

January 25, 2021

**Supporting Statement for
Paperwork Reduction Act Submissions**

OMB Control Number: 1660 - 0069

Title: National Fire Incident Reporting System (NFIRS) v5.0

Form Number(s): FEMA Form National Fire Incident Reporting System (NFIRS) v5.0

**COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL
METHODS**

A Supporting Statement, including the text of the notice to the public required by 5 CFR 1320.5(a)(i)(iv) and its actual or estimated date of publication in the Federal Register, must accompany each request for approval of a collection of information. The Supporting Statement must be prepared in the format described below, and must contain the information specified in Section A below. If an item is not applicable, provide a brief explanation. When Item 17 or the OMB Form 83-I is checked “Yes”, Section B of the Supporting Statement must be completed. OMB reserves the right to require the submission of additional information with respect to any request for approval.

B. Collections of Information Employing Statistical Methods.

When Item 17 on the Form OMB 83-I is checked “Yes”, the following documentation should be included in the Supporting Statement to the extent it applies to the methods proposed:

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g. establishments, State and local governmental units, households, or persons) in the universe and the corresponding sample are to be provided in tabular form. The tabulation must also include expected response rates for the collection as a whole. If the collection has been conducted before, provide the actual response rate achieved.

Note: response rate means: Of those in your respondent sample, from what percentage do you expect to get the required information (if this is not a mandatory collection).

The nonrespondents would include those you could not contact, as well as those you contacted but who refused to give the information.

Based on data from the National Fire Protection Association (NFPA), there were an estimated 30,100 fire departments in the United States in 2012. For the same year, approximately 23,000 departments reported incidents to NFIRS - 76% percent of fire departments estimated to be in the United States.

Expected Response Rates for This Collection

All fire departments in the country can access the reporting system and are asked to report all types of incidents that occur. Fire departments that report to NFIRS have access to tools for reporting. USFA expects participation to remain high.

USFA does not use targeted statistical sampling since the goal is to record all fire incidents that occur in any given year. USFA understands that there are some departments that fail to report, but USFA has taken efforts to increase their participation. This is intended to be a total 100 percent count of fire incident data, not merely a sample.

USFA relies on four factors for valid representation of the NFIRS data:

- 1) historically high levels of participation of fire departments in the database,
- 2) wide geographic distribution of participating fire departments,
- 3) diversity of community sizes as represented by participating fire departments, and
- 4) standardization of core information on fire and casualty reports.

Participation is voluntary and, therefore, USFA cannot guarantee that every fire incident is reported. However, the majority of them are reported. Some states do require fire departments to participate in their state reporting system. Currently, all 50 States, the District of Columbia, and the Native American Tribal Authorities participate in NFIRS. Because of the high reporting rates nationwide, USFA believes that NFIRS is representative of fire departments across the country.

In fire data analyses at the national level, USFA uses at least three years of data to account for fluctuations in fire department participation each year. It is important to stress

that USFA, along with other Federal agencies, do not use NFIRS data to derive State level fire estimates. NFIRS data are used to show the scope of the fire problem at the national level only.

Findings in *USFA's NFIRS Representativeness Study (2011)* show high reporting rates at the national and regional levels, fire departments across the country, whether they be career, volunteer, or protect communities of varying sizes, are well represented in NFIRS. Therefore, USFA concluded that NFIRS reporting departments are representative of the universe of all fire departments in the United States.

2. Describe the procedures for the collection, including: the statistical methodology for stratification and sample selection; the estimation procedure; the degree of accuracy needed for the purpose described in the justification; any unusual problems requiring specialized sampling procedures; and any use of periodic (less frequent than annual) data collection cycles to reduce burden.

-Statistical methodology for stratification and sample selection:

No targeted statistical methodology for stratification and sample selection are used for collecting NFIRS data because this collection is voluntary, not a sample. USFA completed the aforementioned terms of clearance report to show that the response rate, while not 100 percent, is adequate for the purposes of taking a nationwide inventory of incidents that occur.

-Estimation procedure:

Data are presented as scaled up national estimates or percentages rather than raw or absolute numbers from NFIRS. Most estimates will be derived as a percentage from NFIRS categories and applied to national level data from the National Fire Protection Association (NFPA). Since the calculation of national estimates may use various data sources,¹ adjustments for completeness, consistency, and reliability of data sources and data elements will be made. Extrapolations of the NFIRS data to national estimates will be calculated using gross totals from NFPA. To address for different proportions contained in the NFIRS and NFPA (due to the much larger sample contained in the

¹ National Fire Protection Association; National Center for Health Statistics; Bureau of the Census; Bureau of Alcohol, Tobacco, and Firearms; National Institute for Occupational Safety and Health; USFA-Firefighter Fatality Project; Consumer Product Safety Commission.

