

INVESTIGATIVE REPORT

National Oceanic and Atmospheric Administration

Hurricane Sandy Relief Funding for the National Estuarine Research Reserve System (NERRS)

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Chapter I: Background

Executive Summary

In the summer of 2013, the Office of Inspector General (OIG) received information from a whistleblower alleging that a National Oceanic and Atmospheric Administration (NOAA) grantee improperly applied for and received Hurricane Sandy funds under the Disaster Relief Appropriations Act and Sandy Recovery Improvement Act (the "Act"), which was generally passed to benefit the victims of Hurricane Sandy or remediate the storm's damage. Specifically, the whistleblower claimed that a research facility that is part of the National Estuarine Research Reserve System (NERRS) requested these federal relief funds to replace assets that were not actually damaged by Hurricane Sandy. Another key witness claimed that the assets this NERRS facility sought to replace with the disaster relief funds worked properly before, during and after Hurricane Sandy. This key witness expressed concerns to NOAA officials about the propriety of claiming that these assets were "damaged" and thereby eligible for the disaster relief funding. After receiving these allegations, OIG initiated an investigation into the application for and receipt of approximately \$1 million in federal funds by nine research facilities that are part of the NERRS.

OIG's investigation found that NOAA, in response to concerns raised by NERRS facilities (i.e., prospective grant recipients) regarding the use of disaster relief funds to replace aging assets that were not actually "damaged" by the storm, advised the NERRS facilities that research equipment that was "compromised" by the storm was eligible for disaster relief funding. NOAA's direction to the NERRS facilities expanded the Act's plain language requirement that equipment be "damaged" in order to receive disaster relief funds. Moreover, NOAA allowed the NERRS facilities to receive Hurricane Sandy funding through a process requiring no competition and by simply stating that an asset was "damaged" or "compromised" without requiring any additional documentation or specific proof to support the claim for funding. OIG concluded that NOAA's guidance to the funding applicants and subsequent approval of funding applications resulted in questioned costs of approximately \$550,200 - more than half of the approximately \$1 million dollars of funds disbursed – for items that may not have been eligible for funding based on the plain language of the Act passed by Congress. By using Hurricane Sandy funds to replace assets that experienced wear and tear and for which no claims of damage were made, NOAA defeated the purpose of the Act and deprived itself and potentially others from using the funds for purposes that would more directly benefit the victims of Hurricane Sandy or remediate the storm's damage.

As a result of the investigation, OIG made several recommendations including a recommendation for NOAA to conduct an analysis and seek the recovery of any improperly awarded disaster relief funds.

Hurricane Sandy's Impact

Hurricane Sandy made landfall in southern New Jersey on the evening of October 29, 2012 and impacted more than a dozen states. ¹ The storm included "heavy rain, strong winds, and record storm surges." ² "A dangerous nor'easter followed 9 days later and caused additional damage and undermined the recovery effort." "During Sandy's immediate aftermath, more than 23,000 people sought refuge in temporary shelters, and more than 8.5 million customers lost power. ⁴ The storm flooded numerous roads and tunnels, blocked transportation corridors, and deposited extensive debris along the coastline." "Over 1,600 stores were closed, and fuel distribution was severely disrupted, further complicating the recovery effort. ⁶ New York and New Jersey – two of the Nation's most populous states – were especially hit hard by these storms."

Legislative Response to Hurricane Sandy

To aid the storm recovery effort, Congress enacted the Disaster Relief Appropriations Act and Sandy Recovery Improvement Act (the "Act") on January 29, 2013. President Obama signed the Act into law on January 29, 2013.

The Act produced varied reactions from members of Congress. Some members questioned seemingly extraneous items in the Act along with the amount of funding being appropriated by the Act. ¹⁰ Other members focused on the need for immediate assistance and protection to those affected by the disaster. ¹¹

The Act "provided approximately \$50 billion in supplemental appropriations, before sequestration, to 61 programs at 19 federal agencies for expenses related to the consequences of Hurricane Sandy." \$290 million was allocated to NOAA and \$7 million of this amount was

¹ U.S. Federal Emergency Management Agency (FEMA), *Hurricane Sandy: Timeline*, http://www.fema.gov/hurricane-sandy-timeline (last visited Apr. I, 2014) [hereinafter *FEMA website: Hurricane Sandy: Timeline*].

