

Section B

Introduction

B.1. Respondent Universe and Sampling Methods

The decrease in respondents is due largely to the removal of three tasks. In future years, the burden will be affected by the deletion and addition of some subtasks and respondents. NSF will notify OMB whenever there are significant changes to the burden.

While burden changes are often due to adjustments in the numbers of respondents, some changes in burden are due to the addition of new items to previously cleared surveys. The table below indicates which tasks in this clearance have had major items added since their last OMB clearance. More details can be found in individual clearances.

Table 5. Major New Items Since Last OMB Clearance

Attachment	Collection Title	Major New Items Added
A	Centers of Research Excellence in Science and Technology Monitoring System (CREST)	No
B	Graduate STEM Fellows in K-12 Education Monitoring System (GK-12)	Yes
C	Integrative Graduate Education and Research Traineeship Program Monitoring System (IGERT)	Yes
D	Louis Stokes Alliances for Minority Participation Monitoring System (LSAMP)	No
E	Louis Stokes Alliances for Minority Participation Bridge to the Doctorate Monitoring System (LSAMP BD)	No
F	Robert Noyce Teacher Scholarship Program Monitoring System (Noyce)	Yes (Added different instrument version for Track II awards with equivalent questions for two new types of support recipients)
G	Scholarships in Science, Technology, Engineering, and Mathematics Program Monitoring System (S-STEM)	No
H	Science, Technology, Engineering, and Mathematics Talent Expansion Program Monitoring System (STEP)	No
I	Computer & Information Science & Engineering Pathways to a Revitalized Undergraduate Computing Education Program Monitoring System (CPATH)	Yes

Attachment	Collection Title	Major New Items Added
J	Transforming Undergraduate Education in Science, Technology, Engineering, and Mathematics Monitoring System (TUES)	N/A (New task)

In keeping with the original 1995 request and subsequent 1998, 2001, 2005, and 2008 OMB renewed approvals, the EHR Generic Clearance's (OMB 3145-0136) goal is a portfolio of individual collections used to count and describe the universe of NSF-funded or NSF-partnered education and training projects. The statistical method employed in all nine task collections is that of a census of NSF-funded projects. Some projects have only one respondent type, typically a PI; others have several types of respondents.

Data collection for the tasks involves all awardees in the programs involved. The table below shows the total universe and sample size for each of the tasks.

Table 6. Respondent Universe and Sample Size of EHR Generic Clearance Surveys

Attachment	Collection Title	Universe of Respondents	Sample Size
A	Centers of Research Excellence in Science and Technology Monitoring System (CREST)	34	34
B	Graduate STEM Fellows in K-12 Education Monitoring System (GK-12)	2,040	2,040
C	Integrative Graduate Education and Research Traineeship Program Monitoring System (IGERT)	3,756	3,756
D	Louis Stokes Alliances for Minority Participation Monitoring System (LSAMP)	529	529
E	Louis Stokes Alliances for Minority Participation Bridge to the Doctorate Monitoring System (LSAMP BD)	48	48
F	Robert Noyce Teacher Scholarship Program Monitoring System (Noyce)	274	274
G	Scholarships in Science, Technology, Engineering, and Mathematics Program Monitoring System (S-STEM)	500	500
H	Science, Technology, Engineering, and Mathematics Talent Expansion Program Monitoring System (STEP)	213	213
I	Computer & Information Science & Engineering Pathways to a Revitalized Undergraduate Computing Education Program Monitoring System (CPATH)	76	76
J	Transforming Undergraduate Education in	1,100	1,100

Attachment	Collection Title	Universe of Respondents	Sample Size
	Science, Technology, Engineering, and Mathematics Monitoring System (TUES)		

B.2. Information Collection Procedures/Limitations of the Study

The data collections in this generic clearance use Web-based instruments. Each respondent will provide answers once a year, with the exception of respondents to the S-STEM data collection (attachment G), who enter data each semester/quarter, for an average of two times a year.

NSF understands the limitations of the EHR Generic Clearance, particularly in terms of using the data to determine program effectiveness. Data collected under this generic are for monitoring purposes; evaluation studies are cleared under separate OMB requests. OMB 3145-0136 data may serve as preliminary foundation work for later, independent program evaluations. EHR Generic data are not used to determine the ultimate effectiveness of STEM educational interventions, but they are a key element in NSF's efforts to manage its program portfolio, to report on agency activities and goals, and to lay the groundwork for future evaluations.

B.2.1. Statistical Methodology for Stratification and Sample Selection

Each of the ten tasks for which clearance is requested is a census, in which the sample size is the universe. Details on the size of the universe in each collection are included in individual clearances.

B.2.2. Estimation Procedure

Not applicable

B.2.3. Degree of Accuracy Needed for the Purpose Described in the Justification

Not applicable

B.2.4. Unusual Problems Requiring Specialized Sampling Procedures

Not applicable

B.2.5. Use of Periodic (Less Frequent Than Annual) Data Collection Cycles

Not applicable

B.3. Methods for Maximizing the Response Rate and Addressing Issues of Nonresponse

All task collections in this generic clearance are a part of the reporting required of awardees, so a high response rate is expected. The table below shows the expected response rates for each of the individual tasks.

