

Performance Audit of Incurred Costs – Computing Research Association

REPORT PREPARED BY COTTON & COMPANY ASSURANCE AND ADVISORY, LLC

NATIONAL SCIENCE FOUNDATION
OFFICE OF INSPECTOR GENERAL

A complex, abstract network graph is displayed as the background of the cover. It consists of numerous small, glowing teal-colored dots (nodes) connected by thin, translucent teal lines (edges). The nodes are densely packed and interconnected, creating a sense of a large, complex system or network. The overall color palette is dark, with the teal highlights providing a modern, technological feel.



AT A GLANCE

Performance Audit of Incurred Costs – Computing Research Association

Report No. OIG 23-1-002

October 28, 2022

AUDIT OBJECTIVE

The National Science Foundation Office of Inspector General engaged Cotton & Company Assurance and Advisory, LLC (C&C) to conduct a performance audit of costs that the Computing Research Association (CRA) incurred on 11 NSF awards as of September 2, 2021. The auditors tested more than \$1.0 million of the approximately \$24.3 million of costs claimed to NSF. The audit objective was to determine if costs claimed by CRA on NSF awards were allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and federal financial assistance requirements. A full description of the audit's objective, scope, and methodology is attached to the report as Appendix B.

AUDIT RESULTS

The report highlights concerns about CRA's compliance with certain federal requirements, NSF award terms and conditions, and CRA policies. The auditors questioned \$319,674 of costs claimed by CRA during the audit period. Specifically, the auditors found \$262,509 in drawdowns that exceeded expenses, \$25,530 of inadequately supported expenses, \$22,697 of inappropriately allocated expenses, and \$8,938 of unallowable expenses. The auditors also identified five compliance-related findings for which there were no questioned costs: non-compliance with federal pass-through entity requirements, non-compliance with CRA policies, insufficient controls related to the application of indirect costs, fringe benefits not appropriately applied, and lack of documented policies and procedures for procurement, competition, and sole source acquisitions. C&C is responsible for the attached report and the conclusions expressed in it. NSF OIG does not express any opinion on the conclusions presented in C&C's audit report.

RECOMMENDATIONS

The auditors included nine findings in the report with associated recommendations for NSF to resolve the questioned costs and to ensure CRA strengthens administrative and management controls.

AUDITEE RESPONSE

CRA disagreed with the majority of the questioned cost findings but agreed with the majority of the internal control findings in the report. CRA's response is attached in its entirety as Appendix A.

FOR FURTHER INFORMATION, CONTACT US AT OIGPUBLICAFFAIRS@NSF.GOV.



National Science Foundation • Office of Inspector General
2415 Eisenhower Avenue, Alexandria, Virginia 22314

MEMORANDUM

DATE: October 28, 2022

TO:
Alex Wynnnyk
Acting Director
Division of Institution and Award Support

Jamie French
Director
Division of Grants and Agreements

FROM:
for Mark Bell
Assistant Inspector General
Office of Audits

SUBJECT: Audit Report No. 23-1-002, Computing Research Association

Digitally signed
LAURA A RAINNEY
by LAURA A RAINNEY
Date: 2022.10.28 12:21:43 -04'00'

This memorandum transmits the Cotton & Company Assurance and Advisory, LLC (C&C) report for the audit of costs charged by the Computing Research Association (CRA) to its sponsored agreements with the National Science Foundation on 11 NSF awards as of September 2, 2021. The audit encompassed more than \$1.0 million of the approximately \$24.3 million of costs claimed to NSF during the period. The audit objective was to determine if costs claimed by CRA on NSF awards were allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and federal financial assistance requirements. A full description of the audit's objective, scope, and methodology is attached to the report as Appendix B.

Please coordinate with our office during the 6-month resolution period, as specified by OMB Circular A-50, to develop a mutually agreeable resolution of the audit findings. The findings should not be closed until NSF determines that all recommendations have been adequately addressed and the proposed corrective actions have been satisfactorily implemented.

OIG Oversight of the Audit

C&C is responsible for the attached auditors' report and the conclusions expressed in this report. We do not express any opinion on the conclusions presented in C&C's audit report. To fulfill our responsibilities, we:

- reviewed C&C's approach and planning of the audit;
- evaluated the qualifications and independence of the auditors;
- monitored the progress of the audit at key points;
- coordinated periodic meetings with C&C, as necessary, to discuss audit progress, findings, and recommendations;
- reviewed the audit report prepared by C&C; and
- coordinated issuance of the audit report.

We thank your staff for the assistance that was extended to the auditors during this audit. If you have any questions regarding this report, please contact Keith Nackerud at 703.292.7100 or OIGpublicaffairs@nsf.gov.

Attachment

cc:

Stephen Willard	Karen Marrongelle	Charlotte Grant-Cobb	Ken Lish
Dan Reed	Christina Sarris	Allison Lerner	Keith Nackerud
Victor McCrary	Teresa Grancorvitz	Lisa Vonder Haar	Jennifer Kendrick
John Veysey	Janis Coughlin-Piester	Ken Chason	Louise Nelson
Ann Bushmiller	Rochelle Ray	Dan Buchtel	Karen Scott

EXECUTIVE SUMMARY

The Cotton & Company audit team determined that the Computing Research Association (CRA) needs improved oversight of the allocation and documentation of expenses charged to NSF awards to ensure costs claimed are reasonable, allocable, and allowable in accordance with all federal and NSF regulations, NSF award terms and conditions, and CRA policies. Specifically, the audit report includes nine findings and a total of \$319,674 in questioned costs.

AUDIT OBJECTIVES

The National Science Foundation Office of Inspector General engaged Cotton & Company Assurance and Advisory, LLC to conduct a performance audit of costs CRA incurred on 11 awards that either ended or were close to the end of their periods of performance. The audit objectives included evaluating CRA's award management environment to determine whether any further audit work was warranted and performing additional audit work, as determined appropriate. We have attached a full description of the audit's objectives, scope, and methodology as [Appendix B](#).

AUDIT CRITERIA

The audit team assessed CRA's compliance with relevant federal regulations (i.e., 2 Code of Federal Regulations [CFR] 200 and 2 CFR 230); NSF Proposal and Award Policies and Procedures Guides (PAPPGs) 11-1, 13-1, 14-1, 15-1, 17-1, 18-1, and 19-1; NSF award terms and conditions; and CRA policies and procedures. The audit team included references to relevant criteria within each finding and defined key terms within the Glossary located in [Appendix E](#).

We conducted this performance audit in accordance with *Generally Accepted Government Auditing Standards* (GAGAS) issued by the Comptroller General of the United States.

AUDIT FINDINGS

As summarized in [Appendix C](#), the auditors identified and questioned \$319,674 of direct and indirect costs that CRA inappropriately claimed during the audit period, including:

- \$262,509 Award Cash Management Service (ACM\$) drawdowns that exceeded expenses
- \$25,530 of inadequately supported expenses
- \$22,697 of inappropriately allocated expenses
- \$8,938 of unallowable expenses

The audit report also includes five compliance-related findings for which the auditors did not question any costs:

- Non-compliance with federal requirements for pass-through entities
- Non-compliance with CRA policies
- Insufficient controls related to the application of indirect costs
- Fringe benefits not appropriately applied
- Lack of documented policies and procedures for procurement, competition, and sole source acquisitions

RECOMMENDATIONS

The audit report includes 27 recommendations for NSF's Director of the Division of Institution and Award Support related to resolving the \$319,674 in questioned costs and ensuring CRA strengthens its award management environment, as summarized in [Appendix D](#).

AUDITEE RESPONSE

CRA disagreed with the majority of the findings included in the audit report. Although CRA agreed to reimburse NSF for \$62,222 in questioned costs, it disagreed with the remaining \$257,452. CRA's response is attached in its entirety to the report as [Appendix A](#).

Table of Contents

Background	1
Audit Scope.....	2
Audit Results.....	3
Finding 1: ACM\$ Drawdowns That Exceeded Expenses.....	4
Finding 2: Inadequately Supported Expenses	7
Finding 3: Inappropriately Allocated Expenses	10
Finding 4: Unallowable Expenses.....	15
Finding 5: Non-Compliance with Federal Requirements for Pass-Through Entities	21
Finding 6: Non-Compliance with CRA Policies	22
Finding 7: Insufficient Controls Related to the Application of Indirect Costs	25
Finding 8: Fringe Benefits Not Appropriately Applied.....	29
Finding 9: Lack of Documented Policies and Procedures for Procurement, Competition, and Sole Source Acquisitions.....	30
Appendix A: CRA's Response.....	33
Appendix B: Objectives, Scope, and Methodology.....	41
Appendix C: Summary of Questioned Costs.....	45
Appendix D: Summary of Recommendations and Considerations.....	51
Appendix E: Glossary.....	57

Abbreviations

ACM\$	Award Cash Management \$ervice
AV	Audio/Visual
CCC	Computing Community Consortium
CFR	Code of Federal Regulations
CRA	Computing Research Association
DGA	Division of Grants and Agreements
FY	Fiscal Year
GAGAS	Generally Accepted Government Auditing Standards
GL	General Ledger
NICRA	Negotiated Indirect Cost Rate Agreement
NSF	National Science Foundation
OIG	Office of Inspector General
PAPPG	Proposal and Award Policies and Procedures Guide
PI	Principal Investigator

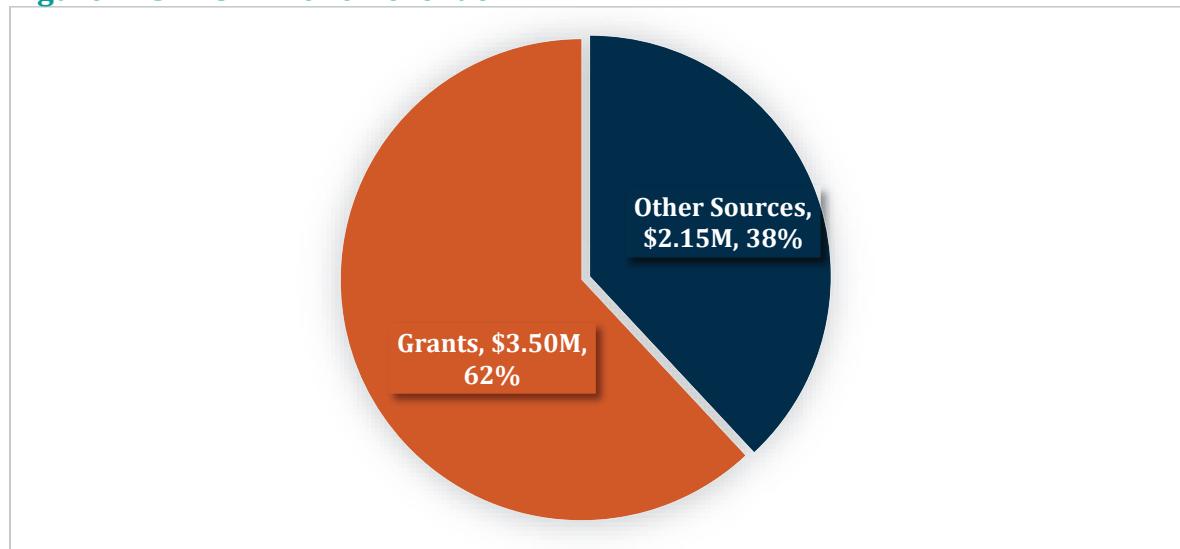
BACKGROUND

The National Science Foundation is an independent federal agency created “to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes” (Pub. L. No. 81-507). NSF funds research and education in science and engineering by awarding grants and contracts to educational and research institutions throughout the United States.

Most federal agencies have an Office of Inspector General that provides independent oversight of the agency’s programs and operations. Part of NSF OIG’s mission is to conduct audits and investigations to prevent and detect fraud, waste, and abuse. In support of this mission, NSF OIG may conduct independent and objective audits, investigations, and other reviews to promote the economy, efficiency, and effectiveness of NSF programs and operations, as well as to safeguard their integrity. NSF OIG may also hire a contractor to provide these audit services.

NSF OIG engaged Cotton & Company Assurance and Advisory, LLC (referred to as “we”) to conduct a performance audit of costs incurred by the Computing Research Association (CRA). Based in Washington, D.C., CRA is a non-profit association that catalyzes the computing research community by informing policy makers and the public on computing research, and championing a diverse and equitable computing research community. In fiscal year (FY) 2020, CRA reported approximately \$5.65 million in total revenue, with \$3.50 million received from grants—including NSF—as illustrated in Figure 1.

Figure 1: CRA’s FY 2020 Revenue



Source: The chart data is supported by CRA’s 2020 Single Audit Report available on the [Federal Audit Clearinghouse website](#).¹

¹ See CRA’s Independent Auditors’ Reports as Required by Title 2 U.S. Code of Federal Regulations (CFR) Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards and Government Auditing Standards and Related Information for the years ending June 30, 2020, and 2019.

AUDIT SCOPE

This performance audit—conducted under Order No. 140D0421F0619—was designed to meet the objectives identified in the Objectives, Scope, and Methodology section of this report ([Appendix B](#)) and was conducted in accordance with *Generally Accepted Government Auditing Standards* issued by the Comptroller General of the United States.

The objectives of this performance audit were to evaluate CRA's award management environment; to determine if costs claimed on NSF awards were allowable, allocable, reasonable, and in compliance with relevant federal and NSF regulations; to determine whether any further audit work was warranted; and to perform any additional audit work, as determined appropriate. [Appendix B](#) provides detailed information regarding the audit scope and methodology used for this engagement.

As illustrated in Figure 2, CRA provided accounting system data to support the \$24.5 million in expenses it claimed on 11 NSF awards from each award's inception date through September 2, 2021.

Figure 2: Costs CRA Claimed on 11 NSF Awards²



Source: Auditor analysis of accounting data CRA provided, illustrating the total costs its accounting system data supports (\$24,260,484) by expense type, using financial information to support costs incurred on NSF awards during the audit period.

We judgmentally selected 44 transactions totaling \$1,041,630³ (see Table 1) and evaluated supporting documentation to determine whether the costs claimed on the NSF awards were allocable, allowable, and reasonable, and whether they were in conformity with

² The total award-related expenses CRA reported in its accounting system data were less than the \$24,518,419 reported in NSF's Award Cash Management Service (ACMS). Refer to [Finding 1 ACMS Drawdowns that Exceeded Expenses](#) and the [Objectives, Scope, and Methodology](#) section of this report for further details.

³ The \$1,041,630 represents the total value of the 44 transactions selected for transaction-based testing; it does not represent the dollar base of the total costs reviewed during the audit.

NSF award terms and conditions, organizational policies, and applicable federal financial assistance requirements.

Table 1: Summary of Selected Transactions

Budget Category	Transaction Count	Expense Amount ⁴
Subawards	3	\$285,201
Participant Support Costs	4	263,129
Consultant Services	2	140,410
Other Direct Costs	9	134,931
Indirect Costs	2	92,527
Salaries and Wages	12	54,243
Travel	6	26,829
Publications	2	25,827
Computer Services	2	10,211
Materials and Supplies	2	8,322
Total	44	\$1,041,630

Source: Auditor summary of selected transactions.

AUDIT RESULTS

We identified and questioned \$319,674 in costs CRA charged to five NSF awards.⁵ We also identified expenses CRA charged to six NSF awards that did not result in questioned costs, but did result in non-compliance with federal, NSF, or CRA-specific policies. See Table 2 for a summary of questioned costs by finding area, [Appendix C](#) for a summary of questioned costs by NSF award, and [Appendix D](#) for a summary of all recommendations.

