if stored in the home, are limited in quantity.
❑ Yes ❑ No The home is not cluttered with clothes, magazines, newspapers and other items that can burn.

## Kitchen

❑ Yes ❑ No Things that can burn are removed from the stovetop.
❑ Yes ❑ No Small appliances are unplugged when not in use.
❑ Yes ❑ No Adult stays in the kitchen when stovetop is in use.

## Living/Family Room

❑ Yes ❑ No Fireplace has proper screen and hearth.
❑ Yes ❑ No Things that can burn are at least 3 feet from space heaters and fireplaces.

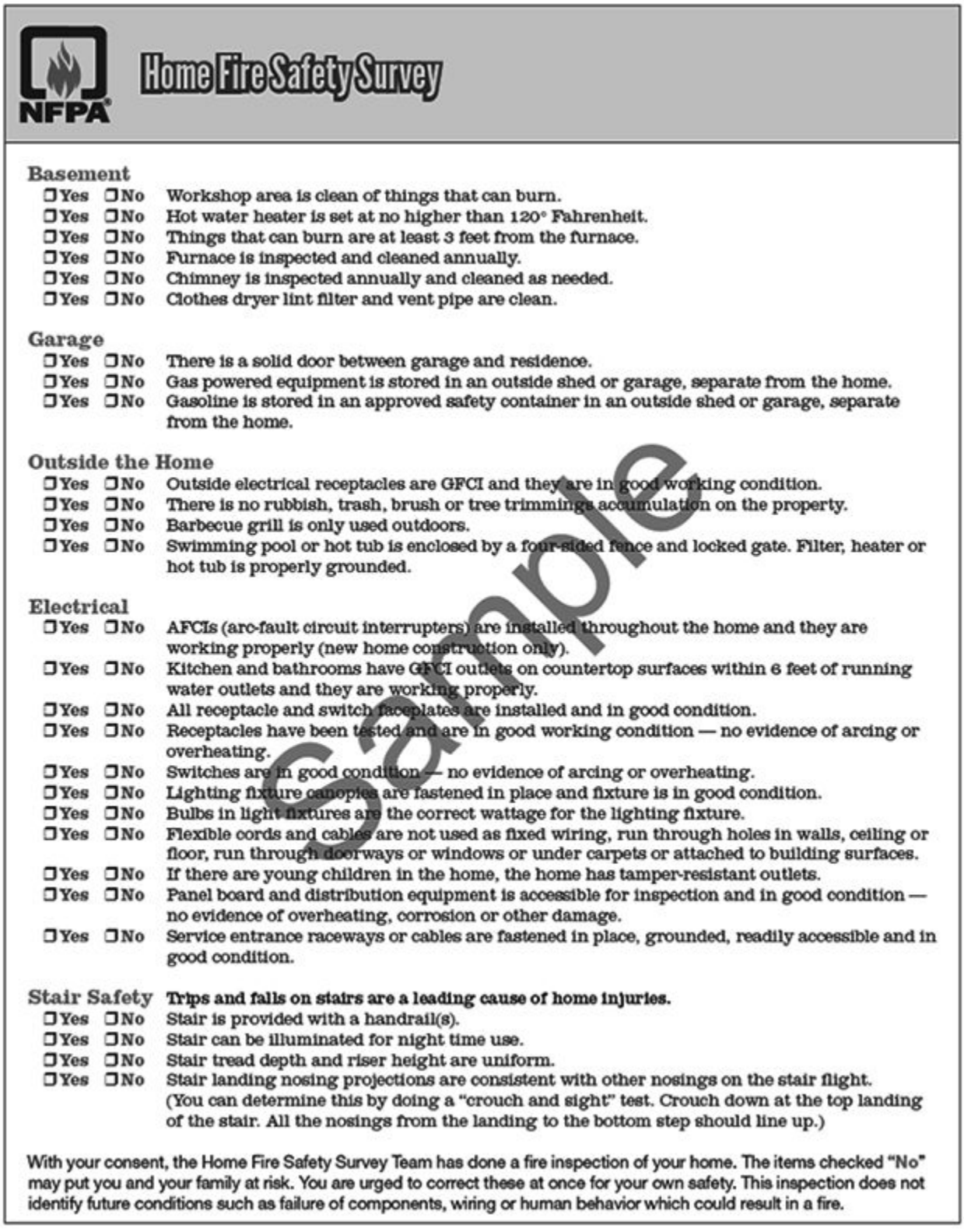
## Bedrooms

❑ Yes ❑ No All bedrooms have two ways out — window and a door.



