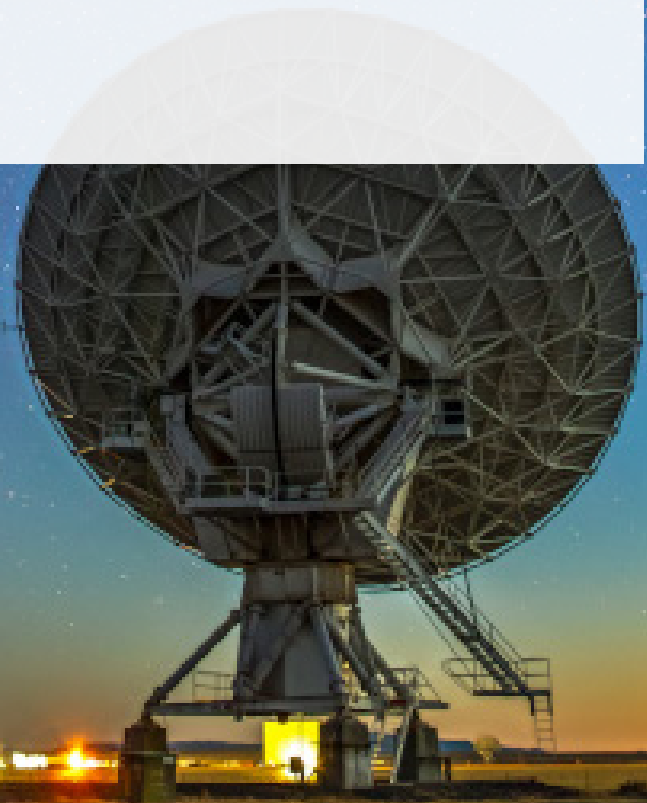




# Merit Review Process

## Fiscal Year 2022 Digest

November 2024



## About the Evaluation and Assessment Capability Section

The [Evaluation and Assessment Capability \(EAC\)](#) Section bolsters the National Science Foundation's (NSF) efforts to make informed decisions and promote a culture of evidence. Located in the Office of Integrative Activities of the Office of the Director, EAC provides centralized technical support, tools, and resources to conduct evidence-building activities and to build capacity for evidence generation and use across the agency. EAC is led by NSF's Chief Evaluation Officer.

## Acknowledgements

This report was prepared by the Evaluation and Assessment Capability Section of the Office of Integrative Activities at the National Science Foundation. All persons acknowledged are from NSF unless otherwise specified. It was written by Erika Rissi and the research team from Westat based on existing data and analyses provided by Beth Ann Velo. Data support was provided by Priya Jayaraman and the technical team from Synectics for Management Decisions, Inc. Quality assurance was provided by Westat.

## Preferred citation

National Science Foundation. 2024. *Merit Review Process: FY 2022 Merit Review Digest*. Alexandria, VA.

## About this Report

*The National Science Foundation's Merit Review Process: FY 2022 Digest* (Merit Review Digest) provides statistical information on proposals awarded and declined in fiscal year (FY) 2022 based on a snapshot of NSF's transactional databases taken on October 1, 2022.<sup>1</sup> The purpose of the Merit Review Digest is to provide summary annual statistics that characterize the annual merit review work of NSF and the individuals and organizations submitting proposals and receiving awards. It makes no conclusions or recommendations about NSF's merit review policies, processes, or outcomes. The statistical information included is relevant to agency leadership and stakeholders in the science and engineering (S&E) enterprise.

This report is prepared in response to a National Science Board (NSB) policy, endorsed in 1977 and amended in 1984, 2017, and 2019, requesting that the NSF Director submit an annual report on the NSF merit review process.

Data in this report are organized into the following sections:

- Competitive Proposals and Awards – Overall proposal and award trends, methods of proposal review, time to decision, diversity of Principal Investigators (PIs), and geographic and institutional participation.
- Characteristics of Research Awards – Award size and duration, PI collaboration, PI funding rate and career stage, and people supported on research awards.

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<sup>1</sup> NSF also publishes statistical and funding information through an interactive dashboard, *NSF by the Numbers* (<https://new.nsf.gov/about/about-nsf-by-the-numbers>). *NSF by the Numbers* is updated periodically, so small differences between the dashboard and the Merit Review Digest may exist due to data corrections or changes made after the Merit Review Digest snapshot was produced.

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## I. Introduction

The National Science Foundation Act of 1950 directs the Foundation "to initiate and support basic scientific research and programs to strengthen scientific research potential and science education programs at all levels." NSF is the only U.S. federal agency whose mission is to invest in fundamental, basic research and education across the full spectrum of science, technology, engineering, and mathematics (STEM) disciplines, except for medical sciences. NSF achieves its unique mission by making merit-based awards to around 1,900 colleges, universities, businesses, informal science organizations and other research organizations throughout the U.S.

### NSF Organization

NSF is divided into directorates that support science and engineering research and education. In FY 2022, NSF had the following directorates: Biological Sciences (BIO); Computer and Information Science and Engineering (CISE); Engineering (ENG); Geosciences (GEO); Mathematical and Physical Sciences (MPS); Social, Behavioral and Economic Sciences (SBE); STEM Education (EDU)<sup>2</sup>; and Technology, Innovation and Partnerships (TIP).<sup>3</sup> Within NSF's Office of the Director, the Office of Integrative Activities (OIA) and the Office of International Science and Engineering (OISE) also support research and researchers. Program divisions or offices within directorates are responsible for the scientific, technical, and programmatic review and evaluation of proposals and for recommending that proposals be declined or awarded. Other sections of NSF are devoted to financial management, proposal and award policy, award processing and monitoring, legal affairs, outreach, and other functions. The Office of Inspector General examines the Foundation's work and reports to the NSB and Congress.

### Distribution of Awards

NSF funds projects primarily using grants, cooperative agreements, and contracts awarded through a competitive proposal evaluation process, referred to as the merit review process. Most NSF projects support or stimulate scientific and engineering research and education and are funded using grants or cooperative agreements. A grant may be funded as either a standard or continuing award. Standard grants are provided full funding for the duration of the project, generally 1-5 years, at the time NSF makes the initial award. Continuing grants receive funding incrementally, usually annually, subject to NSF's judgment of satisfactory progress, availability of funds, and receipt and approval of required annual and final project reports. The use of standard and continuing grants allows NSF flexibility in balancing current and future obligations. Cooperative agreements are used when the project requires substantial agency

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<sup>2</sup> In FY 2022, the Directorate for Education and Human Resources (EHR) was renamed the Directorate for STEM Education (EDU).

<sup>3</sup> In FY 2022, NSF established the new Directorate for Technology, Innovation and Partnerships (TIP). NSF realigned a number of programs from ENG and OIA into the new directorate, including NSF Innovation Corps (I-Corps™), Partnerships for Innovation, Small Business Innovation Research (SBIR), Small Business Technology Transfer (STTR), and the NSF Convergence Accelerator. Proposal and award statistics from FY 2021 and prior years for ENG and OIA have not been restated.

involvement during the project performance period (e.g., research centers and multi-user facilities). Contracts, which are excluded from the Merit Review Digest, are most often used to acquire products, services, and studies (e.g., program evaluations) required for NSF or other government use.

### **Merit Review Process**

Organizations submit proposals for new projects to NSF, which are then evaluated using two NSB-approved criteria: Intellectual Merit and Broader Impacts.<sup>4</sup> The Intellectual Merit criterion encompasses the potential to advance knowledge. The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes. Proposal solicitations may contain additional NSF-specified review criteria particular to the goals and objectives of the program.

NSF program officers, who are knowledgeable experts in both technical and programmatic areas, lead the merit review of proposals and recommend which projects should be funded by NSF. The merit review process also relies on knowledgeable external experts to help evaluate proposals against the merit review criteria. Most proposals are reviewed by 3 to 5 external reviewers chosen for their specific expertise in areas needed to evaluate the proposed project. Each reviewer contributes their diverse experiences and unique point of view. Reviewers provide written reviews that describe the strengths and weaknesses of proposals in the context of the merit review criteria.

NSF programs obtain the input of external reviewers by three principal methods: (1) “ad hoc-only,” (2) “panel-only,” and (3) “ad hoc + panel” review. NSF policy also allows internal review for some types of proposals, including proposals for EARly-concept Grants for Exploratory Research (EAGER), Rapid Response Research (RAPID), Research Advanced by Interdisciplinary Science and Engineering (RAISE), planning, and small proposals for travel and symposia.<sup>5</sup> EAGER is a type of proposal used to support exploratory work in its early stages on untested, but potentially transformative, research ideas or approaches. RAPID is a type of proposal used when there is a severe urgency regarding availability of, or access to, data, facilities or specialized equipment, including quick-response research on natural or anthropogenic disasters and similar unanticipated events.

In the “ad hoc-only” review method, reviewers are asked to submit their written reviews to NSF. “Panel-only” refers to the process of soliciting reviews from panelists who also convene in person or virtually to discuss their reviews and provide advice as a group to the program officer. Many proposals submitted to NSF are reviewed using a combination of these two processes to ensure appropriate rigorous review by a variety of experts.

NSF program officers consider the input of reviewers as one of several factors when making funding recommendations to award or decline proposals. Since NSF receives more highly rated proposals than can be funded each year, program officers strive to build a portfolio of awarded

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<sup>4</sup> For more information, see [https://www.nsf.gov/bfa/dias/policy/merit\\_review/phase2.jsp#review](https://www.nsf.gov/bfa/dias/policy/merit_review/phase2.jsp#review)

<sup>5</sup> For more information, see [https://www.nsf.gov/pubs/policydocs/pappg22\\_1/pappg\\_2.jsp#IIE](https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_2.jsp#IIE)



projects that invests in diverse ideas, funds a mix of experienced and early-career researchers, supports research across the entirety of the nation, and builds research capacity at institutions that have historically received less federal research funding.

