

SUPPORTING STATEMENT  
U.S. Department of Commerce  
U.S. Census Bureau  
Survey of State Research and Development  
OMB Control Number 0607-0933

A. Justification

1. Necessity of the Information Collection

The Census Bureau is requesting a three year extension of the collection of state government research and development (R&D) expenditures conducted by the Census Bureau on behalf of the National Science Foundation (NSF).

This collection is authorized under Title 13, Section 8(b) of the United States Code, which allows the Secretary of Commerce to “make special statistical compilations and surveys, for departments, agencies and establishments of the Federal Government.”

The NSF Act of 1950 includes a statutory charge to “provide a central clearing-house for the collection, interpretation, and analysis of data on scientific and engineering resources and to provide a source of information for policy formulation by other agencies in the Federal Government.” Under the aegis of this legislative mandate, NSF and its predecessors have sponsored surveys of R&D since 1953, including since 2006 the State Government R&D Survey. This survey has helped to expand the scope of R&D collections to include state governments, where previously there had been no established collection efforts.

NSF sponsors surveys of R&D activities of Federal agencies, higher education institutions, and private industries. The data collected from this survey instrument fills the void that previously existed for collection of R&D activities at the state government department or agency level. The results of these surveys provide a consistent information base for government officials, industry professionals, and researchers to use in formulating public policy and planning in science and technology. These surveys allow for the analysis of current and historical trends in research and development in the U.S., as well as, comparisons with other countries.

The Census Bureau, serving as collection agent, employs a methodology similar to the one used to collect information from state and local governments on established censuses and surveys. This methodology involves identifying a central coordinator in each state who will assist Census Bureau staff in identifying appropriate state departments/agencies to survey. These state contacts also verify data responses and assist with nonresponse follow-up. The collection approach using a central state contact is used successfully at the Census Bureau in surveys of local school districts, municipal and county governments, and state government finances.

Items on the survey form include R&D expenditures according to the source of funding, by performer of the work (*i.e.*, internal and external to state agencies), by type (*e.g.*, agriculture, energy, health, transportation, etc.), by character of work (*i.e.*, basic research, applied research, or developmental), and by R&D plant (*e.g.*, construction projects). Final results produced by NSF contain state and national estimates and are useful to a variety of data users interested in research and development performance including: the National Science Board; the Office of Management and Budget (OMB); the White House Office of Science and Technology Policy (OSTP) and other science policy makers; institutional researchers; and private organizations.

## 2. Need and Uses

Legislators, policy officials, and researchers rely on statistics to make informed decisions about R&D investment at the Federal, state, and local level. These statistics are derived from the existing NSF sponsored surveys of Federal agencies, higher education institutions, and private industry. The total picture of R&D expenditures, however, had been incomplete due to the lack of relevant and timely data from state governments prior to this survey collection, which now fills that void.

State government officials and policy makers garner the most benefit from the results of this survey. Governors and legislatures need a reliable, comprehensive source of data to help in evaluating how best to attract the high-tech, R&D industries to their state. Officials are able to evaluate their investment in R&D based on comparisons with other states. These comparisons include the sources of funding, the type of R&D being conducted, and the actual performer of the work.

The information collected from the State Government R&D Survey is used at the Federal level to assess and direct investment in technology and economic issues. Congressional committees and the Congressional Research Service use results of the R&D surveys extensively. Inquiries made to NSF by congressional staff concerning industry and academic data are well documented. In addition, officials from several Federal agencies make use of the data.

NSF also uses data from this survey in various publications produced about the state of R&D in the U.S. The Science and Engineering Indicators series, for example, is a biennial report mandated by Congress and describes quantitatively the condition of the country's R&D efforts. Results are also likely to be included in the National Patterns of Research and Development Resources tabulations and in the Science and Engineering Indicators report.

The availability of state R&D data on the Internet makes this survey visible to several other users, as well. Media, university researchers, nonprofit organizations, and foreign government officials are also consumers of state R&D statistics. All users are able to utilize this information in an attempt to better understand the nation's R&D resources.

Information quality is an integral part of the pre-dissemination review of the information disseminated by the Census Bureau (fully described in Census Bureau Information Quality Guidelines). Information quality is also integral to the information collections conducted by the Census Bureau and is incorporated into the clearance process required by the Paperwork Reduction Act.

### 3. Use of Information Technology

All data are collected via a Web application designed by Census Bureau staff, thus eliminating the need for mass mailings to individual respondents. Through debriefing consultations with respondents, survey staff determined the Web-only option was not only viable, but also preferred by state government officials.

The Web application has two versions, one for the central state coordinator and one for the department/agency respondent. The central state coordinator uses the Web application to identify respondent lists and contacts, and to view and verify state summary data via the Web application. The central state coordinators and the department/agency respondents will be provided a secure password and clear instructions for utilizing the Website and submitting data. Department/agency respondents will log onto the Web application to submit their response, which the state coordinator will later review. A “paper” version of the Web form (Attachment C) will be available for downloading as a PDF, as well as, the printable version of the submitted data response.

Respondents may enter data amounts directly into the Web form and are not required to download any software. Upon completion of the Web form, respondents submit their data, which are then uploaded to Census Bureau secure servers.

### 4. Efforts to Identify Duplication

The Census Bureau and NSF maintain close liaison and share information with other government agencies that have an interest in R&D statistics to ensure duplication of data collection does not occur. Some of these agencies include, but are not limited to OMB, OSTP, and the U.S. Bureau of Economic Analysis (BEA). Although some states produce reports or conduct small surveys, the State Government R&D Survey is the only comprehensive source of R&D data on state governments collected on a nationwide scale using uniform definitions, concepts, and procedures.