 NFPA 1452 (p. 1 of 3)

**FIGURE A.5.6.1.1 Home Safety Survey Form Labeled Sample.**



NFPA

## Home Fire Safety Survey

**Basement**

❒Yes ❒No Workshop area is clean of things that can burn.
❒Yes ❒No Hot water heater is set at no higher than 120° Fahrenheit.
❒Yes ❒No Things that can burn are at least 3 feet from the furnace.
❒Yes ❒No Furnace is inspected and cleaned annually.
❒Yes ❒No Chimney is inspected annually and cleaned as needed.
❒Yes ❒No Clothes dryer lint filter and vent pipe are clean.

**Garage**

❒Yes ❒No There is a solid door between garage and residence.
❒Yes ❒No Gas powered equipment is stored in an outside shed or garage, separate from the home.
❒Yes ❒No Gasoline is stored in an approved safety container in an outside shed or garage, separate from the home.

**Outside the Home**

❒Yes ❒No Outside electrical receptacles are GFCI and they are in good working condition.
❒Yes ❒No There is no rubbish, trash, brush or tree trimmings accumulation on the property.
❒Yes ❒No Barbecue grill is only used outdoors.
❒Yes ❒No Swimming pool or hot tub is enclosed by a four-sided fence and locked gate. Filter, heater or hot tub is properly grounded.

**Electrical**

❒Yes ❒No AFCIs (arc-fault circuit interrupters) are installed throughout the home and they are working properly (new home construction only).
❒Yes ❒No Kitchen and bathrooms have GFCI outlets on countertop surfaces within 6 feet of running water outlets and they are working properly.
❒Yes ❒No All receptacle and switch faceplates are installed and in good condition.
❒Yes ❒No Receptacles have been tested and are in good working condition — no evidence of arcing or overheating.
❒Yes ❒No Switches are in good condition — no evidence of arcing or overheating.
❒Yes ❒No Lighting fixture canopies are fastened in place and fixture is in good condition.
❒Yes ❒No Bulbs in light fixtures are the correct wattage for the lighting fixture.
❒Yes ❒No Flexible cords and cables are not used as fixed wiring, run through holes in walls, ceiling or floor, run through doorways or windows or under carpets or attached to building surfaces.
❒Yes ❒No If there are young children in the home, the home has tamper-resistant outlets.
❒Yes ❒No Panel board and distribution equipment is accessible for inspection and in good condition — no evidence of overheating, corrosion or other damage.
❒Yes ❒No Service entrance raceways or cables are fastened in place, grounded, readily accessible and in good condition.

