

Performance Audit of Incurred Costs – Northwestern University

REPORT PREPARED BY KEARNEY & COMPANY

NATIONAL SCIENCE FOUNDATION
OFFICE OF INSPECTOR GENERAL

December 19, 2018
OIG 19-1-001





AT A GLANCE

Performance Audit of Incurred Costs – Northwestern University

Report No. OIG 19-1-001

December 19, 2018

AUDIT OBJECTIVE

The National Science Foundation Office of Inspector General engaged Kearney & Company (Kearney) to conduct a performance audit of incurred costs at Northwestern University (NWU) for the period July 1, 2013, to June 30, 2016. The auditors tested more than \$5.5 million of the \$129 million of costs claimed to NSF. The objective of the audit was to determine if costs claimed by NWU on NSF awards were allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and Federal financial assistance requirements.

AUDIT RESULTS

NWU did not always comply with all Federal, NSF, and NWU regulations and policies when it submitted claimed costs to NSF awards. The auditors questioned \$51,461 of costs claimed by NWU during the audit period. Specifically, the auditors found \$21,937 in unreasonable expenses near award expiration, \$17,517 in misapplication of indirect costs, \$7,174 in unreasonable or unallocable general expense charges, \$3,589 in unreasonable and unsupported travel costs, and \$1,244 in unsupported and incorrect participant support charges. The auditors also identified \$35,169 in misclassified expenses that were not questioned costs. Kearney is responsible for the attached report and the conclusions expressed in this report. NSF OIG does not express any opinion on the conclusions presented in Kearney's audit report.

RECOMMENDATIONS

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

AUDITEE RESPONSE

NWU agreed with all of the findings in the report. NWU's response is attached in its entirety to the report as Appendix C.

CONTACT US

For further information, contact us at 703.292.7100 or oig@nsf.gov.



NATIONAL SCIENCE FOUNDATION OFFICE OF INSPECTOR GENERAL

MEMORANDUM

DATE: December 19, 2018

TO: Dale Bell
Director
Division of Institution and Award Support

Jamie French
Director
Division of Grants and Agreements

FROM: Mark Bell [REDACTED]
Assistant Inspector General
Office of Audits

SUBJECT: Audit Report No. 19-1-001, Northwestern University

This memo transmits the Kearney & Company (Kearney) report for the audit of costs charged by Northwestern University (NWU) to its sponsored agreements with the National Science Foundation during the period July 1, 2013, to June 30, 2016. The audit encompassed more than \$5.5 million of the \$129 million claimed to NSF during the period. The objective of the audit was to determine if costs claimed by NWU on NSF awards were allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and Federal financial assistance requirements.

Please coordinate with our office during the 6-month resolution period, as specified by Office of Management and Budget 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 Audit

Kearney 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 Kearney's audit report. To fulfill our responsibilities, we:

- reviewed Kearney'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 Kearney, as necessary, to discuss audit progress, findings, and recommendations;



NATIONAL SCIENCE FOUNDATION OFFICE OF INSPECTOR GENERAL

- reviewed the audit report prepared by Kearney; 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 Billy McCain at 703.292.7100 or oig@nsf.gov.

Attachment

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Northwestern University

**Performance Audit of Claimed Costs for
National Science Foundation Awards
For the Period July 1, 2013, through June 30, 2016**

**National Science Foundation
Office of Inspector General**

INDEPENDENT ACCOUNTANT'S PERFORMANCE AUDIT REPORT

To the Inspector General of the National Science Foundation:

Kearney & Company, P.C. (defined as “Kearney,” “we,” and “our” in this report) has conducted a performance audit of costs claimed by Northwestern University (referred to as “Northwestern” or “University” in this report) on National Science Foundation (NSF) awards made to the University for the period of July 1, 2013, through June 30, 2016. This performance audit was conducted under Blanket Purchase Agreement (BPA) #DI4PA00037, Order #D14PB00559.

The objective of the performance audit is to determine if costs claimed in the sample provided to us by the NSF Office of Inspector General (OIG) are allowable, allocable, reasonable, and in conformity with NSF award terms and conditions, as well as applicable Federal financial assistance requirements. Kearney conducted the performance audit by testing costs claimed by the University and reporting on only the samples provided to us by NSF OIG.

Kearney performed testing over NSF OIG’s compiled judgmental sample, which consisted of a listing of an initial 250 transactions, based on NSF OIG’s criteria and assessment of University costs claimed. These samples included, but were not limited to, transactions of unusual spending trends; inconsistencies; even dollar amounts; large dollar amounts; duplicate transactions; descriptions indicating potentially unallowable costs; frequency; and transactions near or after award expiration. Kearney reported the results and findings within the body of this performance audit report. Please see [Appendix A](#) of this report for more information regarding the scope and methodology of the audit.

Kearney determined that the University costs charged to its NSF-sponsored agreements did not always comply with applicable Federal requirements. Specifically, we determined that claimed costs (direct and indirect costs) totaling \$51,461 were questioned and determined to be unallowable, unallocable, unreasonable, and/or not in conformity with NSF award terms and conditions and Federal requirements. Further, Kearney determined costs totaling \$35,169 were misclassified; these costs were not questioned. The [Findings](#) section of this report further describes the costs in question, the basis for our findings, and the recommended actions to be taken by the University. The results of our findings were not projected over the entire award population tested in our audit period.

Kearney conducted this performance audit in accordance with Generally Accepted Government Auditing Standards (GAGAS), 2011 Revision, 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. NSF OIG assessed the risk and approach for the audit by conducting planning,



data mining, and analytical procedures over the universe of data provided by the University. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. The purpose of this report is to communicate the results of Kearney's performance audit and our related findings and recommendations.

Thank you for providing us with the opportunity to assist NSF OIG and conduct the performance audit of the University. Kearney appreciates the cooperation provided by NSF and Northwestern personnel during the audit.