NFIRS), NFPA estimates of fires, deaths, injuries, and dollar loss for residential, non-residential, mobile and outside properties will be used as a starting point, with other estimates below this level based on proportions from NFIRS. Inevitably, some inconsistencies will remain until all estimates can be derived from NFIRS alone. To correct for non-response (missing data items) or for data reported as “unknown,” estimates will include adjusted percentages in which “unknown” values are distributed in the same proportion as “known” values.

-Degree of accuracy needed for the purpose described in the justification:

No statistical tests are computed on this data with any specified percentage level of confidence. Also, NFIRS data are generally reported as scaled up national estimates rather than absolute numbers.

-Unusual problems requiring specialized sampling procedures:

No specialized sampling procedures are used for NFIRS data collection.

-Any use of periodic (less frequent than annual) data collection cycles to reduce burden:

NFIRS data are reported every day of the year by fire departments responding to incidents across the county.

3. Describe the methods used to maximize response rates and to deal with nonresponse. The accuracy and reliability of the information collected must be shown to be adequate for the intended uses. For collections based on sampling, a special justification must be provided if they will not yield "reliable" data that can be generalized to the universe studied.

Every possible effort is taken to ensure that data estimates are accurate, valid, and reliable. To ensure the validity of the information and consistency in the data reporting, a set of standardized definitions for a common core of information on fire and casualty reports is used. States and fire departments across the nation are encouraged to participate. User-friendly data collection and reporting processes have been implemented and are frequently reviewed to meet users’ needs and to identify data gaps. USFA has taken special efforts to solicit participation from departments that do not report. Tools for reporting are equally available to all departments.

USFA completed and deployed a web-based data entry tool in the summer of 2010. The Data Entry Browser Interface (DEBI) is a one purpose tool for use by the fire service to

document incident information within NFIRS. While the functionality is the same as the NFIRS client Data Entry Tool (DET) that has been available for use for many years, DEBI allows entry of incidents using a standard web browser, eliminating the need to download, install, and configure client software.

Given that this is not a new data collection, there is ample empirical evidence and statistical information on data patterns. With over 1,000,000 new fire incident records reported annually, comprising a solid majority of all fires, a wide geographic distribution of fire departments, and representation of communities of all sizes, NFIRS has almost an 80 percent reporting rate. From 2009-2011, 24,026 departments reported fires to NFIRS in at least one of these three years resulting in a 79.7 percent reporting rate. USFA, after several studies regarding NFIRS representativeness, has determined that there is no known major bias that would have meaningful impact on national level estimates. Furthermore, fire data exhibit stability over time as evidenced by 10-year trends and the fact that results based on the full data set are generally similar to those based on part of the data. NFIRS data are further validated against other external data sources. It is expected that these measures will help to maintain sufficiently high reporting rates suitable to analysis.

Terms of clearance from USFA's previous NFIRS PRA submission required another study be prepared prior to this submission. That study, "USFA Response to the OMB 2013 NFIRS Terms of Clearance - A System Review and Assessment of Data Quality" has been provided. It is a review of the NFIRS system, the many robust data quality checks and mechanisms which are an integral part of the system, and an assessment of the data quality both at the state level and at the data element level. The data element assessment is of the most commonly used data elements in NFIRS data analyses. NFIRS data from the three most recent years available at the time of the document's production (2009-2011) were reviewed. Although the USFA has no authority over the NFPA survey, a section drawn from published NFPA documents covering the NFPA survey methodology is also included.

4. Describe any tests of procedures or methods to be undertaken. Tests are encouraged as effective means to refine collections, but if ten or more test respondents are involved OMB must give prior approval under the Paperwork Reduction Act.

Pilot Test

Numerous focus groups on NFIRS Version 5.0 were consulted for the development of the NFIRS 5.0 system and forms. Participants included but were not limited to:

- a. U.S. Census Bureau
- b. Bureau of Standards
- c. National Fire Protection Association
- d. Consumer Product Safety Commission

- e. State Fire Marshals
- f. Local fire department officials
- g. National Fire Information Council
- h. U.S. Chemical Safety and Hazard Investigation Board
- i. National Association of State Foresters
- j. USDA Forest Service
- k. Symposium on Medical Support for the Fire Service
- l. National Wildland Coordinating Group
- m. Bureau of Alcohol, Tobacco, and Firearms
- n. National Highway Traffic Safety Commission

5. Provide the name and telephone number of individuals consulted on the statistical aspects of the design, and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

Data are collected and forwarded to USFA through State Program Managers who are members of the National Fire Information Council (<http://www.nfic.org/>). Organizations consulted on statistical aspects of NFIRS include, but are not limited to:

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