

Supporting Statement A

Registry of Climate Change Vulnerability Assessments

OMB Control Number 1028-NEW

Terms of Clearance: None

General Instructions

A completed Supporting Statement A 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 below. If an item is not applicable, provide a brief explanation. When the question “Does this ICR contain surveys, censuses, or employ statistical methods?” is checked "Yes," then a Supporting Statement B must be completed. OMB reserves the right to require the submission of additional information with respect to any request for approval.

Specific Instructions

Justification

- 1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection.**

Climate change vulnerability assessments are scientific studies to identify resources (natural, cultural, built environment) that are vulnerable to climate change and often, to quantify relative vulnerability among multiple resources of interest. They generally address 1) the degree of *exposure* of the assessment endpoint¹ to climate change (i.e., how much climate change will this resource experience); 2) the degree of *sensitivity* of that resource to climate change (i.e., will climate change harm this resource), and 3) *adaptive capacity* (i.e., the ability of the target to cope with impacts of climate change) the asset may possess.

A very large number of vulnerability studies have been conducted and are ongoing, but identifying these studies and learning their characteristics, such as geographic coverage, topical focus, methodology, data sources, and conclusions, is difficult. This information collection is proposed to provide interested parties (including government and nongovernment parties with resource management responsibilities, and their science support partners) a vehicle to locate vulnerability assessments (VA) that may provide models for their own studies, conclusions that may be incorporated into their work, or have data or other information useful in the conduct of new studies. This will reduce the cost and increase the

¹ “Assessment endpoints” are those natural and societal resources (for example, a species) being studied to determine the effect climate change will have on them.

efficiency by which the large number of required VAs are conducted. A second use of the information to be collected is at a meta-level. That is, it will enable analysis of where VAs have been conducted and on what resources. This will support two important outcomes. The first is identification, using multiple assessments, of the impact of climate change on a broad range of key natural and societal resources. The second is identification of gaps – geographic areas or specific resources – for which assessments have not been conducted.

The USGS is authorized to collect information of this sort, based on its Organic Act². In addition, the National Climate Change and Wildlife Science Center (NCCWSC) was established pursuant to Congressional action³ and Secretarial Order⁴. Appropriations language directs NCCWSC to provide information to resource managers “regarding the impacts of global warming on fish, wildlife, plants and ecological processes” and Secretarial Order 3289 tasks CSCs with “provid[ing] climate change impacts data and analysis ...” to Departmental and other managers. Vulnerability assessments are a basic building block of developing plans to address climate change. In addition, one of former Secretary of the Interior Salazar’s High Priority Performance Goals deals with the conduct of vulnerability assessments, and Secretary Jewell has affirmed this support.

- 2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection. Be specific. If this collection is a form or a questionnaire, every question needs to be justified.**

The registry is intended to identify and provide information on a wide range of studies, using different methods, at different scales, and relying upon different information describing expected future climates. The information sought will be non-proprietary and contain no personally identifiable information as defined under the Privacy Act of 1974. The registry will be made available to interested professionals as well as to the general public by way of a searchable Web-hosted database for a minimum of 5 years.

The primary categories of users and uses are:

- *Individuals and institutions considering conducting vulnerability assessments.* This includes a wide range of federal, state, local and other governmental institutions, as well as nongovernmental organizations (NGOs), universities, and other entities. The intent is to enable users to locate completed or ongoing VAs that share relevant characteristics with the user’s intended VA. For example, a fisheries manager in North Carolina could locate other studies of coldwater fish and climate change; or a Bureau of Land Management analyst may locate VAs conducted on a variety of resource types in her state. Either of these users might identify relevant methods for conducting their assessment, relevant conclusions or concerns raised in other

² Surveys, Investigations and Research Both Inside and Outside the United States (43 U.S.C. § 31): The Organic Act establishing the USGS authorizes surveys, investigations, and research, including such activities outside the national domain when the Secretary determines that work abroad is in the national interest.

³ Department of the Interior, Environment, and Related Agencies Appropriations Bill, 2008, *House Report 110-187*.

⁴ Secretarial Order 3289, September 2009, amended February 2010.

assessments, and potential data sources that may have been assembled for other assessment.

- *Managers of specific resources* who may identify VAs that provide conclusions about the vulnerability of resources they manage. For example, a region-wide VA (e.g., all Northeastern states) may provide the managers in the Adirondack Forest Preserve with information about the regional vulnerability of key species in their sub-region.
- *Analysts* interested in overall conclusions about either the degree to which vulnerability has been assessed (e.g. by region, by assessment endpoint category such as species or ecosystem type) or larger conclusions that a wide number of studies may be able to support.

