

# *NFIRS 5.0 Self Study Program*

## *Introduction & Overview*

### *Objectives*

After completing the Introduction & Overview the student will be able to:

1. Describe the benefits of using version 5.0 of the National Fire Incident Reporting System (NFIRS).
2. Explain how the need to collect fire data led to the organization and development of NFIRS.
3. Identify the Modules that are included in NFIRS.
4. State the purpose of the NFIRS Handbook and Quick Reference Guide (QRG).

## Pre-Test Introduction

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1. NFIRS is an all-incident reporting system.
  - (a) True
  - (b) False
  
2. America Burning is the publication that realized and identified the need to collect data.
  - (a) True
  - (b) False
  
3. NFIRS is an abbreviation for the National Fire Incident Record Standard.
  - (a) True
  - (b) False
  
4. The first step in the data reporting process is for fire personnel to accurately record the circumstances of all incidents, using a reliable and consistent coding methodology.
  - (a) True
  - (b) False
  
5. The NFIC definition of a metropolitan member is a locality serving a population of more than 1,000,000 people.
  - (a) True
  - (b) False

*Incident Data  
Collection*

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## Incident Data Collection and Reporting

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An incident report is the written or electronic documentation that a fire or other incident occurred. It may be as brief as a basic fact statement or as lengthy as an extensive discussion of the incident, supported by photographs, witness statements, and laboratory test results. The length and complexity of the report will depend upon the nature and magnitude of the incident, state and local policies concerning data collection, the need for specific data, and the resources available for obtaining information and completing reports. They also depend on the training and motivation of the person filling out the report.

The incident should include a description of the circumstances related to the situation that was encountered, including: the cause; factors contributing to the magnitude of the incident; actions taken by the fire department to mitigate the incident; and a description of the casualties or the damage resulting from the incident.

*Purpose*

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## Purpose of the Incident Report

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There are three basic purposes for completing incident reports at the local level. First, it is a legal record of the fact that a fire or other incident occurred. The report provides official notification to people who may be required legally to know of the incident, such as the state fire marshal. Essentially, it reports the facts concerning an incident. In the case of a fire, it describes the particular property affected, why the fire occurred, how building components and fire protection devices performed, casualties or damage that resulted, and fire department actions taken.

Second, the report provides information to senior officials and fire department managers so they are kept informed about what is happening within areas of responsibility. This allows them to evaluate the performance of their units at an incident and to talk intelligently about the incident to the media and others. Furthermore, good information about a fire can motivate change in fire protection approaches in a community. Information about what is happening at the local level can even help motivate national changes. One example is a local requirement to provide automatic fire protection

sprinkler systems in residential dwellings. Without information that is obtained by keeping statistics about the problem of residential fires, it would be difficult to get legislation passed to require residential sprinkler protection.

The first two purposes of the incident report can be served by any reporting method that provides an accurate description of local incidents. However, the third purpose involves the need to collect data that is usable at the state and national level. Local fire departments needs, such as training and additional resources, can often be met by state and national sources. These resources are developed and made available based on the information collected on the local level. Therefore, information needs to be collected in a consistent format that will permit a meaningful aggregation of the data from many reports prepared from all types of incidents.

*NOTE: It is important that a single report serve the basic needs of several types of potential users. The data needed at the state and national level must be provided from what is collected locally. However, the locally collected data must also have an actual use at the local fire service level. It is difficult to routinely collect all of the data items that are likely to be needed by all types of potential users of the future. Compromises are needed between the ease of filling out an incident report and the potential uses of it.*

If data are only collected for the benefits of those outside the local area, the motivation and commitment to quality and completeness may diminish, with a resulting reduction in the usefulness of the data. Ease of use also helps to increase quality and commitment, thus increasing reliability. Reliable data increases its usefulness.

*Uniformity of  
Incident  
Reporting*

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## Uniformity of Incident Reporting

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To achieve uniformity in reporting, the United States Fire Administration (USFA), within the Federal Emergency Management Agency (FEMA), has developed the National Fire Incident Reporting System (NFIRS). This system is based on the work of the National Fire Information Council (NFIC) and the National Fire Protection Association (NFPA) Technical Committee on Fire Reporting.

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The NFPA Technical Committee on Fire Reporting is responsible for developing and maintaining NFPA 901, Standard Classifications for Incident Reporting and Fire Protection Data. This standard establishes basic definitions and terminology for use in incident reporting and serves as a means of classifying data so that the information can be aggregated.

*Benefits of  
NFIRS*

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**Benefits of NFIRS**

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At the local level, a fire department can derive many benefits from a good incident reporting system, particularly if it is based on NFIRS. Some of the following uses involve no more than totaling data from the system. Others require more extensive analysis. Many of these benefits can be derived at the state and national levels when a database is used that combines the fire experience of many local fire departments. It is important to note that while fire is the focus of this examination, similar benefits can be derived for all other types of incidents that fire departments respond to. These incidents include emergency medical calls and hazardous materials incidents.