A handwritten signature in blue ink that reads "Kearney & Company". The signature is written in a cursive, flowing style.

Kearney & Company, P.C.
Alexandria, Virginia
December 19, 2018

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Abbreviations

ACM\$	Award Cash Management \$ervice
AAG	Award and Administration Guide
FDP	Federal Demonstration Partnership
GAGAS	Generally Accepted Government Auditing Standards
GL	General Ledger
IDC	Indirect Costs
IPA	Independent Public Accountant
Kearney	Kearney & Company, P.C.
MRI	Major Research Instrumentation
MTDC	Modified Total Direct Cost
Northwestern	Northwestern University
NSF	National Science Foundation
OIG	Office of Inspector General
OMB	Office of Management and Budget
PI	Principal Investigator
RAM	Resolution and Advanced Monitoring Branch
University	Northwestern University

Background

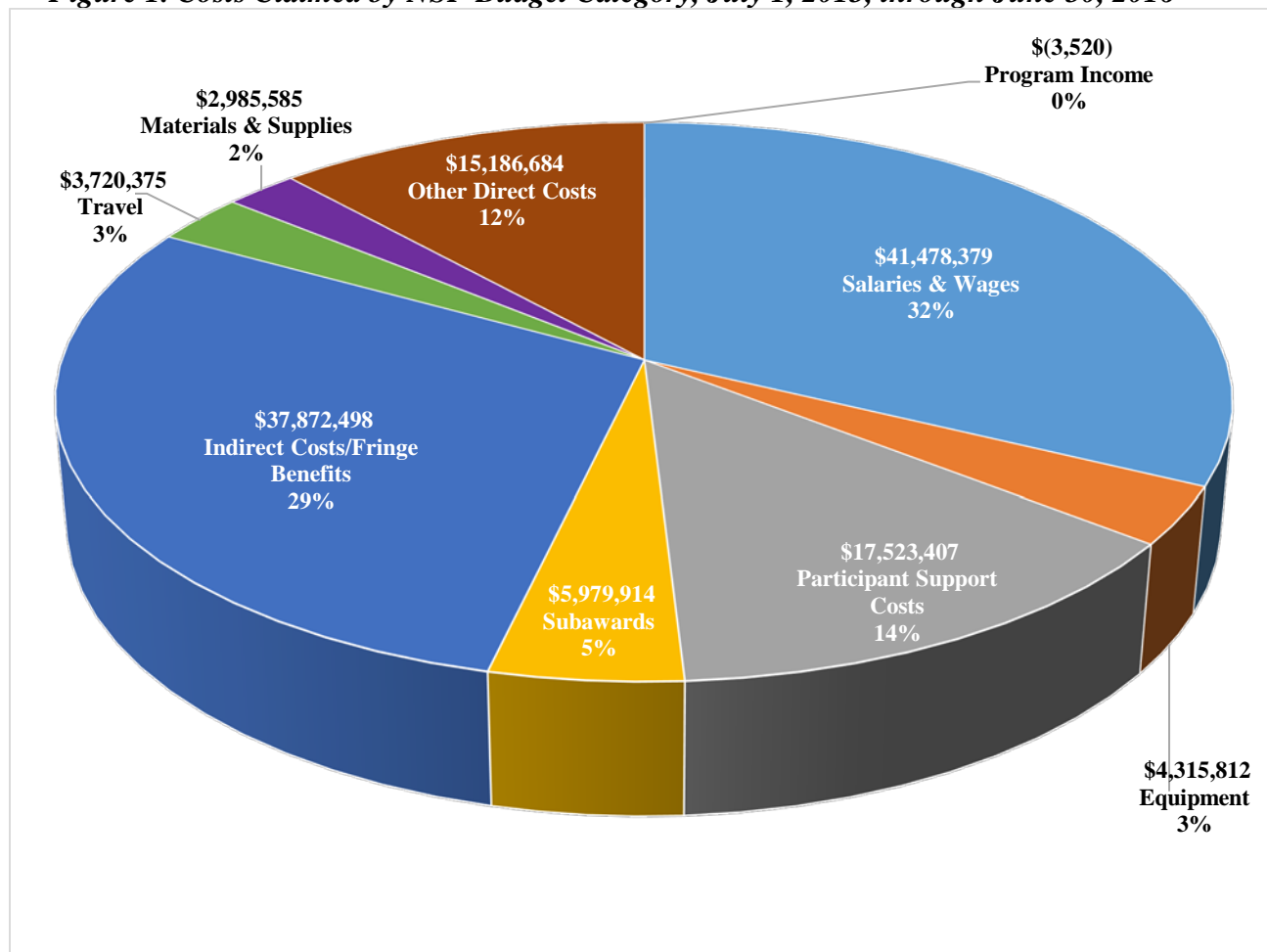
The National Science Foundation (NSF) is an independent Federal agency whose mission is to “promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense...” Through grant awards, cooperative agreements, and contracts, NSF enters into relationships with non-Federal organizations to fund research and education initiatives and to assist in supporting its internal financial, administrative, and programmatic operations.

NSF has an Office of Inspector General (OIG) 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 an independent public accountant (IPA) to provide these audit services.

NSF OIG engaged Kearney & Company, P.C. (defined as “Kearney,” “we,” and “our” in this report) to conduct a performance audit of costs incurred by Northwestern University (referred to as “Northwestern” or “University” in this report). The audit objective was to determine if costs claimed were allowable, allocable, reasonable, and in conformity with NSF award terms and conditions and applicable Federal financial assistance requirements. Additional information on the Objectives, Scope, and Methodology are included in [Appendix A](#) of this report. Northwestern strives to “create knowledge across all fields, including international and domestic policy, chemistry, neuroscience, nanotechnology, biotechnology, materials science, and drug discovery.”¹ As illustrated in Figure 1, Northwestern claimed more than \$129 million in expenditures through the Award Cash Management Service (ACM\$) across 623 NSF awards during our audit period of July 1, 2013, through June 30, 2016. Figure 1 also shows costs claimed by budget category based on the accounting data provided by Northwestern.