The merit review process is overseen by the cognizant division director, or other appropriate NSF official, who reviews program officer funding recommendations before they are finalized.<sup>6</sup> Large awards may receive additional levels of review, up to and including NSB authorization.

## II. Year in Review

In FY 2022, NSF received \$8.4 billion in its annual congressional appropriation to fund the agency's programmatic activities.<sup>7</sup> FY 2022 was the first year that NSF operated under its Strategic Plan for FYs 2022–2026. The strategic plan sets forth an ambitious vision for the Nation to lead the world in science and engineering research and innovation, to the benefit of all, without barriers to participation.<sup>8</sup> To help NSF achieve this vision, NSF's research priorities in FY 2022 included supporting fundamental research and development, strengthening U.S. leadership in emerging technologies, improving equity in science and engineering, and advancing climate science and sustainability research.<sup>9</sup>

One of NSF's Agency Priority Goals (APG) for FY 2022 included establishing baselines for increasing the number and proportion of proposals received from (1) PIs from groups underrepresented in STEM and (2) underserved institutions by 10 percent over the FY 2020 baseline.<sup>10</sup> In recent years, NSF has taken steps to encourage self-reporting of demographic data from PIs and reviewers after NSF observed a pattern of increasing non-response. Demographic data on PIs and reviewers helps NSF measure progress towards one of its strategic goals of empowering historically underrepresented STEM talent to fully participate in science and engineering. By the end of FY 2022, NSF had met the APG target of establishing baselines. The FY 2020 baselines, the FY 2021 results, and the FY 2023 targets were recalculated at the end of FY 2022 to account for improvements in demographic data collection and data on institutions.

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<sup>6</sup> If the funding recommendation is to award the proposal, further processing takes place within the Office of Budget, Finance and Award Management (BFA) before an award is issued by NSF.

<sup>7</sup> NSF's total appropriation was nearly \$8.8 billion. Programmatic activities are funded from three appropriations accounts (Research and Related Activities, Education and Human Resources, and Major Research Equipment and Facilities Construction). The total funding appropriated to these accounts was \$8.4 billion. <https://www.nsf.gov/pubs/2023/nsf23002/pdf/nsf23002.pdf>

<sup>8</sup> Leading the World in Discovery and Innovation, STEM Talent Development and the Delivery of Benefits from Research: NSF Strategic Plan for Fiscal Years 2022-2026.

[https://www.nsf.gov/about/performance/strategic\\_plan.jsp](https://www.nsf.gov/about/performance/strategic_plan.jsp)

<sup>9</sup> FY 2022 Agency Financial Report, Chapter 1 – Management's Discussion and Analysis.

<https://www.nsf.gov/pubs/2023/nsf23002/pdf/nsf23002.pdf>

<sup>10</sup> FY 2024 Annual Performance Plan and FY 2022 Annual Performance Report.

<https://new.nsf.gov/about/budget/fy2024#performance>

NSF's merit review practices are governed by the policies established by the NSB and the agency's policy guidance to proposers, awardees, and staff, which are documented in the *Proposal & Award Policies & Procedures Guide* (PAPPG) and the *Proposal and Award Manual* (PAM).<sup>11</sup> In FY 2022, NSF continued to pilot and assess activities implemented in response to NSB resolutions passed in FY 2021 related to merit review. These included implementing policies to maximize reviewers' preparedness to fulfill their role in the merit review process (Resolution NSB-2021-10) and developing plans to ensure the NSF Committee of Visitor (COV) panels have appropriate Broader Impacts expertise (Resolution NSB-2021-11).

Examples of activities NSF Directorates reported that they continued or initiated in FY 2022 to improve the merit review process included pre-panel virtual training sessions with reviewers to discuss evaluation of the merit review criteria (including solicitation specific criteria), conflicts of interest, confidentiality, implicit bias, and panel operating procedures; office hours for reviewers; and pre-recorded program webinars and resources to provide additional programmatic context and information to reviewers.

### Summary Merit Review Statistics

During FY 2022, NSF evaluated 39,140 competitive proposals and awarded 10,969 new competitive awards, for an overall funding rate of 28%.<sup>12, 13, 14</sup> This was a 3% decrease (-375) in awards and a 2-percentage point increase in the funding rate compared to FY 2021. As shown in Figure 1, the overall funding rate generally increased from FY 2013 to FY 2022.

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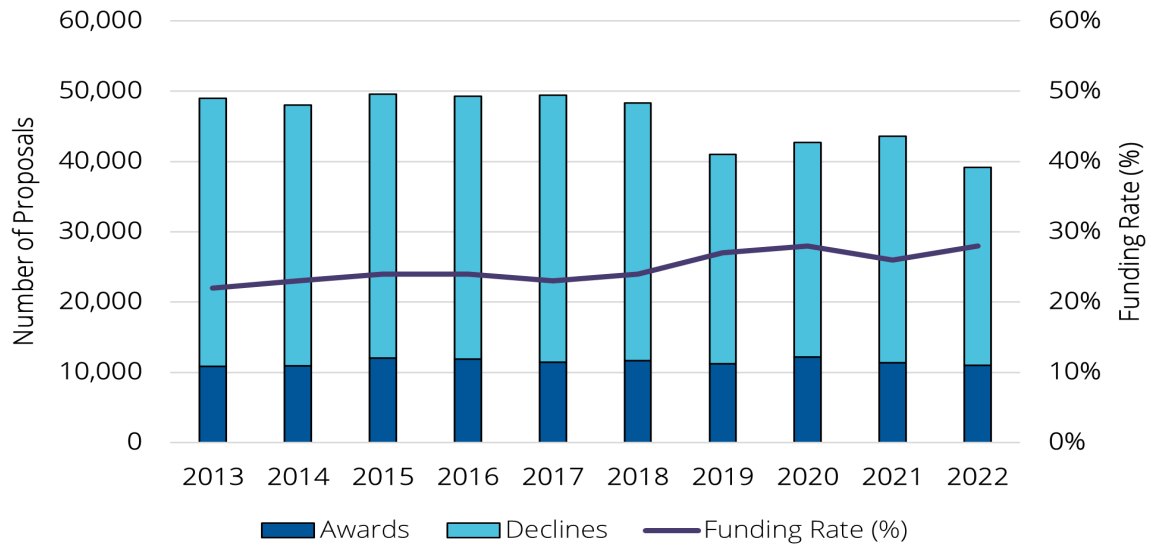
<sup>11</sup> The PAM is a compendium of NSF internal policies and procedures and complements the PAPPG. The PAM provides instructional guidance to NSF staff related to the review and processing of proposals and administration of assistance awards.

<sup>12</sup> Competitive proposals include full proposals for new projects, renewals, and accomplishment-based renewals, as well as interagency agreements that are externally reviewed. It excludes concept outlines, preliminary proposals, contracts, Intergovernmental Personnel Act (IPA) agreements, continuing grant increments, Graduate Research Fellowship applications, and similar categories.

<sup>13</sup> Funding rate refers to the proportion of evaluated proposals that were awarded in a fiscal year. For example, if a directorate evaluated 8,000 proposals in the year, making 2,000 awards and declining the remaining 6,000, the funding rate for that directorate in that year would be 25%.

<sup>14</sup> Interactive dashboards with statistical and funding information are also available through *NSF by the Numbers* (<https://new.nsf.gov/about/about-nsf-by-the-numbers>). Slight differences in the data may exist due to the timing of when data for the Merit Review Digest were exported for analysis, but these do not change the overall observations.

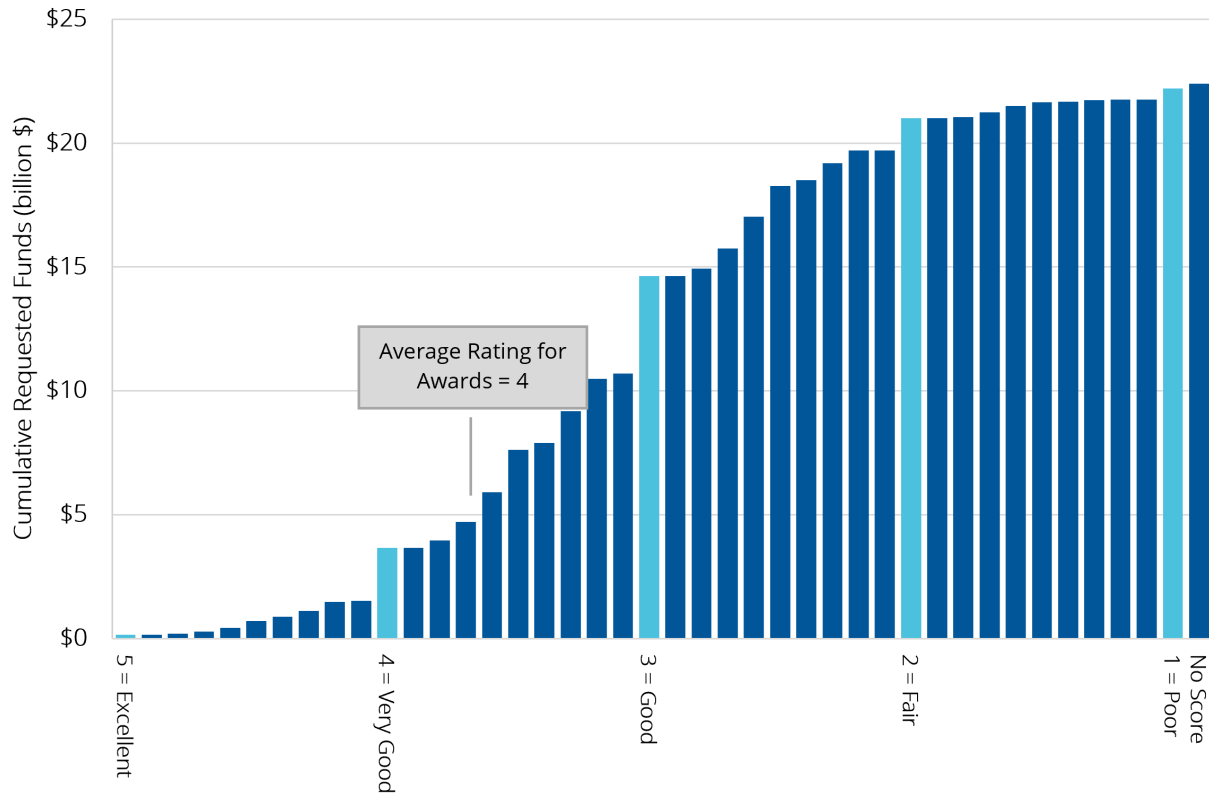
Figure 1 – Overall Award, Decline, and Funding Rate Trends



Source: Table 1 - Overall Proposals, Awards, and Funding Rate

Many potentially fundable proposals are declined each year. As shown in Figure 2, \$3.7 billion was requested for nearly 3,900 declined proposals that received ratings at least as high as the average rating (4.0 out of 5.0) for all awarded proposals, and \$161 million was requested for the over 200 proposals that received a rating of “Excellent” but were not funded.