² Id.

³ Exec. Order 13632 – Establishing the Hurricane Sandy Rebuilding Task Force (Dec. 7, 2012) [hereinafter Exec. Order 13632].

⁴ FEMA website: Hurricane Sandy: Timeline, supra.

۶ Id.

⁶ Exec. Order 13632, supra.

⁷ Id.

⁸ Disaster Relief Appropriations Act and Sandy Recovery Improvement Act, Pub. L. No. 113-2, H.R. 152, 127 Stat. 4 [hereinafter Disaster Relief Appropriations Act].

⁹ Lib. of Cong., *Bill Summary* & *Status*, *113th Cong*. *H.R. 152*, all Information available at http://thomas.loc.gov.

¹⁰ See, e.g. 159 Cong. Rec. H119 [hereinafter *159 Cong*. Rec.] (daily ed. Jan. 15, 2013) (statement of Rep. Hensarling); U.S. Sen. Dan Coats, *Coats Statement on Hurricane Sandy Disaster Relief Funding* (Jan. 28, 2013), http://www.coats.senate.gov/newsroom/press/release/coats-statement-on-hurricane-sandy-disaster-relief-funding (last visited Apr. 3, 2014).

See 159 Cong. Rec., supra, at S317 (daily ed. Jan. 28, 2013) (statement of Sen. Gillibrand); id. at E1590 (daily ed. Oct. 29, 2013) (statement of Rep. King).

¹² See U.S. Gov't Accountability Office, Report to Cong. Comms., HURRICANE SANDY RELIEF, Improved Guidance on Designing Internal Control Plans Could Enhance Oversight of Disaster Funding, AO-GAO-14-58 1 (Nov. 2013).

designated "to repair and replace ocean observing and coastal monitoring assets damaged by Hurricane Sandy" ("Hurricane Sandy funding"). ¹³ The National Ocean Service (NOS), a subcomponent of NOAA, designated approximately \$1 million of these funds to nine East Coast facilities that are part of the NERRS. ¹⁴ The Hurricane Sandy funding was awarded to the NERRS facilities through non-competitive grants. ¹⁵

The table below shows how the funding was distributed to each of the nine NERRS facilities. 16

Table I: Disaster Relief Appropriations Act Awarded Funding to NERRS Facilities

NERRS Facility	Funding Awarded	Funding Obligation Date
Chesapeake Bay, MD	\$22,775	September 30, 2013
Chesapeake Bay, VA	\$30,118	September 25, 2013
Delaware	\$53,811	September 26, 2013
Great Bay, NH	\$58,720	September 27, 2013
Hudson River, NY	\$160,806	October 17, 2013
Jacques Cousteau, NJ	\$496,710	October 22, 2013
Narragansett Bay, RI	\$63,550	September 26, 2013
Waquoit Bay, MA	\$75,840	October 22, 2013
Wells, ME	\$72,833	September 24, 2013
TOTAL	\$1,035,163	

Source: https://grantsonline.rdc.noaa.gov (accessed March 5, 2014).

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¹³ Disaster Relief Appropriations Act, supra, at Title 10, Ch. 2. The remainder of the funds were allocated to five other line items: (1) \$50 million for mapping, charting, geodesy services and marine debris surveys for coastal States impacted by Hurricane Sandy; (2) \$3 million to provide technical assistance to support State assessments of coastal impacts of Hurricane Sandy; (3) \$25 million to improve weather forecasting and hurricane intensity forecasting capabilities, to include data assimilation from ocean observing platforms and satellites; (4) \$50 million for laboratories and cooperative institutes research activities associated with sustained observations weather research programs, and ocean and coastal research; and (5) \$5 million for necessary expenses related to fishery disasters during calendar year 2012 that were declared by the Secretary of Commerce as a direct result of impacts from Hurricane Sandy.