¹ <https://research.northwestern.edu/>

Figure 1. Costs Claimed by NSF Budget Category, July 1, 2013, through June 30, 2016



Source: Auditor summary of General Ledger of Northwestern Costs Claimed from July 1, 2013, through June 30, 2016

Audit Results

As described in the [Appendix A](#) Objectives, Scope, and Methodology, this performance audit included obtaining transaction-level data for all costs that Northwestern claimed on NSF awards during the audit period. Kearney conducted this performance audit in accordance with Generally Accepted Government Auditing Standards (GAGAS). 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. NSF OIG assessed the risk and approach for the audit by conducting planning, data mining, and analytical procedures over the universe of data provided by the University. Based on procedures performed by NSF OIG, 250 transactions (i.e., 220 General Ledger and 30 Payroll), totaling \$5,570,158, were judgmentally selected for testing. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. The results of our findings were not projected over the entire award population tested in our audit period.

Northwestern did not always comply with all Federal, NSF, and Northwestern regulations and policies when submitting claimed costs to NSF awards. Specific recommendations follow each finding that will facilitate improvements to ensure costs claimed are reasonable, allocable, and allowable in accordance with those regulations and policies. As a result, we questioned \$51,461² in costs claimed by Northwestern during the audit period, as follows:

- \$21,937 of unreasonable expenses near the award expiration date;
- \$17,517 of misapplied indirect costs (IDC);
- \$7,174 of unallowable or unallocable general expenses;
- \$3,589 of unreasonable, unallowable, or unsupported travel costs; and
- \$1,244 of unsupported or incorrect charges to participant support projects.

Further, we identified \$35,169 of expenses misclassified.

We provide a breakdown of the questioned and misclassified costs by finding in [Appendix B](#) of this report.

Findings

Finding 1 – Unreasonable Expenses Near and After Award Expiration

Northwestern charged NSF awards for purchases near the end of the award expiration date and, in some cases, after the award expiration date. The costs identified below were not in accordance with the following:

- NSF Award and Administration Guide (AAG), Chapter V, Section A.2.c, *Post-Expiration Costs*³
- NSF Major Research Instrumentation (MRI) policy: NSF 09-502, *MRI Program Solicitation for Instrument Development and Acquisition*⁴
- Office of Management and Budget (OMB) Circular A-21, *Cost Principles for Educational Institutions*, Section C.3, *Reasonable costs*⁵
- OMB Circular A-21, Section C.4.a, *Allocable costs*⁶

² Questioned cost are reported in total (i.e., both indirect costs and direct costs, if applicable).

³ “NSF funds may not be expended subsequent to the expiration date of the grant, except to liquidate valid commitments that were made on or before the expiration date. For example, commitment of project funds is valid when specialized (research) equipment is ordered well in advance of the expiration date but where, due to unusual or unforeseen circumstances, delivery of such equipment is delayed beyond the expiration date. The costs of equipment ordered after the expiration date, however, may not be charged to the project.”

⁴ NSF MRI policy NSF 09-502, *MRI Program Solicitation for Instrument Development and Acquisition*, states: “Instruments are expected to be operational for regular research use by the end of the award period.”

⁵ OMB Circular A-21, App. A, Section C.3, *Reasonable costs*, states: “A cost may be considered reasonable if the nature of the goods or services acquired or applied, and the amount involved therefore, reflect the action that a prudent person would have taken under the circumstances prevailing at the time the decision to incur the cost was made.”

⁶ OMB Circular A-21, App. A, Section C.4.a, *Allocable costs*, states: “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.”

Specifically, Northwestern charged expenses deemed unreasonable to five NSF awards, totaling \$21,937 (i.e., direct and indirect costs, if applicable). Expenses claimed near the award expiration did not benefit the award, nor were the expenses necessary to complete the NSF award objectives. Additional details are as follows:

Unreasonable Expenses Charged near Award Expiration: Northwestern charged expenses deemed unreasonable against expiring NSF awards, as follows:

- *July 2013 Charge against Expiring Award:* The Principal Investigator (PI) of NSF Award No. [REDACTED] purchased capital equipment (i.e., [REDACTED] Server) on June 5, 2013, to conduct grant-related activities. The capital equipment was recorded in the general ledger (GL) on July 5, 2013, and received on June 10, 2013; however, the award expired on August 31, 2013. The University stated that late in the project, a new prediction was considered that Northwestern wanted to test experimentally, but it would have been unable to test without this equipment. As the purchase occurred at the end of the grant period and the budget did not include this purchase, we determined that the timing of the equipment purchase did not fully benefit Award No. [REDACTED], thus making the purchase unallocable. Therefore, we questioned \$5,686 of costs associated with the capital equipment purchase.
- *August 2013 Charge against Expiring Award:* The PI of NSF Award No. [REDACTED] ordered supplies and materials (i.e., [REDACTED] tablets) on July 24, 2013, to conduct grant-related activities. The supplies and materials purchase was recorded in the GL on August 13, 2013; however, the award expired on August 31, 2013. The University stated that the tablets were purchased near the end of the award to capitalize on best value and future use in the continuation of the program. Thus, the timing of the purchase indicates the purchase did not benefit Award No. [REDACTED], but rather other research/award(s) outside the scope of this award, making the purchase unallocable. Therefore, we questioned \$2,381 of costs associated with the supplies and materials purchase.