Figure 2 - Cumulative Requested Amounts in FY 2022 for Declined Proposals, by Average Reviewer Rating



Source: NSF Enterprise Information System, accessed 10/1/2022.

In FY 2022, 82% of competitive proposals were research proposals. The remaining 18% were for centers and facilities projects, equipment, instrumentation, conferences and symposia, the Small Business Innovation Research (SBIR) program, and education and training. The funding rate for research proposals was 27%, 1 percentage point lower than the funding rate for all competitive proposals (see Tables 1 and 17).

As shown in Table 21, the funding rate for PIs submitting research proposals across the last three years (which is the average duration for a research grant) was 44%. That is, among all PIs who submitted one or more research proposals between FY 2020 and FY 2022, 44% received an award in that period. The PI funding rate has been increasing consistently since the FY 2011-2013 time period.

NSF reimburses organizations for the direct and indirect costs of conducting the project, including for salary and other expenses associated with senior personnel (e.g., PIs and co-PIs), post-doctoral researchers, students, and technical staff working on the project. As shown in Table 18, in FY 2022, the mean annualized amount awarded per research grant was about \$202,000. The average amount of PI salary support requested in the project budgets for awarded proposals was 0.6 months, down from the 0.8 months requested in FY 2013 (see

Table 26). Table 23 shows that across all research awards, NSF provided funding to support an estimated 42,200 senior personnel, 4,700 post-doctoral researchers, and 29,200 graduate students that were included in proposal budgets.<sup>15</sup>

### III. Data Tables

#### A. Competitive Proposals and Awards

Competitive proposals include full proposals for new projects, renewals, and accomplishment-based renewals, as well as interagency agreements that are externally reviewed. Concept outlines, preliminary proposals, contracts, Intergovernmental Personnel Act (IPA) agreements, continuing grant increments, Graduate Research Fellowship applications, and similar categories are not included. Funding rate refers to the proportion of proposals acted on in a fiscal year that resulted in awards. For example, if a directorate processed 8,000 proposals in the year, making 2,000 awards and declining the remaining 6,000, the funding rate for that directorate in that year would be 25%.

#### Overall Proposals, Awards and Funding Rate

Table 1 Series – Overall Proposals, Awards, and Funding Rate

NSF

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	48,999	48,051	49,620	49,285	49,415	48,321	41,024	42,723	43,606	39,140
Awards	10,829	10,958	12,007	11,877	11,447	11,702	11,243	12,168	11,344	10,969
Funding Rate	22%	23%	24%	24%	23%	24%	27%	28%	26%	28%

BIO

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	5,934	4,784	5,119	5,206	5,005	4,765	3,110	3,783	3,959	4,234
Awards	1,250	1,272	1,379	1,330	1,142	1,190	1,046	1,369	1,174	1,130
Funding Rate	21%	27%	27%	26%	23%	25%	34%	36%	30%	27%

CISE

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	7,821	7,434	8,032	8,299	8,722	9,150	8,616	7,932	7,247	6,473
Awards	1,616	1,680	1,886	1,918	1,819	2,098	2,009	1,971	1,739	1,787
Funding Rate	21%	23%	23%	23%	21%	23%	23%	25%	24%	28%

<sup>15</sup> These estimates exclude direct support provided through other award categories, such as individual post-doctoral fellowships, NSF Graduate Research Fellowship awards, and other individual awards to graduate students. Estimates are based on budgeted amounts in the original proposals and not actual expenditures.

EDU<sup>1</sup>

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	4,501	4,049	4,242	4,423	4,294	4,160	3,781	4,337	4,550	3,986
Awards	793	701	830	915	899	892	842	996	925	954
Funding Rate	18%	17%	20%	21%	21%	21%	22%	23%	20%	24%

## ENG

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	10,738	11,878	12,326	12,570	13,028	13,092	9,024	9,181	11,325	6,486
Awards	2,212	2,145	2,504	2,499	2,455	2,458	2,379	2,406	2,283	1,577
Funding Rate	21%	18%	20%	20%	19%	19%	26%	26%	20%	24%

## GEO

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	6,087	5,790	5,812	4,999	4,793	3,775	4,099	3,721	3,702	3,296
Awards	1,565	1,487	1,463	1,526	1,520	1,407	1,534	1,552	1,673	1,367
Funding Rate	26%	26%	25%	31%	32%	37%	37%	42%	45%	41%

## MPS

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	8,903	8,855	9,133	9,199	8,848	8,803	8,045	8,612	8,114	7,192
Awards	2,201	2,343	2,593	2,432	2,334	2,593	2,415	2,552	2,422	2,415
Funding Rate	25%	26%	28%	26%	26%	29%	30%	30%	30%	34%

## OIA

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	98	78	91	102	117	211	200	482	481	404
Awards	27	29	36	30	54	68	89	172	131	96
Funding Rate	28%	37%	40%	29%	46%	32%	45%	36%	27%	24%

## OISE

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	484	677	582	313	298	235	416	428	272	222
Awards	245	307	275	236	194	53	58	74	79	66
Funding Rate	51%	45%	47%	75%	65%	23%	14%	17%	29%	30%

## SBE

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	4,433	4,506	4,283	4,174	4,310	4,130	3,733	4,247	3,956	3,502
Awards	920	994	1,041	991	1,030	943	871	1,076	918	770
Funding Rate	21%	22%	24%	24%	24%	23%	23%	25%	23%	22%

TIP<sup>2</sup>

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals										3,345
Awards										807
Funding Rate										24%

Table Series Source: FY 2022 proposals and awards were from NSF Enterprise Information System, accessed 10/1/2022.

<sup>1</sup> In FY 2022, the Directorate for Education and Human Resources (EHR) was renamed the Directorate for STEM Education (EDU).

<sup>2</sup> In FY 2022, NSF established the new Directorate for Technology, Innovation and Partnerships (TIP). NSF realigned a number of programs from ENG and OIA into the new directorate, including NSF Innovation Corps (I-Corps™), Partnerships for Innovation, Small Business Innovation Research (SBIR), Small Business Technology Transfer (STTR), and the NSF Convergence Accelerator. Proposal and award statistics from FY 2021 and prior years for ENG and OIA have not been restated.

## EAGER and RAPID Proposals, Awards and Funding Rate

Table 2 Series - EAGER and RAPID Proposals, Awards, and Funding Rate

### NSF

Year	2018	2018	2019	2019	2020	2020	2021	2021	2022	2022
Category	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER
Proposals	276	666	195	454	957	510	137	375	121	290
Awards	216	498	142	323	869	427	118	283	117	232
Funding Rate	78%	75%	73%	71%	91%	84%	86%	75%	97%	80%

### BIO

Year	2018	2018	2019	2019	2020	2020	2021	2021	2022	2022
Category	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER
Proposals	58	81	15	64	136	65	33	37	21	41
Awards	38	68	13	38	125	57	23	34	20	35
Funding Rate	66%	84%	87%	59%	92%	88%	70%	92%	95%	85%

### CISE

Year	2018	2018	2019	2019	2020	2020	2021	2021	2022	2022
Category	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER
Proposals	16	161	12	166	163	104	5	64	0	91
Awards	12	136	4	109	157	100	3	59	0	66
Funding Rate	75%	84%	33%	66%	96%	96%	60%	92%	N/A	73%

### EDU<sup>1</sup>

Year	2018	2018	2019	2019	2020	2020	2021	2021	2022	2022
Category	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER
Proposals	10	16	3	10	71	28	6	32	12	1
Awards	8	15	2	10	56	26	6	30	12	0
Funding Rate	80%	94%	67%	100%	79%	93%	100%	94%	100%	0%

### ENG

Year	2018	2018	2019	2019	2020	2020	2021	2021	2022	2022
Category	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER
Proposals	42	260	73	130	203	128	22	54	20	90
Awards	33	153	38	84	188	108	19	53	19	70
Funding Rate	79%	59%	52%	65%	93%	84%	86%	98%	95%	78%

### GEO

Year	2018	2018	2019	2019	2020	2020	2021	2021	2022	2022
Category	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER
Proposals	91	45	76	60	62	88	51	44	45	42
Awards	87	41	74	59	61	65	49	41	44	40
Funding Rate	96%	91%	97%	98%	98%	74%	96%	93%	98%	95%

### MPS

Year	2018	2018	2019	2019	2020	2020	2021	2021	2022	2022
Category	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER
Proposals	3	79	2	18	75	62	2	32	2	21
Awards	2	69	2	18	61	51	2	31	2	18
Funding Rate	67%	87%	100%	100%	81%	82%	100%	97%	100%	86%

OD

Year	2018	2018	2019	2019	2020	2020	2021	2021	2022	2022
Category	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER
Proposals	0	0	0	0	13	17	0	2	0	0
Awards	0	0	0	0	13	8	0	2	0	0
Funding Rate	N/A	N/A	N/A	N/A	100%	47%	N/A	100%	N/A	N/A

SBE

Year	2018	2018	2019	2019	2020	2020	2021	2021	2022	2022
Category	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER
Proposals	56	24	14	6	234	18	18	110	21	3
Awards	36	16	9	5	208	12	16	33	20	2
Funding Rate	64%	67%	64%	83%	89%	67%	89%	30%	95%	67%

TIP<sup>2</sup>

Year	2018	2018	2019	2019	2020	2020	2021	2021	2022	2022
Category	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER	RAPID	EAGER
Proposals									0	1
Awards									0	1
Funding Rate									N/A	100%

Table Series Source: FY 2022 proposals and awards were from NSF Enterprise Information System, accessed 10/1/2022.

