



**National Science Foundation**

4201 Wilson Boulevard  
Arlington, Virginia 22230

Office of Inspector General

**MEMORANDUM**

**DATE:** November 24, 2014

**TO:** Jeffery Lupis, Director  
Division of Acquisition and Cooperative Support (DACS)

**FROM:** Dr. Brett M. Baker   
Assistant Inspector General for Audit

**SUBJECT:** NSF OIG Audit Report No. OIG-15-6-001, Observations that Warrant NSF's Attention Found during Audit on National Ecological Observatory Network, Inc.

We contracted with the Defense Contract Audit Agency (DCAA) to complete an audit of National Ecological Observatory Network, Inc.'s (NEON) accounting system. The purpose of this audit was to determine if NEON's accounting system is in compliance with grant terms. As part of this audit, DCAA issued two reports: a letter with observations and recommendations concerning NSF's grant policies and guidance to awardees, attached to this memo; and an audit report with a recommendation regarding NEON's practices, issued in a separate transmittal.<sup>1</sup>

**Background**

DCAA provides services in connection with negotiation, administration, and settlement of awards to ensure taxpayer dollars are spent on fair and reasonable prices. In 2012, DCAA audited NEON's construction proposal budget.<sup>2</sup> DCAA rendered an adverse opinion on NEON's proposal since the audit disclosed significant questioned and unsupported costs of \$154.4 million (nearly 36% of the proposed \$433.7 million budget). Of the total exception amount of \$154.4 million, \$72.6 million (47%) were questioned contingencies. In February 2013, we contracted an accounting system audit because of the significance of the findings in that report.

**Summary**

As part of the NEON accounting system audit, DCAA issued *Observations that Warrant Attention of the NSF-OIG* and provided recommendations in three areas (Contingency Expenditures, Management Fees, and NSF Policy on Reporting Fraud, Waste and Abuse) to help NSF improve its management controls and to protect taxpayer dollars. The observations and recommendations for OIG's consideration are described below.

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<sup>1</sup> NSF-OIG Report No. 15-1-001, *Independent Audit Report on National Ecological Observatory Network, Inc.'s Accounting System*, dated November 20, 2014

<sup>2</sup> NSF-OIG Report No. 12-1-008, *Audit of NEON, Inc.'s Proposed NEON Construction Budget*, dated September 28, 2012

### Contingency Expenditures

DCAA concluded there is a need for NSF to improve safeguards and accountability over the significant contingency funds included in NSF awards. DCAA audits have found that contingency costs are estimated based on percentage factors, yet are not supported by accounting, statistical, or other relevant data, nor by a process to accumulate actual costs for comparison with such percentage estimates. In its previous NEON proposal audit, DCAA found unsupported bases of estimate for NEON's proposed contingency costs (\$72.6 million); but, in this accounting system audit, found that NEON claimed an even greater contingency budget (\$74.2 million) in the NEON award.<sup>3</sup> As a result of inadequate support for the contingency estimate, NSF lacks a sound basis to determine how much contingency should be included in award budgets, which could lead to significant overfunding.

Additionally, in its accounting system audit, DCAA found no requirement in the NEON grant terms for NEON to track the actual use of contingency expenditures. DCAA explained that 2 CFR 215 requires awardees to be able to compare outlays with budget amounts for each award, but noted that this regulation is not specific to contingency expenditures or the tracking of those expenditures. However, as a result of NEON's not tracking the actual use of contingency expenditures in its accounting records, NSF has no visibility over how contingency funds are actually spent. Further, NEON could not provide a comparison of the contingency expended either for a particular account (because contingency expenditures are not distinguishable from non-contingency expenditures in NEON's accounting records) or at the Work Breakdown Structure (WBS) level, which was the level at which NEON estimated its proposed contingency costs. In any case, a meaningful comparison of contingency expenditures with estimated contingencies by WBS is not possible because NEON's accounting practices are not consistent with its estimating practices for contingencies.

