Supporting Statement for Paperwork Reduction Submission

Grantee Reporting Requirements for Research Experiences for Undergraduates (REU) Program Module

A. Justification

A.1. Circumstances Requiring the Collection of Data

The Research Experiences for Undergraduates (REU) program, consisting of REU Sites and REU Supplements, is an NSF-wide program that is coordinated by the Directorate for Education and Human Resources and led by a committee of representatives from directorates, offices, and divisions across the Foundation. As stated in the program solicitation (NSF 12-569):

"The Research Experiences for Undergraduates (REU) program supports active research participation by undergraduate students in any of the areas of research funded by the National Science Foundation. REU projects involve students in meaningful ways in ongoing research programs or in research projects specifically designed for the REU program. [The program] features two mechanisms for support of student research: (1) *REU Sites* are based on independent proposals to initiate and conduct projects that engage a number of students in research. REU Sites may be based in a single discipline or academic department or may offer interdisciplinary or multi-department research opportunities with a coherent intellectual theme.... (2) *REU Supplements* may be included as a component of proposals for new or renewal NSF grants or cooperative agreements or may be requested for ongoing NSF-funded research projects."

The REU program is major contributor to NSF's goal of "preparing and engaging a diverse science, technology, engineering, and mathematics (STEM) workforce motivated to participate at the frontiers," and the program is a prime example of NSF's approach of integrating research and

education. Participation in undergraduate research is known to enhance the learning experience of students in STEM and to increase retention in STEM.

NSF funds approximately 180 new REU Site grants each year. Most grants for REU Sites have a duration of three years; some operate for up to five years. Approximately 5,000 students from colleges and universities around the nation participate in REU Sites each year. Most REU Sites operate for 8 to 10 weeks during the summer. The majority of students participate in the summer before their junior or senior year in college, but the program encourages the involvement of students at earlier stages during their undergraduate careers. The REU Sites receive funds from NSF to host the students and provide research experiences. Some students may be recruited from the institution hosting the REU site; however, REU Sites are required to recruit a significant fraction of their students from other institutions, and at least half of the students must come from institutions where research opportunities in STEM are limited (including two-year colleges). The REU program also strongly encourages the recruitment of underrepresented minorities, women, and persons with disabilities.

NSF also funds approximately 1,600 requests for REU Supplements each year. These allow investigators with active NSF research grants to support typically one or two undergraduate students to participate in the research.

Because REU Site and Supplement awards are a major contributor to NSF's performance goal of "preparing and engaging a diverse STEM workforce motivated to participate at the frontiers," it is necessary for NSF to ensure that its investment is spent appropriately and that each award is contributing to the goal. Investigators having an REU Site or Supplement award are required to complete the REU Program Module as part of their annual and final project reports in the FastLane Project Reports System. The information that this module collects about REU student participants

complements the information that the generic FastLane Project Reports System module collects about *all* personnel who have contributed more than 160 hours per year to a project. The latter information includes demographic information for the personnel and is covered by a separate OMB clearance.

Specifically, in the REU Program Module, the investigator (Principal Investigator [PI] or Co-Principal Investigator [Co-PI]) provides the following information for each REU student participant:

- Year of schooling completed (freshman, sophomore, junior, pre-college teacher, other)
- Home institution
- Home institution's highest degree granted in fields supported by NSF (associate's degree, bachelor's degree, master's degree, doctoral degree)
- Federal Fiscal Year(s) during which the REU participant was supported

In addition, the investigator provides the number of REU student applications received during the reporting period and the number of REU applicants who were selected and who agreed to participate during the reporting period. This information about the degree of competition for REU positions enables NSF to determine whether adequate resources are being allocated to the program.

NSF has prepared the publication "REU Site Awards: Guidelines for Use of NSF FastLane Project Reports System" to assist investigators in complying with the reporting requirements in the REU Program Module and the generic FastLane Project Reports System module.

A.2. Purpose and Use of Data

The information collected in the REU Program Module, when combined with the information collected in the generic FastLane Project Reports System module (which includes demographic information on participants and is covered by a separate OMB clearance), will be used to:

- Monitor the REU Program's annual contribution to NSF's goal of "preparing and engaging a diverse STEM workforce motivated to participate at the frontiers," which includes broadening participation in STEM and reaching students at a variety of institutions and educational levels.
- Make funding decisions. NSF staff use information from the REU Program Module, together with information from annual and final project reports, to make decisions on continuation of funding, level of funding, distribution of awards across disciplines, research topics, and the quality of the undergraduate research experiences.
- Respond to reporting requirements and requests. NSF staff must respond to requests for information about the program from GAO, OSTP, OMB, Congress, and other interested parties. These requests range from providing data for annual surveys that analyze Federal investments in education to answering specific questions about programmatic activities and participants during a particular year.
- Provide information for future program evaluations. The information from the REU Program Module and the generic FastLane Project Reports System module is a foundational data resource for any future evaluations of the program. Each year's information provides a basic profile of the student participants: the number of participants, their demographic characteristics, the institutions they represent, and the types of research activities they conduct.

