

Supporting Statement  
Survey of State Research and Development

A. Justification

1. Necessity of the Information Collection

The U.S. Census Bureau is requesting a new collection of state government research and development (R&D) expenditures that will be planned and supported jointly by the Census Bureau and the National Science Foundation (NSF).

This collection is authorized under Title 13, Sections 161 and 182 of the United States Code, which allow the Secretary of Commerce to collect and disseminate “data on...governmental receipts, expenditures...of states, counties, cities, and other governmental units.” Title 15, Section 1525 of the United States Code also authorizes the Secretary of Commerce “upon the request of any person, firm, organization, or others, public or private, to make special studies on matters within the authority of the Department of Commerce.”

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. This new survey will expand the scope of R&D collections to include state governments, for which there are no established collection efforts.

NSF currently sponsors surveys of R&D activities of Federal agencies, higher education institutions, and private industries. The results of these existing 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 existing NSF surveys, however, do not canvass R&D activities at the state government department or agency level. Collection of data from state government units via this new survey instrument will fill the void that currently exists about our Nation’s R&D expenditures.

The Census Bureau, serving as collection agent, will employ 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 will also be able to 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 will include expenditures by performer, source of funding, and type of R&D (e.g., basic research). The scope of the collection includes amounts for all science and engineering outlays, including social science research. R&D capital expenditures, such as research lab construction and the purchase of buildings, will also be collected.

## 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, is incomplete due to the lack of relevant and timely data from state governments. This survey will fill this void that currently exists.

State government officials and policy makers are likely to 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 will be able to evaluate their investment in R&D based on comparisons with other states. These comparisons will include the sources of funding, the type of R&D being conducted, and the actual performer of the work.

The information collected from the Survey of State R&D will be 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 current 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 existing data.

NSF will also use 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 will also likely be included in the National Patterns of Research and Development Resources tabulations and in the Science and Engineering Indicators report.

Private industry, either individually or through trade associations, will also find

these data useful, particularly statistics concerning funds transferred from state agencies to businesses. The current R&D surveys often receive prominent mention in industry publications such as *Research and Development* magazine, which recently released its “State of Global R&D” report.

The availability of state R&D data on the Internet will make this survey visible to several other users, as well. Media, university researchers, nonprofit organizations, and foreign government officials are also likely consumers of state R&D statistics. All users will 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 the Census Bureau’s 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 will be collected via a Web application designed by Census Bureau staff, thus eliminating the need for mass mailings to individual respondents. In consultation with potential respondents, survey staff determined that the Web-only option was not only viable, but also preferred by state government officials.

The Web application will contain two sections, one for the central state coordinator and one for the department/agency respondent. The central state coordinator will use the Web to identify respondent lists and contacts, and to view and verify state summary data. The department/agency section of the Web application will contain the electronic survey form. 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. A “paper” version of the Web form will be available for download and can be used as an information gathering worksheet.

Respondents may enter data amounts directly into the Web form and will not be required to download any software. A real-time editing system will be designed to alert users of possible submission errors. Upon completion of the Web form, respondents will submit data, which will be 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 that

duplication of data collection does not occur. Although some states produce reports or conduct small surveys, there exists no comprehensive, national survey of state government R&D activities.

5. Minimizing Burden

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

The survey form itself will be less extensive than previous attempts at collecting state R&D data. 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

NSF currently sponsors R&D surveys of federal government agencies, academic institutions, and private industry. Data from these organizations is 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. However, no annual national data collection effort exists that results in a report on state government R&D activities. Less frequent collection of state R&D data would result in inconsistent comparisons and compilations with these other surveys.

7. Special Circumstances

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

8. Consultations Outside the Agency

A notice was published in the Federal Register on May 10, 2006, inviting public comment on plans to submit this request. There were no public comments submitted, however, the Bureau of Economic Analysis submitted a letter of support in response to this notice (see Attachment E).

Project staff conducted 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 C for a complete list of 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 will be informed that this is a voluntary survey.

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 estimate approximately 832 total respondents, including the 52 state coordinators (50 states, the District of Columbia, and Puerto Rico.) Initial research suggests that each state will have between 10 and 20 departments and agencies participate in the survey.

Based on interviews with state officials, the estimated burden on each state coordinator is four hours. The burden on state coordinators includes the initial 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 will be asked to complete the same Web form, which will require approximately one and a half hours to complete. This estimate is based on similar R&D surveys conducted by NSF on industrial (Form RD-1A) and academic entities (Form 411), and consultations with state officials. The total respondent burden amounts to 1378 hours.

RESPONDENT TYPE	NUMBER OF RESPONDENTS	AVERAGE HOURS	TOTAL BURDEN
State Coordinator	52	4.0	208
Department/Agency	780	1.5	1170
Total	832	1.66	1378

13. Estimated Cost to Respondents

We do not expect respondents to incur any cost other than that of 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 cost 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 \$350,000.

15. Reason for Change in Burden

This survey is being submitted as a new collection.

16. Project Schedule

The Census Bureau will initially request data from states for fiscal year 2006. The initial request for data will proceed in October 2006. In succeeding months, project staff will work with central state contacts to conduct nonresponse efforts with agencies that fail to respond to the initial request. Closeout of data submissions is scheduled for January 2007. Data will be reviewed by Census Bureau analysts for accuracy and completeness.

Census Bureau staff will produce preliminary tabulations for NSF in February 2007 and final tabulations in April 2007. Methodological documentation and technical notes will accompany the final tables.

This will be an annual 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 will be displayed on the survey Website.

18. Exceptions to the Certification

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