According to NSF's Large Facility Manual, the total of the base project cost estimate and contingency estimate will be the basis for an NSF budget request to Congress. Regarding NEON's estimating practices, DCAA noted that contingency is estimated by NEON at the WBS level, such that, "NEON estimates specific WBS costs with two components: 1) discrete cost elements for elements of cost, and 2) an additional "contingency" amount..." However, contingency is not allocated to (or kept within) the WBS elements on which it was estimated, but is pooled and held in reserve (for use on the project as the need arises). So, contingency proposed, based on a particular WBS, may ultimately be used to satisfy a requirement under a different WBS. Further, "NSF guidebooks, cooperative agreement, and regulations do not require separate accounting for a contingency...Once NEON incurs an expense it pays for with "contingency funds," the cost on NEON's books and records is not (recorded as) a "contingency" as described in OMB non-profit cost principles, but a specific cost element to a specific WBS..." Generally, once expenditure is made, even if from contingency funds, the expense is recorded in NEON's accounting records as an expenditure of a specific cost element within a WBS and is no longer identifiable as an expense paid using contingency funds.

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<sup>3</sup> NSF Award No. EF-1029808, *Cooperative Support Agreement for MREFC of the NEON*

NEON maintains a Contingency Log that provides a list of approved budgeted amounts of contingencies that are to be spent on the items identified, but the log does not identify actual expenditures made from contingency funds. NSF cooperative support agreements require NEON to report on its use of contingency throughout the performance of the project. NEON has documented Contingency Management and Risk Management Plans, which include documenting changes approved by the Configuration Control Board and notifying NSF via the Contingency Control Log. DCAA verified that NEON received approval for contingency requests greater than the NSF-specified threshold of \$150,000.

Given the present lack of controls, there is virtually no accountability over the contingency funds, either at the expenditure phase or at the estimating phase. NSF does not have sufficient safeguards over the significant and unsupported contingency costs included in NEON's award budget.

DCAA recommended that NSF be required to strengthen its Grant Policy and guidance to awardees with respect to contingencies on construction projects with regard to estimating, monitoring, and accounting for contingency expenditures. Specifically, DCAA recommended that NSF require an awardee to (i) separately track, in more detail than what the awardees are currently doing, the use of the proposed contingency costs in the budget control log as a condition of the award (such that the awardee identifies the actual expenditure in the log compared with the estimated contingency by WBS), and (ii) provide fully supported bases of estimate for contingencies. The objective of the increased tracking is to provide NSF with better oversight of how the contingency is used and if the costs incurred are reasonable.

Additionally, DCAA reported a scope limitation regarding contingency expenditures in its accounting system audit report (under separate transmittal, as stated at the beginning of this memo). This was because DCAA was unable to determine how much of NEON's \$74.2 million in total budgeted contingency funds that NEON had used from August 2011 to March 2013 (approximately \$4.5 million according to NEON's Contingency Log) may have been used for unapproved scope changes. (According to NEON, approximately \$12.4 million of contingencies had been spent through June 2014.) DCAA further stated that, had it completed its planned procedures (i.e., received a technical evaluation), it may have identified additional noncompliances.

During the audit, the auditor found possible indications of NEON's use of contingency funds for out-of-scope changes, for which NEON did not provide evidence of NSF prior written approval. 2 CFR 215.25(h) requires prior written approval from the Federal awarding agency whenever changes in scope or objective occur. Thus, we believe there is a need for NSF program officials with the appropriate technical expertise to examine NEON's use of contingency funds (i.e., all items in NEON's Contingency Log) to determine if each use of those funds was for in-scope or out-of-scope changes in the project or program. Any instance of out-of-scope use of contingency funds would be cause for NSF to address inappropriate use of the funds and strengthen its monitoring and management controls to prevent any further unauthorized use of federal funds.

## Management Fees

During its post-award accounting system audit, DCAA found that Award No. EF-1029808, Amendment 20, established a not-to-exceed ceiling of \$ [REDACTED] for management fee for the life of the NEON cooperative support agreement. DCAA concluded there is a need for NSF to improve accountability over management fees by monitoring its awardees' use of the fees. Monitoring of the types of costs being incurred as a fee is not required by the NEON cooperative agreement. DCAA reviewed NEON's use of management fee from 9/20/12 to mid-April 2013 and found that NEON billed NSF for such normally unallowable costs as \$25,000 for a Christmas party, \$11,000 for coffee services for employees, \$3,000 for Board of Director dinners (which included alcohol), \$3,000 for t-shirts and other apparel for Contractor employees, \$83,000 for "business development," and \$112,000 for lobbying. OMB Circular A-122 (Attachment B, sections 3, 14, and 25) contains provisions that make costs for entertainment, lobbying, and alcohol unallowable.