A.3. Use of Automation

All data is submitted electronically.

A.4. Efforts to Identify Duplication

No other federal agencies or organizations within NSF collect data pertaining to NSF's REU program and its participants.

A.5. Small Business Consideration

N/A

A. 6. Consequences of Less Frequent Collection

The reports and tables generated by the annual data collection constitute a primary mechanism used to monitor the program's contribution to NSF's performance goal of "preparing and engaging a diverse STEM workforce motivated to participate at the frontiers" on an annual basis. In addition, data from this collection are used to respond to requests for information by program stakeholders both inside and outside NSF. If NSF cannot collect information about undergraduate student participants in research, NSF will have no other means to consistently document the number and diversity of participants, the types of research they conduct, the types of institutions they represent, and the REU program's potential impact on the STEM professional workforce.

Less frequent data collection would preclude NSF's annual monitoring and documentation of the progress of each REU Site, and thus would not allow for informed decisions about funding and timely correction of any weaknesses identified in a project's activities.

A.7. Special Circumstances for Collection

N/A

A. 8. Federal Register Notice and Outside Consultation

Per the guidance received for the Research Performance Progress Reporting clearance instructions, the first notice was published in the Federal Register at 72 FR 63629, and as this request seeks to include additional reporting requirements, the agency's notice, as required by 5 CFR 1320.8(d), was published in the *Federal Register* on July 24, 2012, at 77 FR 43374 and no comments were received.

In addition, the reporting requirements and estimates of the hourly burden were discussed with program officers who oversee REU Site awards.

A. 9. Gifts or Remuneration

N/A

A.10. Assurance of Confidentiality

Data are collected through the REU Program Module, which is a component of the NSF FastLane Project Reports System. NSF staff can view the data through the annual and final project reports. Annual and final reports are for use by NSF and are not available to the public.

A. 11. Questions of a Sensitive Nature

No questions of a sensitive nature are used.

A. 12. Estimate of Burden

This request pertains to the approximately 550 active REU Site awards and the approximately 1,600 awards per year that receive REU Supplement funding. Those approximately 2,150 investigators will be asked to respond to this request annually. Each investigator is required to enter data into the REU Program Module at the same time that he or she prepares an annual or final project report in FastLane. We estimate the annual burden as follows: 15 minutes per investigator, and 538 total hours for all investigators.

ANNUALIZED COST TO RESPONDENTS

The overall annualized cost to the respondent is as follows:

Expense category	Unit cost	Units	Total cost
1. Principal Investigator	$ 86.00 per hour*	0.25 hour	**$** 21.50
Total cost per project	$ 86.00 per hour**	0.25 hour	**$** 21.50
Total cost for 2,150 projects	*$ 86.00 per hour*	*537.5 hours*	***$ 46,225.00***

*Salary estimate for PI is based on average salary for full professors plus benefits (using 25% of hourly salary). Information on salary was reported in U.S. Department of Education, National Center for Education Statistics. (2012). *The Condition of Education 2012. (NCES 2008-045).* Washington, DC: U.S. Government Printing Office. *Retrieved 07.26.201*

**Total cost per project is based on one PI responding per project.

A. 13. Annual cost burden [not included in hour cost]

There are no additional costs beyond the estimated hours of burden shown above.

A. 14. Annualized Cost to the Federal Government

The reports that are submitted by the projects are reviewed by the NSF program officers who oversee REU Site and REU Supplement awards for the purposes of overall program management and documentation of progress by individual projects. The following estimates of the anticipated effort are based on the input from an analysis of the time required by program officers to review annual and final reports, the lead program officer in providing oversight and management of the program, and a program officer to provide technical assistance. The annual estimate of their activities and role are as follows:

Expense category	**Unit Cost per Hour**	**Hours**	**Total cost Per Year**
Lead Program Officer	$ 98.00	120	$11,760
Program Officers - Disciplines	$ 98.00	180	$17,640
Program Officer – Technical Assistance	$ 98.00	5	$ 490
Total cost for 2,150 projects			**$ 29,890**

A. 15. Changes in Burden

This is a new request for clearance.

A. 16 Publication of Collection

N/A

A. 17 Approval to Not Display OMB Expiration Date

N/A

A. 18 Exception to Item 19 of OMB Form 83-I Certification Statement

N/A

B. STATISTICAL METHODS

N/A

Attachments

Attachment I. Screen capture of REU Program Module: see the yellow boxes in the capture

Attachment II. Federal Register Notice