Expenses Charged against Expired Award: Northwestern charged expenses (i.e. both indirect costs and direct costs, if applicable) against expired NSF awards, as follows:

- *September 2013 Charge against Expired Award:* The PI of NSF Award No. [REDACTED] purchased equipment (i.e., an [REDACTED]). The purchase was recorded in the GL on September 18, 2013, and had an invoice date of September 17, 2013; however, the award expired on August 31, 2013. Thus, the timing of the purchase indicates the equipment did not benefit Award No. [REDACTED], but rather other research/award(s) outside the scope of this award. Additionally, we noted that the purchase was recorded and misclassified as capital equipment, since the purchase was below the \$5,000 capital equipment threshold. Therefore, we questioned \$4,253 of costs associated with the equipment purchase.
- *September 2013 Charge against Expired Award:* The PI of NSF Award No. [REDACTED] purchased equipment (i.e., [REDACTED]). The transaction

was recorded in the GL on September 23, 2013, and purchased on September 5, 2013; however, the award expired on August 31, 2013. Thus, the timing of the purchase indicates the equipment did not benefit Award No. [REDACTED], but rather other research/award(s) outside the scope of this award. Additionally, we noted that the purchase was recorded and misclassified as capital equipment, since the purchase was below the \$5,000 capital equipment threshold. Therefore, we questioned \$3,610 of costs associated with the capital equipment purchase.

- September 2013 Charge against Expired Award:* The PI of NSF Award No. [REDACTED] ordered supplies and materials (i.e., a [REDACTED] Camera) on August 8, 2013. The supplies and materials transaction was recorded in the GL on September 24, 2013, and had an invoice date of September 9, 2013; however, the award expired on August 31, 2013. Thus, the timing of the purchase indicates the equipment did not benefit Award No. [REDACTED], but rather other research/award(s) outside the scope of this award. Therefore, we questioned \$3,055 of costs associated with the supplies and materials purchase.
- November 2013 Charge against Expired Award:* The PI of NSF Award No. [REDACTED] purchased non-capital equipment (i.e., [REDACTED]). The non-capital equipment transaction was recorded in the GL on November 14, 2013, and had an invoice date of September 16, 2013; however, the award expired on August 31, 2013. Thus, the timing of the purchase indicates the equipment did not benefit Award No. [REDACTED], but rather other research/award(s) outside the scope of this award. Therefore, we questioned \$2,366 of costs associated with the equipment purchase.
- September 2013 Charge against Expired Award:* The PI of NSF Award No. [REDACTED] purchased supplies and materials (i.e., rolled wires) on August 28, 2013. The materials and supplies transaction was recorded in the GL on September 16, 2013, and had a received date of October 1, 2013; however, the award expired on September 30, 2013. Thus, the timing of the purchase indicates the equipment did not benefit Award No. [REDACTED], but rather other research/award(s) outside the scope of this award. Therefore, we questioned \$586 of costs associated with the supplies and materials purchase.

Northwestern did not properly plan the purchase of items or equipment within the allotted period awarded to be operational for regular research. Further, Northwestern did not have sufficient policies and procedures in place to ensure that funds were not expended near or after the award expiration date. As a result, we questioned \$21,937 of expenses as follows:

Table 1. Unreasonable Expenses Near Award Expiration

Description	NSF Award No.	Questioned Costs
Unreasonable Expenses Charged near Award Expiration		\$ 8,067
Expenses Charged against Expired Award		13,870
Total Questioned Costs		\$ 21,937

Source: Auditor summary of questioned costs claimed.

Recommendations: Kearney recommends that NSF’s Director of the Division of Institution and Award Support direct Northwestern to:

1. Resolve the \$21,937 in questioned costs and repay the sustained questioned cost amounts, as directed by the NSF Resolution and Advanced Monitoring (RAM) Branch.
2. Develop policies and procedures to ensure purchases are made timely within the award period of performance to allow the purchases to be fully utilized in support of the award. For items that must be purchased near award expiration, ensure justification is documented, such as with details in the NSF proposal or prior NSF Grant Officer approval.

Northwestern’s Response: Northwestern agreed with the finding and will repay any costs not already refunded to NSF. Northwestern has implemented a cost allowability guide; is implementing a new enterprise system report, which will enable proactive review of account code classifications and expenditures periodically prior to award closeout; and will strengthen training on the Federal cost principles.

Auditor’s Additional Comments: Our position regarding this finding remains the same.

Finding 2 – Misapplication of Indirect Costs (IDC) on Capital Equipment

The indirect costs identified below were not applied in accordance with OMB Circular A-21, Appendix A, Section J.18.b(5)⁷ and Northwestern’s Equipment Policy Manual.⁸ Specifically, Northwestern inappropriately applied indirect costs on capital equipment to two NSF awards, totaling \$17,517 as follows:

Indirect Costs Inappropriately Applied to Capital Equipment: Northwestern inappropriately recovered \$17,517 of indirect costs applied to transactions that were coded to the incorrect account (i.e., to an account that incurred indirect costs [computer supplies] instead of the correct account that does not incur indirect costs [capital equipment]). As a result of the incorrect coding, Northwestern charged indirect cost expenses totaling \$4,853 on NSF Award No. [REDACTED] and \$12,664 on NSF Award No. [REDACTED]. This resulted in indirect costs being inappropriately applied, as follows:

Table 2. Misapplication of IDCs on Capital Equipment

Description	NSF Award No.	Questioned Costs
Indirect Costs Applied to Equipment	[REDACTED]	\$ 17,517
Total Questioned Costs		\$ 17,517

Source: Auditor summary of questioned costs claimed.

Northwestern did not have adequate oversight and controls in place to ensure indirect cost charges were properly applied to NSF awards. As a result, Northwestern inappropriately charged NSF for \$17,517 of indirect cost expenses.

Recommendations: Kearney recommends that NSF’s Director of the Division of Institution and Award Support direct Northwestern to:

1. Resolve the \$17,517 in questioned costs and repay the sustained questioned cost amounts, as directed by the NSF RAM Branch.
2. Take necessary steps to ensure Northwestern periodically reviews computer supplies and other related expenses, to ensure transactions over Northwestern’s capitalization threshold are classified appropriately.
3. Take necessary steps to ensure IDCs are not allocated on capital equipment by appropriately classifying and reviewing the nature of expenses that exceed Northwestern’s \$5,000 capitalization threshold.

