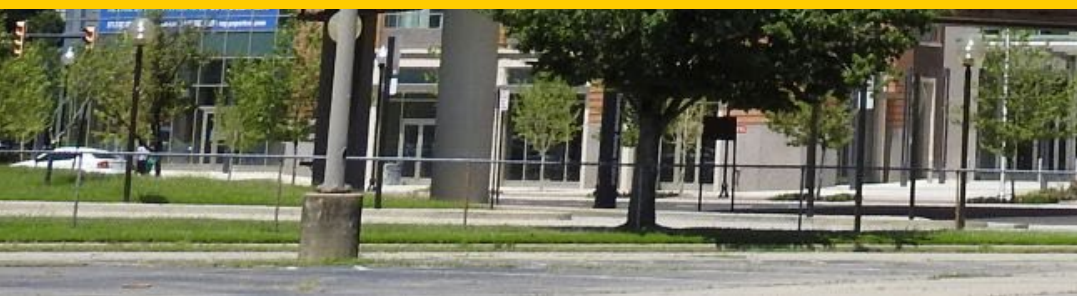**National Science Foundation**
Office of Inspector General

Office of Audits Annual Work Plan
Fiscal Year 2023

AT A GLANCE

Office of Audits Annual Work Plan Fiscal Year 2023
November 8, 2022

WHY WE CREATED THIS WORK PLAN

The *Inspector General Act of 1978*, as amended, authorizes an Office of Inspector General for the National Science Foundation. By statute, we conduct and supervise independent audits and investigations relating to agency programs and operations and recommend policies that promote effectiveness and efficiency and prevent and detect fraud, waste, and abuse. This work plan lists our required and planned discretionary projects for fiscal year 2023. However, we may change the plan to address higher priority issues that arise or to respond to requests from Congress or other stakeholders.

PLANNED PROJECTS

Required projects for FY 2023 include:

- Audit of NSF's financial statements
- Audit of compliance with the *Federal Information Security Modernization Act of 2014*
- Review of NSF's Agency Financial Report for compliance with the *Payment Integrity Information Act of 2019*
- Review of NSF's enhanced personnel security program (if federal guidance is provided)

Ongoing or planned discretionary projects for FY 2023 include

- Audit of NSF's oversight of Industry University Cooperative Research Centers (IUCRCs)
- Inspection of NSF's Sexual Harassment and Assault Prevention and Response, focusing on the U. S. Antarctic Program; and Audit(s) of NSF's oversight of awardee compliance with harassment policies
- Audit of mid-scale projects
- Audit of NSF's management of Information Technology equipment deployment and return
- Audit(s) of NSF's and award recipient compliance with research security requirements
- Review of executive salaries at NSF Federally Funded Research and Development Centers and major research facilities
- Inspection of NSF's compliance with Office of Management and Budget Memorandum 22-09, *Moving the U.S. Government Toward Zero Trust Cybersecurity Principles*
- Inspection of NSF's Management of a Hybrid Workforce

We will also audit NSF award recipients and review the quality of single audits. Additionally, we will monitor construction of major facilities as a potential audit.

FOR MORE INFORMATION, PLEASE CONTACT US AT OIGPUBLICAFFAIRS@NSF.GOV.

ABOUT THE OFFICE OF INSPECTOR GENERAL

We provide independent oversight of the National Science Foundation to improve the effectiveness, efficiency, and economy of its programs and operations and to prevent and detect fraud, waste, and abuse. NSF OIG was established in 1989, in compliance with the *Inspector General Act of 1978*, as amended. Because the Inspector General reports directly to the National Science Board and Congress, the Office is organizationally independent from the National Science Foundation.

Our work is divided into two functional areas: 1) audits and inspections, including audits performed in accordance with *Government Auditing Standards*, to assess the functionality of systems, determine compliance with financial standards and grant requirements, and identify ways to improve systems and operations; and inspections, performed in accordance with *Quality Standards for Inspection and Evaluation,* to assess conformity with requirements; and 2) investigations, which address allegations of serious wrongdoing, such as violations of criminal or civil law or fabrication of data and plagiarism in NSF-funded research.

ABOUT THIS PLAN

We perform audits, inspections and other engagements mandated by legislation, as well as discretionary, risk-based engagements of NSF's contracts, cooperative agreements, and grants to universities and other institutions. We also conduct internal engagements of NSF's programs to identify ways to improve systems and operations. These engagements help ensure that financial, administrative, and programmatic activities are conducted effectively, efficiently, and in compliance with applicable laws, rules, and regulations. This work plan lists our required and planned discretionary projects for fiscal year 2023.