<sup>1</sup> In FY 2022, the Directorate for Education and Human Resources (EHR) was renamed the Directorate for STEM Education (EDU).

<sup>2</sup> In FY 2022, NSF established the new Directorate for Technology, Innovation and Partnerships (TIP). NSF realigned a number of programs from ENG and OIA into the new directorate, including NSF Innovation Corps (I-Corps™), Partnerships for Innovation, Small Business Innovation Research (SBIR), Small Business Technology Transfer (STTR), and the NSF Convergence Accelerator. Proposal and award statistics from FY 2021 and prior years for ENG and OIA have not been restated.

## Methods of Proposal Review

Table 3 - FY 2022 Methods of Proposal Review, by Directorate or Office

Directorate/ Office	Total Proposals	Ad Hoc +	Ad Hoc +	Ad Hoc	Ad Hoc	Panel Only	Panel Only	Internally	Internally
		Panel	Panel	Only	Only			Reviewed	Reviewed
		Proposals	Percent	Proposals	Percent	Proposals	Percent	Proposals	Percent
NSF	39,140	9,480	24%	2,045	5%	26,350	67%	1,265	3%
BIO	4,234	1,987	47%	55	1%	2,066	49%	126	3%
CISE	6,473	578	9%	101	2%	5,593	86%	201	3%
EDU <sup>1</sup>	3,986	340	9%	86	2%	3,510	88%	50	1%
ENG	6,486	492	8%	214	3%	5,568	86%	212	3%
GEO	3,296	2,055	62%	561	17%	523	16%	157	5%
MPS	7,192	1,353	19%	675	9%	4,932	69%	232	3%
OIA	404	208	51%	13	3%	176	44%	7	2%
OISE	222	48	22%	1	0%	172	77%	1	0%
SBE	3,502	2,250	64%	131	4%	1,061	30%	60	2%
TIP	3,345	169	5%	208	6%	2,749	82%	219	7%

Source: NSF Enterprise Information System, accessed 10/1/2022.

Notes: The "Internally Reviewed" category includes proposals that were reviewed by NSF experts in the relevant topical areas but did not receive external reviews.

<sup>1</sup> In FY 2022, the Directorate for Education and Human Resources (EHR) was renamed the Directorate for STEM Education (EDU).



Table 4 - FY 2022 Number of External Reviews, by Method and Directorate or Office

Directorate/ Office	Total Reviews	Ad hoc + Panel	Ad hoc-Only	Panel-Only
NSF	150,037	45,098	7,787	97,152
BIO	18,193	10,294	214	7,685
CISE	24,932	2,762	332	21,838
EDU <sup>1</sup>	15,900	1,480	312	14,108
ENG	23,769	2,254	780	20,735
GEO	13,966	9,648	2,271	2,047
MPS	23,841	5,723	2,635	15,483
OIA	1,679	952	48	679
OISE	826	225	3	598
SBE	15,161	11,057	473	3,631
TIP	11,770	703	719	10,348

Source: NSF Enterprise Information System, accessed 10/1/2022.

Notes: Includes only reviews written by individuals and excludes panel summaries. Panel summaries are written by the panel based on the panel discussion. The panel discussions may include the input of reviewers who have read the proposal but have not been asked to provide a separate written review. The number of external reviews, therefore, underestimates the amount of external reviewer input for the “Ad-hoc +Panel” and “Panel-Only” methods.

<sup>1</sup> In FY 2022, the Directorate for Education and Human Resources (EHR) was renamed the Directorate for STEM Education (EDU).

Table 5 - FY 2022 Mean Number of External Reviews per Proposal, by Directorate or Office

Directorate/ Office	All Methods	Ad hoc + Panel	Ad hoc-Only	Panel-Only
NSF	4.0	4.8	3.8	3.7
BIO	4.4	5.2	3.9	3.7
CISE	4.0	4.8	3.3	3.9
EDU <sup>1</sup>	4.0	4.4	3.6	4.0
ENG	3.8	4.6	3.6	3.7
GEO	4.4	4.7	4.0	3.9
MPS	3.4	4.2	3.9	3.1
OIA	4.2	4.6	3.7	3.9
OISE	3.7	4.7	3.0	3.5
SBE	4.4	4.9	3.6	3.4
TIP	3.8	4.2	3.5	3.8

Source: NSF Enterprise Information System, accessed 10/1/2022.

Notes: Excludes proposals that were internally reviewed.

<sup>1</sup> In FY 2022, the Directorate for Education and Human Resources (EHR) was renamed the Directorate for STEM Education (EDU).

## Time to Decision

Table 6 - Dwell-Time

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Percentage of Proposals Processed Within Six Months	76%	72%	76%	77%	71%	72%	61%	68%	65%	66%

Source: FY 2022 proposals were from NSF Enterprise Information System, accessed 10/1/2022.

## Diversity of PIs

This section provides data on proposals, awards, and funding rates by PI characteristics. Gender, disability, ethnic, and racial data are based on self-reported information.

Table 7 Series - Proposals, Awards, and Funding Rates, by PI Gender

### NSF PIs

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	48,999	48,051	49,620	49,285	49,415	48,321	41,024	42,723	43,606	39,140
Awards	10,829	10,958	12,007	11,877	11,447	11,702	11,243	12,168	11,344	10,969
Funding Rate	22%	23%	24%	24%	23%	24%	27%	28%	26%	28%

### Female PIs

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	11,152	11,142	11,444	11,598	11,322	10,858	10,291	11,096	11,868	11,266
Awards	2,556	2,669	3,007	3,032	2,962	2,943	3,281	3,656	3,679	3,412
Funding Rate	23%	24%	26%	26%	26%	27%	32%	33%	31%	30%

### Male PIs

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	32,866	31,625	32,411	31,528	30,046	28,180	25,781	26,523	26,290	24,364
Awards	7,316	7,286	7,810	7,512	6,930	6,884	7,265	7,828	7,080	6,922
Funding Rate	22%	23%	24%	24%	23%	24%	28%	30%	27%	28%

### Unknown / Do Not Wish to Provide

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	4,981	5,284	5,765	6,159	8,047	9,283	4,952	5,104	5,448	3,510
Awards	957	1,003	1,190	1,333	1,555	1,875	697	684	585	635
Funding Rate	19%	19%	21%	22%	19%	20%	14%	13%	11%	18%

Table Series Source: FY 2022 proposals and awards were from NSF Enterprise Information System, accessed 10/1/2022. Prior to FY 2019, PIs reported demographic data in FastLane. In FY 2019, PIs began using Research.gov instead of FastLane to report demographic data to NSF. In FY 2021, NSF made system changes to improve the collection of demographic data which resulted in a reduction in non-response. In order to provide the most accurate data available, FY 2019-2021 have been restated based on PI-reported data as of February 21, 2023.

Table 8 Series - FY 2022 Proposals, Awards, and Funding Rate, by Directorate or Office and PI Gender

NSF

Category	Female	Male	Unknown / Do Not Wish to Provide
Proposals	11,266	24,364	3,510
Awards	3,412	6,922	635
Funding Rate	30%	28%	18%

BIO

Category	Female	Male	Unknown / Do Not Wish to Provide
Proposals	1,613	2,305	316
Awards	494	586	50
Funding Rate	31%	25%	16%

CISE

Category	Female	Male	Unknown / Do Not Wish to Provide
Proposals	1,508	4,494	471
Awards	438	1,244	105
Funding Rate	29%	28%	22%

EDU<sup>1</sup>

Category	Female	Male	Unknown / Do Not Wish to Provide
Proposals	1,958	1,645	383
Awards	480	390	84
Funding Rate	25%	24%	22%

ENG

Category	Female	Male	Unknown / Do Not Wish to Provide
Proposals	1,393	4,622	471
Awards	395	1,104	78
Funding Rate	28%	24%	17%

GEO

Category	Female	Male	Unknown / Do Not Wish to Provide
Proposals	1,094	2,023	179
Awards	471	845	51
Funding Rate	43%	42%	28%

## MPS

Category	Female	Male	Unknown / Do Not Wish to Provide
Proposals	1,509	5,244	439
Awards	566	1,735	114
Funding Rate	38%	33%	26%

## OIA

Category	Female	Male	Unknown / Do Not Wish to Provide
Proposals	122	253	29
Awards	35	56	5
Funding Rate	29%	22%	17%

## OISE

Category	Female	Male	Unknown / Do Not Wish to Provide
Proposals	66	144	12
Awards	21	43	2
Funding Rate	32%	30%	17%

## SBE

Category	Female	Male	Unknown / Do Not Wish to Provide
Proposals	1,450	1,585	467
Awards	339	354	77
Funding Rate	23%	22%	16%

## TIP

Category	Female	Male	Unknown / Do Not Wish to Provide
Proposals	553	2,049	743
Awards	173	565	69
Funding Rate	31%	28%	9%

Table Series Source: NSF Enterprise Information System, accessed 10/1/2022. Prior to FY 2019, PIs reported demographic data in FastLane. In FY 2019, PIs began using Research.gov instead of FastLane to report demographic data to NSF. In FY 2021, NSF made system changes to improve the collection of demographic data which resulted in a reduction in non-response.