Table 2: Summary of Questioned Costs by Finding Area

Finding Description	Questioned Costs
ACM\$ Drawdowns That Exceeded Expenses	\$262,509
Inadequately Supported Expenses	25,530
Inappropriately Allocated Expenses	22,697
Unallowable Expenses	8,938
Non-Compliance with Federal Requirements for Pass-Through Entities	-
Non-Compliance with CRA Policies	-
Insufficient Controls Related to the Application of Indirect Costs	-
Fringe Benefits Not Appropriately Applied	-
Lack of Policies and Procedures for Procurement, Competition, and Sole Source Acquisitions	-
Total	\$319,674

Source: Auditor summary of findings identified.

⁴ The expense amounts reported represent the total dollar value of the transactions selected for our sample. They do not include the total [fringe benefits](#) or [indirect costs](#) applied to the sampled transactions; however, we tested the fringe benefits and indirect costs for allowability.

⁵ The \$262,509 in questioned costs for [Finding 1](#) were identified when performing a reconciliation of CRA's accounting records to NSF ACM\$ award disbursements, not as part of testing the \$1,041,630 transaction sample expenses.

We made 27 recommendations for NSF's Director of the Division of Institution and Award Support related to resolving the \$319,674 in questioned costs and ensuring CRA strengthens its administrative and management procedures for monitoring federal funds.

We communicated the results of our audit and the related findings and recommendations to CRA and NSF OIG. We included CRA's response to this report in its entirety in [Appendix A](#).

FINDING 1: ACM\$ DRAWDOWNS THAT EXCEEDED EXPENSES

CRA's accounting system data does not support that it appropriately drew down or returned cash it drew from ACM\$ for four NSF awards in compliance with federal regulations⁶ and [NSF Proposal and Award Policies and Procedures Guides \(PAPPGs\)](#).⁷ Specifically, CRA's ACM\$ draws exceeded the total expenses recorded within its accounting system data by \$262,509 for four NSF awards as of the end of our audit period, as illustrated in Table 3.

Table 3: ACM\$ Draws That Exceeded Accumulated Expenses

NSF Award No.	Cash Drawn per ACM\$	Expenses per CRA's GL	Unsupported Expenses	Notes
	\$8,371,911	\$8,176,278	\$195,633	a
	548,929	542,567	6,362	b
	783,973	776,201	7,772	c
	5,094,968	5,042,226	52,742	d

Source: Auditor summary of identified exceptions.

- a) CRA drew down \$8,371,911 in funding on NSF Award No. [REDACTED] however, its accounting system data, which did not include all of CRA's FY 2016 expenses,⁸ supported that CRA had only posted \$8,176,278 in net expenses to the award—or \$195,633 less than it drew down in ACM\$.

⁶ 2 CFR § 215.21(b) states "Recipients' financial management systems shall provide for the following. (1) Accurate, current and complete disclosure of the financial results of each federally-sponsored project or program in accordance with the reporting requirements set forth in § 215.52... (2) Records that identify adequately the source and application of funds for federally-sponsored activities. These records shall contain information pertaining to Federal awards, authorizations, obligations, unobligated balances, assets, outlays, income and interest." Further, per 2 CFR § 200.305 (b) (1), *Payment*, advance payments to a non-federal entity must be limited to the minimum amounts needed and timed in accordance with the actual, immediate cash requirements of the non-federal entity in carrying out the purpose of the approved program or project.

⁷ According to NSF PAPPGs 11-1, 13-1, and 14-1, Part II, Chapter III, Section A, and NSF PAPPG 17-1 Part II, Chapter VIII, Section A, NSF grantees must meet the financial management system requirements of 2 CFR §215.21 and 2 CFR §200.302. Additionally, NSF PAPPGs 11-1, 13-1, and 14-1, Part II, Chapter III, Section C.2.a, and NSF PAPPG 17-1 Part II, Chapter VIII, Section C.2.a states that cash payments are only to occur when essential to meet the needs of a grantee for its actual disbursements. Specifically, the timing and amount of payment shall be as close as is administratively feasible to actual disbursements.

⁸ CRA stated that it was unable to recover accounting system data to support all FY 2016 expenses as a result of the organization implementing a new financial management system.

- b)** CRA drew down \$548,929 in funding on NSF Award No. [REDACTED] however, its accounting system data, which did not include all of CRA's FY 2016 expenses, supported that CRA had only posted \$542,567 in net expenses to the award—or \$6,362 less than it drew down in ACM\$.
- c)** CRA drew down \$783,973 in funding on NSF Award No. [REDACTED] however, its accounting system data, which did not include all of CRA's FY 2016 expenses, supported that CRA had only posted \$776,201 in net expenses to the award—or \$7,772 less than it drew down in ACM\$.
- d)** From March through August 2021 CRA posted adjusting journal entries to NSF Award No. [REDACTED] which resulted in a net credit amount of \$52,742 that CRA did not appropriately refund⁹ to NSF during the audit period of performance.¹⁰

Conclusion

CRA did not have sufficient ACM\$ reconciliation policies and procedures or internal controls in place to ensure it appropriately drew down and returned funds to NSF based on the expenses and credits recorded within its accounting system. Additionally, CRA was missing accounting system data as a result of not maintaining archived accounting system data when it switched its financial management systems. We are therefore questioning \$262,509 in funds CRA drew down on four NSF awards that were not supported by the expenses recorded within its accounting system data as of the end of our audit period. CRA concurred with \$52,742 of the questioned costs, but disagreed with the remaining 209,767, as illustrated in Table 4.

Table 4: Finding 1 Summary: ACM\$ Drawdowns That Exceeded Expenses

NSF Award No.	Description	Questioned Costs	CRA Agreed to Reimburse
[REDACTED]	Expenses Claimed in ACM\$ That Exceeded Accumulated Expenses	\$195,633	\$0
[REDACTED]	Expenses Claimed in ACM\$ That Exceeded Accumulated Expenses	6,362	-
[REDACTED]	Expenses Claimed in ACM\$ That Exceeded Accumulated Expenses	7,772	-
[REDACTED]	Credits Not Appropriately Returned to NSF	52,742	52,742
Total		\$262,509	\$52,742

Source: Auditor summary of identified exceptions.

⁹ According to 2 CFR 200.406(a), non-federal entities must apply applicable credits to a federal award either as a cost reduction or a cash refund, as appropriate, to the extent that the non-federal entity accrued or received the applicable credits.

¹⁰ According to CRA, it refunded the \$52,742 to NSF in September 2021, after this audit was initiated.

Recommendations

We recommend that NSF's Director of the Division of Institution and Award Support:

- 1.1. Resolve the \$209,767 in questioned unsupported Award Cash Management Service drawdowns for which CRA has not agreed to reimburse NSF and direct CRA to repay or otherwise remove the sustained questioned costs from its awards.
- 1.2. Direct CRA to provide documentation that it has repaid or otherwise credited the \$52,742 in unreturned credits for which it has agreed to reimburse NSF.
- 1.3. Direct CRA to strengthen its administrative and management internal controls and processes over its Award Cash Management Service reconciliation process. Updated processes could include:
 - Requiring that an individual who is independent from the standard Award Cash Management Service drawdown process perform periodic reconciliations of Award Cash Management Service drawdowns to CRA general ledger expenses for each NSF award.
 - Requiring that all adjusting entries posted to NSF awards be captured in the next drawdown performed after the adjustments are recorded to ensure that it appropriately reimburses NSF for credits.
- 1.4. Direct CRA to strengthen its document retention policies and procedures to ensure that it maintains sufficient accounting system data to support costs drawn down on NSF awards in NSF's Award Cash Management Service.

CRA Response: Although CRA accepted the finding and has agreed to update its policies regarding accounting back-ups, it only agreed to reimburse NSF for the \$52,742 in questioned costs associated with the credits not appropriately returned to NSF.

With regard to the remaining \$209,767 in questioned costs, although CRA agreed that the accounting system data it provided did not support the total expenses it drew in ACM\$ for the three affected NSF awards, CRA does not believe it should have to repay the costs as it believes the unsupported amounts are the result of a data construction error and not a result of it not incurring sufficient allowable expenses. Specifically, CRA noted that the unsupported expenses relate to FY 2016 accounting data that has been overwritten, corrupted, and/or is unreadable. Further, CRA stated that, while it was unable to restore its FY 2016 accounting system data, because it was able to reconstruct its FY 2016 general ledger (GL) data from monthly GL files and because it is plausible to assume the credit entries posted to its accounting system in FY 2017 represent reversals of FY 2016 expense entries, it has adequately demonstrated that CRA incurred sufficient expenses to support its drawdowns.

Auditor's Additional Comments: Our position regarding this finding has not changed.

Although CRA stated that it was able to reconstruct its FY16 GL data, the GL data files provided were missing sufficient data to support all the drawdowns made on three NSF awards. Further, the adjusting entries CRA posted in its accounting system in FY 2017 could not be tied to explicit transactions within the reconstructed FY 2016 GL data. As we were not provided with sufficient documentation to support that CRA incurred allowable expenses to support its ACM\$ draw downs on these awards, our position regarding this finding has not changed.

FINDING 2: INADEQUATELY SUPPORTED EXPENSES

CRA did not provide adequate documentation to support the allocability, allowability, and reasonableness of \$25,530 in meal expenses charged to two NSF awards as required for the costs to be allowable per federal regulations¹¹ and NSF PAPPGs,¹² as illustrated in Table 5.

Table 5: Insufficiently Supported Meal Expenses

Expense Date	NSF Award No.	Amount Charged	Insufficient Documentation to Support the Allowability of	Notes
July 2013	[REDACTED]	\$1,479	Computing Community Consortium (CCC) Participant Meal Expenses	a
August 2017	[REDACTED]	135	CCC Sociotechnical Cybersecurity Workshop Meal Expenses	b
December 2018	[REDACTED]	23,916	CCC Thermodynamics Computing Workshop Meals	c

Source: Auditor summary of identified exceptions.

- a) In July 2013, CRA used \$1,479 in **participant support cost** funds awarded for NSF Award No. [REDACTED] to cover meals provided during a CCC Council meeting. Although CRA maintained a receipt to support the \$1,479 total meal cost, we are unable to determine whether the expenses charged to the award represented an allowable use of participant support cost funds as CRA did not maintain itemized documentation to support the types of expenses incurred during the meal or individuals who attended the meeting.
- b) In August 2017, CRA charged NSF Award No. [REDACTED] for \$135 in expenses incurred for meals provided to a CRA employee and workshop participants during a

¹¹ According to 2 CFR 230, Appendix A, Sections A.2., and A.3., as well as 2 CFR § 200.403 (a) and (g), for a cost to be allowable it must be adequately documented, necessary, and reasonable for the performance of the federal award. See **Appendix E** of this report for additional **factors affecting the allowability of costs**. Additionally, 2 CFR § 200.302(a) and 2 CFR § 215.21(b)(2) and (7) state that that a recipient's financial management system will provide records that identify the source and application of funds and accounting records that are supported by source documentation.

¹² According to NSF PAPPGs 11-1 and 15-1, Part II, Chapter V, Section A, and 17-1, Part II, Chapter X, Section A, *Basic Considerations*, expenditures under NSF cost-reimbursement grants are governed by the federal cost principles and must conform to NSF policies, grant special provisions, and grantee internal policies. Grantees should ensure that costs claimed under NSF grants meet the requirements of the cost principles, grant terms and conditions, and other specific requirements of both the award notice and the applicable program solicitation.

brainstorming session after the CCC Sociotechnical Cybersecurity Workshop concluded. Although CRA maintained documentation to support the total cost of the meal, we are unable to determine whether the expense charged to the award was allowable as CRA did not provide sufficient documentation to support how the brainstorming session benefited the award.¹³

- c) In December 2018, CRA charged NSF Award No. [REDACTED] for \$23,916 in expenses incurred for meals provided to participants during a CCC Thermodynamics Computing Workshop. Although CRA maintained a receipt to support the total \$41,265 cost of the meals provided, CRA did not provide a documented methodology for how the total meal costs were allocated, nor did it identify which expense(s) represented the \$23,916 in costs charged to the award. As CRA did not provide documentation to support which portion(s) of the meals—some of which included alcohol—were charged or the individuals who attended each meal, the documentation maintained was not sufficient to support these costs are allowable.

Conclusion

CRA did not have appropriate policies, procedures, or internal controls in place to ensure it received and maintained adequate documentation to support the allowability of meal costs charged to federal awards. Specifically, CRA's policies, procedures, and internal controls did not ensure that it maintained itemized meal receipts, participant lists, and/or justifications to support how group meals benefitted NSF awards meal expenses were charged to. We are therefore questioning \$25,530 of inadequately supported meal expenses that CRA charged to two NSF awards. CRA concurred with \$1,479 of the questioned costs but disagreed with the remaining \$24,051, as illustrated in Table 6.

Table 6: Finding 2 Summary: Inadequately Supported Expenses

NSF Award No.	Description	Fiscal Year(s)	Questioned Costs			
			Direct	Indirect	Total	CRA Agreed to Reimburse
[REDACTED]	July 2013 Participant Meal Expenses	2014	\$1,479	\$0	\$1,479	\$1,479
[REDACTED]	August 2017 CCC Workshop Meals	2018	135	- ¹⁴	135	-
[REDACTED]	December 2018 CCC Workshop Meals	2019	23,916	-	23,916	-
Total			\$25,530	\$0	\$25,530	\$1,479

Source: Auditor summary of identified exceptions.

¹³ According to NSF PAPPG 15-1, Part I, Chapter II, Section C.2.g.(xii).(b), *Meals and Coffee Breaks*, no funds may be requested for intramural meeting meals.

¹⁴ The unallowable indirect costs are questioned in Finding 4: Unallowable Indirect Costs.

Recommendations

We recommend that NSF's Director of the Division of Institution and Award Support:

- 2.1 Resolve the \$24,051 in questioned workshop meal expenses for which CRA has not agreed to reimburse NSF and direct CRA to repay or otherwise remove the sustained questioned costs from its awards.
- 2.2 Direct CRA to provide documentation supporting that it has reimbursed or otherwise credited the \$1,479 in questioned participant meal expenses for which it has agreed to reimburse NSF.
- 2.3 Direct CRA to strengthen its policies and procedures for creating and retaining documentation, including introducing additional controls to help ensure that it appropriately creates and maintains all documentation necessary to support the allowability of meal expenses charged to sponsored programs. These additional controls could include:
 - Providing additional training regarding requirements for travel and conference documentation, including the itemized detail and justifications required when paying for hosted or group meals, to ensure it only pays for allowable meal expenses.
 - Requiring travelers to document the business purpose of a group meal—and identify the participant and non-participant portion of the meal—before charging expenses to an NSF award.

CRA Response: CRA agreed to reimburse NSF for the \$1,479 in questioned participant meal expenses incurred but did not agree to reimburse the remaining \$24,051 in questioned workshop meal expenses. Specifically:

- With regard to the \$135 in questioned August 2017 CCC workshop meal expenses charged to NSF Award No. [REDACTED] CRA noted the group meal costs should be allowable as the meal was served at a brainstorming session held at the end of an NSF award-sponsored workshop.
- With regard to the \$23,916 in questioned December 2018 CCC workshop meal expenses charged to NSF Award No. [REDACTED] CRA noted that it accepts the finding as there is no direct link in the accounting between the amount charged to the award (\$23,916) and the banquet check. However, it did not agree to reimburse the questioned costs. Specifically, CRA noted that while it is unable to identify the charges that add up to the \$23,916 charged to the NSF award, its GL supports how it allocated the total \$42,458 in invoiced conference costs.