REQUIRED AUDITS AND REVIEWS

We are required by statute to conduct the following audits or reviews in FY 2023:

- Audit of NSF's financial statements
- Audit of compliance with the *Federal Information Security Modernization Act of 2014* (FISMA, Pub L. No. 113-283)
- Review of NSF's Agency Financial Report for compliance with the *Payment Integrity Information Act of 2019* (PIIA, Pub. L. No. 116-117)
- Review of NSF's enhanced personnel security program, as required by the *Consolidated Appropriations Act of 2016* (Pub. L. 114-113, as amended by Pub. L. 116-92), subject to publication of review guidance

DISCRETIONARY AUDITS, INSPECTIONS, AND REVIEWS

Our discretionary plan is flexible, and we may need to change it to address higher priority issues that arise during the year or to respond to requests from Congress or other stakeholders. Our planned projects focus internally on NSF management and programs and externally on how award recipients, including institutions and researchers, use NSF funds. Based on risk, we have selected the following discretionary audits, inspections, or reviews for FY 2023.

Audit of NSF's Oversight of Industry University Cooperative Research Centers (IUCRCs)

In 1973 NSF created the Industry–University Cooperative Research Centers (IUCRC) program to foster long-term partnerships among industry, academe, and government. The program is primarily funded by the Computer and Information Science and Engineering directorate and Engineering directorates. In June 2022, NSF had 294 active IUCRC awards; for FY 2023, NSF requested $21.86 million for the program. The audit of this relatively small public-private partnership program is an initial step in assessing NSF's management of public-private partnerships, which are a high priority for NSF.

Inspection of NSF's Sexual Harassment and Assault Prevention and Response, Focusing on the U. S. Antarctic Program; and Audit(s) of NSF's Oversight of Awardee Compliance with Harassment Policies

In August 2022, NSF released *Sexual Assault/Harassment Prevention and Response (SAHPR)*, a report NSF commissioned in response to claims of sexual assault and harassment in the United States Antarctic Program (USAP). We are performing an inspection in FY 2023 of NSF's Sexual Harassment and Assault Prevention and Response, focusing on USAP. The objectives of this inspection are: 1. To determine what measures NSF has taken or is developing for sexual harassment and assault prevention and reporting; 2. To provide NSF with information on practices other federal agencies have employed to address this issue; and 3. To determine if NSF's measures are effective.

As resources permit, in FY 2023, we will also initiate a more comprehensive audit of NSF's oversight of awardee compliance with harassment policies. NSF added an award term and condition, effective October 22, 2018, requiring award recipients to notify the agency "… of any findings/determinations of sexual harassment, other forms of harassment, or sexual assault regarding an NSF funded PI or co-PI." Recipients must also notify NSF "… if the PI or co-PI is placed on administrative leave or if the awardee has imposed any administrative action on the PI or any co-PI relating to any finding/determination or an investigation of an alleged violation of awardee policies or codes of conduct, statutes, regulations, or executive orders relating to sexual harassment, other forms of harassment, or sexual assault."

From FY 2019 through FY 2021, NSF received 43 notifications. NSF's Office of Equity and Civil Rights receives the notifications and works with NSF staff to determine the appropriate course of action. NSF's current *Proposal and Awards Policies and Procedures Guide* (PAPPG) states that NSF "…expects all research organizations to establish and maintain clear and unambiguous standards of behavior to ensure harassment-free workplaces wherever science is conducted." Our audit will evaluate NSF's policies on harassment and its oversight of institutions. We may conduct additional audit work, such as testing compliance at selected awardees.

Audits of Mid-Scale Projects

In its FY 2023 Budget Request, NSF requested more than $180 million for mid-scale projects costing between $4 and $100 million. These projects include research instrumentation, equipment, and upgrades to major research facilities or other research infrastructure investments. The projects address national research priorities, rather than regional- or campus- level priorities, and foster student training and workforce diversity. In FY 2023, we will review four mid-scale recipients' expenditures and internal controls to determine if they are providing adequate stewardship over federal funds provided for mid-scale projects.

Audit of NSF's Management of Information Technology Equipment Deployment and Return

NSF has approximately 2,100 employees, who collectively have been issued thousands of pieces of IT equipment, including NSF laptops, wireless mice and keyboards, iPhones and iPads, storage devices, docking stations, and display monitors. Effective internal controls over this equipment includes ensuring the pieces are ordered, received, deployed, and disposed of properly, and implementation of policies and procedures to ensure each item is handled appropriately. NSF administrative staff order, receive, and inventory IT equipment to prepare for distribution agency wide. Once staff distribute the IT equipment, recipients are to use best security practices to protect their devices.

When employees leave, they must return all NSF devices to the agency. During required annual audits of NSF 's information security program, OIG contract auditors review NSF's controls over the inventory of hardware assets connected to NSF's network. However, this work is limited to equipment that has an NSF bar code (i.e., laptops, monitors, and mobile devices). OIG's separate audit will focus on deployment and return of equipment that is not barcoded.

