

SF-83-I SUPPORTING STATEMENT

for

**Higher Education Research and Development Survey and
Federally Funded Research and Development Centers R&D
Survey**

Section B

FY 2022-FY 2024 Cycles

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SECTION B. Collection of Information Employing Statistical Methods

B.1. Universe and Sample Descriptions

The Universe

The HERD and FFRDC R&D Surveys are censuses of all eligible institutions. No sampling will be performed for either survey.

The universe for the FY 2022-24 HERD Survey population will include all bachelor's and higher degree-granting U.S. institutions that spent at least \$150,000 in separately accounted for R&D in their prior fiscal year, estimated to be roughly 925 institutions each year. The population for the survey will be identified through a screening of all bachelor's and higher degree-granting institutions as identified by the National Center for Education Statistics Integrated Postsecondary Education Data System (IPEDS).

The universe for the FFRDC R&D Survey consists of all FFRDCs in operation during the fiscal year of measurement (43 in FY 2021 but will be 42 in FY 2022).

Response Rate Calculations

The AAPOR response rate 6 (RR6) is used to calculate the overall survey response rate (https://www.aapor.org/AAPOR_Main/media/publications/Standard-Definitions20169theditionfinal.pdf page 62). This response rate includes complete plus partial responses in the numerator divided by all known eligible institutions. The response rate is expected to be over 95% each year for the HERD survey, and 100% for the FFRDC R&D Survey.

Fiscal Year	Number of HERD Institutions	Response Rate
2019	916	96.7%
2020	915	96.0%
2021	914	95.0%
Fiscal Year	Number of FFRDCs	Response Rate
2019	42	100%
2020	42	100%
2021	43	100%

B.2. Information Collection Procedures

The HERD and FFRDC Surveys will be administered via the web. Prior to the survey launch, a population review will be conducted to identify newly eligible institutions for the surveys. For the FFRDC Survey this involves a review of the current NCSES Master List of FFRDCs to update the population as needed. For the HERD survey, this involves contacting all four-year and above institutions reporting non-zero R&D expenses in IPEDS, who were not previously included in the HERD survey population and had not already responded to a screener in the previous year. The number of academic institutions contacted is estimated to be approximately

125 per year. These institutions will receive an email with a pdf attachment of the Population Review questionnaire. This brief survey will ask whether the institution spent at least \$150,000 on R&D projects during either of the past two fiscal years, and if so, whether the expenditures were estimated to be between \$150,000 to \$1 million or \$1 million or more. Institutions responding with expenditures over the threshold will be included in the HERD Survey or HERD Short Form depending on the expenditure range reported. Institutions who do not respond after two bi-weekly reminders will be contacted by phone as needed. See attachments 4 and 5 for the population review questionnaire and the population review methodology.

An initial contact verification email will be sent to all previous year respondents. One week later the respondents will be sent survey information, a user ID, and a link with instructions to create a password via email. Each institution's web survey includes data from the 2 preceding years for arithmetical and trend check purposes. Large increases or decreases in expenditures are compared with the preceding years and flagged, and respondents are asked to explain and reconcile these differences.

Telephone and email follow-up will begin approximately 2 weeks after survey transmittal to those respondents who have not verified they are the correct contact for their institution. Reminder mailings, emails and telephone calls will be made at several points throughout the survey collection period. All telephone contacts include an offer to assist the respondent in providing the data. NCSES and the contractor will monitor institution response status closely through a web-monitoring system during the data collection cycle, with periodic contact maintained via telephone and email until survey closeout to ensure that (a) a response is provided and (b) data errors are resolved. This level of interaction with the institutions is responsible for the high survey response rates that have been achieved for the past years (see Attachment 11 for the full set of contact procedures).

Upon survey closeout, NCSES will develop estimates for that portion of the survey population that did not respond. Imputation is performed using prior years' figures derived from the data of respondent institutions with similar characteristics, such as highest degree granted and type of institutional control (public or private). This process has been used consistently since 1976. As a result of high overall response rates, especially from institutions that historically account for the largest share of the HERD total, imputed amounts account for a very small percentage of total R&D expenditures (0.1 percent of the total in FY 2020). See attachments 9-11 for survey contact procedures.

B.3. Statistical Accuracy of the Collection

All of the follow-up procedures described here and in the previous section have been instituted in part to maximize the survey's response rate. While the official survey deadlines are three months after the opening of the survey, the data collection window is held open as long as possible to obtain responses from all of the FFRDCs and at least 95% response for the HERD Survey (including all of the top 150 institutions in R&D spending in the prior FY). Institutions that do not respond by the deadline are contacted every one to two weeks either by email or phone to remind them of the importance of completing the survey for their institution. For the HERD Survey, if an institution has still not responded approximately six weeks after the survey deadline, a letter is sent to their president or chancellor making one final request for their

participation. These methods have delivered a response rate of 94% or higher approximately eight weeks after the initial survey deadline for the last several survey cycles.

B.4. Testing of Procedures

There are no plans to conduct tests of procedures during this clearance period.

B.5. Contact Information

At NCSES, John Finamore, Chief Statistician, provides statistical oversight (703) 292-2258. Michael Gibbons, Survey Manager for the HERD and FFRDC Surveys (703-292-4590), Gary W. Anderson, Program Director (acting), Science, Technology, and Innovation Survey Management Program (703-292-8572) provide analytical and management oversight for the survey.

The survey experts from the HERD and FFRDC data collection contractor, ICF, associated with HERD and FFRDC are Kathryn Harper, Project Director (301-407-6773), Jennifer Greer, Data Products Lead (419-260-5431), Carolyn Bennett, Data Collection Lead (301-572-0322).

ATTACHMENT 1

OMB Notice of Approval 3145-0100

ATTACHMENT 2

FY 2022 Higher Education R&D Survey questionnaire

ATTACHMENT 3

FY 2022 Higher Education R&D Short Form Survey questionnaire

ATTACHMENT 4

FY 2022 Higher Education R&D Survey population review questionnaire

ATTACHMENT 5

FY 2022 Higher Education R&D Survey Population Screening Methodology

ATTACHMENT 6

FY 2022 FFRDC R&D Survey questionnaire

ATTACHMENT 7

First Federal Register Notice for the FY 2022 HERD Survey

ATTACHMENT 8

HERD Comment from the Bureau of Economic Analysis

ATTACHMENT 9

Higher Education R&D Standard Form Survey Contact Procedures

ATTACHMENT 10

Higher Education R&D Short Form Survey Contact Procedures

ATTACHMENT 11

FFRDC R&D Survey Contact Procedures

ATTACHMENT 12

Capital Expenditures Exploratory Questions