All the benefits of using NFIRS can only be discovered through use of the system over time. As issues come to the surface and events occur, new opportunities to use the data appear.

**Describing a community's fire problem:** It is possible to pinpoint where fires are occurring, what factors are most responsible for ignitions, and what casualties and damage are occurring as a result of fires. With the problem placed in proper perspective, the most serious and solvable aspects of the fire problem can be tackled first.

**Supporting budget requests:** Concerns about unnecessary taxes lead municipal officials to cut public agency budgets and only add new programs that are shown to be particularly needed. Fire department managers need to be able to support budget requests and requests for new funding with a statistical foundation. Accurate and complete statistics put the fire problem in perspective with other municipal concerns and help community officials realize the consequences of budget cuts and the value of new fire department programs. New programs can involve the delivery of better emergency

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services such as advanced emergency medical services and higher levels of hazardous materials mitigation response.

Supporting code refinements: A good database permits fire departments to identify and describe fire incidents that might have developed differently or might not have occurred at all if certain code changes had been in place. Loss statistics from other areas with more stringent codes also can involve complex analysis. However, no incident database can address all the subtleties of code impact.

Evaluating code enforcement programs: It is not sufficient to have codes on the books if they are not properly implemented and enforced. NFIRS data can be useful when evaluating a fire loss experience. Data can provide information that makes it possible to see what types of losses are occurring in occupancies that have characteristics that do not meet existing code regulations. It is also possible to document whether or not occupancies have desired features such as exit signs, alarm systems, and sprinkler systems.

Evaluating public fire education programs: Not all problems can be solved by establishing and enforcing codes and standards. There are certain aspects of the fire problem that can only be controlled by public education programs that provide people with information about the danger of fires and other hazards, how to prevent emergencies, and how to respond properly when emergency situations occur. It is important to know as much as possible about the exact problem to be addressed. Appropriate evaluation criteria must be in place to measure whether an education program is in fact helping to solve the problem.

Planning for future fire protection needs: Many communities and fire departments are becoming very active in planning for emergencies and are developing master plans. It is essential that the fire service continue these efforts and increase their involvement in planning efforts. A good NFIRS database will allow a fire department to compute fire rates relative to particulars such as a population type or a building type. Monitoring response times to incidents is another important planning function. Proper planning, based on the characteristics of a community's fire problem, will support better fire protection in the future. Planning supports better fire protection based on changing demography and planned community growth. NFIRS data provides input on decisions

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about the type and level of fire protection that a community will provide. Requirements can be established for developers who construct buildings that may exceed present fire department capabilities.

Improving allocation of resources: Proper analysis of fire incident data can show where a redeployment of existing resources can provide an improved level of fire protection within a community.

Scheduling non-emergency activities: Training sessions, in-service inspections, and other non-emergency activities are important aspects of a fire department's function. A fire department can track the times that there is increased need for emergency response. Then the department can plan non-emergency activities during times when they are least likely to be interrupted by calls.

Regulating product safety: Particularly at the national and state levels, a fire reporting system can be useful in measuring the size and severity of problems associated with various types of consumer products. Data can identify the most commonly involved products and the ways these products become involved in fire. This reporting system can help manufacturers decide how they can redesign their products to make them safer. The system can also prompt changes in standards and regulations to require safer products. Information compiled through use of the NFIRS data can be incorporated into public fire education programs to advise consumers of the dangers associated with using certain products.

Support for fire engineering models: Fire engineering computer models have been developed to assist in many ways with determining whether or not building and fire protections designs meet the intent of codes and standards. For example, there are models that measure fire growth given particular types of room contents. There are also models to predict how fast smoke will fill a room and how fast sprinkler systems will operate. Data output from the NFIRS reporting system is used by engineers during computer model design and refinement. Data is also used as input information which is entered into some types of computer models.

Support for fire engineering analysis: Fire protection engineers sometimes perform NFIRS data analysis as part of the development of new engineering methods. In some cases, data is analyzed to determine about how well current methods of fire protection and defense are working.

**THE DATA-BASED DECISION-MAKING PROCESS**

Fire personnel accurately recording the circumstances of all incidents and using a reliable and consistent coding methodology are the first steps in the data reporting process, a key for developing profiles that affect a department's decisions. Incident data can be used by fire departments to document their experience, support all types of management decisions, and identify, prepare and justify budget requests.

Local agencies then can send their incident data to the state, where the information is combined with data from other fire departments into a statewide database. By combining data at the state level, trends in fire problems can be detected that are often too infrequent to be seen at the local level and a state fire profile developed.

Trend information can be used to target fire safety and prevention programs. It can also be used to assist in identifying the safety level of various products and standard practices. For these reasons, fire incident reporting is mandatory in many states.