DCAA found that NEON and NSF negotiated a management fee in the cooperative agreements that NEON uses to pay unallowable/non-reimbursable costs incurred by NEON. In April 2013, NEON confirmed in an email to DCAA that it was drawing down or billing the fee to NSF on an incurred cost basis, in the context of reimbursement for incurred unallowable costs, the same as any (allowable) cost. DCAA reported that the NSF Proposal Award Policies and Procedures Guide and the NSF Grant Policy Manual address fee in general terms, making it clear that fee is permissible if approved by the grants/agreements officer, which it was. DCAA could find no regulation that prohibits the payment of a management fee under a cooperative agreement to a non-profit entity.

The cooperative agreements awarded to NEON by NSF show the initial management fees were established at amounts needed to cover expenses that were not reimbursable as costs under the cooperative agreements but were incurred in the operation of the non-profit entity. According to DCAA, subsequent awards were made without consideration of the need to reimburse specific unallowable costs. For example, EF-1247476 of the cooperative agreement established a Not-To-Exceed amount of \$ [REDACTED] for management fee for the life of the cooperative agreement (which at the time of award had several years left). The management fee established for EF-1247476 is [REDACTED], which is at the low end of NEON's stated policy of assessing fees of [REDACTED] on NSF projects. However, DCAA was unable to find any NSF Grant Policy determining when a fee should be awarded or limits on how it is to be used by a non-profit awardee.

DCAA also informed us that it found no other specific NSF authority for the practice of reimbursing unallowable costs as a management fee. However, NSF has noted in the past this practice is consistent with the Foundation's general authority set forth at 42 USC 1870(c).

DCAA recommended that OIG consider requiring NSF to strengthen the NSF Grant Policy to specify requirements for determining and monitoring the award of management fee. DCAA also recommended that OIG benchmark with other federal agencies to determine their use of management fee and how other agencies allow the use of that fee.

DCAA did not examine NSF's process to negotiate and award management fees. We are in the process of having audits performed of the negotiation and use of management fees at selected non-profit organizations to which NSF has granted management fees. Based on the results of these audits, we will make recommendations to NSF.

#### NSF Policy on Reporting Fraud, Waste and Abuse

DCAA also concluded that there is a need for NSF to improve accountability over its policy on reporting fraud, waste, and abuse. DCAA noted that the NSF Grant Policy Manual does not require awardees to provide a mechanism for its employees to report suspected fraud, waste, abuse, and noncompliances directly to the NSF-OIG. Thus, DCAA recommended that NSF be required to strengthen the NSF Grant Policy to specify requirements for reporting irregularities or potential irregularities by awardees and awardee employees. The policy could be similar to the requirements in FAR 52.203-13, which requires an internal reporting mechanism such as a hotline, which allows for anonymity, or confidentiality, by which employees may report irregularities.

#### **Recommendations**

We recommend that NSF take appropriate action to strengthen its policies and procedures and guidance to awardees with respect to contingency costs, management fees, and reporting fraud, waste and abuse, and modify its cooperative agreements and grants accordingly. The objective is to improve supporting documentation and accountability over costs estimated, incurred and billed to NSF under NSF-funded projects, including the NEON project. Such actions would include adopting DCAA's recommendations and the recommendations listed below.

Specifically, NSF should:

1. strengthen its Grant Policy and guidance to awardees with respect to contingencies on construction projects with regard to estimating, monitoring, and accounting for contingency expenditures. Specifically, NSF should require awardees to (i) separately track, in more detail than what awardees are currently doing, the use of the proposed contingency costs in the budget control log as a condition of the award (such that the awardee identifies the actual expenditure in the log compared with the estimated contingency by WBS), and (ii) provide fully supported bases of estimate for proposed contingencies before including them in awards, or internally hold contingency funds until a bona fide need materializes and adequate supporting documentation becomes available;
2. work with NEON and other applicable awardees with contingencies in their awards to determine if any of their use of contingency funds represent out-of- scope changes for which NSF's prior written approval was not obtained and, if out-of-scope changes are found, take appropriate financial action with the noncompliant awardee(s); and strengthen NSF's monitoring and management controls over awarded contingency funds by establishing a process to determine if scope is increased at the WBS level to ensure out-of-scope changes do not occur; and

3. strengthen the NSF Grant Policy to specify requirements for reporting irregularities or potential irregularities by awardees and awardee employees.