Auditor's Additional Comments: Although CRA disagreed that it should have to reimburse NSF for \$24,051 of the questioned costs, our position regarding this finding has not changed. Specifically:

- With regard to the \$135 in questioned August 2017 CCC workshop meal expenses charged to NSF Award No. [REDACTED] because CRA did not provide additional support for how the group meal/brainstorming session benefitted the NSF award the meal expense was charged to, our position regarding this exception has not changed.
- With regard to the \$23,916 in questioned December 2018 CCC workshop meal expenses charged to NSF Award No. [REDACTED] although CRA's GL supported that the remaining conference meal costs were allocated to a non-sponsored account, CRA did not document an explicit allocation methodology for the full cost of the conference, nor was it able to identify the specific conference expenses that added up to \$23,916 charged to NSF Award No. [REDACTED] Accordingly, we are unable verify that the amount charged to the award was consistent with the relative benefit the award received, or that only allowable costs were charged to the NSF award.¹⁵ As such, our position regarding this exception has not changed.

FINDING 3: INAPPROPRIATELY ALLOCATED EXPENSES

CRA did not always allocate expenses to NSF awards based on the relative benefits the awards received, as required by federal regulations¹⁶ and NSF PAPPGs.¹⁷ As a result, CRA inappropriately charged three NSF awards for \$22,697 in inappropriately allocated salary, travel, other direct cost, and computer service expenses, as illustrated in Table 7.

Table 7: Inappropriately Allocated Expenses

Expense Date	NSF Award No.	Amount Charged	Percent Allocable	Amount Inappropriately Allocated	Notes
April 2015	[REDACTED]	\$1,740	Unknown	\$1,740	a
September 2016	[REDACTED]	991	0.00%	991	b
September 2016	[REDACTED]	684	0.00%	684	c
June 2020	[REDACTED]	17,069	Unknown	17,069	d
March 2021	[REDACTED]	2,213	0.00%	2,213	e

Source: Auditor summary of identified exceptions.

¹⁵ The conference invoices included at least \$2,047 in unallowable alcohol costs.

¹⁶ According to 2 CFR 230, Appendix A, Sections A.4., and 2 CFR § 200.405, *Allocable Costs*, (a), a cost is allocable to a particular cost objective (i.e., a specific function, project, sponsored agreement, department, or the like) if the goods or services involved are chargeable or assignable to such cost objective in accordance with relative benefits received (or other equitable relationship).

¹⁷ According to NSF PAPPGs 14-1 and 15-1, Part II, Chapter V, Section A, and 18-1, and 19-1, Part II, Chapter X, Section A, *Basic Considerations*, states that grantees should ensure all costs charged to NSF awards meet the requirements of the applicable federal cost principles, grant terms and conditions, and any other specific requirements of both the award notice and the applicable program solicitation.

- a) In April 2015, CRA charged NSF Award No. [REDACTED] for \$1,740 in salary costs paid to two CRA employees. CRA noted that both employees contributed to this NSF award; however, because one employee's position was not identified in the budget or annual reports, nor was any other supporting documentation provided to support the work the employee performed and as the other employee's timesheet was not approved to support how their work benefited this NSF award, we are unable to determine what portion of the salary expenses are allocable to this award.
- b) In September 2016, CRA charged NSF Award No. [REDACTED] for lodging provided to CCC Council Members while attending a CRA-sponsored Snowbird Conference¹⁸ and an NSF award-sponsored CCC Council Meeting from July 15 to 18, 2016. Although the lodging costs incurred to attend the CCC Council Meeting appear allocable to the NSF award, the \$991 of costs incurred to provide lodging from July 15 to 16, 2016—dates the travelers were attending the CRA-sponsored Snowbird Conference—were not appropriately allocated to the NSF award.
- c) In September 2016, CRA charged NSF Award No. [REDACTED] for audio/visual (AV) costs incurred while hosting a CRA-sponsored Snowbird Conference and an NSF award-sponsored CCC Council Meeting. Although the AV costs incurred to support the CCC Council Meeting appear allocable to the NSF award, the \$684 of costs incurred to provide AV services during the CRA-sponsored Snowbird Conference were not appropriately allocated to the NSF award as the products and projects highlighted by the AV expenses prior to the CCC Council meeting were not incurred to support the NSF award, but to support CRA.
- d) In June 2020, CRA charged NSF Award No. [REDACTED] for \$17,069 in costs incurred for event management software that were budgeted and appeared to benefit the award. However, because CRA acknowledged that the purchased services also benefitted NSF Award No. [REDACTED] but did not identify what portion of these costs are allocable to NSF Award No. [REDACTED] we are unable to determine what portion of this expense is allocable to NSF Award No. [REDACTED]
- e) In March 2021, CRA charged NSF Award No. [REDACTED] for travel expenses claimed by a CCC Council Member for attending the 2018 CRA-sponsored Snowbird Conference and an NSF award-sponsored CCC Council Meeting. Although the travel costs incurred to attend the CCC Council Meeting appear allocable to the NSF award, the \$2,213 of costs incurred on July 17, 2018—while the Council Member was attending the CRA-sponsored Snowbird Conference—were not appropriately allocated to the NSF award.

Conclusion

¹⁸ CRA hosts an annual Snowbird Conference in Snowbird, Utah for chairs of departments of computer science, computer engineering, and information technology, as well as leaders from U.S. industrial and government computing research laboratories and centers interest in computing research issues. Additional information about this conference is available at <https://cra.org/conference-at-snowbird/>.

CRA did not establish appropriate procedures for allocating expenses incurred in support of CCC activities from expenses incurred to support CRA's general mission. Specifically, CRA lacked procedures to ensure CRA employee salaries and Snowbird Conference costs were appropriately charged to NSF awards based on the relative benefits to the awards received. We are therefore questioning \$22,697 of expenses that CRA inappropriately allocated to three NSF awards. CRA concurred with \$991 of the questioned costs but disagreed with the remaining \$21,706, as illustrated in Table 8.

Table 8: Finding 3 Summary: Inappropriately Allocated Expenses

NSF Award No.	Description	Fiscal Year(s)	Questioned Costs				CRA Agreed to Reimburse
			Direct	Indirect	Total		
[REDACTED]	April 2015 Salary Expenses	2015	\$1,740	-	\$1,740	\$0	
[REDACTED]	September 2016 Travel Expenses	2017	991	-	991	991	
[REDACTED]	September 2016 AV Expenses	2017	684	-	684	-	
[REDACTED]	June 2020 Software Expenses	2020	12,644	4,425	17,069	-	
[REDACTED]	March 2021 Travel Expenses	2021	1,639	574	2,213	-	
Total			\$17,698	\$4,999	\$22,697		\$991

Source: Auditor summary of identified exceptions.

Recommendations

We recommend that NSF's Director of the Division of Institution and Award Support:

- 3.1 Resolve the \$21,706 in questioned salary, other direct, and travel costs for which CRA has not agreed to reimburse NSF and direct CRA to repay or otherwise remove the sustained questioned costs from its NSF award.
- 3.2 Direct CRA to provide documentation supporting that it has reimbursed or otherwise credited the \$991 in questioned travel expenses for which it has agreed to reimburse NSF.
- 3.3 Direct CRA to strengthen its policies and procedures and internal controls for supporting the allocation of expenses charged to sponsored projects. Updated processes could include:
 - Requiring Principal Investigators to review salary costs charged to the award and verify the employee's benefit to the award as well as the employee's inclusion in the annual report(s).

- Implementing a standard documentation and retention process to support the allocation of travel, other direct costs, and computer service costs that either benefit multiple awards or benefit both sponsored and non-sponsored activities.
- Establishing formal guidance regarding how CRA will ensure costs incurred to support CRA's Snowbird Conference are not charged to NSF awards.

CRA Response: CRA agreed to reimburse NSF for \$991 of the inappropriately allocated September 2016 travel expenses but disagreed with the remaining \$21,706 in questioned costs. Specifically:

- With regard to the \$1,740 in questioned April 2015 salary expenses charged to NSF Award No. [REDACTED] CRA disagreed with the exception as it believes the salary costs are allocable to the NSF award charged. Specifically, CRA noted that a portion of the questioned salary costs relate to an employee responsible for generating the post-workshop evaluation survey and whose role was included in the cumulative budget justification under the 16 "other professionals". With respect to the other employee whose salary costs were questioned, CRA noted that because its Executive Director submitted a single "unapproved" timesheet as part of a batch of other approved timesheets, it is reasonable to infer that the Executive Director approved the timesheet.
- With regard to the \$684 in questioned September 2016 AV expenses charged to NSF Award No. [REDACTED] CRA disagreed with the finding as it believes the AV costs are allocable to the NSF award charged. Specifically, CRA noted that because the rentals allowed CCC to execute outreach to the computing research community about CCC activities, the costs were appropriately allocated to the NSF award.
- With regard to the \$17,069 in questioned June 2020 software expenses charged to NSF Award No. [REDACTED] CRA disagreed with the finding as it believes the costs are allocable to the NSF award charged. Specifically, CRA noted that because the objective of NSF Award No. [REDACTED] was to enhance infrastructure for program scaling and because the services were originally purchased solely for that purpose, the computer service costs were appropriately allocated to that award. Further, CRA noted that the proposal for NSF Award No. [REDACTED] did not include funding to enhance infrastructure and that if NSF Award No. [REDACTED] had not been funded, then NSF Award No. [REDACTED] would not have needed the event management software.
- With regard to the \$2,213¹⁹ in questioned March 2021 travel expenses charged to NSF Award No. [REDACTED] CRA disagreed with this finding as it believes the CCC Council Member's travel solely benefitted this NSF award. Specifically, CRA noted

¹⁹ CRA's finding response includes a reference to \$2,267 in questioned costs, which was adjusted to \$2,213 following the issuance of the formal draft report to CRA.

that because the CCC Council Member did not arrive in Utah until July 17—or one day after the Snowbird Conference started—the purpose of travel was solely to attend the CCC Council Meeting held from July 18 to July 19.

Auditor's Additional Comments: Although CRA disagreed with \$21,706 in questioned costs, our position regarding the finding has not changed. Specifically:

- With regard to the \$1,740 in questioned April 2015 salary expenses charged to NSF Award No. [REDACTED] because CRA's response was not sufficient to support that the salary expenses were appropriately allocated, our position regarding this exception has not changed. Specifically:
 - Regarding the employee who performed the post-workshop evaluation survey, CRA did not provide any documentation or evidence to substantiate that the employee supported the award through the execution of the survey, for the specific pay period. Further, although CRA noted that this employee's role was to survey attendees to ensure the program was meeting its intended objectives, neither the employee nor their work were identified in any annual or final reports submitted by CRA for this award.

Regarding the employee that was not included in the grant budget, although CRA's proposal included a cumulative line item for 16 other professionals, the role performed by this employee was not consistent with the role of these professionals per the grant budget proposal.

- With regard to the second employee and the unapproved timesheet, because CRA's policy requires timesheets to be approved by the Executive Director and because the sampled employee's timesheet was not signed to demonstrate the Executive Director's approval, we are unable to verify their salary was approved as allocable to the NSF award.
- With regard to the \$684 in questioned September 2016 AV expenses charged to NSF Award No. [REDACTED] although the CCC Council travels to the CRA Snowbird Conference to hold one of its routine NSF Award related council meetings, the CCC Council is not traveling in support of and/or to sponsor the CRA Snowbird Conference. Although CRA noted the AV expenses allowed CCC to perform outreach and present products developed by CRA through the CCC NSF Award at the CRA Snowbird Conference, the CRA Snowbird Conference is exclusively held for CRA's benefit and not for the benefit of the CCC NSF Award. Accordingly, our position regarding this exception has not changed.
- With regard to the \$17,069 in questioned June 2020 software expenses charged to NSF Award No. [REDACTED] although CRA noted that it acquired the event management software to benefit one specific award, because it was used to benefit multiple projects, CRA should have allocated the expense based on the relative

benefit each project received. Specifically, because CRA acknowledged that the software was used to benefit NSF Award No. [REDACTED] and as it is reasonable to assume that the event management software was used to benefit other non-NSF sponsored projects, without a reasonable **allocation** methodology to identify what portion of these costs are allocable to each of CRA's projects, we are unable to determine what portion of this expense is allocable to NSF Award No. [REDACTED]. As such, our position regarding this exception has not changed.

- With regard to the \$2,213 in questioned March 2021 travel expenses charged to NSF Award No. [REDACTED] although the CCC Council Member was traveling to attend the CCC Council Meeting held between July 18 and July 19, because the CCC Council Member did register to attend the Snowbird Conference and because the Snowbird Conference was held from July 16 through July 18,²⁰ we maintain that the Council Member's July 17 expenses do not appear allocable to NSF Award No. [REDACTED]. As such, our position regarding this exception has not changed.

FINDING 4: UNALLOWABLE EXPENSES

CRA charged two NSF awards for \$8,938 in alcohol, travel, conference, and indirect cost that are unallowable per federal regulations²¹ and NSF PAPPGs.²²

Unallowable Alcohol Expenses

CRA charged one NSF award for \$4,920 in unallowable alcohol expenses, as illustrated in Table 9.²³

Table 9: Unallowable Alcohol Expenses

Expense Date	NSF Award No.	Amount Charged	Unallowable Expenses Associated With	Notes
May 2013	[REDACTED]	\$1,429	Alcohol	a
June 2014	[REDACTED]	2,022	Alcohol	b
February 2015	[REDACTED]	660	Alcohol	c
September 2016	[REDACTED]	809	Alcohol	d

Source: Auditor summary of identified exceptions.

- a) In May 2013, CRA charged NSF Award No. [REDACTED] for \$1,429 in alcohol expenses it incurred while hosting a workshop in [REDACTED]

²⁰ See the Unallowable Conference Registration in Finding 4: Unallowable Expenses.

²¹ According to 2 CFR § 230, Appendix A, Sections A.2., and A.3., as well as 2 CFR § 200.403 (a) and (g), for a cost to be allowable it must be adequately documented, necessary, and reasonable for the performance of the federal award. See **Appendix E** of this report for additional factors affecting the allowability of costs.

²² According to NSF PAPPGs 11-1, 13-1, 14-1, and 15-1, Part II, Chapter V, Section A, and 17-1 and 19-1, Part II, Chapter X, Section A, *Basic Considerations*, expenditures under NSF cost-reimbursement grants are governed by the federal cost principles and must conform to NSF policies, grant special provisions, and grantee internal policies. Grantees should ensure that costs claimed under NSF grants meet the requirements of the cost principles, grant terms and conditions, and other specific requirements of both the award notice and the applicable program solicitation.

²³ According to 2 CFR § 230, Appendix B, Paragraph 3 and 2 CFR § 200.423, *Alcoholic Beverages*, costs of alcoholic beverages are unallowable.

- b) In June 2014, CRA charged NSF Award No. [REDACTED] for \$2,022 in alcohol expenses it incurred while hosting a workshop in [REDACTED]
- c) In February 2015, CRA charged NSF Award No. [REDACTED] for \$660 in alcohol expenses it incurred while hosting a workshop in [REDACTED]²⁴
- d) In September 2016, CRA charged NSF Award No. [REDACTED] for \$809 in alcohol costs it incurred while hosting a workshop in [REDACTED]

Unallowable Travel Expenses

CRA charged two NSF awards for \$2,992 in unallowable travel expenses, as illustrated in Table 10.²⁵

Table 10: Unallowable Travel Expenses

Expense Date	NSF Award No.	Amount Charged	Unallowable Expenses Associated With	Notes
January 2015	[REDACTED]	\$1,600	Unreimbursed Lodging Credits	a
August 2017	[REDACTED]	296	Flight Upgrades	
May 2018	[REDACTED]	147	Meal Provided to a Former Collaborator	c
January 2019	[REDACTED]	949	Personal Travel	d

Source: Auditor summary of identified exceptions.