State incident data is sent to the National Fire Data Center (NFDC) at the United States Fire Administration for further analysis. The NFDC can compare and contrast statistics from states and large metropolitan departments to develop national public education programs, make recommendations for national codes and standards, and guide allocation of federal funds. The NFDC also can identify consumer product failures, identify the focus for research efforts, and support federal legislation, such as the Hotel/Motel Fire Safety Act (Pub. L. 101-391 – Sept. 25, 1990).

At the national level, data combined from participating states can be used by the information partners. These organizations use national-level fire data to establish policy, allocate funds, and set standards to affect the fire problem. Decision-making

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based on incident patterns identifies common areas for prevention and high-risk products. Differences in data based on geographic areas are carefully compared so partners in various regions can take steps to correct their specific weaknesses.

The purpose of the data reporting system is to provide timely and reliable information to support the decision-making process, whether it is a fire captain identifying target hazards and properly deploying resources based on incident information, or the Consumer Product Safety Commission (CPSC) banning unsafe products like flammable sleep wear.

*Development  
of NFIRS*

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**Development of NFIRS**

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The need to collect data was realized and identified in 1972 when *America Burning* was published. *America Burning* recommends, "...that a national fire data system be established to provide a continuing review and analysis of the entire fire problem" (page 9). The United States Fire Administration (USFA), which was created based on this and other recommendations in *America Burning*, is the agency that evaluates the nation's fire problem.

Among other duties, the USFA is charged with providing for a nationwide exchange of information pertaining to fire and life safety and with having data collection, storage, retrieval, and dissemination capability.

Early data collection efforts varied throughout the country. The first states to pilot test the National Fire Protection Association (NFPA) Pamphlet 901 system were California, New York, Ohio, and Oregon. Version 1 NFIRS software, developed by the National Fire Prevention and Control Administration (NFPCA – the predecessor to USFA), was used in Minnesota, Missouri, and South Dakota. The program started in 1975 with a "NFIRS Users Conference." Version 2 software was completed between 1976 and 1978; Version 3 development began in 1979, and Version 4 in 1985. Version 4.1, was implemented in 1990 and includes the Hazmat Module. Version 5, the latest version, was implemented in 2000. It is an all-incident reporting system including emergency medical services, wildland fires, arson, HazMat, personnel, and apparatus/resources.

*National Fire  
Information  
Council*

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National Fire Information Council (NFIC)

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The critical need for a national network to collect, analyze and share fire data led to the formation of the National Fire Information Council. By participating in a uniform National Fire Incident Reporting System (NFIRS), Council members are dedicated to “fighting fire with facts.” From its meager beginning with just six states in 1975, the Council now encompasses 42 states, the District of Columbia and 31 metropolitan jurisdictions – with nearly 14,000 fire departments participating throughout the nation.

NFIC’s unique partnership of Federal, state and local participants have proven to be one of the most successful, productive, and cost-beneficial programs ever attempted on a national level. The Council’s partnership with the U.S. Fire Administration/FEMA is through a cooperative agreement that provides Federal funding to support specific program objectives. Strategies to “fight fire with facts” include:

- System development and expansion
- Integration of new computer information technologies
- Technical assistance to member states/metros
- Regional and national training workshops
- Data analysis
- Use of data for public fire safety awareness education

*Council  
Objectives*

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Council Objectives

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Effectively working towards its goal to establish the United States as the number one nation in fire safety, the Council has developed these objectives:

- To preserve lives, property, and natural resources from the effects of destructive fires.

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- To enhance the quality of life for all people by employing NFIRS data to assist in developing effective fire prevention and protection strategies.
- To increase the understanding of the causes of destructive fire by combining experience at the community, state, and national levels.
- To provide data essential to the evaluation of existing and proposed fire safety laws, standards, codes and regulations.
- To identify behavioral factors that contribute to the causes of accidental fires.
- To increase the awareness of all people about the hazards of fire and how to defend themselves against those hazards.
- To provide a comprehensive fire information resource to legislators; code developers; federal, state, and local government agencies; fire and building officials; researchers; fire safety educators; the media; public and private sector organizations; the business community; and the general public.
- To promote a positive fire safety attitude in people's daily activities – whether at home, work, or play.

All over the nation, dozens of prominent organizations participate in and benefit from Council activities and data. These organizations span the media, industry, government, and educational institutions. In addition, there are many additional fire-related groups and associations.

To coordinate its broad national representation, the Council is organized into four geographical regions. Three state members from each region serve on the Council's Board of Directors along with three Directors who represent the Metropolitan city members (those fire departments serving a population of more than 500,000).

The Council, with its broad National Fire Incident Reporting System network, is providing valuable data to an extensive range of decision-makers in both the private and public sectors.

*The  
All-Incident  
Reporting  
System*

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## The All-Incident Reporting System

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The USFA, as well as many states, is mandated by law to collect information on fires, and rely on the nation's fire service to meet that requirement through the National Fire Incident Reporting System (NFIRS). NFIRS (Version 4.1) cannot adequately meet today's fire service information needs because it was designed to collect only fire information, which represents a fraction of the tasks performed by the fire service. The new NFIRS (Version 5) addresses the fire service's need for a system that accounts for the full range of fire department incidents.