**Stair Safety** **Trips and falls on stairs are a leading cause of home injuries.**

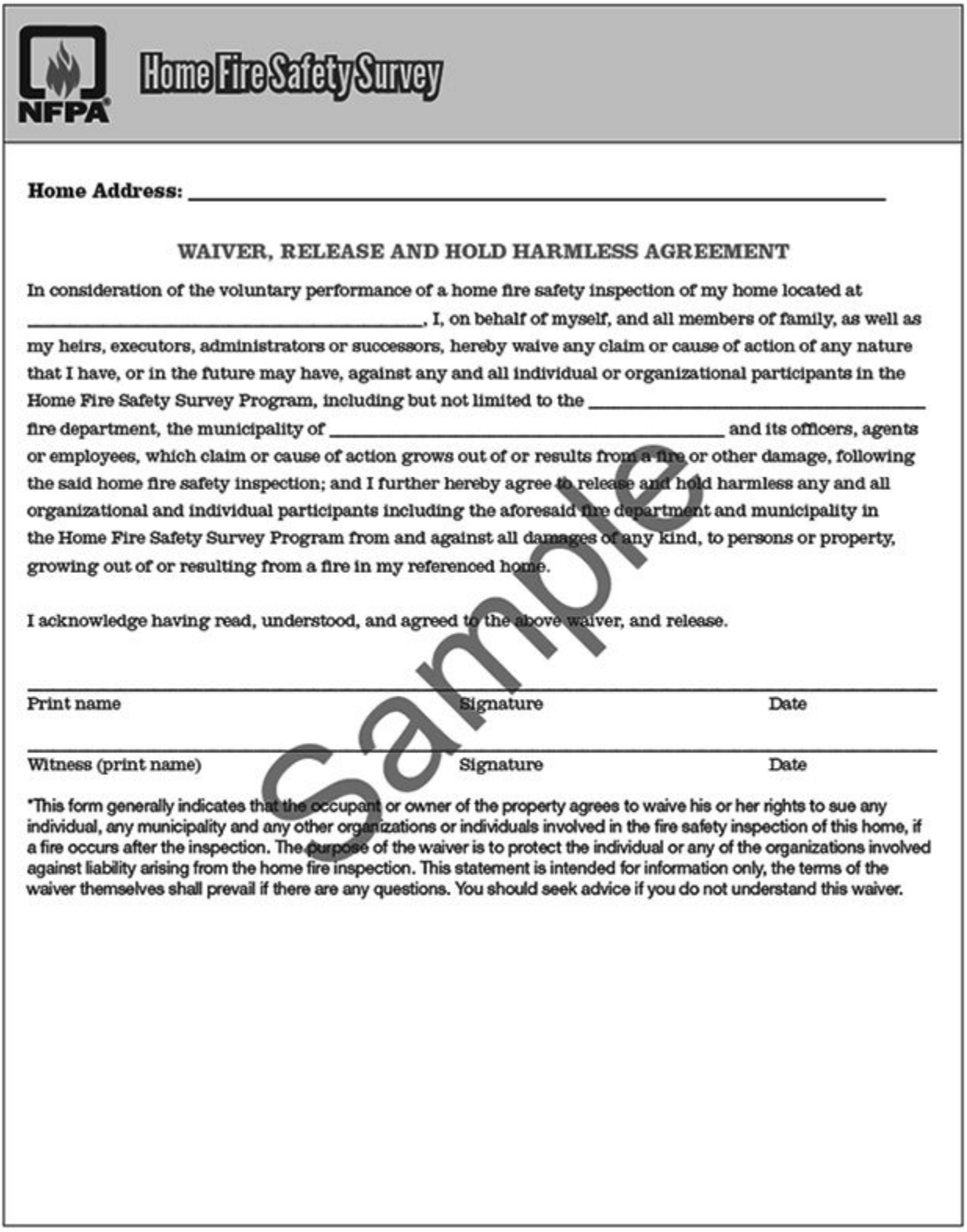
❒Yes ❒No Stair is provided with a handrail(s).
❒Yes ❒No Stair can be illuminated for night time use.
❒Yes ❒No Stair tread depth and riser height are uniform.
❒Yes ❒No Stair landing nosing projections are consistent with other nosings on the stair flight. (You can determine this by doing a "crouch and sight" test. Crouch down at the top landing of the stair. All the nosings from the landing to the bottom step should line up.)

With your consent, the Home Fire Safety Survey Team has done a fire inspection of your home. The items checked "No" may put you and your family at risk. You are urged to correct these at once for your own safety. This inspection does not identify future conditions such as failure of components, wiring or human behavior which could result in a fire.



 NFPA 1452 (p. 2 of 3)

**FIGURE A.5.6.1.1** *Continued*



Home Fire Safety Survey

**Home Address:** _____

**WAIVER, RELEASE AND HOLD HARMLESS AGREEMENT**

In consideration of the voluntary performance of a home fire safety inspection of my home located at _____, I, on behalf of myself, and all members of family, as well as my heirs, executors, administrators or successors, hereby waive any claim or cause of action of any nature that I have, or in the future may have, against any and all individual or organizational participants in the Home Fire Safety Survey Program, including but not limited to the _____ fire department, the municipality of _____ and its officers, agents or employees, which claim or cause of action grows out of or results from a fire or other damage, following the said home fire safety inspection; and I further hereby agree to release and hold harmless any and all organizational and individual participants including the aforesaid fire department and municipality in the Home Fire Safety Survey Program from and against all damages of any kind, to persons or property, growing out of or resulting from a fire in my referenced home.

I acknowledge having read, understood, and agreed to the above waiver, and release.

_____

Print name Signature Date

_____

Witness (print name) Signature Date

*This form generally indicates that the occupant or owner of the property agrees to waive his or her rights to sue any individual, any municipality and any other organizations or individuals involved in the fire safety inspection of this home, if a fire occurs after the inspection. The purpose of the waiver is to protect the individual or any of the organizations involved against liability arising from the home fire inspection. This statement is intended for information only, the terms of the waiver themselves shall prevail if there are any questions. You should seek advice if you do not understand this waiver.

Sample



NFPA 1452 (p. 3 of 3)

**FIGURE A.5.6.1.1** *Continued*

## Annex B Informational References

**B.1 Referenced Publications.** The documents or portions thereof listed in this annex are referenced within the informational sections of this guide and are not advisory in nature unless also listed in Chapter 2 for other reasons.

Δ **B.1.1 NFPA Publications.** National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 1, *Fire Code*, 2018 edition.