- a) In January 2015, CRA received a \$1,600 credit to off-set lodging expenses it would incur to host an NSF Award No. [REDACTED]-related conference. However, CRA did not appropriately use the credit to off-set the conference lodging expenses it charged to the NSF award in February 2015.²⁶
- b) In August 2017, CRA charged NSF Award No. [REDACTED] for \$296 in unallowable flight upgrade expenses.²⁷

²⁴ CRA provided documentation to support that it identified and intended to remove the alcohol costs; however, because these costs were charged to this NSF award, we are questioning the unallowable alcohol costs.

²⁵ According to 2 CFR § 230, Appendix B, Paragraph 51 and 2 CFR § 200.474 (a), *Travel Costs*, are the expenses for transportation, lodging, subsistence, and related items incurred by employees who are in travel status on official business of the non-federal entity. Such costs may be charged on an actual cost basis, on a per diem or mileage basis in lieu of actual costs incurred, or on a combination of the two, provided the method used is applied to an entire trip and not to selected days of the trip and results in charges consistent with those normally allowed in like circumstances in the non-federal entity's non-federally-funded activities and in accordance with non-federal entity's written travel reimbursement policies.

²⁶ According to 2 CFR § 230, Appendix A, Sections A.5., *Applicable credits*, the term applicable credits refers to those receipts, or reduction of expenditures which operate to offset or reduce expense items that are allocable to awards as direct costs...to the extent that such credits accruing or received by the organization relate to allowable cost, they should be credited to the federal government as a cost reduction or cash refund.

²⁷ According to 2 CFR § 200.474 (d), *Commercial Air Travel*, airfare costs in excess of the basic, least expensive offered by commercial airlines are generally unallowable.

- c) In May 2018, CRA charged NSF Award No. [REDACTED] for \$147 for a meal provided to a former collaborator that did not benefit the award.²⁸
- d) In January 2019, CRA charged NSF Award No. [REDACTED] for \$949 in airfare expenses for a traveler to attend a conference in [REDACTED] and take personal travel. Although the traveler's attendance at the conference appears allocable to the award, because the flight included personal travel, and because CRA did not provide documentation to support that additional costs were not incurred by extending the traveler's travel dates, we are unable to verify the airfare costs are allowable.²⁹

Unallowable Conference Registration

CRA charged an NSF award for \$979 for an unallowable conference registration fee, as illustrated in Table 11.

Table 11: Unallowable Conference Registration Fee

Expense Date	NSF Award No.	Amount Charged	Unallowable Expenses Associated With	Notes
[REDACTED]		\$979	CCC Council Member Registration Fee	a

Source: Auditor summary of identified exception.

- a) In March 2021, CRA charged NSF Award No. [REDACTED] for \$979 in registration fees it reimbursed to a CCC Council Member after the Council Member paid CRA to attend CRA's annual Snowbird Conference.

Unallowable Indirect Costs

CRA charged an NSF award for \$47 in unallowable indirect costs, as illustrated in Table 12.

Table 12: Unallowable Indirect Costs

Expense Date	NSF Award No.	Unallowable Total	Unallowable Expenses Associated With	Notes
August 2017	[REDACTED]	\$47	Indirect Costs Applied to Participant Support Costs	a

Source: Auditor summary of identified exception.

²⁸ According to 2 CFR § 200.474 (b)(1), *Lodging and subsistence*, costs incurred by employees for subsistence must be considered reasonable and allowable and the documentation must justify that participation of the individual is necessary to the federal award.

²⁹ According to CRA's *Guidelines for Participant Reimbursement, Combined Travel*, if travel is combined with other professional or personal activities, only the portion directly related to CRA may be claimed for reimbursement.

- a) In August 2017, CRA charged NSF Award No. [REDACTED] for \$47 in unallowable indirect costs as a result of applying its indirect cost rate to costs incurred for participant meals.³⁰

Conclusion

CRA did not have sufficient policies and procedures or internal controls in place to ensure it only charged allowable costs to NSF awards. Specifically, CRA's procedures did not always ensure that it removed costs associated with unallowable alcohol, airfare upgrades, or personal expenses. Further, CRA did not appropriately apply lodging credits, account for conference registration expenses, or ensure participant meal costs were recorded within accounts that did not apply indirect costs. We are therefore questioning \$8,938 of unallowable expenses charged to two NSF awards. CRA concurred with \$7,010 of the questioned costs but disagreed with the remaining \$1,928, as illustrated in Table 13.

Table 13: Finding 4 Summary: Unallowable Expenses

NSF Award No.	Description	Fiscal Year(s)	Questioned Costs			
			Direct	Indirect	Total	CRA Agreed to Reimburse
[REDACTED]	May 2013 Alcohol	2013	\$1,429	\$0	\$1,429	\$1,429
[REDACTED]	June 2014 Alcohol	2014	2,022	-	2,022	2,022
[REDACTED]	February 2015 Alcohol	2015	660	-	660	660
[REDACTED]	September 2016 Alcohol	2017	809	-	809	809
[REDACTED]	January 2015 Lodging Credit	2015	1,600	-	1,600	1,600
[REDACTED]	August 2017 Flight Upgrades	2018	219	77	296	296
[REDACTED]	May 2018 Meal Expenses	2018	147	-	147	147
[REDACTED]	January 2019 Personal Travel Expenses	2019	949	-	949	-
[REDACTED]	March 2021 Snowbird Conference Registration Fee	2021	725	254	979	-
[REDACTED]	August 2017 Indirect Costs	2018	-	47	47	47
Total			\$8,560	\$378	\$8,938	\$7,010

Source: Auditor summary of identified exceptions.

Recommendations

We recommend that NSF's Director of the Division of Institution and Award Support:

³⁰ According to CRA's Negotiated Indirect Cost Rate Agreement (NICRA) dated March 24, 2014, indirect costs are applied to "total direct costs excluding capital expenditures, participant support and subcontract costs exceeding \$25,000." Additionally, 2 CFR §200.68, Modified Total Direct Cost (MTDC), states MTDC excludes participant support costs. Lastly, NSF PAPPG 15-1, Part I, Chapter II, Section C.2.g.v., *Participant Support*, states, indirect costs are not allowed on participant support costs.

- 4.1 Resolve the \$1,928 in questioned travel and conference expenses for which CRA has not agreed to reimburse NSF and direct CRA to repay or otherwise remove the sustained questioned costs from its awards.
- 4.2 Direct CRA to provide documentation supporting that it has reimbursed or otherwise credited the \$7,010 in questioned alcohol, travel, flight upgrades, meal, and indirect expenses for which it has agreed to reimburse NSF.
- 4.3 Direct CRA to strengthen its administrative and management procedures for ensuring alcohol is not charged to NSF awards. Updated processes should require CRA to verify that invoices for hosted events and travel reimbursements do not include alcohol prior to processing payment.
- 4.4 Direct CRA to strengthen its administrative and management procedures for reviewing travel expenses prior to charging NSF awards. Updated procedures could include:
 - Implementing additional monitoring procedures to ensure that travel credits are posted against the original funding source to which the associated travel expenses were charged.
 - Implementing additional reviews for all airfare purchases, including requiring the reviewer to verify the traveler purchased an economy-class ticket and/or has appropriate justification for a travel upgrade before charging the travel expense to an NSF award.
 - Requiring travelers to document the business purpose for all meals provided during collaboration meetings.
 - Requiring travelers to document the business purpose of each day of a planned trip before purchasing airfare so CRA can evaluate whether it must perform a travel comparison indicating personal travel did not increase airfare costs.
 - Direct CRA to strengthen its administrative and management processes related to the approval of conference registration fees. Updated processes should require CRA to verify that individuals either have dedicated or will be dedicating effort to an NSF award prior to allowing their conference registration fees to be charged to the NSF award.
 - Requiring periodic training regarding the types of expenses that are allowable and unallowable for business travel on federal awards.
 - Requiring the separation of employee and participant meal costs so as not to apply indirect costs to participant support costs.

- 4.5 Direct CRA to identify and remove all Snowbird Conference registrations fees charged to NSF awards. Upon identifying these conference registration fees, CRA should provide its analysis and the amount of the reimbursement to NSF's Resolution and Advanced Monitoring Team.

CRA Response: CRA agreed to reimburse NSF for the \$4,920 in questioned alcohol costs, for \$2,043 of the questioned travel costs and for the \$47 in questioned indirect costs but disagreed with the remaining \$1,928 in questioned costs. Specifically:

- ***Unallowable Travel Expenses:*** CRA disagreed with the \$949 in questioned personal travel expenses. Specifically, CRA noted that because its policies allow travelers to combine business and personal travel and because the traveler did not seek reimbursement for any expense unrelated to their attendance at the workshop, the airfare costs should be allowable.
- ***Unallowable Conference Registration:*** CRA disagreed with the \$979 in questioned conference registration expenses noting that, in addition to NSF being a sponsor for Snowbird 2018, it had charged the conference registration costs as discussed with NSF's Division of Grants and Agreements (DGA) during an NSF desk review. Specifically, CRA noted that because NSF DGA personnel only noted that it could not use participant support costs to cover registration expenses, and because CRA had reclassified the expense to a non-participant expense account code, these costs should be allowable.

Auditor's Additional Comments: Although CRA disagreed with \$1,928 of the questioned costs, our position regarding this finding has not changed. Specifically:

- ***Unallowable Travel Expenses:*** Although CRA disagreed with the \$949 of questioned personal travel costs, because the traveler departed on December 30—three days before the conference started—to spend three extra days in Hawaii, including a major holiday (New Year's Day) when airfare costs are typically higher, and did not provide documentation to support the traveler's flight cost was not increased as a result of the early departure date, our position regarding this exception has not changed.
- ***Unallowable Conference Registration:*** Although CRA noted that the registration fees should be allowable based on conversations it held with NSF, because the CCC Council Member's attendance at the Snowbird Conference did not benefit the NSF award, our position regarding this exception has not changed.

FINDING 5: NON-COMPLIANCE WITH FEDERAL REQUIREMENTS FOR PASS-THROUGH ENTITIES

CRA did not comply with all federal requirements for pass-through entities when issuing and monitoring one subaward, as illustrated in Table 14.³¹

Table 14: Non-Compliance with Federal Requirements for Pass-Through Entities

NSF Award No.	Subaward Effective Date	Subawardee	Notes
[REDACTED]	July 2018	University of [REDACTED]	a

Source: Auditor summary of identified exception.

- a) From July 2018 through June 2020, CRA charged NSF Award No. [REDACTED] for \$372,246 in subaward costs claimed by the University of [REDACTED]. Although the subaward benefitted the award, CRA did not provide documentation to support that it performed an assessment of the subawardee's risk, a Single Audit review, or periodic monitoring of the subawardee.

Conclusion

CRA did not have sufficient procedures or internal controls in place to ensure it complied with all federal requirements established for pass-through entities when issuing or monitoring **subawards**. Because this instance of non-compliance did not directly result in CRA charging unallowable costs to NSF awards, we are not questioning any costs related to this exception. However, we are noting a compliance finding for the one instance in which CRA did not comply with federal requirements for pass-through entities, as illustrated in Table 15.

³¹ According to 2 CFR §200.331, *Requirements for pass-through entities*, "All pass-through entities must: ... (b) Evaluate each subrecipient's risk of noncompliance with Federal statutes, regulations, and the terms and conditions of the subaward for purposes of determining the appropriate subrecipient monitoring... (c) Consider imposing specific subaward conditions upon a subrecipient if appropriate as described in §200.207 Specific conditions. (d) Monitor the activities of the subrecipient as necessary to ensure that the subaward is used for authorized purposes, in compliance with Federal statutes, regulations, and the terms and conditions of the subaward; and that subaward performance goals are achieved... (e) Depending upon the pass-through entity's assessment of risk posed by the subrecipient (as described in paragraph (b) of this section), the following monitoring tools may be useful for the pass-through entity to ensure proper accountability and compliance with program requirements and achievement of performance goals: (1) Providing subrecipients with training and technical assistance on program-related matters; and (2) Performing on-site reviews of the subrecipient's program operations; (3) Arranging for agreed-upon-procedures engagements as described in §200.425 *Audit services*. (f) Verify that every subrecipient is audited as required by Subpart F— Audit Requirements of this part when it is expected that the subrecipient's Federal awards expended during the respective fiscal year equaled or exceeded the threshold set forth in §200.501 Audit requirements. (g) Consider whether the results of the subrecipient's audits, on-site reviews, or other monitoring indicate conditions that necessitate adjustments to the pass-through entity's own records."

Table 15: Finding 5 Summary: Non-Compliance with Federal Requirements for Pass-Through Entities

NSF Award No.	Description	Fiscal Year(s)	Questioned Costs			
			Direct	Indirect	Total	CRA Agreed to Reimburse
██████████	2019 - 2020 University of █████ Subaward	2019 - 2020	\$0	\$0	\$0	\$0
Total			\$0	\$0	\$0	\$0

Source: Auditor summary of identified exception.

Recommendations

We recommend that NSF's Director of the Division of Institution and Award Support:

- 5.1 Direct CRA to revise its policies to require personnel to evaluate subawardee risk of non-compliance in accordance with 2 Code of Federal Regulations 200.331, *Requirements for pass-through entities*. Specifically, the updated policies should require:
 - Performing a risk assessment before executing a subaward agreement, as well as periodically updating the risk assessment.
 - Performing continuous monitoring of the subawardee based on the established level of risk determined in the latest risk assessment.
 - Reviewing the subawardee's latest Single Audit review in support of the risk assessment and continuous monitoring.
- 5.2 Direct CRA to ensure that: (1) it has performed risk assessments, Single Audit review(s), and subaward monitoring for all subawards issued between December 2014 and September 2021; and (2) the risk assessments remain active, to validate the agreements in accordance with federal regulations.

CRA Response: CRA agreed with this finding and noted its current subaward process requires risk assessments, Single Audit report reviews, and continued monitoring of subawardees.

Auditor's Additional Comments: Our position regarding this finding has not changed.

FINDING 6: NON-COMPLIANCE WITH CRA POLICIES

CRA did not always comply with its November 2011 CRA *Accounting Policies and Procedures*. Specifically, we identified four instances in which CRA did not comply with its invoicing, monthly close checklist, subawardee reporting, and timesheet approval requirements, as illustrated in Table 16.

Table 16: Non-Compliance with the November 2011 CRA Accounting Policies and Procedures

Expense Date	NSF Award No.	Fiscal Year(s)	Policy Compliance Exception	Notes
June 2014	[REDACTED]	2014	No Invoice Approval Documentation Retained	a
June 2014	[REDACTED]	2014	No Monthly Close Checklist Completed	b
December 2014	[REDACTED]	2015	Subawardee Quarterly Report Not Reviewed	c
April 2015	[REDACTED]	2015	Timesheet Not Approved by Executive Director	d

Source: Auditor summary of identified exceptions.

- a) In June 2014, CRA charged NSF Award No. [REDACTED] for \$94,680 in consulting service expenses paid to the CCC Council Chair. Although the invoice amount was consistent with the total amount identified in the consulting agreement, CRA did not retain documentation from its invoicing system to support that the invoice was appropriately approved.³²
- b) In June 2014, CRA charged NSF Award No. [REDACTED] for \$2,022 in conference expenses related to a CCC workshop held in [REDACTED]. Although the conference expenses appear to have benefitted the award, CRA failed to document its June 2014 monthly close checklist, which would have included its review of the conference expenses.³³
- c) In December 2014, CRA charged NSF Award No. [REDACTED] for \$63,441 in subaward costs invoiced by [REDACTED] University; however, CRA did not provide documentation to support that a quarterly report was obtained from the subawardee and reviewed by the Executive Director and Principal Investigator (PI).³⁴

³² According to CRA's November 2011 *Accounting Policies and Procedures*, AnyBill, AnyBill invoices are reviewed, coded, and approved by an appropriate department manager before being reviewed by the accounting department and approved for payment by the Executive Director.