<sup>1</sup> In FY 2022, the Directorate for Education and Human Resources (EHR) was renamed the Directorate for STEM Education (EDU).

Table 9 Series - Proposals, Awards, and Funding Rates, by PI Ethnicity

NSF

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	48,999	48,051	49,620	49,285	49,415	48,321	41,024	42,723	43,606	39,140
Awards	10,829	10,958	12,007	11,877	11,447	11,702	11,243	12,168	11,344	10,969
Funding Rate	22%	23%	24%	24%	23%	24%	27%	28%	26%	28%

Hispanic or Latino

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	1,956	1,921	2,053	1,950	1,993	2,106	1,724	1,898	2,094	2,006
Awards	401	411	495	459	460	534	503	565	632	567
Funding Rate	21%	21%	24%	24%	23%	25%	29%	30%	30%	28%

Not Hispanic or Latino

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	39,875	38,840	39,993	39,606	38,441	36,471	32,376	33,374	33,635	31,348
Awards	8,977	9,035	9,860	9,725	9,129	9,109	9,441	10,213	9,509	9,135
Funding Rate	23%	23%	25%	25%	24%	25%	29%	31%	28%	29%

Unknown / Do Not Wish to Provide

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	7,168	7,290	7,574	7,729	8,981	9,744	6,924	7,451	7,877	5,786
Awards	1,451	1,512	1,652	1,693	1,858	2,059	1,299	1,390	1,203	1,267
Funding Rate	20%	21%	22%	22%	21%	21%	19%	19%	15%	22%

Table Series Source: FY 2022 proposals and awards were from NSF Enterprise Information System, accessed 10/1/2022. Prior to FY 2019, PIs reported demographic data in FastLane. In FY 2019, PIs began using Research.gov instead of FastLane to report demographic data to NSF. In FY 2021, NSF made system changes to improve the collection of demographic data which resulted in a reduction in non-response. In order to provide the most accurate data available, FY 2019-2021 have been restated based on PI-reported data as of February 21, 2023. Note: Prior to the FY 2021 Merit Review Digest, detailed data were not published on the number of PIs identifying as "Not Hispanic or Latino" or for whom ethnicity was unknown. Data for FY 2013-2020 have been recalculated for inclusion in the current Merit Review Digest. This led to slight differences relative to the data reported in the Merit Review Digests for FY 2013, 2014, 2015, 2016, and 2018. Differences are fewer than 5 proposals or awards in those years and do not change the reported funding rate.

Table 10 Series - FY 2022 Proposals, Awards, and Funding Rates, by Directorate or Office and PI Ethnicity

NSF

Category	Hispanic or Latino	Not Hispanic or Latino	Unknown / Do Not Wish to Provide
Proposals	2,006	31,348	5,786
Awards	567	9,135	1,267
Funding Rate	28%	29%	22%

BIO

Category	Hispanic or Latino	Not Hispanic or Latino	Unknown / Do Not Wish to Provide
Proposals	356	3,346	532
Awards	107	918	105
Funding Rate	30%	27%	20%

CISE

Category	Hispanic or Latino	Not Hispanic or Latino	Unknown / Do Not Wish to Provide
Proposals	211	5,384	878
Awards	51	1,510	226
Funding Rate	24%	28%	26%

EDU<sup>1</sup>

Category	Hispanic or Latino	Not Hispanic or Latino	Unknown / Do Not Wish to Provide
Proposals	294	3,126	566
Awards	69	753	132
Funding Rate	23%	24%	23%

ENG

Category	Hispanic or Latino	Not Hispanic or Latino	Unknown / Do Not Wish to Provide
Proposals	288	5,408	790
Awards	78	1,339	160
Funding Rate	27%	25%	20%

GEO

Category	Hispanic or Latino	Not Hispanic or Latino	Unknown / Do Not Wish to Provide
Proposals	132	2,805	359
Awards	55	1,186	126
Funding Rate	42%	42%	35%

MPS

Category	Hispanic or Latino	Not Hispanic or Latino	Unknown / Do Not Wish to Provide
Proposals	357	5,982	853
Awards	129	2,042	244
Funding Rate	36%	34%	29%

OIA

Category	Hispanic or Latino	Not Hispanic or Latino	Unknown / Do Not Wish to Provide
Proposals	12	343	49
Awards	5	81	10
Funding Rate	42%	24%	20%

OISE

Category	Hispanic or Latino	Not Hispanic or Latino	Unknown / Do Not Wish to Provide
Proposals	18	176	28
Awards	4	56	6
Funding Rate	22%	32%	21%

SBE

Category	Hispanic or Latino	Not Hispanic or Latino	Unknown / Do Not Wish to Provide
Proposals	199	2,631	672
Awards	37	617	116
Funding Rate	19%	23%	17%

TIP

Category	Hispanic or Latino	Not Hispanic or Latino	Unknown / Do Not Wish to Provide
Proposals	139	2,147	1,059
Awards	32	633	142
Funding Rate	23%	29%	13%

Table Series Source: NSF Enterprise Information System, accessed 10/1/2022.

Prior to FY 2019, PIs reported demographic data in FastLane. In FY 2019, PIs began using Research.gov instead of FastLane to report demographic data to NSF. In FY 2021, NSF made system changes to improve the collection of demographic data which resulted in a reduction in non-response.

<sup>1</sup> In FY 2022, the Directorate for Education and Human Resources (EHR) was renamed the Directorate for STEM Education (EDU).

Table 11 Series - Proposals, Awards, and Funding Rates, by PI Race

NSF

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	48,999	48,051	49,620	49,285	49,415	48,321	41,024	42,723	43,606	39,140
Awards	10,829	10,958	12,007	11,877	11,447	11,702	11,243	12,168	11,344	10,969
Funding Rate	22%	23%	24%	24%	23%	24%	27%	28%	26%	28%

American Indian or Alaska Native

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	113	103	104	99	134	112	95	114	112	93
Awards	28	36	25	29	39	29	36	51	42	31
Funding Rate	25%	35%	24%	29%	29%	26%	38%	45%	38%	33%

Asian

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	10,511	10,538	11,148	11,623	11,552	11,362	10,417	10,616	10,966	10,375
Awards	1,887	1,925	2,256	2,168	2,166	2,127	2,378	2,702	2,518	2,596
Funding Rate	18%	18%	20%	19%	19%	19%	23%	25%	23%	25%

Black or African American

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	1,124	1,123	1,102	1,134	1,135	1,159	1,054	1,195	1,360	1,332
Awards	203	204	233	264	266	262	289	326	389	351
Funding Rate	18%	18%	21%	23%	23%	23%	27%	27%	29%	26%

Native Hawaiian or Other Pacific Islander

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	32	30	30	41	30	30	43	25	24	22
Awards	5	5	2*	7	5	5	16	7	6	8
Funding Rate	16%	17%	7%	17%	17%	17%	37%	28%	25%	36%

\* This report generally combines table cells of three or fewer proposals or awards when there is a risk of disclosure of sensitive or private information. Given the high number of PIs of "Unknown" race, the determination was made not to collapse this cell.

White

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	30,766	29,624	30,099	29,031	27,804	25,744	22,748	23,435	22,959	21,046
Awards	7,372	7,390	7,902	7,748	7,170	7,138	7,263	7,751	7,006	6,622
Funding Rate	24%	25%	26%	27%	26%	28%	32%	33%	31%	31%

Multiracial

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	439	425	495	508	550	550	573	630	710	670
Awards	110	114	151	124	143	154	173	191	253	211
Funding Rate	25%	27%	31%	24%	26%	28%	30%	30%	36%	31%

Other<sup>1</sup>

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals							187	268	384	447
Awards							58	74	104	93
Funding Rate							31%	28%	27%	21%



Unknown / Do Not Wish to Provide

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	6,014	6,208	6,642	6,849	8,210	9,364	5,907	6,440	7,091	5,155
Awards	1,224	1,284	1,438	1,537	1,658	1,987	1,030	1,066	1,026	1,057
Funding Rate	20%	21%	22%	22%	20%	21%	17%	17%	14%	21%

Table Series Source: FY 2022 proposals and awards were from NSF Enterprise Information System, accessed 10/1/2022. Prior to FY 2019, PIs reported demographic data in FastLane. In FY 2019, PIs began using Research.gov instead of FastLane to report demographic data to NSF. In FY 2021, NSF made system changes to improve the collection of demographic data which resulted in a reduction in non-response. In order to provide the most accurate data available, FY 2019-2021 have been restated based on PI-reported data as of February 21, 2023.

<sup>1</sup> Beginning in FY 2019, NSF began allowing PIs to self-identify with another racial identity. These responses have been grouped into a single category for reporting purposes labeled "Other."

