

Supporting Statement for Paperwork Reduction Act Submissions

Scientific Collections Survey

A. JUSTIFICATION

1. CIRCUMSTANCES MAKING COLLECTION OF INFORMATION NECESSARY

The FY 2008 Administrative Research and Development Budget Priorities Memorandum, from 23 June 2007, stated that

- 1 “Agencies should assess the priorities for and stewardship of Federal scientific collections, which play an important role in public health and safety, homeland security, trade and economic development, medical research, and environmental monitoring. Agencies should develop a coordinated strategic plan to identify, maintain and use Federal collections and to further collections research.¹”

Under the National Science and Technology Council (NSTC), the Committee on Science (COS) established the Interagency Working Group on Scientific Collections (IWGSC)² to address this priority area. To develop a thorough, comprehensive report on Federal scientific collections³, the IWGSC is surveying relevant Federal agencies to collect information on the scope, size, and condition of their object-based scientific collections. As a member agency in this subcommittee, National Science Foundation (NSF) has agreed to use a customized form of the IWGSC survey to gather information from institutions with object-based scientific collections that receive support from NSF or that are used by researchers that receive support from NSF. This information will be used in conjunction with the information gathered from the IWGSC survey to make a comprehensive report to the Committee of Science.

2. HOW, BY WHOM, AND PURPOSE FOR WHICH INFORMATION IS TO BE USED

The information collected in the NSF Scientific Collections Survey and the IWGSC survey will be used by the NSTC/COS to evaluate the scope, size, and condition of object-based scientific collections, at, supported or used by US Federal agencies in an effort to address the scientific, environmental, societal, and national security needs for these collections.

NSF will report findings from the information collection to the IWGSC, which will ultimately report to the NSTC/COS. The IWGSC report will determine what needs to be done to maintain and further develop object-based scientific collections. The report will also include an assessment of the areas of concern highlighted by collection institutions, such as workforce needs, collection areas that need development, or long-term resource concerns at the institution.

¹ For entire text, see Appendix 1.

² Members of the IWGSC include representatives from CDC, DOE, DOI, NASA, NIH, NOAA, NPS, NSF, OSTP, SI, USDA ARS, and USDA FS.

³ Federal scientific collections are defined as all object-based scientific collections maintained or financially supported by the Federal government or used in research supported by the Federal government, and ancillary materials related directly to them.

Furthermore, the report will increase government and public awareness of the importance and uses of collections.

The report will be used directly by members of the IWG, as well. This report will allow the IWGSC to foster coordination of collections activities between Federal agencies. The member agencies in the IWGSC also plan to use the survey findings in management and maintenance of their collections.

Findings from the NSF survey will also be available publicly. Accordingly, professional collections associations will be free to use this information. The NSF Scientific Collections Survey could serve as a template for these associations to conduct further surveys or could help provide background information to the society on the scope, size, and condition of pertinent scientific collections.

3. USE OF AUTOMATION

The NSF Scientific Collections Survey will be a web-based survey and all information collection will be conducted through the web (Appendix 2). The survey instrument is divided into two components, an Institutional Administrator's Survey and a Collections Manager Survey, to aid institutions in addressing and completing the applicable questions. The Collections Manager Survey will encompass twenty collection types: Anthropology, Archeology, Botany, Entomology, Ethnology, Geology and Mineralogy, Herpetology, Ichthyology, Invertebrate Paleontology, Invertebrate Zoology (apart from Entomology), Living Cell/Organismal Lines, Mammalogy, Microbiology, Ornithology, Paleobotany, Physical Anthropology, Vertebrate Paleontology, and Other.

Answers to commonly asked questions will appear on the survey instrument's FAQ page. If the institution is unable to use the internet to complete the survey, a paper copy of the survey is also available either on the website or upon request to NSF contacts: Judy Skog (jskog@nsf.gov) or Jessica Corman (jrcorman@nsf.gov).

4. EFFORTS TO IDENTIFY DUPLICATION

NSF performed an extensive literature survey to find relevant, and potentially duplicative, scientific collection surveys. Our compendium found that although there have been several attempts at surveying scientific collections, our survey is reporting on unique information. The NSF Scientific Collections Survey will be the first assessment of the stewardship of collections supported, or used by people supported by NSF.

There have been at least 25 surveys of scientific collections over the past 30 years, ranging from reports about collections maintained by single institutions to collections in entire disciplines to collections in many disciplines in many institutions. The later, more comprehensive, surveys include the *Museum Program Survey 1979* (Learning Resources 1980), *1989 National Museum Survey* (American Association of Museums 1992), *1994 Survey of Federally Associated Collections Housed in Non-Federal Institutions* (Wilson 1996),

Preliminary Worldwide Survey of Systematics Collections Holdings (AMNH 2003), and *Heritage Health Index* (HHI 2005).