⁷ OMB Circular A-21, Appendix A, Section J.18.b(5) states: “Equipment and other capital expenditures are unallowable as indirect costs.”

⁸ Northwestern’s Equipment Policy Manual states: “Capital equipment is tangible property having an acquisition value of \$5,000 or more and a useful life expectancy of one year or more.”

Northwestern's Response: Northwestern agreed with the finding and will repay any costs not already refunded to NSF. Northwestern will take the necessary steps to ensure expenses are classified appropriately and that IDCs are not allocated on capital equipment.

Auditor's Additional Comments: Our position regarding this finding remains the same.

Finding 3 – Unallowable or Unallocable General Expense Charges

Northwestern personnel charged \$7,174 of general expenses (i.e., direct costs and indirect costs, if applicable) to NSF awards that were not allowable, necessary, or allocable. Specifically, expenses for three NSF awards did not comply with OMB Circular A-21, as follows:

Unallocable Tuition Charges: Kearney identified two instances regarding tuition charges inappropriately allocated to NSF Awards, as follows:

- *September 2013 Tuition Charges:* On September 19, 2013, Northwestern inappropriately charged \$1,045 of tuition expenses to NSF Award No. [REDACTED] that did not correspond with the student's effort report.
- *October 2014 Tuition Charges:* On October 31, 2014, Northwestern inappropriately charged \$3,113 of tuition expenses to NSF Award No. [REDACTED]. According to Northwestern's Policy on Graduate Student Funding Entry Information,⁹ tuition funding is entered into the Student Enterprise System (SES). However, Northwestern mistakenly corrected a journal entry for tuition through Northwestern's Financial System (NUFIN). Subsequently, the department administrator corrected it in SES; however, the journal in the NUFIN system was never reversed, resulting in a duplicate entry. Thus, the allocability of \$3,113 of tuition expenses charged to the award were questioned.

Directly Charging Operational Cost: Northwestern inappropriately allocated an operational expense for alterations and renovations, totaling \$3,016, to NSF Award No. [REDACTED]. Specifically, Northwestern upgraded sample preparation/polishing stations and directly recorded the expense to the grant; however, these upgrades were actually operation and maintenance expenses. Kearney noted that these costs should be included as a part of the indirect cost associated with this award and should not be directly charged to the award.¹⁰ We further discussed the issue with Northwestern personnel, who agreed the expense was improperly charged to the NSF award, and the University has credited this expense to NSF.

Northwestern PIs overseeing the awards did not adequately review OMB Circular A-21 requirements or seek approval prior to charging the award. As a result, Northwestern inappropriately charged \$7,174 of expenses, which were unallowable or unallocable to the awards, as follows:

⁹ Northwestern's Graduate Student Funding Entry Information, states: "SES/Smart Pages: The Student Enterprise System (SES) is the student information system. Stipend funding information is entered in this system, but does not trigger a paycheck (except at the time of the annual interface described above). Tuition (and health insurance subsidy) funding is also entered in this system, and this does result in the payment being applied to the student's account. Smart Pages is a user friendly interface within SES used for entering funding." <https://www.weinberg.northwestern.edu/graduate/documents/grad-student-funding-entry-info.pdf>

¹⁰ OMB Circular A-21, Appendix A, Section E.2.e(2), states: "Depreciation and use allowances, operation and maintenance expenses, and general administrative and general expenses should be allocated in that order to the remaining F&A cost categories as well as to the major functions and specialized service facilities of the institution."

Table 3. Unallowable or Unallocable General Expense Charges

Description	NSF Award No.	Questioned Costs
Unallocable Tuition Charges		\$ 4,158
Directly Charging Operational Cost		3,016
Total Questioned Costs		\$ 7,174

Source: Auditor summary of questioned costs claimed.

Recommendations: Kearney recommends that NSF's Director of the Division of Institution and Award Support direct Northwestern to:

1. Resolve the \$7,174 in questioned costs and repay the sustained questioned cost amounts, as directed by the NSF RAM Branch.
2. Ensure that PIs are informed on the applicable cost principles of reasonableness and allocability for Federal awards in OMB Circular A-21 for awards made prior to December 26, 2014, and 2 CFR Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, for awards made after December 26, 2014.
3. Additionally, Northwestern should periodically monitor its PIs' accounts to ensure appropriate use.

Northwestern's Response: Northwestern agreed with the finding and will repay any costs not already refunded to NSF. Northwestern routinely conducts training regarding the Federal cost principles, and has implemented trainings for PIs and school/department administrators. Northwestern will also strengthen training on the Federal cost principles.

Auditor's Additional Comments: Our position regarding this finding remains the same.

Finding 4 – Unreasonable, Unallowable, or Unsupported Travel Costs

Northwestern charged \$3,589 of unreasonable, unallowable, or unsupported travel expenses (i.e., direct costs and indirect costs, if applicable) to three NSF awards during the sampled period. Specifically, the University inappropriately charged airfare expenses for individuals that were not Northwestern employees, students, or participants; PI airfare expenses after the award expired; and unallowable Visa fees to NSF awards, as follows:

Non-Participant Support Travel for Non-Northwestern Employees: Travel expenses to Houston and Phoenix, totaling \$2,188, were charged to NSF Award No. [REDACTED]. In both instances, the individual traveling did not appear as a PI or within Northwestern’s payroll, and this expense was not charged under a participant support travel account. Additionally, Northwestern did not provide documentation to support any benefit of this travel to NSF Award No. [REDACTED]. Therefore, we questioned \$2,188 of travel expenses as unallocable to the grant.

PI Travel Expenses to Expired Award: Northwestern charged \$1,041 of unreasonable PI Travel expenses that were not in accordance with NSF policies or Northwestern travel policies. Specifically, on November [REDACTED], 2013, the PI of NSF Award No. [REDACTED] attended a conference in [REDACTED], which occurred after the award had expired on August 31, 2013.