Table 12 Series - FY 2022 Proposals, Awards, and Funding Rates, by Directorate or Office and PI Race

NSF

Category	American Indian / Alaskan Native / Native Hawaiian / Pacific Islander / Other*	Asian	Black or African American	White	Multi-racial	Unknown / Do Not Wish to Provide
Proposals	562	10,375	1,332	21,046	670	5,155
Awards	132	2,596	351	6,622	211	1,057
Funding Rate	23%	25%	26%	31%	31%	21%

BIO

Category	American Indian / Alaskan Native / Native Hawaiian / Pacific Islander / Other*	Asian	Black or African American	White	Multi-racial	Unknown / Do Not Wish to Provide
Proposals	58	612	103	2,884	112	465
Awards	13	158	37	804	35	83
Funding Rate	22%	26%	36%	28%	31%	18%

CISE

Category	American Indian / Alaskan Native / Native Hawaiian / Pacific Islander / Other*	Asian	Black or African American	White	Multi-racial	Unknown / Do Not Wish to Provide
Proposals	72	2,696	134	2,726	63	782
Awards	20	651	36	884	14	182
Funding Rate	28%	24%	27%	32%	22%	23%

EDU<sup>1</sup>

Category	American Indian / Alaskan Native / Native Hawaiian / Pacific Islander / Other*	Asian	Black or African American	White	Multi-racial	Unknown / Do Not Wish to Provide
Proposals	89	615	407	2,239	109	527
Awards	24	136	88	561	29	116
Funding Rate	27%	22%	22%	25%	27%	22%

ENG

Category	American Indian / Alaskan Native / Native Hawaiian / Pacific Islander / Other*	Asian	Black or African American	White	Multi-racial	Unknown / Do Not Wish to Provide
Proposals	91	2,637	210	2,758	77	713
Awards	20	557	70	779	19	132
Funding Rate	22%	21%	33%	28%	25%	19%

GEO

Category	American Indian / Alaskan Native / Native Hawaiian / Pacific Islander / Other*	Asian	Black or African American	White	Multi-racial	Unknown / Do Not Wish to Provide
Proposals	43	452	45	2,404	64	288
Awards	18	158	16	1,056	27	92
Funding Rate	42%	35%	36%	44%	42%	32%

MPS

Category	American Indian / Alaskan Native / Native Hawaiian / Pacific Islander / Other*	Asian	Black or African American	White	Multi-racial	Unknown / Do Not Wish to Provide
Proposals	81	2,020	157	4,108	97	729
Awards	17	575	56	1,513	44	210
Funding Rate	21%	28%	36%	37%	45%	29%

OIA and OISE<sup>2</sup>

Category	American Indian / Alaskan Native / Native Hawaiian / Pacific Islander / Other*	Asian	Black or African American	White	Multi-racial	Unknown / Do Not Wish to Provide
Proposals	6	217	21	299	19	64
Awards	1**	48	5	88	6	14
Funding Rate	17%	22%	24%	29%	32%	22%

\*\* This report generally combines table cells of three or fewer proposals or awards when there is a risk of disclosure of sensitive or private information. Given the high number of PIs of "Unknown/Do Not Wish to Provide" race, the determination was made not to collapse this cell.

SBE

Category	American Indian / Alaskan Native / Native Hawaiian / Pacific Islander / Other*	Asian	Black or African American	White	Multi-racial	Unknown / Do Not Wish to Provide
Proposals	56	458	93	2,239	72	584
Awards	10	97	18	525	23	97
Funding Rate	18%	21%	19%	23%	32%	17%

TIP

Category	American Indian / Alaskan Native / Native Hawaiian / Pacific Islander / Other*	Asian	Black or African American	White	Multi-racial	Unknown / Do Not Wish to Provide
Proposals	66	668	162	1,389	57	1,003
Awards	9	216	25	412	14	131
Funding Rate	14%	32%	15%	30%	25%	13%

Table Series Source: NSF Enterprise Information System, accessed 10/1/2022. Prior to FY 2019, PIs reported demographic data in FastLane. In FY 2019, PIs began using Research.gov instead of FastLane to report demographic data to NSF. In FY 2021, NSF made system changes to improve the collection of demographic data which resulted in a reduction in non-response.

<sup>1</sup> In FY 2022, the Directorate for Education and Human Resources (EHR) was renamed the Directorate for STEM Education (EDU).

<sup>2</sup> These cells have been combined to minimize the risk of revealing information that is confidential, sensitive, or otherwise protected.

\* Beginning in FY 2019, NSF began allowing PIs to self-identify with another racial identity. These responses have been grouped into a single category for reporting purposes labeled "Other."

**Table 13 Series - Proposals, Awards, and Funding Rates, by PI Disability Status**

NSF

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	48,999	48,051	49,620	49,285	49,415	48,321	41,024	42,723	43,606	39,140
Awards	10,829	10,958	12,007	11,877	11,447	11,702	11,243	12,168	11,344	10,969
Funding Rate	22%	23%	24%	24%	23%	24%	27%	28%	26%	28%

PIs with a Disability

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	488	468	562	496	491	453	521	583	622	666
Awards	122	99	120	110	120	114	150	176	156	151
Funding Rate	25%	21%	21%	22%	24%	25%	29%	30%	25%	23%

PIs without a Disability

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	33,679	33,302	34,633	34,158	33,292	31,826	34,794	35,584	35,851	33,569
Total Awards	7,486	7,692	8,515	8,281	7,811	7,884	10,101	10,900	10,183	9,796
Funding Rate	22%	23%	25%	24%	23%	25%	29%	31%	28%	29%

Unknown / Do Not Wish to Provide

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	14,832	14,281	14,425	14,631	15,632	16,042	5,709	6,556	7,133	4,905
Total Awards	3,221	3,167	3,372	3,486	3,516	3,704	992	1,092	1,005	1,022
Funding Rate	22%	22%	23%	24%	22%	23%	17%	17%	14%	21%

Table Series Source: FY 2022 proposals and awards were from NSF Enterprise Information System, accessed 10/1/2022. Prior to FY 2019, PIs reported demographic data in FastLane. In FY 2019, PIs began using Research.gov instead of FastLane to report demographic data to NSF. In FY 2021, NSF made system changes to improve the collection of demographic data which resulted in a reduction in non-response. In order to provide the most accurate data available, FY 2019-2021 have been restated based on PI-reported data as of February 21, 2023.

Note: Prior to the FY 2021 Merit Review Digest, detailed data were not published on the number of PIs without a reported disability or for whom disability status was unknown. Data for FY 2013-2020 were previously recalculated for inclusion in the FY 2021 Merit Review Digest. This led to slight differences relative to the data reported in the Merit Review Digests for FY 2013, 2014, 2015, and 2016. These differences do not change the reported funding rate.

Table 14 Series – FY 2022 Proposals, Awards, and Funding Rates, by Directorate or Office and PI Disability Status

NSF

Category	PIs with a Disability	PIs without a Disability	Unknown / Do Not Wish to Provide
Proposals	666	33,569	4,905
Awards	151	9,796	1,022
Funding Rate	23%	29%	21%

BIO

Category	PIs with a Disability	PIs without a Disability	Unknown / Do Not Wish to Provide
Proposals	80	3,690	464
Awards	19	1,025	86
Funding Rate	24%	28%	19%

CISE

Category	PIs with a Disability	PIs without a Disability	Unknown / Do Not Wish to Provide
Proposals	84	5,735	654
Awards	28	1,585	174
Funding Rate	33%	28%	27%

EDU<sup>1</sup>

Category	PIs with a Disability	PIs without a Disability	Unknown / Do Not Wish to Provide
Proposals	117	3,301	568
Awards	22	803	129
Funding Rate	19%	24%	23%

ENG

Category	PIs with a Disability	PIs without a Disability	Unknown / Do Not Wish to Provide
Proposals	73	5,804	609
Awards	17	1,460	100
Funding Rate	23%	25%	16%

GEO

Category	PIs with a Disability	PIs without a Disability	Unknown / Do Not Wish to Provide
Proposals	46	2,938	312
Awards	19	1,249	99
Funding Rate	41%	43%	32%

MPS

Category	PIs with a Disability	PIs without a Disability	Unknown / Do Not Wish to Provide
Proposals	104	6,447	641
Awards	19	2,206	190
Funding Rate	18%	34%	30%

OIA and OISE<sup>2</sup>

Category	PIs with a Disability	PIs without a Disability	Unknown / Do Not Wish to Provide
Proposals	8	560	58
Awards	2*	143	17
Funding Rate	25%	26%	29%

\* This report generally combines table cells of three or fewer proposals or awards when there is a risk of disclosure of sensitive or private information. Given the high number of PIs of "Unknown/Do Not Wish to Provide" disability status, the determination was made not to collapse this cell.

SBE

Category	PIs with a Disability	PIs without a Disability	Unknown / Do Not Wish to Provide
Proposals	80	2,767	655
Awards	14	634	122
Funding Rate	18%	23%	19%

TIP

Category	PIs with a Disability	PIs without a Disability	Unknown / Do Not Wish to Provide
Proposals	74	2,327	944
Awards	11	691	105
Funding Rate	15%	30%	11%

Table Series Source: NSF Enterprise Information System, accessed 10/1/2022. Prior to FY 2019, PIs reported demographic data in FastLane. In FY 2019, PIs began using Research.gov instead of FastLane to report demographic data to NSF. In FY 2021, NSF made system changes to improve the collection of demographic data which resulted in a reduction in non-response.

<sup>1</sup> In FY 2022, the Directorate for Education and Human Resources (EHR) was renamed the Directorate for STEM Education (EDU).

<sup>2</sup> These cells have been combined to minimize the risk of revealing information that is confidential, sensitive, or otherwise protected.

Table 15 Series – Proposals, Awards, and Funding Rates, by PI Experience with NSF

New PIs

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	17,635	17,405	18,276	18,348	18,757	18,596	15,654	16,221	17,345	15,585
Awards	3,013	3,108	3,320	3,510	3,319	3,257	3,252	3,473	3,453	3,417
Funding Rate	17%	18%	18%	19%	18%	18%	21%	21%	20%	22%

Prior PIs

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	31,364	30,646	31,344	30,937	30,658	29,725	25,370	26,502	26,261	23,555
Awards	7,816	7,850	8,687	8,367	8,128	8,445	7,991	8,695	7,891	7,552
Funding Rate	25%	26%	28%	27%	27%	28%	31%	33%	30%	32%

Table Series Source: FY 2022 proposals and awards were from NSF Enterprise Information System, accessed 10/1/2022.