To analyze what information has already been assessed in US collections, we compiled a table with a reference to each of the 25 surveys and the review criteria that each addresses (Appendix 3). We extracted the review criteria (listed as the column headings in Appendix 3) from the NSF Scientific Collections Survey to clarify and highlight overlaps and gaps between the NSF survey and the surveys in the analysis. Definitions for the sixteen review criteria are included (Appendix 3).

Certain information seems to be well represented in these reports: size and scope of collections, users of the collections, type of collections, and staff (Appendix 3, Table 1). However, information on the collection preservation, condition and uniqueness, institutional funding resources, or institutional governance is rarely surveyed. Unfortunately, these are the issues which will have the greatest impact on scientific research in the future and the information which is necessary to address the state and future health of the nation's collections.

None of the surveys reported on all the criteria included in our survey. Only the five extensive surveys addressed a similar scope as the NSF survey, which is surveying collections in Anthropology, Archeology, Botany, Entomology, Ethnology, Geology and Mineralogy, Herpetology, Ichthyology, Invertebrate Paleontology, Invertebrate Zoology, Living Cell/Organismal Lines, Mammalogy, Microbiology, Ornithology, Paleobotany, Physical Anthropology, and Vertebrate Paleontology. However, in the survey most similar to our survey (HHI 2005), the response rate was rather low (24%), suggesting the results may not be as comprehensive as we aim to achieve.

As we did not find a duplicative study, we are proceeding with the clearance request to conduct our survey.

5. SMALL BUSINESS CONSIDERATIONS

Not applicable. This survey will be distributed to institutions with object-based scientific collections, including institutions of higher education and research; such institutions are not considered "small organizations" or "small businesses."

6. CONSEQUENCES OF LESS FREQUENT COLLECTION

National Science Foundation is surveying institutions with object-based scientific collections that currently receive NSF support or have received NSF support in the last twenty years; 147 institutions fall into these categories. Without the information about the object-based scientific collections at these institutions, the IWGSC will not have the ability to assess the priorities for and stewardship of Federal scientific collections, as mandated in the FY 2008 Budget Priorities Memorandum (Appendix 1). It is imperative that NSF conduct this survey so the IWGSC can comprehensively assess the scientific collections that are important to federal priorities.

7. SPECIAL CIRCUMSTANCES FOR COLLECTION

There are no special circumstances. None of the listed reporting requirements apply to this data collection.

8. FEDERAL REGISTER NOTICE.

The Federal Register Notice was published on 19 April 2006, p. 20141 (Appendix 4), as requested by 5 CFR 1320.8(d). Comments were due by 18 June 2006. NSF received two public comments in response to the announcement during the comment period. The first comment came from Dr. Michael A. Gibson, The University of Tennessee at Martin, Martin, TN on 24 April 2006. Dr. Gibson requested for his university to partake in the survey, as they have a paleontological collection from past NSF support. NSF noted this request and confirmed that The University of Tennessee was included on our list of eligible institutions.

The second comment came from Ellen Paul, The Ornithological Council, Chevy Chase, MD on 6 June 2006. Ms. Paul requested a copy of the survey to address the anticipated burden. On 8 June 2006, NSF sent Ms. Paul an electronic copy of the IWGSC Scientific Collections survey. On 16 June 2006, NSF received comments regarding the survey from Ms. Paul. We responded to her concerns, noting that we had received and incorporated input from the scientific community through correspondence during NSF panel meetings (which are populated from scientists representing a plethora of institutions) and scientific professional society conferences during the creation of the survey, and that the issues regarding ambiguity in language used in the survey are addressed in the instructions for the survey. After extensive phone and email correspondences, it was determined Ms. Paul's concerns originated from distress about a new National Park Service policy regarding scientific collections. As that program is unrelated to our survey collection and her concerns of unclearly defined terms used in the survey are addressed in the FAQ section of the survey instrument, NSF is moving forward with the clearance request.

OUTSIDE CONSULTATION

Throughout the planning process, NSF has engaged in conversations with representatives of the scientific collections community to ensure the NSF survey is appropriate for the non-Federal agency scientific collections community to whom NSF is surveying. These interactions have occurred at NSF, during relevant panel meetings, and at various locations across the country, at professional scientific meetings. NSF has also maintained close collaborations with the IWGSC and OSTP during the planning process to ensure the survey still meets the needs of the IWGSC.

In January 2007, NSF conducted a focus group with members of the scientific collections community to evaluate the NSF Scientific Collections Survey. The focus group participants were chosen to provide a reasonable cross-section of the scientific collections community, in terms of both size and scope of collection as well as type of institution. Eight institutions were represented at the focus group. Prior to the meeting, participants were given the Institutional Administrator's Letter, Collection Manager's Letter, the Institutional Administrator's Survey,

and the Collections Manager Survey. NSF worked with OSTP, STPI⁴ and Abt Associates Inc. to plan and run the focus group in an informative, effective manner. Comments and concerns discussed during the focus group regarding the letters and surveys were integrated into the final version of the letter and survey.