NFIRS program managers representing 42 states and 34 metro fire departments have learned many lessons about fire reporting during the past 20 years. With the input of state Fire Marshals, Metro Fire Chiefs, local Fire Department personnel, and customers such as the IAFC, IAFF, NFPA, CPSC, and NHTSA, they developed NFIRS 5.0, guided by the following specific design objectives:

- Create an All-Incident Reporting System. To keep pace with the rapidly changing activities of the fire service, NFIRS 5.0 must be designed as an "all-incident" system including, but not limited to: Fire, EMS, HazMat, Wildland, and Arson incidents.
- Inclusion of new incident types must be supported by the NFIRS 5.0 Standard.
- Develop a set of reporting codes that can accurately, reliably and easily describe any incident with all data readily collectible, reportable and usable.
- Promote uniformity of incident reporting by establishing the NFIRS 5.0 coding methodology as the accepted national standard, with the consensus of the USFA, NFIC, NFPA, IAFC, IAFF, NASFM and other information partners.
- Make the system hardware platform independent. The NFIRS 5.0 Design Specifications must support the development of a data collection system on any hardware platform to ensure its universal acceptance and capability to integrate with existing system, where needed.

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- Make the system application software/database independent. The NFIRS 5.0 Design Specifications must support the development of a data collection system using industry standard software that is non-proprietary to the specification. This helps to ensure universal acceptance of NFIRS 5.0 and allows for integration with existing systems.
- Map the historical data from the old system to the new system where feasible.
- Preserve the ability for a state to collect Version 4.1 incident reports without maintaining a separate database.

*Benefits*

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**Benefits**

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The new system is modular in design and only uses the modules necessary to describe the incidents. Data is collected for all incident types in one basic module. More detailed information can be collected with other modules to further profile fires, structure fires, civilian fire casualties, fire fighter casualties, hazardous materials, wildland fires, arson, apparatus, personnel, and EMS incidents as necessary.

The modular design makes the system easier to use because only the data required to profile the extent of the incident is captured. Accuracy and reliability have been improved by modifying the coding system.

*Ease of Use*

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**Ease of Use**

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- Simplifies look-ups by alphabetizing coding lists with multiple choices for the same code.
- Merges the codes ending in 9 and 0. Version 4.1 required a distinction between the codes ending in 9, “not classified”, and the codes ending in 0, “insufficient information to classify further” The proper distinction between these two codes is often not observable in the field.

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- Eliminates compound codes. Some of the previous codes have contained embedded multiple questions. NFIRS 5.0 splits these elements, since they are often confusing to the reporter and result in ambiguous or erroneous answers. Although this may increase the number of fields, the choices will be clearer among alternatives and the number of codes are decreased. For example, “Equipment Involved in Ignition” in Version 4.1 is a long, complex list of equipment that includes factors on power source and use. Version 5.0 creates just three categories (Equipment, Portability, and Equipment Power Source) to make coding easier, more accurate, and specific.
- Provides for abbreviated reporting of self-contained, non-loss fires by using a basic incident form that can be completed with as little as three look-ups. This may represent the majority of all fire incidents in many jurisdictions.
- Abbreviates paths through the system for nuisance fires where there have been no losses or casualties. This will eliminate the amount of information that needs to be entered into the system.
- Documents small spills of common hazardous materials on the basic form. More detailed information can be provided on the optional hazardous materials module if a serious release of hazardous materials occurs.

*Compatibility*

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**Compatibility**

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- Compatible with current electronic technology. Designed for electronic media technology with design specification for data libraries, programming, and flow charts.
- Designed to support current and anticipated technologies: client-server, object-oriented database; and Internet WEB server technology.
- Includes a mapping strategy back to Version 4.1 to provide for statistical analysis of historical data.

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- Allows for the inclusion of optional state or local data storage and retrieval. This data is for the use at the local or state level only.
- Recognizes that there may be a need for additional data elements to meet the local situation.

*Comprehensiveness*

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**Comprehensiveness**

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- Collects behavioral information on multiple levels, e.g., children playing with fire, age range, what they used to set the fire, and if they were alone at the time of the incident.
- Formats the address to allow computerized queries and street-based address matching for Geographic Information System (GIS) purposes.
- Breaks fire losses into property and contents to better define structure losses. Pre-incident value is also now captured as an optional data element.
- Captures specific property information about multiple on-site materials and their use to allow identification of non-intended or illegal uses, such as residential drug houses/laboratories.
- Notes information on the number of acres burned for all fires. Specific and detailed information about wildland or large open fires is captured for those fires only.
- Represents missing (not-reported) data as blanks system wide. Missing data will no longer be lumped in with undetermined default code values.