³³ According to CRA's November 2011 *Accounting Policies and Procedures*, *Monthly Close Checklist*, the accounting staff utilizes a monthly close checklist to close each month and issue financial statements. Additionally, the accounting manager reviews the monthly close checklist, and the accounting staff produces the supporting GL detail as a result of the review.

³⁴ According to CRA's November 2011 *Accounting Manual*, *Sub-awardee: Selection, Monitoring, and Oversight Process*, on a quarterly basis all subawardees are required to submit to the Executive Director and the PIs a written report detailing a comparison of actual accomplishments of goals and objectives for the quarter, including any quantifiable information. If the goals and objectives have not been met, the report must contain an explanation and analysis of why not, including any elucidation of costs over- or under-runs. The Executive Director and the PIs, after reviewing the quarterly reports, meet with the subawardees to discuss the project and goals and objectives. If the project appears to be in a cost over-run situation, the subawardee, the Executive Director, and the PIs will be responsible for producing and implementing a corrective plan of action.

- d) In April 2015, CRA charged NSF Award No. [REDACTED] for \$1,701 in salary costs that were not supported by a timesheet that the Executive Director approved.³⁵

Conclusion

CRA did not have adequate procedures in place to ensure that it consistently complied with or documented its compliance with the invoicing, monthly close checklist, subaward reporting, and timesheet approval requirements in its November 2011 *CRA Accounting Policies and Procedures*. Because these instances of non-compliance did not directly result in CRA charging unallowable costs to NSF awards, we are not questioning any costs related to these exceptions. However, we are noting compliance findings for four instances in which CRA did not comply with its internal policies when charging costs to one NSF award, as illustrated in Table 17.

Table 17: Finding 6 Summary: Non-Compliance with CRA Policies

NSF Award		
[REDACTED]	Non-Compliance with CRA Accounting Policies and Procedures on AnyBill Invoicing (November 2011)	2014
[REDACTED]	Non-Compliance with CRA Accounting Policies and Procedures on Monthly Close Checklist (November 2011)	2014
[REDACTED]	Non-Compliance with CRA Accounting Policies and Procedures on Subaward Monitoring (November 2011)	2015
[REDACTED]	Non-Compliance with CRA Accounting Policies and Procedures on Timesheet Approval (November 2011)	2015

Source: Auditor summary of identified exceptions.

Recommendations

We recommend that NSF's Director of the Division of Institution and Award Support:

- 6.1 Direct CRA to strengthen its administrative and management procedures to ensure that department managers and the Executive Director documents approval of all invoices prior to payment.
- 6.2 Direct CRA to strengthen its administrative and management procedures to confirm that a monthly close checklist is completed and reviewed for each award prior to closing the month.
- 6.3 Direct CRA to strengthen its administrative and management procedures to ensure it documents its review of required subawardee reports.
- 6.4 Direct CRA to strengthen its administrative and management procedures to ensure that the Executive Director documents approval of all timesheets prior to payment.

³⁵ According to the *CRA Accounting Policies and Procedures*, as of November 2011, on *Time and Effort*, the Executive Director reviews and approves payroll that is submitted to the accounting staff.

CRA Response: CRA accepted this finding, but re-iterated its disagreement with the timesheet approval exception, as explained in its response to Finding 3.³⁶

Auditor's Additional Comments: Our position regarding this finding has not changed.

With regard to CRA's disagreement with the timesheet approval exception, because the employee's timesheet did not include a signature documenting the Executive Director's approval, as required per CRA's policies, our position regarding this exception has not changed.

FINDING 7: INSUFFICIENT CONTROLS RELATED TO THE APPLICATION OF INDIRECT COSTS

CRA did not have sufficient controls in place to ensure it and its subawardees consistently applied negotiated indirect cost rate(s) in a manner consistent with applicable NICRAs, as required by federal³⁷ and NSF guidance.³⁸

Insufficient Controls Related to the Application of Indirect Cost Rates

CRA did not apply indirect costs using the indirect cost rates included within its NICRAs. Specifically, rather than applying its NICRA rates, CRA elected to apply a 35.00 percent rate to costs incurred between July 2017 and March 2021 and a 38.00 rate to costs incurred from April 2021 through the end of the audit period, as illustrated in Table 18.

Table 18: Insufficient Controls Related to the Application of Indirect Cost Rates

NSF Award No.	Award Date	Transaction Date	Assumed Rate Applied (%)	Appropriate Rate (%) ³⁹
	7/24/2017	9/24/2019	35.00	39.27
	9/25/2012	8/17/2017	35.00	39.27
	8/4/2018	6/30/2020	35.00	39.27
	7/24/2017	8/22/2019	35.00	39.27
	7/24/2017	7/6/2021	38.00	50.00
	7/24/2017	3/31/2021	35.00	50.00
	9/25/2012	9/30/2017	35.00	39.27

³⁶ CRA noted that an individual can infer that the Executive Director approved the timesheet because it was included within a stack of other approved timesheets.

³⁷ According to 2 CFR 230, Appendix A, Section E.1.e, *Negotiation and Approval of Indirect Cost Rates*, and 2 CFR § 200, Appendix III, Section C.6, *Provisional and Final Rates for Indirect (F&A) Costs*, to prevent substantial overpayment or underpayment, the provisional rate may be adjusted by the cognizant agency for indirect costs during the institution's FY. If a provisional rate is not replaced by a predetermined or fixed rate prior to the end of the institution's FY, a final rate will be established and upward or downward adjustments will be made based on the actual allowable costs incurred for the period involved.

³⁸ According to NSF PAPPG 11-1, 13-1, 14-1, 15-1, 17-1, 18-1 and 19-1 Part I, Chapter II, Section C.2.g.(viii), federal agencies are required to use the negotiated rates that are in effect at the time of the initial award throughout the life of the sponsored agreement.

³⁹ CRA's NICRA dated September 13, 2019, established negotiated indirect cost rates of 39.27 percent for July 1, 2017, to June 30, 2018, July 1, 2018, to June 30, 2019, and July 1, 2019, to June 30, 2020. Additionally, CRA's NICRA dated May 20, 2020, established provisional rates of 50.00 percent for July 1, 2020, to June 30, 2021, and July 1, 2021, to June 30, 2022.

NSF Award No.	Award Date	Transaction Date	Assumed Rate Applied (%)	Appropriate Rate (%)³⁹
	7/24/2017	12/21/2018	35.00	39.27
	7/24/2017	1/11/2019	35.00	39.27
	7/24/2017	10/16/2020	35.00	50.00
	7/24/2017	4/10/2020	35.00	39.27
	8/18/2018	3/13/2020	35.00	39.27
	8/18/2018	3/13/2020	35.00	39.27
	7/24/2017	7/16/2021	38.00	50.00
	7/24/2017	2/28/2020	35.00	39.27
	8/18/2018	10/11/2019	35.00	39.27
	7/24/2017	12/20/2019	35.00	39.27
	7/24/2017	7/19/2019	35.00	39.27
	7/24/2017	7/30/2020	35.00	50.00
	7/24/2017	4/10/2020	35.00	39.27
	7/24/2017	12/23/2018	35.00	39.27
	7/24/2017	5/17/2018	35.00	39.27
	9/6/2012	6/21/2019	35.00	39.27

Source: Auditor summary of identified exceptions.

Insufficient Controls Related to the Support of Indirect Cost Rates

Although CRA claimed that it applied a 35.00 percent indirect cost rate to all modified total direct costs incurred on NSF awards prior to March 2021, it could not always support that a 35.00 percent indirect cost rate was applied to costs charged to NSF awards prior to FY 2018. Specifically, because CRA did not consistently apply indirect cost rates prior to the implementation of a new accounting system in July 2017, CRA was unable to identify the rate(s) it applied to individual expense transactions incurred prior to that date, as illustrated in Table 19.⁴⁰

Table 19: Insufficient Controls Related to the Support of Indirect Costs

NSF Award No.	Award Date	Transaction Date	Appropriate Rate (%)⁴¹
	9/25/2012	6/30/2014	35.00
	9/25/2012	6/1/2014	35.00
	9/25/2012	2/11/2015	35.00
	9/25/2012	10/1/2015	35.00
	9/25/2012	12/1/2014	35.00
	9/25/2012	6/30/2014	35.00
	9/25/2012	9/14/2016	42.53

⁴⁰ According to 2 CFR § 215.53(b) and 2 CFR § 200.333, “[f]inancial records, supporting documents, statistical records, and all other records pertinent to an award shall/must be retained for a period of three years from the date of submission of the final expenditure report...”.

⁴¹ CRA’s NICRA dated June 20, 2011, established a provisional rate of 50.92 percent for July 1, 2010, to June 30, 2012. CRA’s NICRA dated March 24, 2014, established a provisional rate of 35.00 percent for July 1, 2012, to June 30, 2013. CRA’s NICRA dated October 4, 2017, established a negotiated rate of 35.00 percent for July 1, 2012, to June 30, 2016. A provisional rate of 38.00 percent was established for July 1, 2016, to June 30, 2018. CRA’s NICRA dated June 26, 2019, established a negotiated rate of 42.53 percent for July 1, 2016, to June 30, 2017.

NSF Award No.	Award Date	Transaction Date	Appropriate Rate (%)⁴¹
	9/25/2012	9/14/2016	42.53
	9/25/2012	2/28/2017	42.53
	9/25/2012	6/30/2014	35.00
	9/25/2012	8/1/2015	35.00
	9/25/2012	5/14/2015	35.00
	9/25/2012	4/30/2015	35.00
	9/25/2012	5/14/2013	35.00
	7/26/2014	12/31/2015	35.00

Source: Auditor summary of identified exceptions.

Insufficient Controls Related to the Application of Subawardee Indirect Cost Rates

As illustrated in Table 20, CRA allowed its subawardee to apply indirect costs using a NICRA rate that differed from the rate that was in effect at the time the subaward agreement was issued.⁴²

Table 20: Insufficient Controls Related to the Application of the Subawardee Indirect Cost Rate

NSF Award No.	Award Date	Fiscal Years	Rate Applied (%)	Appropriate Rate (%)	Notes
	July 2018	2019 – 2020	53.00	55.00	a

Source: Auditor summary of identified exception.

- a) In June 2020, CRA charged NSF Award No. [REDACTED] for subaward costs the University of [REDACTED] invoiced using the budgeted 53.00 percent indirect cost rate rather than using the 55.00 percent NICRA rate in effect at the time the subaward agreement was executed.

Conclusion

CRA did not have sufficient internal controls in place surrounding the application and monitoring of indirect cost rates applied to direct costs it charged to NSF awards. Specifically, CRA lacked a sufficient understanding of how to appropriately apply indirect costs to federal awards and charged indirect costs using direction its former Executive Director provided so as not to overcharge NSF awards. Further, CRA did not appropriately monitor indirect costs invoiced by subawardees to ensure indirect cost rates charged were consistent with relevant NICRAs. Further, prior to FY 2018, CRA did not consistently apply indirect costs in a manner that allowed it to support what indirect cost rate(s) was applied to individual expense transactions.

⁴² According to 2 CFR § 200.331, subrecipients can apply either an approved, federally-recognized indirect cost rate negotiated between the subrecipient and the federal government or a rate negotiated between the pass-through entity and the subrecipient. Additionally, all pass-through entities must be monitored to ensure that the subaward is used for authorized purposes; complies federal statutes, regulations, and the terms and conditions of the subaward.

Because these instances did not directly result in CRA charging unallowable costs to NSF awards, we are not questioning any costs related to these exceptions. However, because of CRA's election to use a non-NICRA rate and its lack of controls to verify subawardees are appropriately applying indirect costs do not comply with federal or NSF regulations, we are noting compliance exceptions related to the six NSF awards for which negotiated rates were not appropriately applied, as illustrated in Table 21.

Table 21: Finding 7 Summary: Insufficient Controls Related to the Application of Indirect Cost Rates

NSF Award No.	Compliance Exception Identified	Fiscal Year(s)
[REDACTED]	Insufficient Controls Related to the Application of Indirect Cost Rates	2018 - 2022
[REDACTED]	Insufficient Controls Related to the Application of Indirect Cost Rates	2018
[REDACTED]	Insufficient Controls Related to the Support of Indirect Cost Rates	2013 - 2017
[REDACTED]	Insufficient Controls Related to the Application of Indirect Cost Rates	2019
[REDACTED]	Insufficient Controls Related to the Application of Indirect Cost Rates	2020
[REDACTED]	Insufficient Controls Related to the Application of Indirect Cost Rates	2020
[REDACTED]	Insufficient Controls Related to the Support of Indirect Cost Rates	2016
[REDACTED]	Insufficient Internal Controls Related to the Application of the Subawardee Indirect Cost Rates	2020

Source: Auditor summary of identified exceptions.

Recommendations

We recommend that NSF's Director of the Division of Institution and Award Support:

- 7.1 Direct CRA to update its current award set-up practices to ensure that it sets up accounts for NSF awards such that each account applies indirect costs using the indirect cost rate(s) established in the Negotiated Indirect Cost Rate Agreement in effect as of the date of grant award.
- 7.2 Direct CRA to strengthen its internal controls to ensure that it maintains sufficient documentation to support what indirect cost rate was applied to individual expenses charged to NSF awards.
- 7.3 Direct CRA to update its current practices for approving invoices submitted by NSF award subrecipients. The updated approval process should require that CRA ensure subrecipients apply indirect costs consistent with their negotiated indirect cost rate agreement and/or with their approved budget.

CRA Response: CRA accepted this finding, agreeing to formalize its approach for applying indirect costs. Specifically, CRA noted that, while it consistently chooses the lower of either the indirect cost rate in effect at the time a grant is awarded or the subsequent negotiated rate to ensure it does not overcharge NSF in the event the negotiated indirect cost rate goes down, it agreed that a control formalizing its approach is necessary.

Auditor's Additional Comments: Our position regarding this finding has not changed.

FINDING 8: FRINGE BENEFITS NOT APPROPRIATELY APPLIED

CRA did not have sufficient controls in place to ensure it consistently treated fringe benefits as direct costs, as required by the organization's NICRA.⁴³ Specifically, CRA applied a non-negotiated fringe benefit rate to direct salary expenses in lieu of charging fringe benefits as direct costs, as illustrated in Table 22.

Table 22: Fringe Benefits Inappropriately Applied Using a Non-NICRA Rate

NSF Award	Award	Rate Applied	Fringe That Should Have Been	
	9/25/2012	31.60	Unknown	a
	9/6/2012	31.60	Unknown	
	7/24/2017	31.60	Unknown	
	9/11/2018	31.60	Unknown	

Source: Auditor summary of identified exceptions.

- a) CRA charged fringe benefits to at least four⁴⁴ NSF awards by inappropriately applying a 31.60 percent fringe benefit rate, rather than treating fringe benefits as direct costs in a manner consistent with its NICRA. Specifically, although CRA's NICRA dated June 20, 2011, states that fringe benefits are treated as direct costs, CRA's former accountant calculated a 31.60 percent fringe benefit rate that CRA has since used to charge fringe benefits to NSF awards.