The information collected (“questions asked”) are described and justified below:

Survey Item	Description/Purpose
Title of assessment	A title is important for identifying the project and understanding the general scope of the assessment.
Assessment location	Provides a geographic location for the assessment, enabling users to identify “local” studies.
Managing agency and partners	Identifies the lead agency and collaborators. Will enable users to select projects of specific agencies, or to identify the scope of collaboration.
Assessment endpoint	Assessment endpoints are the resources (e.g., species, built environment) that the assessment seeks to evaluate with respect to their vulnerability to climate change.
Project status	Provides information on whether an assessment has been completed versus an assessment that is in progress or in planning.
Time required for assessment completion	Provides information on the amount of time to complete an assessment. Many parties have restricted timeframes and are interested in other assessments that were carried out during a similar period of time.
Project cost	Provides information on the approximate cost of the assessment. Similar to timeframe, many parties have a restricted budget and are interested in assessments that were conducted based on a similarly sized budget.
Contact information	Provides professional contact information (name, email). No non-professional personally identifiable information (PII) will be solicited or collected.
Additional assessment information	Allows for submission of additional project information that may be available. This optional category allows for submission of an abstract, project URLs, or uploading of maps and other files.
Geographic scope	Identifies the approximate size of the study area, which is important for differentiating between large-scale and local-scale assessments.
Purpose of assessment	Identifies whether the assessment is directly linked to management / planning or is a research activity. Many parties

	are seeking information on “actionable” assessments, and this will enable selection along this dimension.
Vulnerability components	Vulnerability components refers to the three basic elements of a vulnerability assessment – how much climate change is this resource “exposed to” (exposure); how much effect a projected level of climate change will have on the resource (sensitivity) and whether the resource can adapt without external assistance (adaptive capacity).
Assessment methods	This question asks for the methodology used to determine the effects of the projected changes in climate and related conditions (drivers) on assessment targets. As with the drivers themselves, this information is of strong interest to users seeking to identify methods of evaluating their target resources.
Large-scale driver of change	This question asks about which expected future conditions are used for the assessment. Domains include atmospheric, sea level and hydrological changes, and other projections (e.g. habitat conversion). It also asks about whether past, present, or future projected conditions are used for this purpose, and the source. These items are of special interest to users, as the choice of projections is complex and poorly understood. This information will enable users seeking guidance on “best practices” to evaluate options based on their use in related conditions.
Timeframe of assessment	Provides information on the timeframe that the assessment considered (e.g., retrospective, current, future).

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden and specifically how this collection meets GPEA requirements.

This information collection is proposed to be undertaken using three methods:

- a) An electronic survey has been developed by USGS and produced under the direction of an ad hoc Federal interagency working group. This survey will be provided via a Web link to a lead point of contact for participating agencies⁵, each of which will rely upon internal agency processes to distribute the link to personnel conducting assessments within their respective agency and collate responses. Each agency will assure that data so collected and provided to the registry host (see below) is releasable

⁵ At present, this includes: USGS (lead developer), Bureau of Indian Affairs, National Park Service, US Fish and Wildlife Service, Bureau of Land Management, US Forest Service, Environmental Protection Agency, National Oceanic and Atmospheric Administration, Office of Science and Technology Policy, and Council on Environmental Quality.

- to the public, based on that agency's own internal release procedures.
- b) Non-Federal governmental (state, local, and tribal) institutions and interested private sector entities (e.g. commercial firms, NGOs, academic researchers) may access the same link to distribute through their own networks, allowing for collection of data from other communities. For example, there is an organization representing state fish and game agencies, and this entity has proposed to distribute the survey to their members. Other private sector NGOs have also expressed interest in this approach.
 - c) The USGS will host the online survey, enabling other partners to submit information. While the operational URL is not available at this time, the site will be found within the National Climate Change and Wildlife Science Center domain (<https://nccwsc.usgs.gov/>).

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

The Federal interagency team has been meeting regularly, and has included state, academic, and nongovernmental collaborators. While expanding rapidly, the vulnerability assessment community is still relatively small, and no participants are aware of any duplicative activity. Individual agencies may have listings of their own VAs, but without assembling them into a registry, none of the search or analysis functions described above can be conducted effectively.

5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.

No small businesses will be affected.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

Failure to collect this information will result in:

- Reduced efficiencies and increased costs for conducting VAs than would be the case if it were available;
- Reduced ability to understand the impacts of changing climate on resources of concern;
- Reduced ability for agency managers to strategically allocate resources to areas of highest need; and
- Reduced ability for NCCWSC to provide information to resource managers regarding the impacts of global warming on fish, wildlife, plants, and ecological processes (as directed under the Appropriations language by the Department of the Interior and Secretarial Order 3289).