*Reliability*

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**Reliability**

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- Profiles fire prevention and code issues that affected the fire.

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- Captures multiple factors contributing to the causes of the fire for the first time. This allows identification of juvenile fire setters, gang involvement in fires, alcohol and cigarette interaction, as well as drugs and youth involvement by age categories.
- Expands on equipment involved in starting fires. Detailed tracking of specific equipment involved in fire ignitions is possible.
- Highlights factors that affect fireground suppression. Burglar bars, high-rack storage, balloon construction and unprotected vertical openings are some examples of this information.

*Usefulness*

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**Usefulness**

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- Provides better information on the impact of fire protection features.
- Includes carbon monoxide incidents.
- Notes one-time information for special studies purposes.
- Groups fire service resources for apparatus and personnel by use at the incident. Specific, detailed information about the use of fire service personnel and apparatus will be collected in a standard way for the first time in optional modules. This will permit staffing studies on several levels of use.
- Outlines detailed information on the impact of fires on buildings. Information on the building's size, number of stories and status is now available. Specific information on fire origin, damage patterns, flame spread, and materials contributing to flame spread is captured as well.
- Expands information on detectors and automatic suppression systems. Information on the system's presence, range, power supply, effectiveness, operation, and reason for failure is included.

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- Extends casualty information to improve understanding of the relationship of the casualty to factors contributing to injury, as well as the nature and cause of injuries.

*NFIRS 5.0  
Module  
Overview*

**NFIRS 5.0 Module Overview**

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Version 5.0 uses a modular format to increase the accuracy and applicability of data collection for all incident types. The overall number of data fields has been increased. However, because 5.0 takes advantage of selective field entries based on incident type, the number of fields used to define an incident has decreased compared to Version 4.1. Version 5.0 has eleven modules that are described below.

Each module (form) in the system is designed to collect specific data. The modules do, however, have some characteristics in common. Any portion of a module identified by a letter – A, B, etc. – is called a section. Sections may be subdivided into blocks such as A1, A2, etc. A block can contain one or more lines and each entry within a line is called a field. Codes are used, in some cases, to capture data within a field.

Whenever a data-entry point is marked with a star, the information requested is considered essential and the section, block, line, and/or field must be completed.

*Basic Module*

**NFIRS 1 – BASIC MODULE**

The purpose of the Basic Module is to collect information common to all incidents. The Basic Module is required for every type of incident to which a department responds. Entries in the Basic Module determine what other modules need to be completed based on the type of incident involved. For example, all types of incidents are reported in the Basic Module, but fires require additional reporting using the Fire Module (NFIRS-2). Some fires in structures require the completion of the Structure Fire Module. Table 1 gives guidance on when the Fire Module should be completed.

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The Civilian Fire Casualty Module (NFIRS-4) and the Fire Service Casualty Module (NFIRS-5) are required when there are casualties associated with a fire incident. The Fire Service Casualty Module should also be completed when there are fire service casualties at all other incident types as well. Optional modules include the EMS, HazMat, Wildland Fire, Apparatus, Personnel, and Arson Modules. The type of incident reported or the nature of a particular incident, such as the release of hazardous materials at a fire after the arrival of the fire department, may trigger one or more of these additional modules if your fire department is using these options. The amount of information needed in each module varies based on the type of incident, associated casualties, and property losses.

**TABLE 1.**

| <b>INCIDENT TYPE</b>                         | <b>FIRE MODULE GUIDANCE</b>                   |
|--|---|
|  | Complete:                                     |
| Buildings-111                                | Fire and Structure Fire Module                |
| Special Structure/Not a Building -112        | Fire Module and "I" Block on Structure Module |
| Confined Fire Within Structure -113-118      | Basic Module                                  |
| Mobile Property Used as a Structure -120-123 | Fire and Structure Module                     |
| Vehicle-130-138                              | Fire Module                                   |
| Vegetation, Not Cultivated - 40-143          | Fire or Wildland Module                       |
| Outside Rubbish-150-155                      | Basic Module                                  |
| Special Outside Fire-160-164                 | Fire Module                                   |
| Cultivated Vegetation-170-173                | Fire Module                                   |

**NFIRS-1 includes information on:**

- Fire Department Identifier
- Location
- Incident Type
- Dates and Times/Shifts/Special Studies
- Actions Taken
- Dollar Losses and Values
- Casualties

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- Hazmat Releases
- Property Use
- Persons and Entities Involved

*Fire Module*

**NFIRS 2 – FIRE MODULE**

The Fire Module is used for all fires except for those contained fires with incident type codes 113-118, or outside rubbish fires 150-155, unless the contained fire has associated injuries, deaths or property loss.

The optional Wildland Fire Module can be used instead of the Fire Module for “Incident Types” 140-143, 170-173, and 632.