¹⁴ NOS Disaster Relief Act Spending Plan, provided to OIG by NOAA Resource Management Division, on March 28, 2014 (on file with OIG) [hereinafter *Disaster Relief Act Spending Plan*]. See Appendix A for the complete NOS Disaster Relief Act Spending Plan, which details how NOS distributed the \$7 million among several programs. The propriety of the disposition of the remainder of the \$7 million in funding received by NOAA that was not distributed to the NERRS facilities is beyond the scope of this report.

¹⁵ See Memorandum from NOAA (Aug. 30, 2013) (on file with OIG) (discussing non-competitive justification for Hurricane Sandy funding) [hereinafter Memorandum on Non-competitive Justification].

¹⁶ Please note not all of the funding is in question.

Allegation Regarding Potential Misuse of Hurricane Sandy Funding

On June 18, 2013, OIG was provided with information from a whistleblower, alleging that a NERRS facility had requested Hurricane Sandy funding under the Act to replace assets that were not actually damaged by the storm.¹⁷ The whistleblower's information was referred

The Disaster Relief Appropriations Act of 2013 provided funds to NOAA "to repair and replace ocean observing and coastal monitoring assets damaged by Hurricane Sandy."

to OIG by the Government Accountability Office's Fraudnet, a hotline operated to receive allegations from federal employees and members of the public. 18

OIG's objective in conducting this investigation was to determine whether the NERRS facility in question made a fraudulent request for Hurricane Sandy funding under the Act. Furthermore, OIG sought to determine whether NOAA appropriately awarded the Hurricane Sandy funding to the nine NERRS facilities.

I. Scope and Methodology

OIG interviewed nine individuals associated with the funding awarded to the NERRS facilities under the Act. The individuals who were interviewed included the whistleblower and the NOAA officials responsible for reviewing and approving the grant awards to the NERRS facilities. OIG also spoke with an employee of the NERRS facility in question who possesses detailed knowledge of the equipment replaced with the Hurricane Sandy funding. In addition, OIG reviewed the documents associated with the announcement and implementation of the Hurricane Sandy funding, application materials submitted by the nine NERRS facilities, and email communications from NOAA officials and NERRS employees regarding the application and funding process.

The whistleblower indicated that a NERRS facility, in applying for Hurricane Sandy funding, used the term "compromised" rather than the term "damaged" to describe the assets that it proposed to replace.¹⁹ The whistleblower thought this did not meet the standard for replacement established by the Act, which specifically provided funding to repair and replace "damaged" assets.²⁰ In addition, the whistleblower claimed that the assets proposed for replacement operated properly following Hurricane Sandy, and the data produced by the assets was not interrupted before, during, or after Hurricane Sandy.²¹

The whistleblower's allegations led OIG to review the applications of the other eight NERRS facilities that requested Hurricane Sandy funding under the Act. OIG obtained and reviewed the

¹⁷ Letter from GAO Fraudnet Operations, to OIG (June 18, 2013) (on file with OIG).

¹⁸ See id.

¹⁹ OIG Investigative Record Form ("IRF"): Interview with Whistleblower, 2 [hereinafter OIG IRF: Whistleblower Interview].

²⁰ Id.

²¹ Id. at 4.

documents submitted by the nine NERRS facilities in support of their applications for grant funds.

II. Organization of the Report

Chapter 2 of this report provides an overview of the NERRS research program's organization and focus, and outlines the laws and regulations applicable to this matter. Chapter 3 addresses the allegations presented by the whistleblower. Chapter 3 also details why the NERRS facilities considered "compromised" assets to be eligible for funding under the Act and why NOAA approved these applications. Chapter 4 presents OIG's findings, conclusions and recommendations as a result of this investigation.