Conclusion

CRA did not appropriately identify and distribute its fringe benefit expenses as required by its NICRA, but applied fringe expenses using a rate, as proposed in its NSF award budgets.⁴⁵ Because CRA did not track fringe benefit expenses in a manner that allows us to determine the total fringe benefit costs that are allocable to each NSF award, we are not questioning any costs related to these exceptions. However, because CRA's current process could have caused it to charge unallowable costs to NSF awards, we are noting compliance exceptions

⁴³ According to CRA's NICRA date June 20, 2011, and March 24, 2014, fringe benefits associated with direct salaries and wages are treated as direct costs and included in the indirect cost rate applicable base. Each of the following NICRAs excluded any reference to the application of fringe benefits as direct costs or the use of a negotiated fringe benefit rate.

⁴⁴ Although this finding only identifies exceptions for the four NSF awards where we sampled salary/fringe benefit expenses, fringe benefits may not have been appropriately applied to other NSF awards within our audit scope.

⁴⁵ CRA included a non-negotiated rate of 32.00 percent in its award budgets rather than the 31.60 rate which is routinely applied for incurring fringe benefits.

related to the four NSF awards for which fringe benefits were not appropriately charged, as illustrated in Table 23.

Table 23: Finding 8 Summary: Fringe Benefits Not Appropriately Applied

NSF Award No.	Compliance Exception Identified	Fiscal Year(s) ⁴⁶
[REDACTED]	Fringe Benefits Not Appropriately Applied	2013 – 2020
[REDACTED]	Fringe Benefits Not Appropriately Applied	2013 – 2020
[REDACTED]	Fringe Benefits Not Appropriately Applied	2018 – 2022
[REDACTED]	Fringe Benefits Not Appropriately Applied	2019 - 2022

Source: Auditor summary of identified exceptions.

Recommendations

We recommend that NSF's Director of the Division of Institution and Award Support:

- 8.1 Direct CRA to meet with NSF's Cost Analysis and Pre-Award Branch to establish a negotiated rate for fringe benefits or establish policies and procedures to charge fringe benefits as direct costs as required by its Negotiated Indirect Cost Rate Agreement.
- 8.2 Direct CRA to reassess the total fringe benefit costs charged to each NSF award for its entire period of performance. Upon completion of the reassessment, perform a cost analysis of the total fringe benefits earned by staff throughout the same award period of performance. Finally, provide each award analysis to the NSF's Resolution and Advanced Monitoring Branch for review and assessment to determine if fringe benefits were over charged as a result of using the non-negotiated indirect cost rate.

CRA Response: CRA agreed with this finding and noted that it is updating its application of fringe benefit rates as recommended.

Auditor's Additional Comments: Our position regarding this finding has not changed.

FINDING 9: LACK OF DOCUMENTED POLICIES AND PROCEDURES FOR PROCUREMENT, COMPETITION, AND SOLE SOURCE ACQUISITIONS

CRA does not have documented policies and procedures for competition and procurement, as required per federal regulation.⁴⁷ Further, although CRA stated that it has

⁴⁶ We did not sample expenses incurred in each of the identified FYs; however, because CRA used the same methodology to apply fringe benefits to all salary costs incurred on the sampled NSF awards, we included all FYs that this exception applied to during our audit period. Specifically, the FY ranges represent the beginning of each award's period of performance through each award's expiration date or September 2, 2021 (the end of our audit's period of performance), whichever occurred first.

⁴⁷ According to 2 CFR §200.319, *Competition*, “[a]ll procurement transactions must be conducted in a manner providing full and open competition” ... Also, “[t]he non-federal entity must have written procedures for procurement transactions.” Additionally, according to 2 CFR §200.320, *Method of Procurement*, the non-federal entity must use one of the following procurement methods: procurement by micro-purchases, procurement by small purchase procedures, procurement by sealed bid, procurement by competitive proposals, or procurement by non-competitive proposals.

undocumented procurement procedures where it routinely solicits informal bids and executes large events at venues, we found that it also selects vendors for goods and services based on experience or referrals without documenting its selection methodology. As a result, we identified three purchases that were not supported by evidence of competition or the procurement method used, as summarized in Table 24.

Table 24: Purchases Without the Application of Procurement Procedures

NSF Award No.	Expense Date	Purchases of Goods and Services with Sufficient Procurement Process	Note
[REDACTED]	December 2018	Conference Venue	a
[REDACTED]	August 2019	Publication Contractor	b
[REDACTED]	October 2020	Virtual Setting Consultant	c

Source: Auditor summary of identified exceptions.

- a) In December 2018, CRA charged NSF Award No. [REDACTED] for \$23,916 in expenses incurred to host a conference for the CCC Thermodynamics Computing Workshop. CRA did not issue a request for proposals or perform any type of competition to select a vendor for this conference. In lieu of following its procurement procedures, CRA awarded the conference based on a local organizer's recommendation.
- b) In August 2019, CRA charged NSF Award No. [REDACTED] for \$13,183 in publication costs incurred for [REDACTED] to assist in the publication of research. Although the services rendered by [REDACTED] appear to have benefited the award, CRA did not document whether its selection of this vendor was conducted using full and open competition.
- c) In October 2020, CRA charged NSF Award No. [REDACTED] for \$45,730 in consulting services for Smash Productions to assist in shifting conferences to a virtual setting, due to the impact of the Coronavirus Disease 2019 (COVID-19) pandemic. Although the services rendered by [REDACTED] appear to have benefited the award, CRA did not document whether its selection of this vendor was conducted using full and open competition.

Conclusion

CRA does not have documented policies and procedures to guide how it documents and selects vendors that provide goods and services and did not maintain documentation to support its undocumented procedures were followed. Because we did not identify any instances where the amount charged to NSF awards appeared unreasonable, we did not question any costs. However, we are noting a compliance finding, as without compliant procurement policies CRA may not receive services at the most effective and reasonable prices, as appropriate to ensure it is a responsible steward of federal funds, as illustrated in Table 25.

Table 25: Finding 9 Summary: Lack of Documented Policies and Procedures for Procurement, Competition, and Sole Source Acquisitions

NSF Award No.	Compliance Exception Identified	Fiscal Year(s)
[REDACTED]	Lack of Documented Procurement, Competition, or Sole Source Acquisitions	2019 - 2021

Source: Auditor summary of identified exceptions.

Recommendation

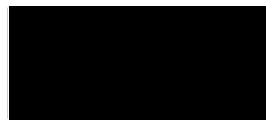
We recommend that NSF's Director of the Division of Institution and Award Support:

- 9.1 Direct CRA to establish documented policies, procedures, and internal controls for the procurement of goods and services, at established threshold levels, in accordance with federal regulations.

CRA Response: CRA agreed with this finding and noted that it is establishing documented policies, procedures, and internal controls for the procurement of goods and services as recommended.

Auditor's Additional Comments: Our position regarding this finding has not changed.

Cotton & Company Assurance and Advisory, LLC



Megan Mesko, CPA, CFE
October 25, 2022

APPENDIX A: CRA's RESPONSE



September 26, 2022

Cotton & Company
333 John Carlyle Street, Suite 500
Alexandria, VA 22313

Attn: Megan Mesko, CPA, CFE

Dear Ms. Mesko:

The Computing Research Association (CRA) takes its stewardship of the taxpayer dollars we receive in Federal grants very seriously. As the report notes, CRA is a 501(c)(3) non-profit organization with the mission of catalyzing the computing research community to pursue audacious research visions, championing a diverse, welcoming, equitable, and socially responsible computing research community, and communicating the importance of computing research developments to policymakers and the public. We are largely volunteer-driven, with a volunteer Board of Directors comprised of elected and appointed leaders from the computing research community, and a full-time paid staff that has grown from 11 in 2013 to 24 in 2022.

We appreciate the opportunity this audit presents to improve our policies and procedures around the administration of the Federal grants we receive, and we largely agree with the findings noted in the report. We note that \$262,509 of the questioned costs included in the report stem from a reconciliation of the \$24.5 million in grant expenses we claimed from FY13 – FY21 and are the result of data backup corruption and reconstruction errors for one fiscal year (FY16). The remaining \$57,219 in questioned costs stem from the analysis of \$1,041,630 in claimed expenses examined as part of the 44 sample transactions you selected. What follows are our specific responses to each finding.

Finding I: ACM\$ Drawdowns That Exceeded Expenses

CRA's accounting system data does not support that it appropriately drew down or returned cash it drew from ACM\$ for four NSF awards in compliance with federal regulations and NSF Proposal and Award Policies and Procedures Guides (PAPPGs). Specifically, CRA's ACM\$ draws exceeded the total expenses recorded within its accounting system data by \$262,509 for four NSF awards as of the end of our audit period, as illustrated in Table 3.

CRA Response: CRA accepts the finding (I.a, I.b, and I.c) that the General Ledger detail provided for the three grants noted do not support CRA's ACM\$ drawdowns during the period, but we believe this is the result of a data reconstruction error and not because our actual expenses did not support the drawdown. In response to the NSF OIG document request for the audit, we were able to produce yearly GL data for all grants requested for all fiscal years (FY13 - FY21), except FY16. Two data backups of our FY16 GL data produced by a previous outsourced accounting firm were found to be corrupt and unreadable in 2021, and a third appeared to have been overwritten with FY15 data before it was provided to CRA. We were able to reconstruct FY16 GL data from monthly GL files that had been successfully archived, but these do not reflect any subsequent corrections or reclassifications that were made. We have previously provided a "CRA Explanation of Differences" document that notes entries that were excluded from the reconstructed FY16 GL report. The "CRA Explanation of Differences" document shows several expenses that CRA "reversed" in FY17. The

1828 L Street, NW, Suite 800
Washington, DC 20036

P: 202 234 2111
F: 202 667 1066

www.cra.org
info@cra.org



descriptions of the FY17 adjusting entries note the intention to reverse "unbilled receivables related to 6/30/16 audit". It is plausible to assume that these FY17 reversed receivables have corresponding accrued expense entries in FY16. Lastly, we note the total of the FY17 reversed entries are above the total of the amounts in finding I.a, I.b, and I.c. In summary, while we agree that the reconstructed GL for FY16 show a variance when reconciled against the ACMS record, we contend that the adjusting entries from FY17 demonstrate that we did not overcharge the ACMS for our expenses and that the variance is an artifact of being unable to produce a year-end, audited GL for FY16.

CRA's policy regarding accounting backups is changing because of this situation. Each fiscal year backup will be verified as valid before archiving. In addition, should we change accounting systems again in the future, we will migrate each backup to the new system (and verify that the backup remains readable in the new system).

Finding 1d – From March through August 2021 CRA posted adjusting journal entries to NSF Award No. I734706 which resulted in a net credit amount of \$52,742 that CRA did not appropriately refund to NSF during the audit period of performance.

CRA Response: We accept this finding and concur with the footnote that correctly notes the amount was refunded as part of our September 2021 drawdown. This refund was already in process when we received the audit notification on September 2, 2021.

Finding 2: Inadequately Supported Expenses

CRA did not provide adequate documentation to support the allocability, allowability, and reasonableness of \$25,530 in meal expenses charged to two NSF awards as required for the costs to be allowable per federal regulations and NSF PAPPGs, as illustrated in Table 5.

Award Number	Unallowable Total	CRA Response
[REDACTED]	\$1,479	We accept this finding and agree to refund the amount.
[REDACTED]	\$135	We disagree with this finding. The meal at issue was a "group" meal brainstorming session at the end of the workshop proper. The meal included 1 CRA staff member and 5 workshop attendees classified as Non-Participants. The meal was coded to "Staff Meal," which is not our current policy, but we note that Staff Meal was an ODC code (and appropriately not participant support).



Award Number	Unallowable Total	CRA Response
[REDACTED]	\$23,916	<p>We accept the finding that there is not a direct link in this accounting between the amount charged (\$23,916) and a banquet check showing that specific amount. In this case, our initial deposit (\$42,458) was allocated across multiple categories and then the balance paid in a later transaction. In other words, we can show in the documents provided that (in aggregate) we allocated charges to account for the total food costs across two invoices (the deposit and final – modulo some minor errors in coding), but we cannot show a specific set of charges that added up to the \$23,916 allocated on the initial deposit.</p> <p>Our current policy would treat this deposit as a pre-paid expense, which would not be allocated until we received a final itemized invoice from the venue with event breakdown details.</p>

Finding 3: Inappropriately Allocated Expenses

CRA did not always allocate expenses to NSF awards based on the relative benefits the awards received, as required by federal regulations and NSF PAPPGs. As a result, CRA inappropriately charged three NSF awards for \$22,751 in inappropriately allocated salary, travel, other direct cost, and computer service expenses, as illustrated in Table 7.

Award Number	Unallowable Total	CRA Response
[REDACTED]	\$1,740	<p>We disagree with this finding. The employee noted was responsible for generating the post-workshop evaluation survey distributed immediately after the completion of the workshop. This involved gaining complete knowledge of the event agenda and activities and then formulating questions that would enable evaluation of whether the workshop was achieving its stated aims. [REDACTED] role would fall under the 16 "Other Professionals" included in the cumulative budget justification in the proposal.</p> <p>Regarding the "unapproved" timesheet, the single timesheet was submitted by CRA's Executive Director (ED) as part of a batch of approved timesheets but was one to which the ED had inadvertently not affixed [REDACTED] signature. Every other timesheet, approved at the same time and submitted <i>en masse</i>, included the ED's signature. It is reasonable to infer that the timesheet was approved by the ED, like all the others with which it was submitted.</p>



Award Number	Unallowable Total	CRA Response
[REDACTED]	\$991	We accept this finding and agree to refund the amount.
[REDACTED]	\$684	We disagree with this finding. This charge represents 4 days of table and television rental for an Exhibit Table for CCC at CRA's Snowbird conference. An important part of CCC's mission is outreach to the computing research community about CCC activities. The table featured a looped slideshow of CCC activities on the TV, copies of CCC white papers and other products of CCC's visioning efforts, and was monitored by CCC staff throughout the conference. Conference attendees are primarily the department chairs of the 200+ PhD-granting computing research departments across North America, as well as representatives from industry and government – essentially the audience NSF expects the CCC to reach. CRA provided a breakdown of the costs (CCC had 1 of the 4 tables we set up), along with copies of the receipts for the initial table rental and setup, plus the a/v (television) rental for each day of the event.
[REDACTED]	\$17,069	<p>We disagree with this finding. The proposal for [REDACTED] was submitted on June 4, 2018 and did not include funding to enhance infrastructure to support programs that are funded by the award.</p> <p>The proposal for [REDACTED] was submitted on June 15, 2018 and included both an objective to enhance infrastructure to enable program scaling and the funds necessary to achieve that. We later determined which platform would help us achieve the objective and signed a contract with [REDACTED] on July 12, 2019. Given the fact that [REDACTED] was submitted later, with the intent to scale, it was necessary to explore and secure computer services (the [REDACTED] platform) to help us achieve that goal.</p> <p>While it is true that CRA-WP programs funded by [REDACTED] subsequently benefited from the infrastructure enhancements funded by [REDACTED] it is also true that the funds were requested, allocated, and used for the purpose stated in [REDACTED]. Further, if [REDACTED] had not been funded, we would not have needed this scale platform for [REDACTED].</p>



CRA
Computing Research
Association

Award Number	Unallowable Total	CRA Response
[REDACTED]	\$2,267	We disagree with this finding. The finding questions the allocability of a CCC council member's travel expenses incurred "July 16-17, 2018" for attendance at the CCC Council Meeting, held after CRA's Snowbird meeting (July 16-18) in Snowbird, UT. The council member arrived at Snowbird on July 17, the day before the CCC Council Meeting began on July 18. The expenses incurred were roundtrip airfare to SLC, ground transportation to and from the airport, and lodging at Snowbird from July 17-20, all of which were allocable to [REDACTED]

Finding 4: Unallowable Expenses

CRA charged two NSF awards for \$8,938 in alcohol, conference, and travel expenses that are unallowable per federal regulations and NSF PAPPGs.