**NFIRS-2 includes information on:**

- Property Details
- On-Site Materials
- Ignition: Area of Fire Origin, Source of Ignition, Material Ignited, Factors Contributing, Human Issues, Equipment Involved
- Human Factors Involved
- Mobile Property Description
- Fire Origin and Spread Description
- Fire Suppression Factors

*Structure Fire  
Module*

**NFIRS 3 – STRUCTURE FIRE MODULE**

The Structure Module (NFIRS-3) should be completed for all structure fires that extend beyond a non-container. A structure is an assembly of materials forming a construction for occupancy or use to serve a specific purpose. This includes, but is not limited to, buildings, open platforms, bridges, roof assemblies, open storage or process areas, tents, air-supported structures, and grandstands. Like the other modules, the Structure Module is divided into sections and further subdivided into blocks. The sections and blocks ask for information on different factors or items involved in the structure fire.

**NFIRS-3 includes information on:**

- Structure type
- Building status, height, main floor size

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- Fire origin, fire spread, number of stories damaged by flame
- Material contributing to flame spread
- Presence of detectors, detector type, detector power supply, detector operation, detector effectiveness, detector failure reason
- Presence of automatic extinguishments system (AES), type of AES, AES operation, AES effectiveness and AES failure reason

*Civilian Fire  
Casualty  
Module*

**NFIRS 4 – CIVILIAN FIRE CASUALTY MODULE**

The Civilian Fire Casualty Module should be completed only for fire casualties. A fire casualty is a person who is injured or killed as a result of a fire, and includes injuries or deaths from natural or accidental causes sustained while involved in the activities of fire control, attempting rescue, or escaping from the dangers of the fire. Fires include incident types 100-199. An entry in H1 of the Basic Module will initiate the completion of this module.

The Civilian Fire Casualty Module is designed to provide a better understanding of human reaction to fire. Not just major fires, but those likely to be encountered by the fire department on a more frequent basis. In this way, public safety education programs can be targeted to address these behaviors. Furthermore, building codes can be modified in recognition of how people will likely react in fire conditions.

**NFIRS-4 includes information on:**

- Person's identification
- Demographic information
- Injury causes, including human and contributing factors
- Activity when injured
- Location when injured
- Symptoms and portion of body injured
- Disposition

*Fire Service  
Casualty  
Module*

## **NFIRS 5 – FIRE SERVICE CASUALTY MODULE**

The Fire Service Casualty Module is used when fire service personnel suffer an injury, fall, or exposure involved with any incident. When the Fire Service Casualty Module is used, at a minimum the Basic Module must also be completed. Other modules may also be required depending on the incident type.

An exposure is when fire service personnel are exposed to a toxic substance or harmful physical agent through any route or entry (e.g., inhalation, ingestion, skin absorption, or direct contact). Exposures can be reported regardless of the presence of clinical signs and symptoms. An exposure fire is NOT the same as an exposure to personnel.

Firefighter casualty information can be used by Health and Safety Officers to reduce risks at incidents.

### **NFIRS-5 includes information on:**

- Person's identification and age
- Injury time
- Assignment and activity at time of injury
- Severity and injury and disposition
- Location of victim when injured
- Symptoms and portion of body injured
- Cause of injury, factors contributing, object involved
- Where injury occurred
- Equipment profiles

*EMS Module*

## **NFIRS 6 – EMS MODULE**

The EMS Module is an optional module. It should be used when that option has been chosen by your state or local authorities. The purpose of the EMS Module is to gather basic data as it relates to the provision of emergency medical care to the community. It may be used by both responding EMS unit(s) and fire suppression unit(s) that provide emergency medical services. The EMS Module is not intended to replace or otherwise interfere with state or local EMS patient care reporting requirements. Instead, it is the intent that the data elements contained in this model be viewed as "core elements" and be included in the design of upgrades or new EMS data collection systems. The desire is that EMS data

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that contains these core elements would be exported to the NFIRS system and include as an integral part of the national fire database.

The EMS Module should be completed when Incident Type 311, 321, 322, or 323 is reported in the Basic Module (NFIRS-1) or when an injury is treated in any other incident type.

*NOTE: The EMS module does not replace the Civilian Fire Casualty Module in cases where a civilian injury or death occurs as a result of fire. data on fire service injuries or deaths are reported on the Fire Service Casualty Module.*

One EMS Module should be used for each patient and the number of modules submitted for an incident should match the “Number of Patients” entered in block B of the paper form.

**NFIRS – 6 includes information on:**

- Incident location and type
- In-service dates and times
- Provider assessment
- Victim demographics
- Injury/illness description
- Procedures used
- Safety equipment involved
- Care level
- Patient status

*HazMat  
Module*

**NFIRS 7 – HAZMAT MODULE**

The “optional” Hazmat Module is used when the Basic Module (Block H3 – Hazardous Materials Release) indicates “other” for hazardous material. Its purpose is to document REPORTABLE hazmat incidents. Generally speaking, a reportable hazmat incident is one in which:

- Specialized hazmat resources were dispatched or used, or should have been dispatched or used, for assessing, mitigating, or managing the situation; or
- Releases or spills of hazardous materials exceed 55 gallons.