DCAA is responsible for the attached letter, and the conclusions and recommendations expressed in that letter.

This memo is related to the work on NEON's accounting system done under OIG Report No. 15-1-001, and brings to NSF's attention issues identified during that work that warrant corrective action. In accordance with OMB Circular A-50, NSF and OIG should agree on a corrective action plan for resolution of all findings. Please provide us your proposed corrective plan within 60 calendar days.

We thank you and your staff for the assistance extended to us during the audit. If you have any questions about this report, please contact Jannifer Jenkins at (703) 292-4996 or David Willems at (703) 292-4979.

Attachments:

DCAA Letter, *Observations that Warrant Attention of the NSF-OIG*, dated October 23, 2014

cc: Martha Rubenstein, BFA  
Mary Santonastasso, DIAS  
Matthew Hawkins, LFO  
Fae Korsmo, OD  
Michael Van Woert, NSB  
Ruth David, NSB



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IN REPLY REFER TO

3121-2013J17741001

October 23, 2014

National Science Foundation  
Office of the Inspector General  
4201 Wilson Boulevard  
Arlington, VA 22230

**SUBJECT:** Observations that Warrant Attention of the NSF-OIG

Dear Mr. Willems:

This letter replaces a previous letter issued with this subject on October 6, 2014. The only change from the previous letter is a clarification made to the last sentence of the first paragraph under the Contingency Expenditures section below.

DCAA's mission is to perform all necessary contract audits for the Department of Defense and provide accounting and financial advisory services regarding contracts and subcontracts to all DoD Components responsible for procurement and contract administration. These services are provided in connection with negotiation, administration, and settlement of contracts and subcontracts to ensure taxpayer dollars are spent on fair and reasonable contract prices. DCAA shall provide contract audit services to other Federal agencies, as appropriate and when requested.

Your request for audit of the National Ecological Observatory Network, Inc.'s (NEON) accounting system falls within our audit purview. We performed the accounting system audit and reported the results in Audit Report Number 03121-2014J11090001, dated October 3, 2014 (Enclosure 1). As part of your request for an accounting system audit, you also asked our office to provide information on whether NEON's accounting system is designed to adequately track contingency expenditures in accordance with 2 CFR 215 (OMB Circular A-110). While we found no requirement in 2 CFR 215 for tracking contingency expenditures (discussed further below), we note that EF-1138160 Award Specific Programmatic Terms and Conditions No. 6, required NEON to notify the NSF of all proposed uses of contingency via a change control database. NEON's contingency control log provides that notification to NSF.

Nevertheless, we are providing information related to your concerns with contingencies and other matters that came to our attention. We believe the information presented below will help NSF improve its management controls in those areas.



SUBJECT: Observations that Warrant Attention of the NSF-OIG

### Contingency Expenditures

As mentioned above, based on what we noted during the accounting system audit, there is no requirement for NEON to track the actual use of contingency in its awards. 2 CFR 215 only requires comparison of outlays with budget amounts for each award. It is not specific to contingency expenditures or the tracking of those expenditures. NEON maintains a Contingency Log in which it captures approved budget for contingency expenditures to be made from “contingency funds.”

NSF has a “Draft Definition and Use of Contingency Resources in NSF Facility Construction” document that instructs awardees to develop estimates of contingency costs representing anticipated cost growth for major construction projects such as the NEON observatories. The contingency estimate represents the portion of the project’s construction budget to account for unknowns relating to the requirements and the uncertainty that are within the scope of the project (Definition and Use of Contingency Resources in NSF Facility Construction – May 6, 2004 Draft, p. 3). NSF’s *Risk Management Guide for Large Facilities* (2012) defines contingency as “the amount added to an estimate to allow for items, conditions, or events for which the state, occurrence, or effect is uncertain and that experience shows will likely result, in aggregate, in additional costs” (p. 16). Contingency includes “items such as planning and estimating errors and omissions, minor labor or material price fluctuations, design developments and changes within the project scope, labor productivity losses due to congestion or contractor interferences, and variations in market and environmental conditions” (Risk Management Guide for Large Facilities (NSF Publication No. NSF 12-048), p. 6). The total of the base project cost estimate and contingency estimate will be the basis for a NSF budget request to Congress (Large Facilities Manual (NSF Publication No. NSF 13-38), p. 8 and 20).