Chapter 2: Overview

I. NERRS: Programmatic Overview

The NERRS program is an operation within NOAA, a component of the U.S. Department of Commerce (DOC). The Estuarine Reserves Division (ERD) of the Office of Ocean and Coastal Resource Management (OCRM), National Ocean Service (NOS), administers the NERRS and "is also the home of a number of services that provide technical assistance and support to the NERRS." According to background information provided by NOAA, the NERRS "is a partnership program between NOAA and coastal states to study and protect vital coastal and estuarine resources." It is made up of "a network of 28 areas representing different biogeographic regions of the United States that are protected for long-term research, water-quality monitoring, education, and coastal stewardship." NOAA provides funding, national guidance, and technical assistance" to the program. Within NERRS, "each reserve is managed on a daily basis by a lead state agency or university, with input from local partners."

The part of the NERRS research program designated by NOAA for funding under the Act is the System-Wide Monitoring Program (SWMP).²⁸ The SWMP is "an integral part of the system's research program," and it "provides researchers, resource managers, educators, and other coastal decision makers with standardized, quantitative measures to determine how reserve conditions are changing in both the short-term and the long-term."²⁹ The NERRS established the SWMP in 1995 and describes the program as follows:

[The SWMP has] a primary mission to develop quantitative measurements of short-term variability and long-term changes in the water quality, biological systems, and land-use/land-cover characteristics of estuaries and estuarine ecosystems for the purposes of informing effective coastal zone management. . . SWMP data help establish the NERRS as a system of national reference sites, as well as a network of sentinel sites for detecting and understanding the effects of climate change in coastal regions. ³⁰

In informational material, NOAA and NERRS provide the following details on the SWMP:

SWMP focuses on three related broad environmental measures: (I) abiotic monitoring, including atmospheric conditions, nutrients and contaminants, and physical water quality factors such as salinity, dissolved oxygen, and tidal range; (2) biological monitoring, including biodiversity, habitat and population characteristics; and (3) watershed and land

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²² NERRS, Key Documents and Partners, http://www.nerrs.noaa.gov/BGDefault.aspx?ID=17 (last visited Apr. I, 2014).

²⁴ NERRS, Background, http://www.nerrs.noaa.gov/Background.aspx (last visited Apr. 1, 2014).

²⁵ National Ocean Service, What is NERRS?, http://oceanservice.noaa.gov/facts/nerrs.html (last visited Apr. 1, 2014).

²⁷ Id.

²⁸ See Appendix A.

²⁹ NERRS, SWMP, http://www.nerrs.noaa.gov/BGDefault.aspx?ID=18 (last visited Apr. 1, 2014).

³⁰ Id.

use classification, including changes over time in coastal and estuarine habitat and land use. The program currently provides long-term data on water quality and weather at high frequency time intervals (every 15 to 30 minutes) to researchers, natural resource managers, and other coastal decision makers. These types of data are critical indicators of environmental conditions for numerous estuarine species and their habitats. . . [SWMP equipment is] now providing real-time data for a variety of purposes, including weather forecasts, fisheries, stewardship, and transportation.³¹

Generally, SWMP data are collected and transmitted by water quality monitoring data sondes (and associated probes) and data loggers that are placed in the water.³² The SWMP at each NERRS facility also includes a scientific weather station for implementation of the SWMP's meteorological component (collectively, the "SWMP equipment").³³

II. Legal and Regulatory Overview

The NERRS was established by Section 315 of the Coastal Zone Management Act of 1972, as amended.³⁴ 15 C.F.R. § 921.50 authorizes NOAA to provide financial support for research projects within the NERRS.³⁵ Title 10, Chapter 2 of the Disaster Relief Appropriations Act of 2013 provided the funding at issue in this report. Number 11.483 of the Catalog of Federal Domestic Assistance (CFDA) provides specific information on this funding, including eligibility requirements.³⁶ After the legislation was enacted, the application procedures and evaluation criteria were publicly announced on August 7, 2013.³⁷

The DOC Pre-Award Notification Requirements for Grants and Cooperative Agreements list the policies and procedures with respect to applications for all DOC-sponsored grants and cooperative agreements and apply to the Hurricane Sandy funding opportunity. ³⁸ The DOC Grants and Cooperative Agreements Manual (the "Manual"), updated March I, 2013, "applies to all DOC operating units in their award, management, and administration of grants and cooperative agreements." The Manual also sets forth guidance on grants administration and

³¹ NERRS, SWMP One-Pager, http://www.nerrs.noaa.gov/Doc/PDF/Background/SWMPOnePager.pdf (last visited Apr. 3, 2014).

