

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

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.

NIST will use statistical methods to generalize the results of the information collection to the universe of U.S. fire departments (27,166 fire departments nationwide in 2005). The project team anticipates a response rate in excess of 10 percent (greater than 2,500 fire departments), from which the 128 departments will be randomly sampled using the stratification criteria. The sample will be stratified on several variables (including characteristics of emergency responders, population, response, special hazards, pre-planning, prevention programs, and apparatus and equipment) which are not expected to vary within a community in order to ensure variation for those elements. Replicates are included to assess uncertainty and reproducibility. The responses of significant interest to the study occur at the tail end of the distribution curve (lower probability-higher consequence events), such as multi-alarm fires resulting in significant economic losses and / or injuries to civilians or response personnel. This will necessitate collection of up to 50,000 unique responses in order to ensure adequate coverage of these events.

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.

The sample will be stratified on characteristics of emergency responders, population, response, special hazards, pre-planning, prevention programs, and apparatus and equipment which are not expected to vary within a community in order to ensure variation for those elements. A minimum of one replicate department will be selected for each stratification classification. It is anticipated that the number of responses will yield a 0.05 level of statistical significance, power of 0.80, and difference in means of approximately 5%.

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.

Distribution of the opportunity for project participation to the universe of fire departments will be conducted by each of the project participants, which represent a broad, objective coalition of respected organizations, including the Commission on Fire Accreditation International, the

International Association of Fire Chiefs, the International Association of Firefighters, NIST, and Worcester Polytechnic Institute. A significant literature review and project participation from nationally-renowned fire chiefs and tacticians during the first year of this project has identified all elements of community risk assessment in an effort to minimize specification error in the model. The significance of the coalition of project team members is expected to increase fire department response rates. In addition to training the respondents in the study objectives, data entry procedures, and intent of the data elements, the data collection will use reliable, objective measures of risk and mitigation strategies. Existing fire department measures of data elements will be preserved wherever possible to minimize reporting error or confusion during data entry.

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.

Not Applicable.

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.

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