NSF policies¹¹ and Northwestern travel policies¹² prohibit travel expenses charged to sponsored projects if travel does not occur within the specified award period.

Unallowable Visa Fee: Northwestern charged travel expenses for an international visa fee, totaling \$360, to NSF Award No. [REDACTED]. The visa fee was not supported by documentation to demonstrate an allowable expense; therefore, we questioned \$360 related to the visa fee. We further discussed the issue with Northwestern personnel, who agreed the expense was improperly charged to the NSF award, and the University has credited this expense to NSF.

Northwestern did not have appropriate policies and procedures in place to ensure that travel expenses were appropriately reviewed and approved to verify that claimed costs complied with all relevant Northwestern and Federal policies before the travel costs were charged to NSF. As a result, Northwestern inappropriately charged unreasonable, unallowable, and unsupported travel expenses to NSF awards, and we questioned \$3,589 of expenses as follows:

¹¹ See NSF *Award and Administration Guide*, Chapter V, Section A.2.c: “Post-Expiration Costs.”

¹² Per Northwestern’s Travel policy, Sponsored Programs – *Special Considerations*, Section (a), “Allowable Travel for Sponsored Projects,” states: “All travel must be completed within the beginning and end dates of the sponsored program.”

Table 4. Unreasonable, Unallowable, or Unsupported Travel Costs

Description	NSF Award No.	Questioned Costs
Non-Participant Support Travel for Non- Northwestern Employees		\$ 2,188
PI Travel Expenses to Expired Award		1,041
Unallowable Visa Fee:		360
Total Questioned Costs		\$ 3,589

Source: Auditor summary of questioned costs claimed.

Recommendations: Kearney recommends that NSF's Director of the Division of Institution and Award Support direct Northwestern to:

1. Resolve the \$3,589 in questioned costs and repay the sustained questioned cost amounts, as directed by the NSF RAM Branch.
2. Take necessary steps to ensure the allowability, allocability, and reasonableness of costs before charging to NSF awards.

Northwestern's Response: Northwestern agreed with the finding and will repay any costs not already refunded to NSF. Northwestern has strengthened its internal controls regarding travel and visa costs before charging NSF awards. In addition, Northwestern has implemented a cost allowability guide to provide more in-depth information regarding the allowability of travel and visa costs.

Auditor's Additional Comments: Our position regarding this finding remains the same.

Finding 5 – Unsupported or Incorrect Charges to Participant Support

Participant Support Costs (PSC) used for Employee Travel: The *NSF Proposal and Award Policies and Procedures Guide, Part II – Award and Administration Guide*, Chapter V, Section 8.a defines participant support costs as: “direct costs for items such as stipends or subsistence, travel allowances, and registration fees paid to or on behalf of participants or trainees in connection with conferences or training projects. Participant support costs should not be used for University employees, unless specifically permitted under that provision.” Northwestern inappropriately charged PSC to NSF Award No. [REDACTED]. Specifically, in May 2015, Northwestern purchased two airline tickets, one for \$716 and one for \$528, for Northwestern employees to travel to a conference in [REDACTED], using funds allocated in the budget for PSC.

NSF’s policies and procedures,¹³ as well as Northwestern’s PSC policies and procedures,¹⁴ require the University to request approval before shifting funds from PSC to other categories; however, Northwestern did not appropriately obtain that approval prior to incurring the travel expenses. As a result, we questioned \$1,244 travel expenses inappropriately charged to this award, as follows:

Table 5. Unsupported or Incorrect Charges to Participant Support

Description	NSF Award No.	Questioned Costs
PSC used for Employee Travel	[REDACTED]	\$ 1,244
Total Questioned Costs		\$ 1,244

Source: Auditor summary of questioned costs claimed.

Recommendations: Kearney recommends that NSF’s Director of the Division of Institution and Award Support direct Northwestern to:

1. Resolve the \$1,244 in questioned costs and repay the sustained questioned cost amounts, as directed by the NSF RAM Branch.
2. Develop new policies and procedures that require Northwestern to obtain prior approval from the assigned Grant Officer prior to reallocating funds from PSC to other budget categories.

Northwestern’s Response: Northwestern agreed with the finding and will repay any costs not already refunded to NSF. Northwestern’s procedures require prior approval from the assigned Grant Officer prior to reallocating funds from PSC to other budget categories. Northwestern

¹³ *NSF Proposal and Award Policies and Procedures Guide (PAPPG), Part II – Award and Administration Guide, Chapter II, Section C.2.g(v)*, states: “Proposers are advised that Article 12 of the NSF Agency Specific Requirements to the Research Terms and Conditions and Grant General Conditions (GC-1) Article 7, require the grantee to obtain written authorization from the cognizant NSF program officer prior to the reallocation of funds budgeted for participant support.”

¹⁴ *Northwestern Participant Support Costs Policies*, states: “Rebudgeting from the participant support cost category into other categories without prior sponsor approval is not allowed.”

believes this was an isolated incident and will take the necessary steps to adhere to this procedure.

Auditor's Additional Comments: Our position regarding this finding remains the same.

Finding 6 – Non-Financial Impact Finding – Misclassifications

Northwestern personnel charged \$35,169 of incorrectly classified expenses to NSF awards (i.e., costs claimed were allowable and valid; however, expenses were recorded under an incorrect account/budget category within the University financial system of record). No financial impact was recognized, other than the misclassification of accounts. The misclassification costs identified below are as follows:

Misclassified Payroll Expenses: We identified two instances where Northwestern personnel misclassified valid payroll expenses, as follows:

- *2013 Payroll Expenses:* Northwestern misclassified \$8,807 of payroll expenses to NSF Award No. [REDACTED] and another \$3,973 to NSF Award No. [REDACTED]. In both instances, payroll expenses for program coordinators were recorded under Northwestern's Secretarial/Clerical account code; however, this position was budgeted as "Other Personnel."

