

Supporting Statement for Paperwork Reduction Act Submissions

Scientific Collections Survey

A. JUSTIFICATION

1. CIRCUMSTANCES MAKING COLLECTION OF INFORMATION NECESSARY

The FY 2007 Administrative Research and Development Budget Priorities Memorandum, from 8 July 2006, stated that

“Agencies should assess the priorities for and stewardship of Federal scientific collections which play an important role in public 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 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 created the Scientific Collections Survey to survey relevant institutions to collect information on their object-based scientific collections. As a member agency in this subcommittee, the National Science Foundation (NSF) has agreed to use this survey to collect information from institutions with object-based scientific collections that receive support from the NSF or that are used by researchers that receive support from the NSF. This information will be consolidated with all other surveys conducted by the IWGSC from other US Federal agencies to report back to the Committee of Science.

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

The information collected in the Scientific Collections Survey will be used by the NSTC/COS to evaluate the state 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.

The IWGSC will report findings from the information collection to the NSTC/COS. In this report, the IWGSC will evaluate the requirements 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

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.

development, or long-term resource concerns at the institution. 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.

3. USE OF AUTOMATION

The Scientific Collections survey is a web-based survey and all information collection will be conducted through the web (Appendix 2). The survey instrument is divided into eleven surveys, one Agency Director Stewardship Survey and ten Collections Surveys, to aid institutions in addressing and completing the applicable questions. The ten Collections Surveys are: Archaeological, Anthropological, and Ethnographic Collections Survey; Botanical Collections Survey; Cellular & Tissue Collections Survey; Chemical Collections Survey; Geological and Geophysical Collections Survey; Invertebrate Zoology Collections Survey; Paleontology Collections Survey; Vertebrate Zoology Collections Survey; Technological Collections Survey; and Other (Not Elsewhere Classified) Collections Survey.

Answers to commonly asked questions will appear on the survey instrument's FAQ page. Assistance for electronically completing the survey will be available to all of the institutions by emailing William Tompkins, tompkinw@sia.si.edu. 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) and Jessica Corman (jrcorman@nsf.gov).

4. EFFORTS TO IDENTIFY DUPLICATION

The NSTC/COS IWGSC performed an extensive literature survey to find relevant, and potentially duplicative, scientific collection surveys. Our analysis found that although there have been several attempts at surveying scientific collections, our survey is reporting on unique information. This survey will be the first assessment of the stewardship of collections maintained, supported, or used by peoples supported by the Federal Government.

There have been at least 25 recent surveys of scientific collections, ranging from reports about collections in 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 (the column headings) from the IWGSC

Scientific Collections Survey to clarify and highlight overlaps and gaps between that 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 the IWGSC Scientific Collections Survey. Only the five extensive surveys addressed a similar scope as the IWGSC Scientific Collections Survey, which is surveying collections in archaeology, anthropology, botany, cell and tissue studies, chemistry, ethnography, geology, geophysics, invertebrate zoology, paleontology, technology, and vertebrate zoology. However, in the survey most similar to ours (HHI 2005), the response rate was rather low (24%), suggesting the results may not be as comprehensive as we aim to achieve.

As the NSF 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."

6. CONSEQUENCES OF LESS FREQUENT COLLECTION

The National Science Foundation is surveying institutions that receive support from the NSF or that are used by researchers that receive support from the NSF. Over 850 institutions fall into one of these categories. Without the information about the object-based scientific collections in these institutions, the IWGSC will not have the ability to assess the priorities for and stewardship of Federal scientific collections, as mandated in the above described FY 2007 Budget Priorities Memorandum. It is imperative that NSF conduct this survey so the IWGSC can comprehensively assess Federal scientific collections.

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 Registry 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. The NSF noted this request and confirmed that The University of Tennessee at Martin 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, the 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 “FAQ” section of the website. 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, the NSF is moving forward with the clearance request.

OUTSIDE CONSULTATION

The IWGSC is coordinating collection efforts with the Science and Technology Policy Institute (STPI), a federally funded research and development center under the Institute for Defense Analysis (IDA). STPI developed the survey instrument with input from the IWGSC and conducted a pilot survey. The input from the IWGSC represents 12 institutions and any outside contact the institution has with other institutions (for NSF, this includes contacts with professional society representatives and private collections through NSF panels, which bring scientists from across the country to NSF, and outreach activities, which allow NSF employees to meet with scientists across the country at professional society meetings and other locations). After the pilot survey, STPI interviewed participants by phone to collect comments and concerns which were used to improve the final survey instrument. The pilot test also allowed the IWGSC to determine the approximate length of time it would take to complete the survey (see “Estimate of Burden”).

Additionally, the National Science Foundation has coordinated efforts with the Global Biological Information Facility and the NSF Collections Working Group to collect institution names with object-based scientific collections and their contact information to develop a comprehensive list of institutions eligible to participate in the 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. Only those individuals that respond “1. Yes” to Question A-5 (“May the NSTC Interagency Working Group on Scientific Collections include your reporting unit on a published list of survey participants?”; Appendix 2) will have the name of the reporting unit included in the published list of participants.

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 approximately 859 institutions. Each institution will complete two types of surveys, one type related to the stewardship of collections (Agency Director Survey) and another related to the scientific collection (Collections Survey). The Collections Surveys are further divided into ten categories of collection type, with surveys for Archaeological, Anthropological, and Ethnographic; Botanical; Cellular & Tissue; Chemical; Geological and Geophysical; Invertebrate Zoology; Paleontology; Vertebrate Zoology; Technological; and Other (Not Elsewhere Classified) Collections.

In a pilot survey, nine institutions reported spending, on average, 40 minutes completing a survey. Assuming the director and the curator fill out the Agency Director Survey and one Collections Survey, respectively, at each institution, the total amount of time to complete the surveys would average 1.33 hours per institution (if the institution has one of each type of scientific collection, this time would increase to 7.33 hours per institution⁴). The NSF aims to achieve an 85% response rate, therefore the total number of institutions anticipated to respond to the survey will be approximately 730. **The estimated total burden of the collection of information ranges from 973.33 – 5,353.33 hours⁴.**

ANNUALIZED COST TO RESPONDENTS

⁴ However, this number is likely to be an overestimate. There are eleven sections within the Collections Survey and four of these sections refer to the same or similar information (A. Reporting Unit Information, B. Description of the Reporting Unit, H. Funding, and I. Policies and Procedures). Thus, as an institution completes this survey for multiple collections, the burden per survey is likely to decrease.

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. For an hourly wage of \$34.57 for directors of research and \$25.57 for curators⁶, the cost per hour per institution ranges from \$60.14 to \$315.84, depending on whether the institution completes one or all ten Collections Surveys. Assuming an hour burden between 973.33 – 5,353.33 hours⁴, **the annualized cost to the respondents for providing information to the Scientific Collections Survey is \$29,289 to \$141,364.**⁴

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

There are no costs to the Federal government incurred with the collection of this information. Operational costs associated with maintaining the survey instrument will be covered by STPI and the IWGSC.

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 Working Group created the survey instrument in December 2005 and spent the beginning of 2006 editing and revising it, based on input from Working Group members, STPI, and the participants in the pilot study. Currently, the IWGSC is surveying Federal agencies. The information from the institutions that NSF will survey will be collected in summer and winter of 2006. In 2007, the IWGSC will analyze the data and compile the information to be presented in a report published in the summer of 2007.

17. SEEKING APPROVAL TO NOT DISPLAY OMB EXPIRATION DATE

Not applicable.

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

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

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.