³² National Estuarine Research Reserve – Sandy Supplemental – Equipment 6 (Apr. 2013) [hereinafter NERR Guidance].

³³ Id.

³⁴ See 16 U.S.C. §§ 1451-64.

³⁵ 15 C.F.R. § 921.50.

³⁶ See Catalog of Federal Domestic Assistance: NOAA Programs for Disaster Relief Appropriations Act — Non-Construction and Construction No. 11.483,

https://www.cfda.gov/index?s=program&mode=form&tab=core&id=10be84e8302f5d9dc1ef0a85ea15ce50 (last visited Apr. 17, 2014) [hereinafter CFDA].

³⁷ NOAA, Request for Applications – Non-Competitive I (undated) (on file with OIG) [hereinafter Request for Applications] (guidance on Funding Opportunity Number NOAA-NOS-OCRM-2013-2003687).

³⁸ DOC Pre-Award Notification Requirements for Grans and Cooperative Agreements, 77 Fed. Reg. 74634 (DOC Dec. 17, 2012).

³⁹ DOC, DOC Grants and Cooperative Agreements Manual § 2(C) (updated Mar. I, 2013) http://www.osec.doc.gov/oam/grants_management/policy/documents/FINAL%20Master%20DOC%20Grants%20Manual%202013%20(03.01.13) b.pdf (last visited Apr.17, 2014) [hereinafter Manual].

provides the Department with a uniform set of minimum procedures for federal funding announcements as well as processes for reviewing, awarding, managing and closing out of grants. ⁴⁰ Additionally, the Manual references policies and procedures for use by the Department to ensure the consistent implementation of legislation, regulations, Office of Management and Budget (OMB) circulars, executive orders (EOs), and Departmental policies and procedures related to financial assistance. ⁴¹

⁴⁰ Id. § 2(A).

⁴¹ Id

Chapter 3: Allegations

I. A NERRS facility submitted a grant application to NOAA that fraudulently requested funds under the Disaster Relief Appropriations Act to replace assets that were not "damaged" by Hurricane Sandy.

Facts

In a January 28, 2013 e-mail to personnel at NERRS facilities affected by Hurricane Sandy, NOAA announced that federal funding appropriated by the Act would be made available to the public, and that approximately \$1.1 million would be designated for the NERRS facilities for SWMP repair and replacement.⁴² In February 2013, researchers from at least two NERRS facilities expressed reservations directly to NOAA officials regarding the use of the Hurricane Sandy funding to replace certain assets that they could not legitimately claim were "damaged". ⁴³

NOAA distributed a document, dated April 2013, to the NERRS facilities that served as a template for the Hurricane Sandy funding applications. ⁴⁴ This document stated:

[t]he disaster assistance awards are used to replace and repair observing systems, equipment, supplies, and infrastructure that was lost, damaged, or compromised during Hurricane Sandy in October 2012. 45

The "Task Description" portion of this document provided a template for the applications and instructs:

[t]he Reserve will procure (reserves should provide details here on the type and number of data sondes and associated equipment, including telemetry, that will be acquired) to replace lost, damaged, and compromised water quality monitoring equipment.⁴⁶

The application for the NERRS facility that is the subject of the whistleblower's complaint stated that the SWMP equipment continued to operate during the storm, but assumed the storm placed stress on the equipment.⁴⁷ The application claimed that following Hurricane Sandy

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⁴² E-mail from NOAA Employee B to OIG (forwarding information regarding communications with the NERRS facilities) (Jan. 6, 2014) (on file with OIG).

⁴³ OIG IRF: Interview with Key Witness 4 [hereinafter OIG IRF: Key Witness Interview]; E-mail from Key Witness to OIG (Mar. 6, 2014) (on file with OIG) (forwarding e-mail from another NERRS employee expressing concern about funding).

