SUPPORTING STATEMENT
U.S. Department of Commerce
National Oceanic & Atmospheric Administration
Developing, Testing, and Evaluating Methods for Transitioning the Brief Vulnerability Overview Tool (BVOT) to NWS Weather Forecasting Office Operations
OMB Control No. 0648-XXXX

SUPPORTING STATEMENT PART B

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 government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.**

Data will be collected from 1) NWS Weather Forecast Office (WFO)-level meteorologists at four (4) NWS WFOs, one from each of four different NWS regions (Alaska, Central, Eastern, and Western) and 2) the county/borough emergency managers from each of the recruited WFOs' County Warning Areas (CWAs). Because this recruitment has yet to occur, there can be significant differences in the size of the respondent sample based on the number of counties/boroughs that compose a WFO's CWA, however, we estimate that each WFO will have ~20 meteorologists who will consent to participate in this study (n=80) and that each WFO will have an average of between 8-28 counties/boroughs (averaged across regions) as well as a number of municipal, tribal, and other critical Emergency Managers (EMs) from each CWA that amount to an average of ~34 EMs per CWA who will participate in the data collection (n=135). We have conducted a comparable study (though the PIs — Jack R. Friedman, Ph.D. (Univ. of Oklahoma) and Daphne LaDue, Ph.D. (University of Oklahoma) — were exclusively involved in data collection) with two NWS WFOs in the past, and the actual response rate was between 90-100% (100% of all WFO meteorologists and county EMs from one CWA; 100% of all WFO meteorologists and ~90% of all EMs from a second CWA).

Respondent Universe and Expected Response Rate

Survey Group	Estimated Respondent Universe (a)	Expected Response Rate (b)	Expected Number of Respondents (c) = (b) × (a)
Meteorologists	100	80%	80
Emergency Managers	200	67.5%	135
Total	300		215

2. **Describe the procedures for the collection of information including:**

    a. **Statistical methodology for stratification and sample selection,**

    b. **Estimation procedure,**

    c. **Degree of accuracy needed for the purpose described in the justification,**

d. **Unusual problems requiring specialized sampling procedures, and**

e. **Any use of periodic (less frequent than annual) data collection cycles to reduce burden.**

This study does not rely on statistical methods for sampling. This study involves conducting 4 case studies in which all relevant partners (not a sample) will be asked to participate in the creation of a Brief Vulnerability Overview Tool (BVOT) database. All of the relevant partners will collaborate to assess the most efficient and effective process for collecting local, mappable vulnerability *knowledge* from across a WFO's CWA. As such, the study does not rely on sampling a large group of respondents like studies that, for instance, seek to collect data on the public. Instead, the goal is to collect and map *known vulnerabilities* across a CWA in a manner that can be operationalized by NWS WFO meteorologists in order to provide improved awareness to meteorologists and to provide them with the guidance necessary to target messaging to their core partners' critical needs.

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

Response rate will depend on the relationships that already exist between an NWS WFO and its core partners (especially its county emergency managers). As such, this is not dependent upon sampling a random or targeted population. Instead, this will involve leveraging existing WFO-core partner relationships to work together to provide spatially specific (i.e., mappable) vulnerability information that can be used to populate a GIS shapefile.

4. **Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.**

The funded research project is designed to assess the best methods for implementing the BVOT (or, a comparable, local-knowledge populated vulnerability mapping tool). The project is designed to permit the research team to adjust different approaches to data collection, communication between NWS WFOs and their core partners, and methods for processing vulnerability data to best organize it for the needs of particular WFOs. As such, this project collects vulnerability data and creates a BVOT sequentially across 4 NWS WFOs (and their CWAs) in order to improve the methods and optimize the technologies (e.g., Google Earth online, Google Earth desktop, ArcGIS online, etc.) that can be used by a WFO.

5. **Provide the name and telephone number of individuals consulted on 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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