7. Explain any special circumstances that would cause an information collection to be

conducted in a manner:

- * requiring respondents to report information to the agency more often than quarterly;
- * requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;
- * requiring respondents to submit more than an original and two copies of any document;
- * requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;
- * in connection with a statistical survey that is not designed to produce valid and reliable results that can be generalized to the universe of study;
- * requiring the use of a statistical data classification that has not been reviewed and approved by OMB;
- * that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or
- * requiring respondents to submit proprietary trade secrets, or other confidential information, unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.

There are no special circumstances associated with the proposed collection activity that would require it to be conducted in any of the manners described.

8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and in response to the PRA statement associated with the collection over the past three years, and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.

On August 21, 2013, a 60-day Federal Register notice (78 FR 51740) was published announcing this information collection. Public comments were solicited for 60 days ending October 21, 2013.

We received two comments in response to that notice, each emphasizing support for the project. Specifically, the comments suggested that development of a registry would be necessary for cataloguing existing assessments and that such a registry will increase understanding of the nation's progress towards determining climate change impacts and provide insights for adaptation planning. Additionally, one commenter felt the registry will be useful for comparing assessment methods from different disciplines (e.g., ecosystems, infrastructure) and potentially reveal unrecognized connections or causal relationships between climate change and societal or natural resource vulnerabilities (e.g., ecosystem shifts and changes in vector-borne and zoonotic disease incidence). Suggested improvements included ensuring that the registry is relevant for all disciplines assessing vulnerability and implementing adaptation actions, including the public health and health care delivery services sectors.

Our initial intent was to ensure that the registry would be available to all parties interested in questions of vulnerability and adaptation. We have, therefore, expanded the focus of the registry to explicitly include the health sectors cited in the received comments.

Because this is a new collection, neither commenter addressed our current cost and hour burden estimates.

Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

This activity is being coordinated with several categories of partners:

- The Interagency Land Management Adaptation Group (ILMAG) – an ad hoc group of Federal Agency and Executive Office parties involved in large-landscape climate adaptation activities;
- The US Global Change Research Program Adaptation Science Working Group (<http://www.globalchange.gov/>); and
- An ad hoc working group comprised of members of the above two committees and a number of state agency representatives, NGO representatives, and interested academics. This committee is managing the activity, in consultation with the other groups.

The ad hoc working group met several times to develop a list of basic reporting elements (e.g., assessment purpose, location, target) to be included in the registry.

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every three years — even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

- Federal agency partners have committed to conducting this collection at least annually for at least five years.
- At least annually, VAs listed on the registry will be polled to ascertain any changes in status (or reasons for removal).

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

No payments or gifts to respondents are contemplated.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

No assurances of confidentiality will be provided because the information being collected is not of a confidential nature.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

No sensitive questions are to be included.

12. Provide estimates of the hour burden of the collection of information. The statement should:

- * **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.**
- * **If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens.**
- * **Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here.**

Our estimate of the maximum annual hour and cost burdens of this collection of information (incurred in the first year) assumes:

- Number of respondents – 1360, including:
 - 1200 federal,
 - 110 state/local/tribal government, and
 - 50 private sector (academic, nongovernmental, commercial) respondents (see Supporting Statement B for respondent categories and response rates).
- Frequency of response – once, annually; and
- Annual hour burden – one hour per response.

Note that the requirements of the Paperwork Reduction Act regarding estimation of respondent participation and justification of hour and cost burden do not apply to collections from Federal agencies. This information request pertains to non-Federal respondents only.

Data relating to Federal participation in this collection activity are included for information only.

We estimate the total cost of burden hours for **state/local/tribal government** and **private sector** respondents to be \$13,479.60. The average annual cost will be \$4,493.20, varying from \$8,300.10 in year 1 to \$2,589.75 in years 2-3 (see Table 1). The hour cost is based on BLS news release USDL-14-0390 (http://www.bls.gov/news.release/archives/ecec_03122014.pdf) of March 12, 2014, for average full compensation per hour including benefits for private industry and state, local, tribal governments. The particular values utilized are:

States/tribal/local governments. The total cost of compensation per hour worked is \$52.01 for state and local government management, professional, and related occupational groups (USDL-14-0390, Table 3, State and local government workers, by major occupational and industry group, December 2013).

Private sector. The total cost of compensation per hour worked is \$51.58 for private management, professional, and related occupational groups (USDL-14-0390, Table 1, Civilian workers, by major occupational and industry group, December 2013).

