

**Department of Commerce
United States Census Bureau
OMB Information Collection Request
Survey of State Government Research and Development
OMB Control Number 0607-0933**

B. Collection of Information Employing Statistical Methods

1. Description of Universe and Respondent Selection

The survey frame consists of all state government-dependent units, including those for the District of Columbia and Puerto Rico, with the capacity or budget authority to perform or fund R&D. A state coordinator, who is appointed by the governor of each state, reviews the list of agencies and based on their knowledge of the state budget, activities, and priorities will make changes to the survey frame where appropriate.

The target population consists of state government departments, agencies, commissions, public authorities, institutions, and other entities that operate separately or somewhat autonomously from the central state government but where the state government maintains administrative or fiscal control over their activities, as defined in the *U.S. Census Bureau Government Finance and Employment Classification Manual* (chapter 1). Several industry-specific state commissions, which are generally chartered by state legislatures but are administered independently, are considered state agencies and included in the survey's population of interest. State-run colleges and universities, which are canvassed as part of NCSSES's Higher Education Research and Development (HERD) Survey, are excluded from the survey frame. State-run laboratories or experiment stations controlled by state universities are also excluded from the respondent universe, as are any entities determined to be nonprofit or private, as defined by the U.S. Census Bureau government classification criteria.

Data are collected for each state's fiscal year end. Most states have a fiscal-year period that begins July 1 and ends the following June 30. For example, FY 2020 is the state fiscal period beginning on July 1, 2019 and ending on June 30, 2020. There are, however, four exceptions to the June 30 fiscal-year end: New York (ends March 31), Texas (ends August 31), Alabama (ends September 30), and Michigan (ends September 30). For comparability, these four states are surveyed with the other 46 states that end on June 30 - a practice consistent with the Census Bureau's Census of Governments program. The District of Columbia follows the Federal Government fiscal year, which ends September 30, while Puerto Rico's fiscal year begins July 1 and ends June 30.

2. Procedures for Collection of Information

In August, a letter (Attachment A) is sent to the office of each state's governor asking them to appoint a state coordinator who would provide updates to the universe of state government-dependent agencies that have the capacity to perform or fund R&D during the most recent fiscal period ended. State coordinators are provided with a list of agencies (Attachment B2) and asked to: add agencies that may be involved in R&D and are not already on the frame, make changes to the existing frame due to reorganizations, restructuring of agency R&D related activities to their portfolios since the last survey cycle, or remove agencies from the frame that no longer exist or have R&D activities.

Once the state coordinator completes updates to the list of agencies and returns it to the Census Bureau, e-mails (Attachment C1) are sent to the agency contacts with the survey form (Attachment C2) attached. Agency contacts are asked to complete the form and e-mail back to the Census Bureau. Alternatively, agency contacts can provide survey responses over the phone to a Census analyst. Upon completion by all agencies, the state coordinators are provided with a file of agency responses and asked to review the final data for the state aggregate and agency level detail to identify any anomalies. Results are then provided to NCSES for final analysis and dissemination.

3. Methods to Maximize Response and Account for Nonresponse

Maximizing response: The key to maximizing response is obtaining high-level approval and oversight for the data collection effort within each state. The state coordinator, who has been identified by the Governor's office, is asked to assist with identifying those agencies within the state that perform or fund R&D activities in a given fiscal year.

Survey staff monitors responses and works with the agency level respondents to obtain responses. Since the survey is expected to launch in November 2020, monthly follow-up on state agencies that have not submitted data will begin with state coordinators in January 2021.

Accounting for Nonresponse: Missing data are possible in two instances: (1) agencies within a state do not respond to the survey and, (2) agencies within a state do not respond to particular items on the survey. Since each state government's organizational structure, laws, and delegation of powers within its purview are unique, there is no imputation base for a given state government to use data from other state governments. Therefore, there are no formal methods of imputation to account for these structural differences that are consistent with basic statistical methods. This practice is consistent with the Census Bureau's Annual Survey of State Government Finances.

Since its change from a biennial collection to an annual collection with the FY 2016 survey cycle, the survey's agency response rate has averaged 94% and we expect it to remain fairly consistent for the FY 2020-2022 surveys.

4. Tests of Procedures or Methods

The NSF and the Census Bureau annually conduct debriefings with survey respondents to assess the effectiveness of current question wording, instructions, and tools. In the event that these debriefings or other respondent feedback suggest the need for substantive changes to survey questions, any such changes will be cognitively tested with respondents prior to implementation.

The NSF conducted cognitive testing on two new R&D personnel questions (Questions 10 and 11 on the survey form (Attachment C2)) with the following agencies:

- New York Office of Mental Health
 - Including a subsequent interview with the Research Foundation for Mental Hygiene
- New York Department of Agriculture and Markets
- New York Department of Environmental Conservation
- New York Department of Transportation
- Florida Fish and Wildlife Conservation Commission
 - Including a subsequent interview with the head of HR
- Massachusetts Department of Environmental Protection

These questions are only applicable to agencies that conduct intramural R&D (about 180 of the ~700 agencies in-scope). NY OMH and FL Fish and Wildlife combined account for nearly \$200 million of the \$600 million in state government intramural R&D. New questions have added anywhere between 20 minutes to 3 days of burden. Generally speaking, most agencies are finding the total head count to be fairly easy to answer, the total FTE to be a little more challenging but not difficult, but they are finding the splits of employee types more difficult. Agencies are unsure what to include and what to exclude in terms of “support staff”. Definition and examples of “support staff” will be added to the form prior to survey launch and will be made available to OMB prior to clearance upon request.

5. Contacts for Statistical Aspects and Data Collection

Statistical staffs at both the Census Bureau and the National Science Foundation have been consulted on statistical aspects of the survey and on data collection issues.

Persons responsible for data collection:

Richard S. Hough, Assistant Division Chief
R&D and Special Surveys
Economic Reimbursable Surveys Division
U.S. Census Bureau
(301) 763-4823
richard.s.hough@census.gov

Michael Flaherty, Chief

Research, Development, and Innovation Surveys Branch
Economic Reimbursable Surveys Division
U.S. Census Bureau
(301) 763-7699
michael.j.flaherty@census.gov

Vicki Kuppala, Survey Statistician
Economic Reimbursable Surveys Division
U.S. Census Bureau
(301) 763-7678
vicki.kuppala@census.gov

Persons responsible for analysis of the statistics and publication:

Christopher Pece, Senior Analyst
Research and Development Statistics Program
National Center for Science and Engineering Statistics
National Science Foundation
(703) 292-7788
cpece@nsf.gov

John E. Jankowski, Program Director
Research and Development Statistics Program
National Center for Science and Engineering Statistics
National Science Foundation
(703) 292-7781
jjankows@nsf.gov

List of Attachments

- A) Governors Letter
- B1) State Coordinator Email
- B2) Survey Frame-Review Module (State Coordinator)
- C1) Agency Email
- C2) SRD-1 (State Agency Form)