9. GIFTS OR REMUNERATION

Not applicable. There is no payment to respondents.

10. CONFIDENTIALITY PROVIDED TO RESPONDENTS

The information collected in the Scientific Collections Survey is solely for statistical and analytical purpose and the identity of the respondent will be appropriately protected.

11. QUESTIONS OF A SENSITIVE NATURE

The survey questionnaire does not contain any questions of a sensitive nature.

12. ESTIMATE OF BURDEN

The NSF will survey 147 institutions. Each institution will complete two types of surveys, one type related to the stewardship of collections (Institutional Administrator's Survey) and another related to the scientific collection (Collections Manager Survey). There are 413 object-based collections from the 147 institutions that received NSF support. Therefore, 147 institutional administrators will complete the Administrator's Survey and 413 curators will complete the Scientific Collections Survey.

The eight focus group participants reported spending, on average, 40 minutes completing either survey. Based on this estimate, the total amount of time to complete 560 surveys (147 + 413) would be 373.33 hours. NSF aims to achieve an 85% response rate, therefore the total number of surveys anticipated to be completed is approximately 502. At 40 minutes per survey, **the estimated total burden of the collection of information is 334.66 hours.**

ANNUALIZED COST TO RESPONDENTS

The estimated median salary of a director of research is \$71,900⁵, which, assuming a 40-hour workweek and a 52-week salary, translates to an hourly wage of \$34.57. Based on the above

⁴ The IDA Science and Technology Policy Institute (STPI) is a congressionally mandated FFRDC which supports the work of the OSTP and the NSTC, as well as other federal agencies. Through a task order arrangement, STPI has supported the work of the IWGSC since December 2005. Furthermore, through a subcontracting agreement, Abt Associates, Inc. supports STPI in its work for the OSTP as requested.

⁵ Source: *The Chronicle of Higher Education* at: <http://chronicle.com/prm/weekly/v51/i26/26a03001.htm>

average completion time of 40 minutes per survey, the cost of completing each Institutional Administrator's Survey is \$23.05.

The hourly wage of a scientific collections curator is \$25.57⁶. Based on the above average completion time of 40 minutes per survey, the cost of completing each Scientific Collections Survey is \$17.05.

Assuming a response rate of 85%, 125 Institutional Administrator's Surveys will be completed at a total cost of \$2,881 and 351 Collections Manager Surveys will be completed at a total cost of \$5,985. **The annualized cost to the respondents for providing information to the NSF Scientific Collections Survey is \$8,866.**

13. CAPITAL/STARTUP COSTS

This survey does not require the purchase of equipment, software, or services beyond those normally used by institutions with scientific collections.

14. ANNUALIZED COST TO THE FEDERAL GOVERNMENT

The total cost to the Federal government for collection of information will be approximately \$230,000. This estimate is an inclusive estimate of contractual costs for the Focus Group, website development, database design and development, survey launch, data analysis, preparation of statistical reports, and preparation and distribution of the final project report.

15. CHANGES IN BURDEN

Not applicable.

16. PUBLICATION OF COLLECTION

The IWGSC was formed in 2005, following release of the FY 2007 Budget Memorandum (Appendix 1). The Interagency Working Group created a survey instrument in December 2005 and spent the beginning of 2006 editing and revising it, based on input from Working Group members and the participants in a pilot study. STPI designed the on-line instrument which is hosted by OSTP. Currently, the IWGSC is surveying Federal agencies using that on-line tool.

NSF plans to begin surveying institutions in the spring of 2007, following approval of the Office of Management and Budget. NSF will work with a contractor to analysis the survey information. In late 2007, preliminary results of the NSF survey will be reported to the IWGSC.

⁶ Source: *National Compensation Survey: Occupational Wages in the United States, July 2004* at <http://www.bls.gov/ncs/ocs/sp/ncbl0727.pdf>

The IWGSC will analyze the data and compile the information in order to present the compiled results to the COS near the end of 2007.

17. SEEKING APPROVAL TO NOT DISPLAY OMB EXPIRATION DATE

Not applicable.

18. EXCEPTION(S) TO THE CERTIFICATION STATEMENT (19) ON OMB 83-I

Not applicable. There are no exceptions to 5 CFR 1320.9 in the proposed collection of information.

ATTACHMENTS

Appendix 1. Budget Memorandum

Memorandum: FY 2008 Administration Research and Development Budget Priorities

Appendix 2. NSF Scientific Collections Survey

Institutional Administrator Survey & Instructions
Collections Manager Survey & Instructions

Appendix 3. Analysis of past collection efforts

Table 1. Summary of past scientific collection surveys, indicating the number of institutions or individuals surveyed, content included in survey (see above for descriptions), and the response rate.
Definitions for Table 1.

Appendix 4. Federal Register Notice and comments

Federal Register Notice
Response to comments from Dr. Michael A. Gibson
Response to comments from Ms. Ellen Paul

Appendix 5. Survey Cover Letter

Initial NSF Contact Letter