Table 1. Estimated Non-Federal Dollar Value of Annual Burden Hours

Activity	Annual Number of Responses	Estimated Completion Time per Respondent	Total Annual Burden Hours	Dollar Value of Burden Hour [Including Benefits]	Total Dollar Value of Annual Burden Hours
Year 1 (out of 5)					
State/Local/Tribal	110	1 hour	110	\$52.01	\$5,721.10
Private Sector	50	1 hour	50	\$51.58	\$2,579.00
Year 2 (out of 5)					
State/Local/Tribal	25	1 hour	25	\$52.01	\$1,300.25
Private Sector	25	1 hour	25	\$51.58	\$1,289.50
Year 3 (out of 5)					
State/Local/Tribal	25	1 hour	25	\$52.01	\$1,300.25
Private Sector	25	1 hour	25	\$51.58	\$1,289.50
TOTAL					\$13,479.60

13. Provide an estimate of the total annual non-hour cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden already reflected in item 12.)

* The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life) and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information (including filing fees paid for form processing). Include

descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.

- * If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collection services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.
- * Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.

There is no non-hour cost burden to respondents resulting from this collection. There are no fees associated with an application process, or with collection requirements or methods.

14. Provide estimates of annualized cost to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information.

Our estimate of annual total cost to the Federal government is \$146,186.68 in year 1 and \$21,956.34 in future years (see Table 2). The total cost over the 3-year period for which this information collection is being requested is estimated to be \$190,099.36, or an average of \$63,366.45 per year.

Start-up costs will be contracted through the Information Science Branch of the USGS Fort Collins Science Center at a rate of \$62.11/hour. Personnel from that institution have estimated 644 hours of labor required to develop the database. An additional 200 hours of labor each year may be required for developing new tools and for managing and improving the database (see developmental costs).

Supporting costs will include 52 hours (1 hour/week) of general support labor each year. The hourly cost of Federal employees is based on the Office of Personnel Management locality pay area of Washington-Baltimore-Northern Virginia, DC-MD-VA-WV-PA (https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2014/DCB_h.pdf). The hourly wage for a step 10 GS-15 scientist is \$75.28 multiplied by 1.5 to account for benefits (\$112.92).

The expected number of respondents is 1200/year with an estimated 1 hour/response. Again, we used the hourly wage of Federal employees based on the Office of Personnel Management locality pay area of Washington-Baltimore-Northern Virginia, DC-MD-VA-WV-PA (https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2014/DCB_h.pdf) for a step 5 GS-13 scientist (\$48.83) multiplied by 1.5 to account for benefits (\$73.25).

Table 2. Estimated annual cost to the Federal government.

Activity	Annual Number of Responses	Estimated Completion Time for Activity (hours)	Dollar value/hour	Annual cost
Year 1 (out of 5)				
Start-up costs (contractor)	-	644	\$62.11	\$39,998.84
Developmental costs (contractor)	-	200	\$62.11	\$12,422.00
Supporting costs (agency)	-	52	\$112.92	\$5,871.84
Federal burden hours (agencies)	1200	1200	\$73.25	\$87,894.00
TOTAL (YEAR ONE)				\$146,186.68
Years 2-3 (out of 5)				
Developmental costs (contractor)	-	200	\$62.11	\$12,422.00
Supporting costs (agency)	-	52	\$112.92	\$5,871.84
Federal burden hours (agencies)	50	50	\$73.25	\$3,662.50
ANNUAL TOTAL (FUTURE YEARS)				\$21,956.34

15. Explain the reasons for any program changes or adjustments in hour or cost burden.

This is a new collection.

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

Survey responses will be collated and made available in a searchable format on a Web

platform. No overall tabulations will be provided. No analysis of the results is included in this collection and data management activity.

Web hosting will be accomplished in two ways. A USGS site will be established (under the National Climate Change and Wildlife Science Center domain). This site will hold all data, collected by this information collection. In addition, “back end” connections will be completed to enable sharing of these data in a secure manner with a nongovernmental partner (EcoAdapt) which hosts the Climate Adaptation Knowledge Exchange (<http://www.ecoadapt.org/programs/cake>), a well-known resource for the climate adaptation community of practice. This will enable access to the information by a broader suite of users than can be provided by either the USGS or EcoAdapt site alone. Additional technical and administrative work is required to finalize arrangements with EcoAdapt, but the project will proceed with the USGS site alone if these arrangements cannot be finalized.

The schedule below contemplates publication of Federal responses as soon as they can be made available, and addition of non-Federal entries later, following full PRA approval.

April-June 2013	Design survey content	Complete
September 2013	Prepare Web-form survey instrument	Beta version complete
July 2014	Distribute survey to FEDERAL partners only	
August 2014	Publish initial FEDERAL survey results	
Pending PRA Approval	Survey instrument will be made available to non-Federal partners	
PRA approval + 2 months	Bulk upload and release of available non-Federal information	
Ongoing	Addition of new entries as received	
Annually	Participating federal agencies resurvey	
Annually	Registry respondents contacted to ascertain changes in status	

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

Not applicable.

18. Explain each exception to the topics of the certification statement identified in "Certification for Paperwork Reduction Act Submissions."

None.