Award Number	Unallowable Total	CRA Response
[REDACTED]	\$1,429	We accept this finding and agree to refund the amount.
[REDACTED]	\$2,022	We accept this finding and agree to refund the amount.
[REDACTED]	\$660	We accept this finding and agree to refund the amount.
[REDACTED]	\$809	We accept this finding and agree to refund the amount.
[REDACTED]	\$1,600	We accept this finding and agree to refund the amount.
[REDACTED]	\$296	We accept this finding and agree to refund the amount.
[REDACTED]	\$147	We accept this finding and agree to refund the amount.
[REDACTED]	\$949	We disagree with this finding. The cost questioned is the cost of the round-trip ticket to the workshop (\$949). The attendee purchased the ticket following CRA guidelines in place at the time of booking. Guidance provided then included "Combined Travel - If you combine CRA travel with other professional or personal activities, only the portion directly related to CRA may be claimed for reimbursement." The attendee followed this policy. The attendee did not seek reimbursement for any expense unrelated to [REDACTED] attendance at the workshop, and CRA did not charge the grant for any expense unrelated to [REDACTED] attendance at the workshop.



CRA
Computing Research
Association

Award Number	Unallowable Total	CRA Response
[REDACTED]	\$9/9	We disagree with this finding. NSF was a sponsor of Snowbird 2018. We have provided the correspondence we had with DGA after a site visit of [REDACTED] first raised this question. As shown, the issue was around using Participant Support for Registration fees, and that re-classing to non-participant expenses mooted the concern about registration fees.
[REDACTED]	\$47	We accept this finding and agree to refund the amount.

Finding 5: Non-Compliance with Federal Requirements for Pass-Through Entities

CRA did not comply with all federal requirements for pass-through entities when issuing and monitoring one subaward, as illustrated in Table 14.

CRA Response: We accept this finding. Our current process requires a risk assessment before executing a subaward agreement including reviewing the latest single audit review, and continued monitoring of the subawardee.

Finding 6: Non-Compliance with CRA Policies

CRA did not always comply with its November 2011 CRA Accounting Policies and Procedures. Specifically, we identified four instances in which CRA did not comply with its invoicing, monthly close checklist, subawardee reporting, and timesheet approval requirements, as illustrated in Table 16.

CRA Response: We accept this finding, except 6.d. As noted previously, one can infer the ED approval for the timesheet at issue since it was included *en masse* with several other approved timesheets.

Finding 7: Insufficient Controls Related to the Application of Indirect Costs

CRA did not have sufficient controls in place to ensure it and its subawardees consistently applied negotiated indirect rate(s) in a manner consistent with the Negotiated Indirect Cost Rate Agreement (NICRA), as required by federal and NSF guidance.

CRA Response: We accept this finding and note that CRA has consistently adopted the approach of choosing the lower of either the IDC rate in effect at the time a grant was awarded or a subsequent negotiated rate to ensure the most funding available for the beneficiaries of our programs. This approach also ensures we do not overcharge NSF in the event our negotiated IDC rate goes down. We agree that a control formalizing this approach is necessary and are establishing guiding policy and procedures to enact it.

Finding 8: Fringe Benefits Not Appropriately Applied

CRA did not have sufficient controls in place to ensure it consistently treated fringe benefits as direct costs, as required by the organization's NICRA. Specifically, CRA applied a non-negotiated fringe benefit rate to direct salary expenses in lieu of charging fringe benefits as direct costs, as illustrated in Table 22.



CRA Response: We accept this finding and are updating our application of fringe benefit rates as recommended.

Finding 9: Lack of Documented Policies and Procedures for Procurement, Competition, and Sole Source Acquisitions

CRA does not have documented policies and procedures for competition and procurement, as required per federal regulation. Further, although CRA stated that it has undocumented procurement procedures where it routinely solicits informal bids and executes large events at venues, we found that it also selects vendors for goods and services based on experience or referrals without documenting its selection methodology. As a result, we identified three purchases that were not supported by evidence of competition or the procurement method used, as summarized in Table 24.

CRA Response: We accept this finding and are establishing documented policies, procedures, and internal controls for the procurement of goods and services as recommended.

Thank you again for the opportunity to share our responses to this audit. Thanks also to your team for their exceptional professionalism in dealing with our questions and concerns about the audit process, and for your flexibility as our staff worked to meet all the various audit milestones. CRA is and will be a better organization because of your efforts and recommendations.

Sincerely,



Tracy Camp
Executive Director

APPENDIX B: OBJECTIVES, SCOPE, AND METHODOLOGY

OBJECTIVES

The NSF OIG Office of Audits engaged Cotton & Company Assurance and Advisory, LLC (referred to as “we”) to conduct an audit of all the costs that the CRA claimed on 11 NSF awards. The objectives of the audit were to evaluate CRA’s award management environment; to determine if costs claimed are allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and applicable federal financial assistance requirements; and to determine whether any extraordinary circumstances existed that would justify further audit work beyond the original 40 to 50 transactions.

SCOPE

The audit population included approximately \$24.5 million in expenses CRA claimed on the following 11 NSF awards from each award’s inception date through September 2, 2021.

NSF Award Number

METHODOLOGY

After obtaining NSF OIG’s approval for our audit plan, we performed each of the approved audit steps. Generally, these steps included:

- Assessing the reliability of the GL data CRA provided by comparing the costs charged to NSF awards per CRA’s accounting records to the reported net expenditures reflected in the Award Cash Management \$ervice (ACM\$) drawdown requests.
 - Our work required us to rely on computer-processed and manually created data obtained from CRA, as well as computer-processed data from NSF OIG. NSF OIG provided award data CRA reported through ACM\$ during our audit period.
 - We assessed the reliability of the GL data that CRA provided by: (1) comparing the costs charged to NSF awards per CRA’s accounting records to the reported net expenditures reflected in the ACM\$ drawdown requests that CRA submitted to NSF during the audit

period of performance; and (2) reviewing the parameters that CRA used to extract transaction data from its accounting systems. We identified several discrepancies between the amounts supported by CRA's GL and the amounts that CRA claimed per NSF's ACM\$ system. These discrepancies resulted in **Finding 1: ACM\$ Drawdowns That Exceeded Expenses**. Although CRA was unable to provide sufficient GL detail for costs incurred prior to July 1, 2017, we found CRA's computer-processed data from its current accounting system to be sufficiently reliable for the purposes of the audit. We did not identify any issues with the parameters that CRA used to extract the accounting data from the current accounting system; however, we did identify issues with the extractions related to the data processed prior to July 1, 2017, as referenced in Finding 1.

- We found NSF's computer-processed data to be sufficiently reliable for the purposes of this audit. We did not review or test whether the data contained in NSF's databases or the controls over NSF's databases were accurate or reliable; however, the independent auditor's report on NSF's financial statements for FY 2020 found no reportable instances in which NSF's financial management systems did not substantially comply with applicable requirements.
- CRA provided detailed transaction-level data to support \$24,280,896 in costs charged to NSF awards during the period, which was less than the \$24,518,419 CRA claimed in ACM\$ for the 11 awards. This data resulted in a total audit universe of \$24,260,484 in expenses claimed on 11 NSF awards.
- Obtaining and reviewing all available accounting and administrative policies and procedures, external audit reports, desk review reports, and other relevant information CRA and NSF OIG provided, as well as any other relevant information that was available online.
- Summarizing our understanding of federal, NSF, and CRA-specific policies and procedures surrounding costs budgeted for or charged to NSF awards and identifying the controls in place to ensure that costs charged to sponsored projects were reasonable, allocable, and allowable.
 - In planning and performing this audit, we considered CRA's internal controls within the audit's scope solely to understand the directives or policies and procedures CRA has in place to ensure that charges against NSF awards complied with relevant federal regulations, NSF award terms, and CRA policies.

- Providing CRA with a list of 44 transactions that we selected based on the results of our data analytics and requesting that CRA provide documentation to support each transaction.
- Reviewing the supporting documentation CRA provided and requesting additional documentation as necessary to ensure we obtained sufficient, appropriate evidence to assess the allowability of each sampled transaction under relevant federal,⁴⁸ NSF,⁴⁹ and CRA policies.⁵⁰
- Holding virtual interviews and walkthroughs with CRA in March 2022 to discuss payroll (including effort reporting), fringe benefits, travel, participant support costs, procurement, **equipment** (including an inventory check), Graduate Research Fellowship Program, other direct costs (e.g., patent, relocation, recruiting, interest, advertising/public relations, **entertainment**, fundraising, lobbying, selling/marketing, and training costs), grant close-out procedures, subawards, ACM\$ processing, indirect costs, and other general policies (e.g., pre- and post-award costs, program income, whistle-blower information, research misconduct, and conflict of interest policies).
- Summarizing the results of our fieldwork and confirming that we did not identify any extraordinary circumstances that justified the need for a second audit phase.⁵¹

At the conclusion of our fieldwork, we provided a summary of our results to NSF OIG personnel for review. We also provided the summary to CRA personnel to ensure CRA was aware of each of our findings and did not have additional documentation to support the questioned costs.

We conducted this performance audit in accordance with *Generally Accepted Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

⁴⁸ We assessed CRA's compliance with 2 CFR Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, and 2 CFR Part 230, Cost Principles for Non-Profit Organizations (Office of Management and Budget [OMB] Circular A-122), as appropriate.

⁴⁹ We assessed CRA's compliance with NSF PAPPGs 11-1, 13-1, 14-1, 15-1, 17-1, 18-1, and 19-1 and with NSF award-specific terms and conditions, as appropriate.

⁵⁰ We assessed CRA's compliance with internal CRA policies and procedures surrounding costs budgeted for or charged to NSF awards.

⁵¹ Based on the areas of elevated risk of noncompliance identified during the initial phase, we determined that there was no need for any expanded audit phase.

APPENDIX C: SUMMARY OF QUESTIONED COSTS

Appendix C, Table 1: Schedule of Questioned Costs by Finding

Finding	Description	Questioned Costs		Total
		Unsupported	Unallowable	
1	ACM\$ Drawdowns That Exceeded Expenses	\$262,509	\$0	\$262,509
2	Inadequately Supported Expenses	-	25,530	25,530
3	Inappropriately Allocated Expenses	-	22,697	22,697
4	Unallowable Expenses	-	8,938	8,938
5	Non-Compliance with Federal Requirements for Pass-Through Entities	-	-	-
6	Non-Compliance with CRA Policies	-	-	-
7	Insufficient Controls Related to the Application of Indirect Costs	-	-	-
8	Fringe Benefits Not Appropriately Applied	-	-	-
9	Lack of Documented Policies and Procedures for Procurement, Competition, and Sole Source Acquisitions	-	-	-
Total		<u>\$262,509</u>	<u>\$57,165</u>	<u>\$319,674</u>

Source: Auditor summary of questioned costs by finding.

Appendix C, Table 2: Summary of Questioned Costs by NSF Award Number

NSF Award No.	No. of Transaction Exceptions	Questioned Direct Costs	Questioned Indirect Costs	Questioned Total	CRA Agreed to Reimburse
[REDACTED]	20	\$207,401	\$124	\$207,525	\$9,333
[REDACTED]	2	-	-	-	-
[REDACTED]	1	6,362	-	6,362	-
[REDACTED]	2	7,772	-	7,772	-
[REDACTED]	11	80,118	828	80,946	52,889
[REDACTED]	2	-	-	-	-
[REDACTED]	2	12,644	4,425	17,069	-
Total	40	\$314,297	\$5,377	\$319,674	\$62,222

Source: Auditor summary of questioned costs by NSF award number.

Appendix C, Table 3: Summary of Questioned Costs by NSF Award Number and Expense Description

Finding No.	NSF Award No.	Description	Fiscal Year(s)	Direct	Indirect	Total	CRA Agreed to Reimburse
Finding 1: ACM\$ Drawdowns That Exceeded Expenses	[REDACTED]	Expenses Claimed in ACM\$ That Exceeded Accumulated Expenses	-	\$195,633	\$-	\$195,633	\$-
	[REDACTED]	Expenses Claimed in ACM\$ That Exceeded Accumulated Expenses	-		-	6,362	-
	[REDACTED]	Expenses Claimed in ACM\$ That Exceeded Accumulated Expenses	-		-	7,772	-
	[REDACTED]	Credits Not Appropriately Returned to NSF	6,362		-	52,742	52,742
Finding 2: Inadequately Supported Expenses	[REDACTED]	July 2013 Participant Meal Expenses	2017	4772	1,479	-	1,479
	[REDACTED]	August 2017 CCC Workshop Meals	2018	52,742	135	-	135
	[REDACTED]	December 2018 CCC Workshop Meals	2019		23,916	-	23,916
Finding 3: Inappropriately Allocated Expenses	[REDACTED]	April 2015 Salary Expenses	2015	1,740	-	1,740	-
	[REDACTED]	September 2016 Travel Expenses	2017	991	-	991	991
	[REDACTED]	September 2016 AV Expenses	2017	684	-	684	-
	[REDACTED]	June 2020 Software Expenses	2020	12,644	4,425	17,069	-
	[REDACTED]	March 2021 Travel Expenses	2021	1,639	574	2,213	-
Finding 4: Unallowable Expenses	[REDACTED]	May 2013 Alcohol	2013	1,429	-	1,429	1,429
	[REDACTED]	June 2014 Alcohol	2014	2,022	-	2,022	2,022
	[REDACTED]	February 2015 Alcohol	2015	660	-	660	660
	[REDACTED]	September 2016 Alcohol	2017	809	-	809	809
	[REDACTED]	January 2015 Lodging Credit	2015	1,600	-	1,600	1,600
	[REDACTED]	August 2017 Flight Upgrades	2018	219	77	296	296
	[REDACTED]	May 2018 Meal Expenses	2018	147	-	147	147
	[REDACTED]	January 2019 Personal Travel Expenses	2019	949	-	949	-

	[REDACTED]	March 2021 Snowbird Conference Registration Fee	2021	725	254	979	-
	[REDACTED]	August 2017 Indirect Costs	2018	-	47	47	47
Finding 5: Non-Compliance with Federal Requirements for Pass-Through Entities	[REDACTED]	2019 - 2020 University of [REDACTED] Subaward	2019 - 2020	-	-	-	-
Finding 6: Non-Compliance with CRA Policies	[REDACTED]	Non-Compliance with CRA Accounting Policies and Procedures on AnyBill Invoicing (November 2011)	2014	-	-	-	-
	[REDACTED]	Non-Compliance with CRA Accounting Policies and Procedures on Monthly Close Checklist (November 2011)	2014	-	-	-	-
	[REDACTED]	Non-Compliance with CRA Accounting Policies and Procedures on Subaward Monitoring (November 2011)	2015	-	-	-	-
	[REDACTED]	Non-Compliance with CRA Accounting Policies and Procedures on Timesheet Approval (November 2011)	2015	-	-	-	-
Finding 7: Insufficient Controls Related to the Application of Indirect Costs	[REDACTED]	Insufficient Controls Related to the Application of Indirect Cost Rates	2018 - 2022	-	-	-	-
	[REDACTED]	Insufficient Controls Related to the Application of Indirect Cost Rates	2018	-	-	-	-
	[REDACTED]	Insufficient Controls Related to the Support of Indirect Cost Rates	2013 - 2017	-	-	-	-
	[REDACTED]	Insufficient Controls Related to the Application of Indirect Cost Rates	2019	-	-	-	-
	[REDACTED]	Insufficient Controls Related to the Application of Indirect Cost Rates	2020	-	-	-	-

		Insufficient Controls Related to the Application of Indirect Cost Rates	2020	-	-	-	-
		Insufficient Controls Related to the Support of Indirect Cost Rates	2016	-	-	-	-
		Insufficient Internal Controls Related to the Application of the Subawardee Indirect Cost Rate	2020	-	-	-	-
Finding 8: Fringe Benefits Not Appropriately Applied		Fringe Benefits Not Appropriately Applied	2013 – 2020	-	-	-	-
		Fringe Benefits Not Appropriately Applied	2013 – 2020	-	-	-	-
		Fringe Benefits Not Appropriately Applied	2018 – 2022	-	-	-	-
		Fringe Benefits Not Appropriately Applied	2019 - 2022	-	-	-	-
Finding 9: Lack of Documented Policies and Procedures for Procurement, Competition, and Sole Source Acquisitions		Lack of Documented Procurement, Competition, or Sole Source Acquisitions	2019 - 2021	-	-	-	-
Total				\$314,297	\$5,377	\$319,674	\$62,222

Source: Auditor summary of identified exceptions.