Table 7. Response Rates for EHR Generic Clearance Task Collections

Attachment	Collection Title	Response Rate
A	Centers of Research Excellence in Science and Technology Monitoring System (CREST)	100%
B	Graduate STEM Fellows in K-12 Education Monitoring System (GK-12)	100% awardees and NSF-funded fellows; 85-95% lead/NSF-supported teachers
C	Integrative Graduate Education and Research Traineeship Program Monitoring System (IGERT)	100%
D	Louis Stokes Alliances for Minority Participation Monitoring System (LSAMP)	100%
E	Louis Stokes Alliances for Minority Participation Bridge to the Doctorate Monitoring System (LSAMP BD)	80%
F	Robert Noyce Teacher Scholarship Program Monitoring System (Noyce)	100%
G	Scholarships in Science, Technology, Engineering, and Mathematics Program Monitoring System (S-STEM)	90%
H	Science, Technology, Engineering, and Mathematics Talent Expansion Program Monitoring System (STEP)	100%
I	Computer & Information Science & Engineering Pathways to a Revitalized Undergraduate Computing Education Program Monitoring System (CPATH)	100%
J	Transforming Undergraduate Education in Science, Technology, Engineering, and Mathematics Monitoring System (TUES)	100%

Principal investigators are responsible for ensuring that other individuals involved in the project submit all necessary data, and in many cases have access to status information on the Web-based systems indicating whether or not individual respondents in their projects have completed their data entry. In addition, EHR staff also have access to online monitoring sections of many of the Web-based systems and can check the status of reporting. A series of e-mail messages and phone calls are also used to follow up with

respondents and ensure that all necessary data are collected. See individual task collections for examples of the followup e-mail messages that are sent and more specific information on how response rates are supported.

B.4. Tests of Procedures or Methods

All of the collections for which clearance is being requested are currently in operation and have been tested both before initial implementation and throughout the data collection. The LSAMP monitoring system, for example, has been operational since 1995. Input on this system is continually received from users and their suggestions are implemented as the system is upgraded. Other test methods used by the various collections in the EHR Generic include feedback from PIs, both as data are collected and during meetings and conferences; review by NSF staff; and testing performed by the system developers. Many systems are based on data collection methods currently used by other NSF groups, and many of the items and response categories follow formats that are already in place.

B.5. Names and Telephone Numbers of Individuals Consulted

The following individuals were consulted on the EHR Generic Clearance:

William Neufeld, Division of Research on Learning in Formal and Informal Settings, National Science Foundation, (703) 292-5148

The following table shows the individuals involved in each task:

Table 8. Contact Information for Individuals Responsible for Tasks

Attachment	Collection Title	NSF Agency Unit	Contractor or Grantee
A	Centers of Research Excellence in Science and Technology Monitoring System (CREST)	Victor Santiago, (703) 292-4673	Lea Mesner, ICF Macro, (301) 657-3070
B	Graduate STEM Fellows in K-12 Education Monitoring System (GK-12)	Sonia Ortega, (703) 292-8697	Lea Mesner, ICF Macro, (301) 657-3070
C	Integrative Graduate Education and Research Traineeship Program Monitoring System (IGERT)	Melur K Ramasubramanian, (703) 292-9048	Lea Mesner, ICF Macro, (301) 657-3070
D	Louis Stokes Alliances for Minority Participation Monitoring System (LSAMP)	A. James Hicks, (703) 292-4668	Lea Mesner, ICF Macro, (301) 657-3070
E	Louis Stokes Alliances for Minority Participation Bridge to the Doctorate Monitoring	A. James Hicks, (703) 292-4668	Lea Mesner, ICF Macro, (301) 657-3070

Attachment	Collection Title	NSF Agency Unit	Contractor or Grantee
	System (LSAMP BD)		
F	Robert Noyce Teacher Scholarship Program Monitoring System (Noyce)	Joan Prival, (703) 292-4635	Lea Mesner, ICF Macro, (301) 657-3070
G	Scholarships in Science, Technology, Engineering, and Mathematics Program Monitoring System (S-STEM)	Joyce Evans, (703) 292-5098	Lea Mesner, ICF Macro, (301) 657-3070
H	Science, Technology, Engineering, and Mathematics Talent Expansion Program Monitoring System (STEP)	Susan H. Hixson, (703) 292-4623	Lea Mesner, ICF Macro, (301) 657-3070
I	Computer & Information Science & Engineering Pathways to a Revitalized Undergraduate Computing Education Program Monitoring System (CPATH)	Harriet G. Taylor, (703) 292-8950	Nancy Adelman, SRI International, (703) 247-8434
J	Transforming Undergraduate Education in Science, Technology, Engineering and Mathematics Monitoring System (TUES)	Connie Kubo Della-Piana, (703) 292-5309	Lea Mesner, ICF Macro, (301) 657-3070