The NSF manages an extensive portfolio of surveys designed to provide comprehensive national statistics on the state of R&D in the U.S. In addition to the State Government R&D Survey, NSF also surveys academic institutions R&D performance and funding through its Higher Education R&D (HERD) survey; manages two surveys of federal government agencies R&D activities and funding for R&D through the Survey of Federal Funds for R&D (Federal Funds Survey),

as well as federal support for R&D through the Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions (Federal Support Survey); the Business R&D and Innovation Survey (BRDIS), also conducted in cooperation with the Census Bureau, provides the most extensive measurements of R&D for the private sector; and with the nascent Micro-business Innovation, Science, and Technology (MIST) survey NSF is developing a survey to measure innovation occurring in small business with less than 5 employees. Through this array of surveys NSF ensures the flow of funds for R&D across all sectors of the economy are properly accounted for and avoid duplication of effort and duplication of measurement.

5. Minimizing Burden

To minimize total burden for the survey, the project staff coordinates with central state contacts to pre-select departments and agencies that likely conduct R&D activities. This phase of the survey helps to eliminate burden from most state government entities that do not have R&D data to report.

Items on the form have been reviewed by state government experts and are consistent with common recordkeeping practices of respondents.

The Web submission method also allows for real-time, state-level review of data. The use of paper or faxed submissions would require central state contacts and analysts to enter data or compile responses manually before reviewing state totals.

6. Consequences of Less Frequent Collection

The State Government R&D Survey, in an attempt to reduce burden and increase efficiencies, has changed from a single fiscal-year centric survey to a biennial collection requesting two fiscal years of data at the same time. This has already reduced the frequency of collection to reduce burden on respondents. There is no other national data collection effort that results in a report on state government R&D activities.

NSF currently sponsors R&D surveys of federal government agencies, academic institutions, and private industry. Data from these organizations are collected on an annual basis and the results are vital to policy makers at all levels of government, to the business community, and to those in the science and technology research community. Less frequent collection of state government R&D data would result in inconsistent comparisons and compilations with these other surveys.

7. Special Circumstances

This information collection is conducted in a manner consistent with OMB guidelines and there are no special circumstances.

8. Consultations Outside the Agency

The published *Federal Register* of October 24, 2012, Volume 77, Number 206, Page. 64952-64953, contained a pre-submission notice inviting comments about the plans to submit this request. We received one comment from an individual generally opposing data collection. We received a letter from the Bureau of Economic Analysis in support of the data collection (Attachment H).

Project staff conducted individual usability testing and debriefing interviews with state government budget officials, comptrollers, analysts, research coordinators, and national organizations in order to determine the scope of items on the survey and the methodology to collect the data. See Attachment G for a complete list of individual usability testing and debriefing interview consultations.

9. Paying Respondents

No payments or gifts are given to respondents of the survey.

10. Assurance of Confidentiality

The data collected in this survey are from public records and do not require confidentiality. Each participant in the survey is informed this is a voluntary survey through the initial Governors Letter (Attachment D); initial State Coordinator Email (Attachment E); and initial Agency Respondent email (Attachment F).

11. Justification for Sensitive Questions

There are no questions in the survey that are commonly considered sensitive.

12. Estimate of Hour Burden

The Census Bureau and NSF reported there were approximately 552 total respondents, including the 52 state coordinators (50 states, the District of Columbia, and Puerto Rico). Research suggests each state has between 8 and 10 departments and agencies that will participate in the survey.

Based on interviews with state officials, the estimated burden on each state coordinator is four hours. The state coordinators are asked to complete a web form that includes the identification of department and agency contacts, monitoring of department and agency response, and final review and verification of state data. The department and agency respondents are asked to complete a web form which requires approximately one hour and forty five minutes to complete. The total respondent burden amounts to 1,083 hours biennially or 542 hours annually.

RESPONDENT TYPE	NUMBER OF RESPONDENTS	AVERAGE HOURS	TOTAL BURDEN
State Coordinator	52	4.0	208
Department/Agency	500	1.75	875
Total	552		1,083 or 542 annually

13. Estimated Cost to Respondents

We do not expect respondents to incur any cost other than their time to respond. The information requested is of the type and scope normally carried in agency records and no special hardware or software is necessary to provide answers to this information collection. Therefore, respondents are not expected to incur any capital and startup costs, or systems maintenance costs in responding. Further, purchasing of outside information collection services, if performed by the respondent, is part of usual and customary business practices and not specifically required for this information collection.

14. Cost to the Federal Government

We expect the total cost to the Federal government to be approximately \$62,500 with the cost to be born by the National Science Foundation.

15. Reason for Change in Burden

We have condensed the collection into one IC (previously two). All parts of the collection are now included as one IC. No parts of the collection have been removed.

16. Project Schedule

The Census Bureau will request data from states for fiscal year 2012 and 2013 starting November 2013. In succeeding months, project staff will work with central state contacts to conduct non-response efforts with agencies that fail to respond to the initial request. Closeout of data submissions is scheduled for August 2014. Data will be reviewed by Census Bureau analysts for accuracy and completeness.

Census Bureau staff will produce and deliver final tabulations for NSF in September 2014. Methodological documentation and technical notes will accompany the final tables.

This is a biennial collection and future surveys will follow the same data submission, review, and final tabulation schedule.

17. Request to Not Display the Expiration Date

The expiration date of OMB approval is displayed in the upper right corner on the survey Website and in the Burden Statement section on the downloaded paper instrument.

18. Exceptions to the Certification

The collection of information for the survey complies with 5 CFR 1320.9 without exception.