APPENDIX D: SUMMARY OF RECOMMENDATIONS AND CONSIDERATIONS

We recommend that NSF's Director of the Division of Institution and Award Support:

- 1.1. Resolve the \$209,767 in questioned unsupported Award Cash Management \$ervice drawdowns for which CRA has not agreed to reimburse NSF and direct CRA to repay or otherwise remove the sustained questioned costs from its awards.
 - 1.2. Direct CRA to provide documentation that it has repaid or otherwise credited the \$52,742 in unreturned credits for which it has agreed to reimburse NSF.
 - 1.3. Direct CRA to strengthen its administrative and management internal controls and processes over its Award Cash Management \$ervice reconciliation process. Updated processes could include:
 - Requiring that an individual who is independent from the standard Award Cash Management \$ervice drawdown process perform periodic reconciliations of Award Cash Management \$ervice drawdowns to CRA general ledger expenses for each NSF award.
 - Requiring that all adjusting entries posted to NSF awards be captured in the next drawdown performed after the adjustments are recorded to ensure that it appropriately reimburses NSF for credits.
 - 1.4. Direct CRA to strengthen its document retention policies and procedures to ensure that it maintains sufficient accounting system data to support costs drawn down on NSF awards in NSF's Award Cash Management \$ervice.
- 2.1. Resolve the \$24,051 in questioned workshop meal expenses for which CRA has not agreed to reimburse NSF and direct CRA to repay or otherwise remove the sustained questioned costs from its awards.
 - 2.2. Direct CRA to provide documentation supporting that it has reimbursed or otherwise credited the \$1,479 in questioned participant meal expenses for which it has agreed to reimburse NSF.
 - 2.3. Direct CRA to strengthen its policies and procedures for creating and retaining documentation, including introducing additional controls to help ensure that it appropriately creates and maintains all documentation necessary to support the allowability of meal expenses charged to sponsored programs. These additional controls could include:
 - Providing additional training regarding requirements for travel and conference documentation, including the itemized detail and justifications required when paying for hosted or group meals, to ensure it only pays for allowable meal expenses.

- Requiring travelers to document the business purpose of a group meal—and identify the participant and non-participant portion of the meal—before charging expenses to an NSF award.
- 3.1 Resolve the \$21,706 in questioned salary, other direct, and travel costs for which CRA has not agreed to reimburse NSF and direct CRA to repay or otherwise remove the sustained questioned costs from its NSF award.
- 3.2 Direct CRA to provide documentation supporting that it has reimbursed or otherwise credited the \$991 in questioned travel expenses for which it has agreed to reimburse NSF.
- 3.3 Direct CRA to strengthen its policies and procedures and internal controls for supporting the allocation of expenses charged to sponsored projects. Updated processes could include:
- Requiring Principal Investigators to review salary costs charged to the award and verify the employee's benefit to the award as well as the employee's inclusion in the annual report(s).
 - Implementing a standard documentation and retention process to support the allocation of travel, other direct costs, and computer service costs that either benefit multiple awards or benefit both sponsored and non-sponsored activities.
 - Establishing formal guidance regarding how CRA will ensure costs incurred to support CRA's Snowbird Conference are not charged to NSF awards.
- 4.1 Resolve the \$1,928 in questioned travel and conference expenses for which CRA has not agreed to reimburse NSF and direct CRA to repay or otherwise remove the sustained questioned costs from its awards.
- 4.2 Direct CRA to provide documentation supporting that it has reimbursed or otherwise credited the \$7,010 in questioned alcohol, travel, flight upgrades, meal, and indirect expenses for which it has agreed to reimburse NSF.
- 4.3 Direct CRA to strengthen its administrative and management procedures for ensuring alcohol is not charged to NSF awards. Updated processes should require CRA to verify that invoices for hosted events and travel reimbursements do not include alcohol prior to processing payment.
- 4.4 Direct CRA to strengthen its administrative and management procedures for reviewing travel expenses prior to charging NSF awards. Updated procedures could include:

- Implementing additional monitoring procedures to ensure that travel credits are posted against the original funding source to which the associated travel expenses were charged.
 - Implementing additional reviews for all airfare purchases, including requiring the reviewer to verify the traveler purchased an economy-class ticket and/or has appropriate justification for a travel upgrade before charging the travel expense to an NSF award.
 - Requiring travelers to document the business purpose for all meals provided during collaboration meetings.
 - Requiring travelers to document the business purpose of each day of a planned trip before purchasing airfare so CRA can evaluate whether it must perform a travel comparison indicating personal travel did not increase airfare costs.
 - Direct CRA to strengthen its administrative and management processes related to the approval of conference registration fees. Updated processes should require CRA to verify that individuals either have dedicated or will be dedicating effort to an NSF award prior to allowing their conference registration fees to be charged to the NSF award.
 - Requiring periodic training regarding the types of expenses that are allowable and unallowable for business travel on federal awards.
 - Requiring the separation of employee and participant meal costs so as not to apply indirect costs to participant support costs.
- 4.5 Direct CRA to identify and remove all Snowbird Conference registrations fees charged to NSF awards. Upon identifying these conference registration fees, CRA should provide its analysis and the amount of the reimbursement to NSF's Resolution and Advanced Monitoring Team.
- 5.1 Direct CRA to revise its policies to require personnel to evaluate subawardee risk of non-compliance in accordance with 2 Code of Federal Regulations 200.331, *Requirements for pass-through entities*. Specifically, the updated policies should require:
- Performing a risk assessment before executing a subaward agreement, as well as periodically updating the risk assessment.
 - Performing continuous monitoring of the subawardee based on the established level of risk determined in the latest risk assessment.

- Reviewing the subawardee's latest Single Audit review in support of the risk assessment and continuous monitoring.
- 5.2 Direct CRA to ensure that: (1) it has performed risk assessments, Single Audit review(s), and subaward monitoring for all subawards issued between December 2014 and September 2021; and (2) the risk assessments remain active, to validate the agreements in accordance with federal regulations.
- 6.1 Direct CRA to strengthen its administrative and management procedures to ensure that department managers and the Executive Director documents approval of all invoices prior to payment.
- 6.2 Direct CRA to strengthen its administrative and management procedures to confirm that a monthly close checklist is completed and reviewed for each award prior to closing the month.
- 6.3 Direct CRA to strengthen its administrative and management procedures to ensure it documents its review of required subawardee reports.
- 6.4 Direct CRA to strengthen its administrative and management procedures to ensure that the Executive Director documents approval of all timesheets prior to payment.
- 7.1 Direct CRA to update its current award set-up practices to ensure that it sets up accounts for NSF awards such that each account applies indirect costs using the indirect cost rate(s) established in the Negotiated Indirect Cost Rate Agreement in effect as of the date of grant award.
- 7.2 Direct CRA to strengthen its internal controls to ensure that it maintains sufficient documentation to support what indirect cost rate was applied to individual expenses charged to NSF awards.
- 7.3 Direct CRA to update its current practices for approving invoices submitted by NSF award subrecipients. The updated approval process should require that CRA ensure subrecipients apply indirect costs consistent with their negotiated indirect cost rate agreement and/or with their approved budget.
- 8.1 Direct CRA to meet with NSF's Cost Analysis and Pre-Award Branch to establish a negotiated rate for fringe benefits or establish policies and procedures to charge fringe benefits as direct costs as required by its Negotiated Indirect Cost Rate Agreement.
- 8.2 Direct CRA to reassess the total fringe benefit costs charged to each NSF award for its entire period of performance. Upon completion of the reassessment, perform a cost analysis of the total fringe benefits earned by staff throughout the same award period of performance. Finally, provide each award analysis to the NSF's Resolution

and Advanced Monitoring Branch for review and assessment to determine if fringe benefits were over charged as a result of using the non-negotiated indirect cost rate.

- 9.1 Direct CRA to establish documented policies, procedures, and internal controls for the procurement of goods and services, at established threshold levels, in accordance with federal regulations.

APPENDIX E: GLOSSARY

Allocable Cost. A cost is allocable to a particular federal award or other cost objective if the goods or services involved are chargeable or assignable to that federal award or cost objective in accordance with relative benefits received. This standard is met if the cost:

- (a) Is incurred specifically for the federal award.
- (b) Benefits both the federal award and other work of the non-federal entity and can be distributed in proportions that may be approximated using reasonable methods.
- (c) Is necessary to the overall operation of the non-federal entity and is assignable in part to the federal award in accordance with the principles in this subpart. (2 CFR § 200.405).

Return to the term's initial use.

Allocation refers to the process of assigning a cost, or a group of costs, to one or more cost objective(s), in reasonable proportion to the benefit provided or other equitable relationship. The process may entail assigning a cost(s) directly to a final cost objective or through one or more intermediate cost objectives. (2 CFR § 200.4).

Return to the term's initial use.

Allowable Cost. Except where otherwise authorized by statute, costs must meet the following general criteria in order to be allowable under federal awards:

- (a) Be necessary and reasonable for the performance of the federal award and be allocable thereto under these principles.
- (b) Conform to any limitations or exclusions set forth in these principles or in the federal award as to types or amount of cost items.
- (c) Be consistent with policies and procedures that apply uniformly to both federally-financed and other activities of the non-federal entity. (2 CFR § 200.403).

Return to the term's initial use.

Capital expenditures refers to expenditures to acquire capital assets or expenditures to make additions, improvements, modifications, replacements, rearrangements, reinstallations, renovations, or alterations to capital assets that materially increase their value or useful life. (2 CFR § 200.13).

Return to the term's initial use.

Cognizant agency for indirect costs refers to the federal agency responsible for reviewing, negotiating, and approving cost allocation plans or indirect cost proposals developed on behalf of all Federal agencies. (2 CFR § 200.19).

Return to the term's initial use.

Direct Costs are those costs that can be identified specifically with a particular final cost objective, such as a federal award, or other internally or externally funded activity, or that

can be directly assigned to such activities relatively easily with a high degree of accuracy. Costs incurred for the same purpose in like circumstances must be treated consistently as either direct or indirect (F&A) costs (2 CFR § 200.413).

[Return to the term's initial use.](#)

Entertainment. Costs of entertainment, including amusement, diversion, and social activities and any associated costs are unallowable, except where specific costs that might otherwise be considered entertainment have a programmatic purpose and are authorized either in the approved budget for the federal award or with prior written approval of the federal awarding agency. (2 CFR § 200.438).

[Return to the term's initial use.](#)

Equipment means tangible personal property—including information technology (IT) systems—having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds the lesser of the capitalization level established by the non-federal entity for financial statement purposes, or \$5,000. (2 CFR § 200.33).

[Return to the term's initial use.](#)

Fringe Benefits refers to allowances and services provided by employers to their employees as compensation in addition to regular salaries and wages. Fringe benefits include, but are not limited to, the costs of leave (vacation, family-related, sick, or military), employee insurance, pensions, and unemployment benefit plans. (2 CFR § 200.431).

[Return to the term's initial use.](#)

Indirect (F&A) Costs refers to costs incurred for a common or joint purpose benefitting more than one cost objective, and not readily assignable to the cost objectives specifically benefitted, without effort disproportionate to the results achieved. (2 CFR § 230, Appendix A, Section C.), (2 CFR § 200.56) and (2 CFR Revision § 200.1).

[Return to the term's initial use.](#)

Modified Total Direct Cost (MTDC) refers to all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel, and up to the first \$25,000 of each subaward (regardless of the period of performance of the subawards under the award). MTDC excludes equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of \$25,000. Other items may only be excluded when necessary to avoid a serious inequity in the distribution of indirect costs, and with the approval of the cognizant agency for indirect costs. (2 CFR § 200.68) and (2 CFR Revision § 200.1).

[Return to the term's initial use.](#)

Negotiated Indirect Cost Rate refers to the indirect cost rates charged to federal awards through the development and application of a negotiated indirect cost rate agreement (NICRA). In order to recover indirect costs related to federal awards, most organizations must negotiate an indirect cost rate with the federal agency that provides the preponderance of funding. (NSF Office of Budget, Finance, and Award Management).

[Return to the term's initial use.](#)

Participant Support Costs refers to the direct costs for items such as stipends or subsistence allowances, travel allowances, and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with conferences or training projects. (2 CFR § 200.75).

[Return to the term's initial use.](#)

NSF Proposal & Award Policies & Procedures Guide (PAPPG) refers to the NSF publication which comprises documents relating to NSF's proposal and award process for the assistance programs of NSF. The PAPPG, in conjunction with the applicable standard award conditions incorporated by reference in award, serve as the NSF's implementation of 2 CFR § 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*. (NSF PAPPG 19-1).

[Return to the term's initial use.](#)

Reasonable Cost means a cost that, in its nature and amount, does not exceed that which would have been incurred by a prudent person under the circumstances prevailing at the time the decision to incur the cost was made. (2 CFR § 200.404).

[Return to the term's initial use.](#)

Salaries and Wages mean the compensation for personal services including all remuneration, paid currently or accrued, for services of employees rendered during the period of performance under the Federal award, including but not necessarily limited to wages and salaries. (2 CFR § 200.430).

[Return to the term's initial use.](#)

Subawards mean awards provided by a pass-through entity to a subrecipient for the subrecipient to carry out part of a federal award received by the pass-through entity. It does not include payments to a contractor or payments to an individual that is a beneficiary of a federal program. A subaward may be provided through any form of legal agreement, including an agreement that the pass-through entity considers a contract. (2 CFR § 200.92).

[Return to the term's initial use.](#)

Travel Costs refer to expenses incurred for transportation, lodging, subsistence, and related items incurred by employees who are in travel status on official business of the non-federal entity. (2 CFR § 200.474).

[Return to the term's initial use.](#)



About NSF OIG

We promote effectiveness, efficiency, and economy in administering the Foundation's programs; detect and prevent fraud, waste, and abuse within NSF or by individuals who receive NSF funding; and identify and help to resolve cases of research misconduct. 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 Foundation.

Obtaining Copies of Our Reports

To view this and any of our other reports, please visit our website at www.oig.nsf.gov.

Connect with Us

For further information or questions, please contact us at OIGpublicaffairs@nsf.gov or 703.292.7100. Follow us on Twitter at [@nsfoig](https://twitter.com/nsfoig). Visit our website at www.oig.nsf.gov.

Report Fraud, Waste, Abuse, or Whistleblower Reprisal

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