Note: A new PI is an individual who has not served as the PI or co-PI on any award from NSF (excluding as a PI or co-PI for doctoral dissertation awards, graduate or post-doctoral fellowships, research planning grants, or conferences, symposia and workshop grants).

## Geographic Participation

Table 16 provides data on proposal, award, and funding rates by the state or U.S. jurisdiction of the awardee institution. Twenty-five states, the Commonwealth of Puerto Rico, Guam, and the U.S. Virgin Islands were eligible to participate in aspects of the NSF Established Program to Stimulate Competitive Research (EPSCoR) program in FY 2022. EPSCoR was designed for those jurisdictions that have historically received lesser amounts of NSF Research and Development funding.

Additional information about the EPSCoR program can be found at:

<https://new.nsf.gov/funding/initiatives/epscor>. Additional state-level statistical and funding details are available and published by NSF in the Budget Internet Information System (BIIS), <https://dellweb.bfa.nsf.gov/AwdLst2/default.asp>.

Table 16 - FY 2022 Proposals, Awards, and Funding Rate, by State or U.S. Jurisdiction

State or Jurisdiction	Proposals	Awards	Funding Rate
Alabama*	565	123	22%
Alaska*	138	54	39%
Arizona	920	255	28%
Arkansas*	172	46	27%
California	4,400	1,354	31%
Colorado	1,022	321	31%
Connecticut	537	148	28%
Delaware*	235	57	24%
District of Columbia	448	151	34%
Florida	1,684	358	21%
Georgia	1,042	267	26%
Hawaii*	179	60	34%
Idaho*	158	35	22%
Illinois	1,503	416	28%
Indiana	1,029	303	29%
Iowa*	410	112	27%
Kansas*	341	70	21%
Kentucky*	245	65	27%
Louisiana*	401	117	29%
Maine*	146	42	29%
Maryland	901	248	28%
Massachusetts	2,198	693	32%
Michigan	1,386	378	27%
Minnesota	433	145	33%
Mississippi*	244	56	23%
Missouri	621	152	24%
Montana*	124	37	30%
Nebraska*	275	76	28%
Nevada*	231	64	28%
New Hampshire*	198	54	27%
New Jersey	970	267	28%
New Mexico*	316	85	27%

State or Jurisdiction	Proposals	Awards	Funding Rate
New York	2,809	831	30%
North Carolina	1,227	353	29%
North Dakota*	103	19	18%
Ohio	1,013	244	24%
Oklahoma*	324	71	22%
Oregon	459	143	31%
Pennsylvania	1,831	533	29%
Puerto Rico*	73	24	33%
Rhode Island*	283	110	39%
South Carolina*	399	94	24%
South Dakota*	94	31	33%
Tennessee	660	178	27%
Texas	2,994	726	24%
Utah	495	141	28%
Vermont*	82	20	24%
Virgin Islands*	5	4	80%
Virginia	1,244	313	25%
Washington	718	280	39%
West Virginia*	126	29	23%
Wisconsin	593	183	31%
Wyoming*	87	17	20%
Other	49	16	33%

Source: NSF Enterprise Information System, accessed 10/1/2022.

Note: \* denotes that the state or jurisdiction was eligible to participate in EPSCoR in FY 2022. "Other" includes institutions in Guam\*, Northern Mariana Islands, and a small number of entries coded as "other" for the state name. These have been combined to minimize the risk of revealing information that is confidential, sensitive, or otherwise protected.

## B. Characteristics of Research Awards

"Research award" is a term used by NSF to represent a typical research award, particularly with respect to the award size. Not included in this category are awards such as operations costs for centers and facilities, grants for equipment, instrumentation, conferences, and symposia, awards in the Small Business Innovation Research program, and education and training grants.

These data are based on proposal budget and award data at the time of the initial award and do not include post award changes such as extensions of the period of performance or funding supplements.

### Research Proposals, Awards and Funding Rate

Table 17 - Research Proposals, Awards, and Funding Rate

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	39,249	38,885	40,869	41,034	40,678	40,364	33,613	35,115	35,787	32,287
Awards	7,652	7,926	8,993	8,782	8,553	9,043	8,580	9,665	9,132	8,735
Funding Rate	19%	20%	22%	21%	21%	22%	26%	28%	26%	27%

Source: FY 2022 proposals and awards were from NSF Enterprise Information System, accessed 10/1/2022.

### Research Award Size and Duration

Table 18 Series - Annualized Award Amount per Research Project (in Thousands)

Nominal Dollars

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Median	\$130	\$133	\$130	\$133	\$133	\$140	\$147	\$150	\$150	\$150
Mean	\$169	\$172	\$171	\$173	\$169	\$178	\$189	\$194	\$198	\$202

Real Dollars (i.e., adjusted for inflation)

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Median	\$156	\$157	\$152	\$154	\$151	\$155	\$159	\$161	\$156	\$150
Mean	\$203	\$202	\$198	\$200	\$192	\$197	\$205	\$208	\$206	\$202

Table Series Source: FY 2022 awards were from NSF Enterprise Information System, accessed 10/1/2022. Office of Management and Budget Historical Table 10.1 "Gross Domestic Product and Deflators Used in the Historical Tables: 1940–2028", <https://www.whitehouse.gov/omb/budget/historical-tables/>. Real dollars use FY 2022 as a baseline.

Note: This analysis is focused on projects, which count multi-institutional collaborative submissions as a single project.



Table 19 Series - Annualized Award Amount per Research Project, by Directorate or Office  
(Nominal Dollars, in Thousands)

BIO

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Median	\$182	\$178	\$186	\$200	\$198	\$197	\$215	\$200	\$222	\$227
Mean	\$228	\$217	\$237	\$243	\$223	\$226	\$263	\$243	\$260	\$278

CISE

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Median	\$161	\$166	\$161	\$155	\$156	\$166	\$167	\$166	\$167	\$172
Mean	\$204	\$199	\$187	\$198	\$187	\$199	\$210	\$203	\$224	\$228

EDU\*1

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Median									\$167	\$168
Mean									\$275	\$274

\* These data were only calculated for this directorate beginning in FY 2021.

ENG

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Median	\$103	\$112	\$103	\$102	\$107	\$113	\$117	\$125	\$119	\$130
Mean	\$122	\$131	\$122	\$124	\$125	\$131	\$135	\$148	\$141	\$163

GEO

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Median	\$141	\$141	\$144	\$150	\$150	\$166	\$155	\$167	\$172	\$185
Mean	\$193	\$201	\$183	\$185	\$190	\$216	\$224	\$225	\$230	\$252

MPS

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Median	\$116	\$120	\$125	\$122	\$120	\$123	\$130	\$130	\$137	\$135
Mean	\$130	\$141	\$149	\$142	\$138	\$146	\$151	\$166	\$164	\$159

OIA

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Median	\$156	\$171	\$713	\$156	\$152	\$150	\$948	\$710	\$721	\$693
Mean	\$948	\$173	\$554	\$514	\$260	\$262	\$817	\$655	\$616	\$945

OISE

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Median	\$31	\$49	\$82	\$83	\$84	\$100	\$101	\$100	\$100	\$125
Mean	\$53	\$142	\$149	\$102	\$318	\$161	\$167	\$163	\$148	\$237

SBE

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Median	\$101	\$109	\$112	\$117	\$119	\$123	\$129	\$144	\$135	\$141
Mean	\$139	\$134	\$138	\$136	\$146	\$141	\$155	\$154	\$174	\$168

TIP<sup>2</sup>

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Median										\$50
Mean										\$116

Table Series Source: FY 2022 awards were from NSF Enterprise Information System, accessed 10/1/2022.

Note: This analysis is focused on projects, which count multi-institutional collaborative submissions as a single project. Only lead proposals for new projects were included in this analysis.

<sup>1</sup> In FY 2022, the Directorate for Education and Human Resources (EHR) was renamed the Directorate for STEM Education (EDU).

<sup>2</sup> In FY 2022, NSF established the new Directorate for Technology, Innovation and Partnerships (TIP). NSF realigned a number of programs from ENG and OIA into the new directorate, including NSF Innovation Corps (I-Corps™), Partnerships for Innovation, Small Business Innovation Research (SBIR), Small Business Technology Transfer (STTR), and the NSF Convergence Accelerator. Proposal and award statistics from FY 2021 and prior years for ENG and OIA have not been restated.

**Table 20 - Mean Award Duration (Research Awards)**

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Duration (Yrs)	3.0	3.0	2.9	2.9	2.9	3.0	3.0	2.8	3.1	3.1

Source: FY 2022 awards were from NSF Enterprise Information System, accessed 10/1/2022.

## PI Funding Rate

Table 21 - PI Funding Rate (Research Awards)

Category	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2017-2019	2018-2020	2019-2021	2020-2022
PIs Applied (in Thousands)	55.1	53.4	53.9	54.2	54.6	54.6	52.6	51.7	50.8	50.8
PIs Awarded (in Thousands)	19.0	19.1	19.9	20.6	21.1	21.2	20.7	21.8	21.9	22.2
PI Funding Rate	35%	36%	37%	38%	39%	39%	39%	42%	43%	44%

Source: NSF Enterprise Information System, accessed 10/1/2022.

Note: PI funding rate is the number of unique PIs receiving a research award divided by the total number of unique PIs submitting proposals in the same three-year window.