NFPA 13D, *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*, 2019 edition.

NFPA 54, *National Fuel Gas Code*, 2018 edition.

NFPA 1300, *Standard on Community Risk Assessment and Community Risk Reduction Plan Development*, 2020 edition.

Safety tip sheets, www.nfpa.org/safetytips.

**B.2 Informational References.** The following documents or portions thereof are listed here as informational resources only. They are not directly referenced in this guide.

**B.2.1 NFPA Publications.** National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

*NFPA 72®*, *National Fire Alarm and Signaling Code®*, 2019 edition.

NFPA *101®*, *Life Safety Code®*, 2018 edition.

NFPA 1730, *Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations*, 2019 edition.

**B.3 References for Extracts in Informational Sections.**

NFPA 1144, *Standard for Reducing Structure Ignition Hazards from Wildland Fire*, 2018 edition.

# Index



**-A-**

**Administration**, Chap. 1
- Purpose, 1.2
- Scope, 1.1, A.1.1

**All-Hazards Education**, Chap. 10
- All-Hazards Concerns, 10.3
- Communications, 10.5, A.10.5
- Emergency All-Hazards Evacuation Preparations, 10.2, A.10.2
- General, 10.1
- Preparation, 10.4, A.10.4

**Approved**
- Definition, 3.2.1, A.3.2.1

**Authority Having Jurisdiction (AHJ)**
- Definition, 3.2.2, A.3.2.2

**-C-**

**Carbon Monoxide Alarm**
- Definition, 3.3.1

**Common Hazards Found in Residential Occupancies**, Chap. 6
- Additional Items, 6.3
- Alternative Power Supplies and Storage Generators, 6.6
- Electrical Installations, 6.5
  - Other Common Electrical Hazards Found in the Residential Occupancy, 6.5.1
- Fire Safety Precautions in Earthquake-Prone Areas, 6.10
- Flammable or Combustible Liquids, 6.7
  - Other Flammable or Combustible Liquid Hazards, 6.7.2
  - Storage and Dispensing Practices, 6.7.1
- General, 6.1
- Heating Systems and Appliances, 6.8
  - Cooking Appliances and Venting Systems, 6.8.3
  - General Hazards, 6.8.1
  - Types of Heating Systems, 6.8.2, A.6.8.2
- Housekeeping, Storage, and Rubbish Hazards, 6.9
- Notification of the Fire Department, 6.4
- Open-Flame Devices, 6.2

**Community Risk Reduction (CRR)**
- Definition, 3.3.2, A.3.3.2

**-E-**

**Explanatory Material**, Chap. A
- Approved, A.3.2.1
- Authority Having Jurisdiction (AHJ), A.3.2.2
- Community Risk Reduction (CRR), A.3.3.2
- Home Ignition Zone, A.3.3.3
- Radon, A.3.3.4
- Residential Occupancy, A.3.3.5
- Wildland/Urban Interface, A.3.3.8

**-D-**

**Definitions**
- Definition, Chap. 3

**-G-**

**Guide**
- Definition, 3.2.3

**-F-**

**Fire-Extinguishing Equipment**, Chap. 8
- Fire Extinguishers, 8.1
- Residential Automatic Fire Sprinkler Systems, 8.2

**-I-**

**Informational References**, Chap. B
- Informational References, B.2
  - NFPA Publications, B.2.1
- Referenced Publications, B.1
  - NFPA Publications, B.1.1
- References for Extracts in Informational Sections, B.3

**-H-**

**Home Ignition Zone**
- Definition, 3.3.3, A.3.3.3

**-L-**

**Life Safety Considerations**, Chap. 7
- Carbon Monoxide Alarms, 7.6
- Close Your Door Program, 7.3
- Residential Fire Escape Drill Plan, 7.2, A.7.2
- Residential Fire Escape Planning, 7.1
- Residents Requiring Assistance, 7.4
- Smoke Alarms and Other Early Warning Devices, 7.5

**-P-**

**Planning the Community Risk Reduction Program**, Chap. 5
- Community Risk Reduction Considerations, 5.3
- Community Risk Reduction Procedures, 5.5
- Documentation and Evaluation, 5.6
  - Confidentiality of Results, 5.6.2
  - General Procedures, 5.6.1
  - Retaining Results, 5.6.3
- General, 5.1
- Public Relations, 5.4
- Training, 5.2

**Program Benefits**, Chap. 4
- Continuing Community Risk Reduction Programs, 4.4
- Education, 4.1
- Identification of Hazardous Conditions, 4.3
- Organizational Community Image, 4.2