

**SUPPORTING STATEMENT B
FOR PAPERWORK REDUCTION ACT SUBMISSION**

**Next Generation Volcano Hazards Assessment (NGVHA)
OMB Control Number 1028-NEW**

Collections of Information Employing Statistical Methods

The agency should be prepared to justify its decision not to use statistical methods in any case where such methods might reduce burden or improve accuracy of results. When the question “Does this ICR contain surveys, censuses, or employ statistical methods?” is checked "Yes," the following documentation should be included in Supporting Statement B to the extent that 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 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.

The purpose of the surveys is to assess whether and how volcano hazards assessment information currently provided by the US Geological Survey serves the needs of our diverse user groups. The results of this survey will contribute to a broader study on user needs and use of volcano hazards assessments and inform the development of future volcano hazard assessment products. These surveys will complement qualitative data collection, which will be the focus of the research. Qualitative data collection will be used for *depth* of understanding, while surveys will be used to *broaden* our understanding of who are stakeholders are and how they use (or would use) our hazard assessment information, since we will not be able to interview or conduct focus groups with all potential users.

Potential respondent universe: The potential respondent universe includes stakeholders involved in emergency preparedness groups engaged with each of the five USGS volcano observatories (Alaska, Cascades, Yellowstone, Hawaiian, and California). These regional groups consist of participants with statutory responsibility for or with interest in emergency management and risk reduction to hazards relevant to their region and office. Participants in these groups may be local government staff (e.g., city planners, county emergency management, fire and rescue), state-level emergency managers, local business operators, and others. Because participation in these groups is often optional, we will also work with the Volcano Science Center’s outreach coordinators to identify additional potential users such as school district and hospital administrators for each region. We will attempt to include respondents from equivalent positions in each of the regional survey lists. Our potential respondent universe in each case will include the combination of these two lists (working group members plus others as identified by outreach staff).

We will use a census sampling method to include everyone with a valid email address within the identified universe. Each member with a valid email address will be given the same opportunity to participate in this study. Surveys will be collected online via links sent to individuals' emails. The universe for this collection will include a combined list of approximately 435 individuals (n~100 per region/observatory). There will be no attempts to generalize the results outside the scope of this study and this universe of respondents.

Respondent universe and expected sample size

Sample	Expected respondent Universe	Expected response rate	Expected number of responses
Users and potential users			
(1) <i>Local Emergency Planning Committee, Unalaska, Alaska, plus additionally identified potential users (Alaska VO)</i>	50	60%	30
(2) <i>Local Emergency Planning Committee, Cook Inlet, Alaska, plus additionally identified potential users (Alaska VO)</i>	50	40%	20
(3) <i>Volcano working group, Mount Baker, Washington, plus additionally identified potential users (Cascades VO)</i>	50	60%	30
(4) <i>Volcano working group, Central Oregon, plus additionally identified potential users (Cascades VO)</i>	50	60%	30
(5) <i>Yellowstone Volcano Observatory partners, plus additionally identified potential users (Yellowstone VO)</i>	25	80%	20
(6) <i>Volcano working group, San Francisco volcanic field, Arizona, plus additionally identified potential users (Yellowstone VO)</i>	50	40%	20
(7) <i>Hawaii interagency working group, Hawaii, Hawaii, plus additionally identified potential users (Hawaiian VO)</i>	50	70%	35
(8) <i>Volcano working group, Mount Shasta, California, plus additionally identified potential users (California VO)</i>	50	40%	20
(9) <i>Volcano working group, Clear Lake, California, plus additionally identified potential users (California VO)</i>	60	40%	24
Total:	435		229

The response rate estimates in the table above reflect level of current engagement with groups to be surveyed; we anticipate higher levels of engagement from partners and others with whom we engage frequently.

- 2. Describe the procedures for the collection of information including:**
- * **Statistical methodology for stratification and sample selection,**
 - * **Estimation procedure,**
 - * **Degree of accuracy needed for the purpose described in the justification,**
 - * **Unusual problems requiring specialized sampling procedures, and**
 - * **Any use of periodic (less frequent than annual) data collection cycles to reduce burden.**

The sample will not be stratified by any features. We anticipate no unusual problems requiring specialized sampling procedures. We anticipate collecting data with each sample group as a new product comes out, no more than once per year.

Based on the response rates estimated above, our effort will produce sample sizes sufficient to achieve margins of error under 15% at the 90% confidence level for all groups (specifically, (1) 9.6%; (2) 14.4; (3) 9.6%; (4) 9.6%; (5) 8.3%; (6) 14.4; (7) 7.7%; (8) 14.4%; and (9) 13.1%.) However, we will not be running statistics on this sample, only presenting counts, frequency distributions, and heat maps.

- 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.**

To maximize response rates, all potential respondents will have multiple opportunities to respond to the survey. Workshop participants will be provided with links, e.g. through QR codes, during workshops and given time to complete the survey onsite to promote participation. All potential respondents will receive the survey link via email; once a respondent completes the survey, or requests to be taken off the email list, they will be removed from the list and sent no further emails. Potential respondents who have not taken either action will receive a second email two weeks later; after another two weeks, we will send another reminder email to those who have not yet responded, indicating that it is their final opportunity and that we may follow up with a phone call if we have not received sufficient responses. If at the close of the survey we have not received the appropriate distribution of responses, we will follow up with select participants via personal email to try to schedule a call.

- 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.**

A subset of survey questions has been previously tested by S. McBride (USGS Natural Hazards Science Center). Prior to administration of the survey(s) each will be tested by a small (3-8) group of USGS staff and external stakeholders within the target demographic and with whom we already work closely. The feedback from these tests will be used to improve the wording and

order of survey questions, survey length, and usability of the online application.

5. Provide the names and telephone numbers 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.

Statistical consultants:

Dr. Beth Bartel
Volcano Science Center
U.S. Geological Survey
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Vancouver, WA 98683
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Collection and analysis agency:

Volcano Science Center
Natural Hazards Mission Area
U.S. Geological Survey
4230 University Drive Suite 100
Anchorage, AK 99508

For Additional Guidance/Information:

OMB-OIRA has produced a number of documents that may serve as useful reference material for completing Supporting Statement B.

These can be found at: http://www.whitehouse.gov/omb/inforeg_statpolicy.