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Nothing in this definition is meant to alter compliance with state or local Haz Mat reporting requirements. In states with mandatory reporting, the state program manager determines which optional modules (EMS, HazMat, Wildland, etc.) are to be submitted to the state.

The HazMat Module permits hazardous materials incidents to be profiled in depth for incident-management analysis and response-strategy development. It collects relevant information on:

- Hazardous materials identification
- Container information
- Release amounts and location
- Actions taken
- Mitigation factors

*Wildland Fire  
Module*

**NFIRS 8 – WILDLAND FIRE MODULE**

Historically, NFIRS data has not proven useful in understanding the nature and magnitude of the wildland fire problem. The optional Wildland Fire Module attempts to rectify this problem by capturing data about the number of acres burned, the type of materials involved, conditions that contribute to the ignition and spread of wildland fires, and the resources needed to control and/or extinguish them.

The purpose of the Wildland Fire Module is to document REPORTABLE wildland fires. Generally speaking, a reportable wildland fire is:

Any fire involving vegetative fuels that occurs in the wildland or urban-wildland interface areas, including those fires which threaten or consume structures.

To better understand the role of fire in the wildland ecosystem, prescribed fires are also included in this definition of reportable fires.

Use the “optional” Wildland Fire Module is when the Incident Type is coded as Forest, woods or Wildlands Fire (Incident Type 141), or a Prescribed Fire (Incident Type 632). In these cases, the Wildland Fire Module would be used in-lieu-of the Fire Module.

**NFIRS-8 includes information on:**

- Property details
- Fire cause
- Ignition information
- Fire suppression and management
- Mobile property type
- Equipment involved in ignition
- Weather data
- Fuel model at origin
- Total acres burned
- Property management
- Person responsible
- Fire behavior

*Apparatus or  
Resources  
Module*

**NFIRS 9 – APPARATUS OR RESOURCES MODULE**

The Apparatus Module (NFIRS-9) is an optional module that is used to help manage and track apparatus and resources used on incidents. The Personnel Module (NFIRS-10) should be used when details about apparatus and personnel are needed.

**NFIRS-9 includes information on:**

- Apparatus identification and type
- Dispatch, arrival, clear dates and times
- Actions taken by each apparatus
- Number of personnel used on each apparatus

If the Apparatus Module is used, the Basic Module must also be completed.

*Personnel  
Module*

**NFIRS 10 – PERSONNEL MODULE**

The Personnel Module (NFIRS-10) is an optional module that is used to help manage and track personnel and resources used on incidents. This module can be used in place of the Apparatus/Resource Module (NFIRS-9) if more detail on personnel is needed.

**NFIRS – 10 includes information on:**

- Apparatus identification and type
- Dispatch, arrival, clear dates and times
- Use
- Actions taken by each apparatus
- Personnel ID, rank, actions taken

Note: The personnel module or the apparatus/resources module may be used, but not both.

*Arson Module*

**NFIRS 11 – ARSON MODULE**

The optional Arson Module may be used whenever the Cause of Ignition, (NFIRS-2, E) is coded as “intentional,” or as “under investigation.” There is no need for a distinction made about whether or not a crime has occurred. Neither is it necessary to make a determination of criminal intent.

The Arson Module may also be used when the fire is under investigation or in cases where the cause is Undetermined after investigation.”

The Arson Module may also be used to document juvenile-set fires, whether determined to be intentional or not. This information will permit analysis of juvenile firesetting trends including intervention strategies and repeated activity.

Nothing in this definition is meant to alter or affect compliance with state or local incident reporting requirements. In states with mandatory reporting, the state program manager determines which optional modules (EMS, HazMat, Wildland, Arson, etc.) are to be submitted to the state.

The Arson Module consists of two parts; a local investigation module which permits a fire department or arson investigation unit to document certain details concerning the incident; and a juvenile firesetter section which identifies key items of information that could be used for local, state and national intervention programs.

Many arson investigation units utilize an “arson information management system” to collect and compile information on arson incidents. This Module is not intended to replace such systems, but rather to identify those data elements that could

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be exported to the NFIRS system and included as an integral part of the U.S. Fire Administration (USFA) National Fire Database and the Bureau of Alcohol, Tobacco and Firearms, Arson and Explosives National Repository (BATF).

**The NFIRS-11 includes information on:**

- Agency investigating the incident
- Case status
- Suspected motivation factors
- Entry methods, devices, other information
- Property ownership
- Laboratory used

**The Juvenile Firesetter section includes information on:**

Age, gender, race, and Ethnicity of each juvenile involved.

- Family Type
- Suspected motivation and risk factors
- Disposition

The juvenile firesetter is not an additional module. It is a continuation of the Arson Module if the firesetter is under 18 years old.