NSF guidebooks, cooperative agreement, and regulations do not require separate accounting for a contingency as used in the nature and context of contingency by the NSF. NEON estimates specific WBS costs with two components; (i) discrete cost estimates for elements of cost, and (ii) an additional “contingency” amount for anticipated cost growth due to various factors. Once NEON incurs an expense it pays for with “contingency funds,” the cost on NEON’s books and records is not a “contingency” as described in the OMB non-profit cost principles, but a specific cost element to a specific WBS, as it would for any project (i.e., labor).

However, NSF cooperative support agreements require NEON report on its use of contingency throughout the performance of the project. For instance, EF-1029808 Award Specific Programmatic Terms and Conditions requires NEON to provide monthly technical reports that includes reporting on contingency expenditures for the reporting period, update of graphical presentation of contingency usage, as a percentage of cost to go, and forecasts on potential, future contingency liens for the project. In addition, it requires NEON to report on its risk management activities for the reporting period. During our review we noted NEON has documented Contingency Management and Risk Management Plans, which include documenting changes approved by the configuration control board and notifying of NSF via the Contingency Control Log.



SUBJECT: Observations that Warrant Attention of the NSF-OIG

We recommend you consider requiring NSF to strengthen its Grant Policy and guidance to awardees with respect to contingencies on construction projects with regard to estimating, monitoring, and accounting for contingency expenditures. Specifically, have NSF require an awardee to (i) separately track in more detail, than what the contractors are currently doing, the use of the proposed contingency costs in the budget control log as a condition of the award, and (ii) provide fully supported bases of estimate for contingencies. However, when considering the broad definition of contingency as defined by NSF, the tracking will not be an exact representation of the contingency, but will provide NSF with better oversight of how the contingency is used.

#### Management Fees

Based on what we observed during the accounting system audit, NEON and NSF negotiate a "management fee" in the cooperative agreements that NEON uses to pay unallowable/non-reimbursable costs incurred by NEON. The NSF Proposal Award Policies and Procedures Guide and the NSF Grant Policy Manual address fee in general terms, making it clear that fee is permissible if approved by the grants/agreements officer, which it was. We can find no regulation that prohibits the payment of a management fee under a cooperative agreement to a non-profit entity.

The cooperative agreements awarded to NEON by NSF shows the initial management fees were established at amounts needed to cover expenses that were not reimbursable as costs under the cooperative agreements but were incurred in the operation of the non-profit entity. Subsequent awards were made without consideration of the need to reimburse specific unallowable costs. For example, EF-1247476 of the cooperative agreement established a Not-To-Exceed amount of \$[REDACTED] for management fee for the life of the cooperative agreement (which at the time of award had several years left). The management fee established for EF-1247476 is [REDACTED]%, which is at the low end of NEON's stated policy of assessing fees of [REDACTED] on NSF projects.

However, we were unable to find any NSF Grant Policy determining when a fee should be awarded or how a negotiated fee is used by a non-profit entity. We recommend that you consider requiring the NSF to strengthen the NSF Grant Policy to specify requirements for determining and monitoring the award of fee. We also recommend you benchmark with other federal agencies to determine their use of management fee and how other agencies allow the use of that fee.

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#### NSF Policy on Reporting Fraud, Waste and Abuse

Based on what we noted during the accounting audit, the NSF Grant Policy Manual does not require awardees to provide a mechanism for its employees to report suspected fraud, waste, abuse, and noncompliances directly to the NSF-OIG. We recommend that you consider requiring the NSF to strengthen the NSF Grant Policy to specify requirements for reporting irregularities or potential irregularities by awardees and awardee employees. The policy could be similar to the requirements in FAR 52.203-13, which require an internal reporting mechanism

3121-2013J17741001

October 23, 2014

SUBJECT: Observations that Warrant Attention of the NSF-OIG

such as a hotline, which allows for anonymity, or confidentiality, by which employees may report irregularities.

If you have questions please contact the undersigned at [REDACTED] or Mr. [REDACTED] Supervisory Auditor, at [REDACTED]. Our fax number is [REDACTED] and our email address is [REDACTED].

Sincerely,

Digitally signed by

Date: 2014.10.23 13:17:54 -06'00'

[REDACTED]  
Branch Manager