## PI Career Stage

Table 22 Series - Early and Later Career PIs (Research Awards)

### Early Career PIs

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	14,885	14,902	15,762	16,097	16,299	16,254	13,470	13,993	14,046	12,667
Awards	2,654	2,710	3,091	3,131	3,053	3,211	3,192	3,499	3,393	3,294
Funding Rate	18%	18%	20%	19%	19%	20%	24%	25%	24%	26%

### Later Career PIs

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Proposals	24,332	23,955	25,070	24,913	24,341	24,080	20,135	21,117	21,738	19,617
Awards	4,995	5,208	5,896	5,649	5,500	5,830	5,388	6,166	5,739	5,441
Funding Rate	21%	22%	24%	23%	23%	24%	27%	29%	26%	28%

Table Series Source: FY 2022 proposals and awards were from NSF Enterprise Information System, accessed 10/1/2022.

Note: An early career PI is defined as someone within ten years of receiving their last degree at the time of award. Prior to FY 2020, NSF defined an early career PI as someone within seven years of receiving their last degree at the time award. The definition was changed to align with the National Center for Science and Engineering Statistics (NCSES) Early Career Doctorates Survey (ECDS) and the 2021 "Women, Minorities, and Persons with Disabilities in Science and Engineering" reports. The table restates the data using the new definition.

## Graduate Student, Post-doctoral Researcher, and Senior Personnel Funding Support

This section estimates direct NSF support provided to graduate students, post-doctoral researchers, and senior personnel on research proposals that are subsequently awarded.<sup>16</sup> NSF-funded research awards directly support these personnel by reimbursing the award institution for salary and other expenses. Estimates exclude other categories of personnel that may be included in the award budget, such as technicians, programmers, and undergraduate students. These estimates also exclude direct support provided through other award categories, such as individual post-doctoral fellowships, NSF Graduate Research Fellowship

<sup>16</sup> Senior personnel include PIs, co-PIs, and other individuals designated on the proposal budget as senior personnel.

awards, and other individual awards to graduate students. Estimates are based on budgeted amounts in the original proposals and not actual expenditures. Budget details are extracted for research grants active in the year indicated. Award budgets include the amount of funding requested and a count of individuals by personnel category.

**Table 23 - Estimated Number of People Budgeted on Successful Research Awards, by Year**

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Graduate Students	25,161	26,317	26,882	27,099	26,693	26,997	27,159	29,043	30,292	29,224
Post-doctoral Researchers	4,447	4,286	4,586	4,460	4,442	4,516	4,230	4,672	5,008	4,714
Senior Personnel	32,829	31,650	33,831	35,326	33,296	35,870	33,529	38,865	44,564	42,180

Source: FY 2022 awards were from NSF Enterprise Information System, accessed 10/1/2022.

Note: The numbers reflect the expected number of people supported by the grant as specified in the yearly award budget.

**Table 24 - Average Annual Budgeted Support for Graduate Students on Successful Research Awards, per Award (Nominal Dollars)**

Fiscal Year	All Research Awards	Research Awards with Graduate Student Support
2013	\$20,937	\$29,101
2014	\$21,028	\$29,381
2015	\$20,842	\$29,875
2016	\$21,408	\$30,657
2017	\$21,440	\$30,766
2018	\$21,547	\$31,182
2019	\$23,471	\$32,743
2020	\$22,151	\$30,413
2021	\$24,951	\$34,368
2022	\$25,991	\$35,184

Source: FY 2022 awards were from NSF Enterprise Information System, accessed 10/1/2022.

Notes: Amounts do not represent an average stipend amount paid per student. This table shows the average annual amount of graduate student support requested in the proposal budgets for research awards divided, respectively, by the total number of research awards and by the subset of research awards that requested funding for graduate students.

Table 25 - Average Annual Budgeted Support for Post-Doctoral Researchers on Successful Research Awards, per Award (Nominal Dollars)

Fiscal Year	All Research Awards	Research Awards with Post-Doctoral Researcher Support
2013	\$6,060	\$34,674
2014	\$5,492	\$34,142
2015	\$5,970	\$35,889
2016	\$5,894	\$36,339
2017	\$5,680	\$36,700
2018	\$5,838	\$35,861
2019	\$6,556	\$39,633
2020	\$6,342	\$35,526
2021	\$7,063	\$38,743
2022	\$7,503	\$42,390

Source: FY 2022 awards were from NSF Enterprise Information System, accessed 10/1/2022.

Notes: Amounts do not represent an average stipend amount paid per post-doctoral researcher. This table shows the average annual amount of post-doctoral researcher support requested in the proposal budgets for research awards divided, respectively, by the total number of research awards and by the subset of research awards that requested funding for post-doctoral researchers.

Table 26 - Average Number of Months of Budgeted PI/co-PI Salary Support, per Research Award, by Directorate or Office

Directorate/ Office	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NSF	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.5	0.6	0.6
BIO	1.1	1.0	0.9	0.9	0.7	0.7	0.7	0.7	0.7	0.6
CISE	0.6	0.7	0.6	0.6	0.6	0.6	0.5	0.4	0.5	0.5
EDU <sup>1</sup>	1.1	0.9	0.8	0.7	0.8	0.8	0.8	0.7	0.8	1.0
ENG	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
GEO	1.0	1.1	1.0	1.0	0.9	1.3	0.7	0.6	0.7	1.0
MPS	1.0	1.0	0.9	0.8	0.8	0.8	0.7	0.5	0.7	0.6
OIA	1.1	0.8	0.8	0.5	0.5	1.2	1.2	1.1	1.1	0.3
OISE	0.7	0.5	0.7	0.7	0.6	1.0	0.6	0.5	0.3	0.2
SBE	1.1	1.2	1.3	1.1	0.9	0.8	0.7	0.7	0.7	0.7
TIP <sup>2</sup>										0.5

Source: FY 2022 awards were from NSF Enterprise Information System, accessed 10/1/2022.

<sup>1</sup> In FY 2022, the Directorate for Education and Human Resources (EHR) was renamed the Directorate for STEM Education (EDU).

<sup>2</sup> In FY 2022, NSF established the new Directorate for Technology, Innovation and Partnerships (TIP). NSF realigned a number of programs from ENG and OIA into the new directorate, including NSF Innovation Corps (I-Corps™), Partnerships for Innovation, Small Business Innovation Research (SBIR), Small Business Technology Transfer (STTR), and the NSF Convergence Accelerator. Proposal and award statistics from FY 2021 and prior years for ENG and OIA have not been restated.

## IV. Appendix

### A. Acronyms

BFA	Office of Budget, Finance and Award Management
BIO	Directorate for Biological Sciences
CISE	Directorate for Computer and Information Science and Engineering
COV	Committee of Visitors
DD	Division Director
EAGER	EARly-concept Grants for Exploratory Research
EDU	Directorate for STEM Education
ENG	Directorate for Engineering
EIS	Enterprise Information System
EPSCoR	Established Program to Stimulate Competitive Research
FY	Fiscal Year (October 1 – September 30)
GDP	Gross Domestic Product
GEO	Directorate for Geosciences
IPA	Temporary employees hired through the Intergovernmental Personnel Act
MPS	Directorate for Mathematical and Physical Sciences
MSI	Minority-Serving Institution
NSB	National Science Board
NSF	National Science Foundation
OD	Office of the Director
OIA	Office of Integrative Activities
OISE	Office of International Science and Engineering
PAM	Proposal and Award Manual
PAPPG	Proposal and Award Policies and Procedures Guide
PI	Principal Investigator
RAISE	Research Advanced by Interdisciplinary Science and Engineering
RAPID	Grants for Rapid Response Research
SBE	Directorate for Social, Behavioral and Economic Sciences
SBIR	Small Business Innovative Research
STEM	Science, Technology, Engineering and Mathematics
TIP	Directorate for Technology, Innovation and Partnerships
US	United States

## B. Data Sources and Notes

The data tables in this report were produced using data from NSF's Enterprise Information System (EIS). EIS is an internal NSF system used for reporting. It is a compilation of data from NSF's transactional administrative systems that manage the proposal submission, review, and award process. At the end of the most recent fiscal year of the report, a data extract is saved for all proposals that were awarded or declined in the fiscal year. A proposal is included in a given fiscal year based on whether the action to award or decline the proposal was taken by NSF that year, not whether the proposal was received in that year.

Real (i.e., inflation-adjusted) dollars were calculated using the Office of Management and Budget's Historical Table 10.1 "Gross Domestic Product and Deflators Used in the Historical Tables: 1940–2028." FY 2022 is the reference year (one FY 2022 dollar equals one real dollar). <https://www.whitehouse.gov/omb/budget/historical-tables/> accessed on 10/2022.

Directorate-level details reflect the NSF organization structure in FY 2022.

To minimize the risk of revealing information that is confidential, sensitive, or otherwise protected (such as privacy-protected data and information about declined proposals), the Merit Review Digest generally combines table cells of three or fewer proposals or awards. In some instances (noted in the tables) smaller cells have not been combined because the amount of "Unknown" demographic data is large enough that protected data are not likely to be revealed.

NSF collects demographic data from PIs to better understand who is submitting proposals and receiving awards. NSF collects data on gender, ethnicity, race, and disability status as part of the PI's personal profile in Research.gov.<sup>17</sup> The demographic data collected are confidential and used for aggregate statistical reporting. They are not included in the proposal or shared with reviewers.

Racial and ethnic categories reported are those mandated by the Office of Management and Budget (OMB) in the Standards for the Classification of Federal Data on Race and Ethnicity (OMB Statistical Policy Directive No. 15). The standards have five categories for race: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. There are two categories for data on ethnicity: "Hispanic or Latino," and "Not Hispanic or Latino."

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<sup>17</sup> Before the implementation of account management functions in Research.gov in FY 2019, demographic data were collected in FastLane.