*Supplemental  
Form*

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**NFIRS 1S – Supplemental Form**

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The Supplemental Form should be used as a local option for recording additional persons or entities involved in the incident for those departments that use paper-based incident reporting. The Supplemental Form is not a module. It adds flexibility to any incident report by expanding the ability to collect an additional amount of this basic module data.

*The Narrative  
Report*

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**The Narrative Report**

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The incident report serves as an official, legal record of an incident and must accurately describe the incident and the actions taken to mitigate it. While many of these facts may be collected in uniform, coded fields – some information can best be presented in a detailed narrative.

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Information that should be included in the narrative includes:

- Observations and actions taken – list them in logical order (usually chronological). Paint a complete picture of the scene; summarize the incident
- Describe the scene conditions and the condition of the premises when you left
- Describe property damage and remaining hazards

*NFIRS 5.0  
Resources  
Reference  
Guide  
(Handbook)*

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**NFIRS 5.0 Resources**

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**REFERENCE GUIDE (HANDBOOK)**

This instructional handbook is used in the preparation and use of National Fire Incident Reporting System (NFIRS) Version 5.0 modules. The NFIRS (pronounced “INFURS”) was designed as a tool for fire departments to report and maintain computerized records of fire responses and other fire department activities in a uniform manner. This system is made available to fire departments by the Federal Emergency Management Agency through the U.S. Fire Administration.

A series of basic phrases with number codes are used to describe the incidents in the system. The Handbook offers both alphabetic and numeric lists of codes. Many of the descriptive phrases were developed in cooperation with the National Fire Protection Association and are based on NFPA 901 – Standard Classification for Incident Reporting and Fire Protection Data. Appropriate codes are included in the Handbook for your convenience.

This Handbook represents the fifth version of NFIRS developed thus far. Version 5.0 is a modification and improvement of previous versions. Most of the improvements are the result of suggestions made by participating fire departments and state agencies and representatives from the National Fire Information Council (NFIC). The information contained in the Handbook is based on almost 20 years of experience in NFIRS fire data collection by up to 42 states and 36 major metropolitan areas. More importantly, well over 14,000 of this nation’s fire departments are supplying NFIRS data.

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Aside from being an excellent fire department management tool, the system provides data for fire analysis to detect trends on a local, state, and nation-wide basis. The resulting information is used to help reduce the needless loss of life and property due to fire in this country.

*Quick  
Reference  
Guide*

**QUICK REFERENCE GUIDE (QRG)**

The QRG can also be used as NFIRS 5.0 modules are prepared. It includes a brief description of how data is to be entered in each section, block, line, and field of each module. There are also code listings – many grouped into categories and some alphabetical – to make field entries. The last portion of the QRG contains abbreviations for street types; states, territories, and provinces; and countries.

*Summary*

**SUMMARY**

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This unit has provided a brief overview of the development of NFIRS, including the need to collect data as identified in America Burning. The role of the U.S. Fire Administration in data collection was also described.

Some advantages of NFIRS 5.0 – ease of use, compatibility, comprehensiveness, and preciseness of reporting were listed and explained.

The eleven modules in the system were identified and the intended use of each was introduced.

Finally, two valuable references that can be useful in completing the modules – the NFIRS Handbook and Quick Reference Guide – were described.

## Activity

### Review of Introduction & Overview

This activity will help you to review the important topics covered in the Introduction Overview. During this activity, you will check your understanding of the issues discussed in the Introduction Overview. Work from memory as you complete this activity.

1. Describe one benefit of participating in NFIRS.

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2. Name the publication that recommended the establishment of a national fire data system.

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3. Explain how your fire/rescue department benefits from the data collected using NFIRS.

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**NFIRS 5.0 SELF STUDY PROGRAM  
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4. Explain how the public benefits from NFIRS.

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5. Explain how you or someone in your family benefits from NFIRS.

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6. Describe one new way that you, your department, or your community could benefit from NFIRS.

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## Test for Introduction

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1. What organization, with the slogan "Fighting Fire with Facts", members are participating states and metropolitan fire departments in NFIRS?
  - (a) USFA
  - (b) IAFC
  - (c) NFIC
  - (d) NFPA
  
2. Which module is not a required module?
  - (a) Basis
  - (b) EMS
  - (c) Structure
  - (d) Civilian Fire Casualty
  
3. Which module is a required module?
  - (a) HazMat
  - (b) Arson
  - (c) Fire
  - (d) Wildland Fire
  
4. Which publication contains the NFIRS codes and a brief overview of the system and data elements?
  - (a) Reference Guide
  - (b) Handbook
  - (c) American Burning
  - (d) QRG
  
5. Which is not an NFIRS feature?
  - (a) Simplified look-ups by alphabetizing code
  - (b) Abbreviates paths for nuisance fires
  - (c) A comprehensive EMS patient care report.
  - (d) Documents small spills of common HazMat on the basic module