Misclassified Travel Expenses: We identified four instances where Northwestern personnel misclassified valid travel expenses, as follows:

- *November 2014 Travel Expense:* Northwestern misclassified \$6,000 of consultant travel expenses to NSF Award No. [REDACTED]. Specifically, transaction was recorded as PSC; however, there were no funds budgeted to PSC.
- *February 2015 Travel Expense:* Northwestern misclassified \$1,579 of travel expenses to NSF Award No. [REDACTED]. Specifically, the PI of the award traveled to [REDACTED] to give a lecture and collaborate with colleagues; however, Northwestern recorded the transaction under Domestic Travel.
- *April 2015 Travel Expense:* Northwestern misclassified \$700 of foreign conference registration fee expenses to NSF Award No. [REDACTED]. Specifically, a transaction for an [REDACTED] membership fee for the PI for "professional development" was recorded under Northwestern's Domestic Travel account; however, the conference was held in [REDACTED].
- *April 2016 Travel Expense:* Northwestern misclassified \$3,102 of travel expenses to NSF Award No. [REDACTED]. Specifically, a University graduate student traveled to [REDACTED]; however, Northwestern recorded the transaction under Domestic Travel.

Misclassified Warranty Expenses: We identified two instances where Northwestern personnel misclassified valid expenses as capital equipment, as follows:

- *December 2013 Warranty Expense:* Northwestern misclassified \$5,504 of warranty expenses to NSF Award No. [REDACTED] and another \$5,504 to NSF Award No. [REDACTED]. Specifically, expenses were categorized under Capital Equipment; however, the budget

did not have any funds allocated towards capital equipment and the expenses were for warranty costs.

Northwestern personnel did not accurately classify expenses, nor did they perform a review to determine whether expenses were classified appropriately in order to accurately determine spending against the budget categories in the proposals. As a result, we identified \$35,169 of misclassified expenses charged to NSF awards, as follows:

Table 6. Non-Financial Impact Finding – Misclassifications

Description	NSF Award No.	Questioned Costs
Misclassified Payroll Expenses		\$ 12,780
Misclassified Travel Expenses		11,381
Misclassified Warranty Expenses		11,008
Total Questioned Costs		\$ 35,169

Source: Auditor summary of questioned costs claimed.

Recommendations: Kearney recommends that NSF’s Director of the Division of Institution and Award Support direct Northwestern to:

1. Develop new policies and procedures that require Northwestern to strengthen controls and periodically review expense classifications.

Northwestern’s Response: Northwestern agrees with this recommendation. Northwestern has implemented a cost allowability guide and is implementing a new enterprise system report, which will enable proactive review of account code classifications and expenditures periodically prior to award closeout.

Auditor’s Additional Comments: Our position regarding this finding remains the same.

Appendix A: Objectives, Scope, and Methodology of the Audit

Objective

As requested by the National Science Foundation (NSF) Office of Inspector General (OIG), Kearney & Company, P.C. (defined as “Kearney,” “we,” and “our” in this report) audited a sample of Northwestern University’s (defined as “Northwestern” or “University” in this report) claimed costs on NSF awards. Kearney conducted this performance audit in accordance with Generally Accepted Government Auditing Standards (GAGAS), issued by the Comptroller General of the United States.

NSF OIG initiated an audit of costs claimed by the University on NSF awards made to the University. The audit objective was to determine whether costs claimed were allowable, allocable, reasonable, and in conformity with NSF award terms and conditions and applicable Federal financial assistance requirements. Kearney conducted the performance audit by testing costs claimed by the University and reporting on only the transactions provided.

Scope

NSF OIG engaged Kearney to conduct a performance audit of an NSF OIG-selected sample of costs incurred by Northwestern on NSF awards for the period of July 1, 2013, to June 30, 2016. Our audit included assessing the allowability, allocability, and reasonableness of the sample of 250 transactions initially selected by NSF OIG from a population of 249,049 transactions provided by Northwestern at the request of NSF. As of June 30, 2016, Northwestern received 623 NSF awards with expenditures totaling \$129,059,134 during the scope of the audit. Our work required reliance on computer-processed data obtained from Northwestern and NSF OIG.

Methodology and Work Performed

Kearney conducted this performance audit in accordance with GAGAS for performance audits, as prescribed in the 2011 Revision of *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that Kearney plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for the findings and conclusions based on the audit objectives. We believe that the evidence obtained provides a reasonable basis for the findings and conclusions based on the audit objectives. As a basis for our performance audit, the Audit Team used the NSF award documentation; NSF policies; Office of Management and Budget (OMB) Circular A-21, *Cost Principles for Educational Institutions*; OMB Circular A-110, *Uniform Administrative Requirements for Grants and Other Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations*; and 2 Code of Federal Regulations (CFR) Part 200 *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* to determine whether costs were in compliance and were allowable, allocable, and reasonable.

To meet the performance audit objectives, Kearney specifically:

- reviewed NSF policy and OMB guidance;
- tested a sample of 250 expenditures selected by NSF OIG for compliance with grant terms and conditions; and
- requested and reviewed supporting documentation from Northwestern for each sample item to ensure validity and compliance with grant requirements.

To ensure completeness of the Northwestern data provided for the audit period, NSF OIG analyzed schedules and reconciliations prepared by Northwestern and agreed them to the accounting records. After ensuring completeness, NSF OIG conducted data mining and analytical procedures over the universe of data provided by Northwestern. NSF OIG compiled a judgmental sample list of an initial 250 transactions based on criteria, including, but not limited to, transactions of unusual spending trends, inconsistencies, even dollar amounts, large dollar amounts, duplicate transactions, descriptions indicating potentially unallowable costs, frequency, and transactions near or after award expiration.