Audit(s) of NSF's and Award Recipient Compliance with Research Security Requirements

NSF recently updated its PAPPG to, in part, comply with the research security requirements established by *National Security Presidential Memorandum 33* (NSPM-33). NSPM-33 strengthens protections of U.S. government-supported research and development against foreign government interference and exploitation while maintaining an open environment to foster research discoveries and innovation that benefit our nation and the world. Besides existing

conflict of interest guidance, NSF's PAPPG now includes new pre-award and post-award disclosure requirements. Further, NSPM-33 requires research organizations with over $50 million per year in total federal research funding to have a research security program, although implementation guidance on this requirement is still forthcoming. Additionally, the *CHIPS and Science Act of 2022* (CHIPS Act, Pub. L. No. 117-167) enacted additional research security requirements that are applicable to both NSF and its award recipients.

Combined, these requirements establish the primary mechanisms for managing risks related to researchers' potential conflicts, including participation in foreign government talent programs. If institutions have not enacted policies that meet the requirements of NSPM-33, the CHIPS Act, and the PAPPG, there is a heightened risk to research security. Our audit(s) may evaluate NSF's implementation of NSPM-33, NSF's implementation of the CHIPS Act, NSF's oversight of award recipients' compliance with associated PAPPG requirements, and/or award recipient compliance with other associated requirements.

Review of Executive Salaries at NSF Federally Funded Research and Development Centers and Major Research Facilities

In response to our request for input on the FY 2023 audit plan, NSF recommended that we conduct a review of salaries for executives at NSF awardee institutions. In particular, the Office of Budget, Finance and Award Management has observed that salaries for executives at organizations managing major research facilities and Federally Funded Research and Development Centers may be higher than for executives at other types of awardee institutions. We are conducting background research related to this request and will inform NSF if we proceed with audit work.

Inspection of NSF's Compliance with Office of Management and Budget Memorandum 22-09, *Moving the U.S. Government Toward Zero Trust Cybersecurity Principles*

On January 26, 2022, the Office of Management and Budget (OMB) issued memorandum M-22-09 to help move the federal government toward Zero Trust cybersecurity principles. The memorandum provides a federal zero trust architecture (ZTA) strategy, requiring agencies to meet specific cybersecurity standards and goals by the end of FY 2024. The memorandum's goals are organized using the zero-trust maturity model developed by Cybersecurity & Infrastructure Security Agency (CISA). CISA's zero trust model describes five complementary areas of effort (pillars): Identity, Devices, Networks, Applications and Workloads, and Data; with three themes that cut across these areas: Visibility and Analytics, Automation and Orchestration, and Governance. As part of the ZTA requirements, agencies were to submit an implementation plan by March 26, 2022, to OMB and CISA for FY 2022 through FY 2024 for OMB concurrence, and a budget estimate for FY 2024.

Our inspection will review the NSF plans for implementing the ZTA strategy, the FY 2024 budget request, and NSF's progress towards meeting the goals and objectives outlined in M-22-09. The inspection will identify if NSF has appropriately prioritized its ZTA efforts.

Inspection of NSF's Management of a Hybrid Workforc*e*

In FY 2022, NSF implemented a hybrid workforce, which requires support for on-site and off-site employees. Our inspection may include topics such as the adequacy of NSF's management of its information technology infrastructure; use of space at NSF's Alexandria, Virginia headquarters; personnel hiring, supervision, and retention; structure and location of merit review panels; and controls over the award lifecycle and NSF's assets.

Audits of NSF Award Recipients

We will continue to audit NSF award recipients at various universities, non-profits, and for-profit entities to detect improper spending or noncompliance with federal and NSF requirements. We will conduct some of the audits, and independent public accounting firms with whom we contract will conduct the rest. The audits may focus on areas such as internal controls, accounting systems, or incurred costs. We will also continue to expand our oversight of smaller entities through targeted audits focused on grant management capabilities.

Reviews of the Quality of Single Audits

Award recipients that spend $750,000 or more of federal funds in a year must obtain a single audit, which is an important oversight tool. We will continue to review the quality of single audits of NSF award recipients for which NSF has audit cognizance or oversight — defined generally as those institutions that receive the majority of their federal funding from NSF. We will also review other award recipients when we have concerns about the NSF-related information in their single audit reports. Our reviews assess whether the audits followed federal requirements and professional audit standards. In FY 2023, we plan to conduct desk reviews of approximately 100 single audit report packages and conduct quality control reviews of three single audits.

PROJECTS WE ARE MONITORING

Pending additional background research and resource availability, we will monitor the following major facilities NSF reports as under construction:

- Antarctic Infrastructure Modernization for Science
- High-Luminosity Large Hadron Collider
- Regional Class Research Vessel
- Vera C. Rubin Observatory (formerly the Large Synoptic Survey Telescope)

In FY 2023, we plan to monitor construction activities, including changes to schedule and costs.

CONNECT WITH US

Visit our website at www.oig.nsf.gov/. Contact us at OIGpublicaffairs@nsf.gov or 703.292.7100. Follow us on Twitter at @nsfoig.

Report Fraud, Waste, Abuse, or Whistleblower Reprisal

- File online report: oig.nsf.gov/contact/hotline
- Anonymous Hotline: 1.800.428.2189
- Mail: 2415 Eisenhower Avenue, Alexandria, VA 22314 ATTN: OIG HOTLINE