Kearney requested supporting documentation for the 250 transactions from Northwestern, and we reviewed the support provided by the University to determine the allowability, allocability, and reasonableness of expenditures. When necessary, we obtained additional support or explanations from Northwestern to determine whether the transactions were valid. Kearney reported the results and findings within the body of this performance audit report. The results of our findings were not projected over the entire award population tested in our audit period.

Work Related to Internal Controls

Northwestern management is responsible for establishing and maintaining effective internal control to help ensure that Federal award funds are used in compliance with laws, regulations, and award terms. In planning and performing our audit, we considered Northwestern's internal control over awards related to financial reporting solely for the purpose of understanding the policies and procedures relevant to the financial reporting and administration of NSF awards in order to evaluate Northwestern's compliance with laws, regulations, and award terms applicable to the items selected by NSF OIG for testing, but not for the purpose of expressing an opinion on the effectiveness of Northwestern's internal control over award financial reporting and administration. Accordingly, we do not express an opinion on the effectiveness of Northwestern's internal control.

Appendix B: Schedule of Questioned Costs by Finding

**NATIONAL SCIENCE FOUNDATION
ORDER # D14PB00559
PERFORMANCE AUDIT OF COSTS CLAIMED ON NSF AWARDS
NORTHWESTERN UNIVERSITY**

SCHEDULE OF QUESTIONED COSTS BY FINDING

Finding	Description	Questioned Costs		Total
		Unsupported	Unallowable	
1	Unreasonable Expenses Near Award Expiration	\$ 0	\$ 21,937	\$ 21,937
2	Misapplication of Indirect Costs (IDC)	0	17,517	17,517
3	Unreasonable or Unallocable General Expense Charges	0	7,174	7,174
4	Unreasonable, Unallowable, or Unsupported Travel Costs	0	3,589	3,589
5	Unsupported or Incorrect Charges to Participant Support	0	1,244	1,244
Total		\$ 0	\$ 51,461	\$ 51,461
N/A	Misclassified Expenses – (Costs not questioned)	N/A	N/A	\$ 35,169
Total				\$ 35,169

Source: Auditor summary of findings over NSF-provided data from Northwestern during the period of July 1, 2013, to June 30, 2016

Appendix C: Northwestern University Response

Northwestern

Northwestern University
Office of Financial Operations
619 Clark Street, Room 111
Evanston, Illinois 60208

m-daniels2@northwestern.edu
Office: 847.491.47

November 30, 2018

Marcos Vigil
Kearney & Company, P.C.
1701 Duke Street | Suite 500
Alexandria, VA 22314

Dear Mr. Vigil,

Northwestern University submits the following comments in response to the final draft audit report, Performance Audit of Claimed Costs for National Science Foundation awards for the period July 1, 2013 through June 30, 2016, provided by Kearney & Company on behalf of the National Science Foundation (NSF) Office of Inspector General.

Finding 1 – Unreasonable Expenses Near and After Award Expiration - \$21,937

Northwestern agrees with this audit finding. Northwestern will repay any costs not already refunded to NSF. Northwestern has implemented a cost allowability guide to provide more in-depth information regarding the allowability of charging sponsored projects. Further, Northwestern is implementing a new enterprise system report, Grants Transaction History Queries, which will enable school/department administrators to proactively review the expenditures periodically prior to the award closeout. The report is expected to be released by February, 2019.

Northwestern will also strengthen training on the Federal cost principles by providing information regarding the reasonableness of expenses near award expiration in the quarterly research administration training seminars and semi-annual post award networking events.

Finding 2 – Misapplication of Indirect Costs (IDC) on Capital Equipment - \$17,517

Northwestern agrees with this audit finding. Northwestern will repay any costs not already refunded to NSF. Northwestern will take the necessary steps to ensure these expenses are classified appropriately and that IDCs are not allocated on capital equipment.

Finding 3 – Unallowable or Unallocable General Expense Charges - \$7,174

Northwestern agrees with this audit finding. Northwestern will repay any costs not already refunded to NSF. Northwestern routinely conducts training regarding the Federal cost principles, and has created online training classes available to Principal Investigators and school/department administrators.

In addition, Northwestern will strengthen training on the reasonableness and allocability of the Federal cost principles for presentations in the quarterly research administration training seminars and semi-annual post award networking events.

Finding 4 – Unreasonable, Unallowable, or Unsupported Travel Costs - \$3,589

Northwestern agrees with this audit finding. Northwestern will repay any costs not already refunded to NSF. Northwestern has strengthened its internal controls regarding processing, approving, and monitoring the allowability, allocability, and reasonableness of travel and visa costs before charging NSF awards. In addition, Northwestern has implemented a cost allowability guide to provide more in-depth information regarding the allowability of travel and visa costs.

Finding 5 – Unsupported or Incorrect Charges to Participant Support - \$1,244

Northwestern agrees with this audit finding. Northwestern will repay any costs not already refunded to NSF. Northwestern's procedure requires prior approval from the assigned Grant Officer prior to reallocating funds from PSC to other budget categories. Northwestern believes this was an isolated incident and will take the necessary steps to adhere to this procedure.

Finding 6 – Non-Financial Impact Finding – Misclassifications - \$35,169

Northwestern agrees with this recommendation. In addition to the current internal controls environment under which sponsored expenditures are reviewed and approved by multiple stakeholders, Northwestern has implemented a cost allowability guide to provide more in-depth information regarding the allowability of charging sponsored projects. Further, Northwestern is implementing a new enterprise system report, Grants Transaction History Queries, which will enable school/department administrators to proactively review the account code classifications and expenditures periodically prior to the award closeout. The report is expected to be released by February, 2019.

Northwestern University appreciates the opportunity to review and provide comments to the final draft report. We want to acknowledge the professional manner in which Kearney And Company staff conducted the audit, and for their timely communication and updates throughout the process. Please contact me if you have any questions.

Sincerely,



Michael Daniels
Executive Director, Research Financial Operations



NATIONAL SCIENCE FOUNDATION
OFFICE OF INSPECTOR GENERAL