⁴⁴ See NERR Guidance, supra.

⁴⁵ Id. at 3.

⁴⁶ Id. at **6**.

⁴⁷ NERR I, Hurricane Sandy Supplemental Relief Funding for NERR I in a certain East Coast state I (undated) [hereinafter NERR I Application] (NERR I application).

the SWMP assets had some issues.⁴⁸ Interviews of staff at this particular NERRS facility revealed that the assets for which Hurricane Sandy funding was requested operated properly before, during, and after Hurricane Sandy.⁴⁹

Funding applications submitted by all nine NERRS facilities similarly requested Hurricane Sandy funds for at least some SWMP equipment that was described as "compromised" and not described as "damaged." NOAA approved all of the NERRS facilities' applications for Hurricane Sandy funding.

OIG Analysis

The Act designates the Hurricane Sandy funding to "repair and replace ocean observing and coastal monitoring assets damaged by Hurricane Sandy," and the application that is the subject of the whistleblower's allegation does not claim that any assets were actually damaged by Hurricane Sandy. Thus, this application seems inappropriate on its face. As noted above, the NERRS facility's application does not claim any of the SWMP equipment failed during the storm, and it did not specify that the assets were damaged. Instead, the application only stated that the SWMP equipment was "compromised." Furthermore, regarding the condition of the assets, the application only assumed the storm placed stress on the SWMP equipment.

The application follows the template for Hurricane Sandy funding applications provided by NOAA and uses the term "compromised" to describe the SWMP assets. While the application itself does not appear to qualify for funding (it is based on an eligibility standard that expands beyond the plain language standard established by the Act), the application also does not appear to contain false assertions or misrepresent the state of the assets. The application itself, along with statements from employees at this NERRS facility, indicate that those most closely involved with the SWMP assets did not feel comfortable certifying the assets were "damaged" by Hurricane Sandy as specified by the Act. Accordingly, OIG's review determined that the application does not satisfy the eligibility standard provided by the plain language of the Act.

OIG's investigation revealed the Hurricane Sandy funding application completed by the NERRS facility in question (along with applications by other NERRS facilities) was based on guidance from NOAA officials regarding which assets were eligible for replacement. This information led OIG to consider the origin of and justification for the guidance NOAA officials provided to the NERRS facilities regarding the eligibility standard for Hurricane Sandy funding under the Act. Section 2 of this chapter discusses this issue in greater detail.

⁴⁸ ld. at 1.

⁴⁹ See OIG IRF: Whistleblower Interview, supra, at 4; see also OIG IRF: Key Witness Interview, supra, at 4.

⁵⁰ See Appendix B.

⁵¹ Disaster Relief Appropriations Act, supra, at Title 10, Ch. 2.

⁵² See NERR I Application, supra.

⁵³ *Id.* at 1.

⁵⁴ Id.⁵⁵ Id.

⁵⁵ Id.

NOAA advised the NERRS facilities that the Act's funding supported the repair and replacement of assets that were "lost, damaged, or compromised during Hurricane Sandy." 56 Given NOAA's guidance and subsequent approval of the applications, the NERRS facilities' culpability in the Hurricane Sandy funding application process appears limited. In fact, NOAA officials were aware that employees of at least two NERRS facilities expressed concerns about using Hurricane Sandy funding to purchase assets they could not legitimately claim were "damaged" by the storm. 57 During interviews, NOAA officials noted the NERRS facilities had questions regarding eligibility for funding and the term "damaged," and the NOAA officials responded to these questions by advising the NERRS facilities that "lost, damaged, or compromised" assets were eligible for the funding. 58 The NERRS facilities could have requested funding only for assets they could demonstrate were actually "damaged" by Hurricane Sandy, and this approach would have insured compliance with the Act. However, the NERRS facilities appear to have taken guidance and instruction regarding funding eligibility from NOAA, the agency evaluating and approving their Hurricane Sandy applications. Ultimately, NOAA advised the applicants to represent their eligibility for Hurricane Sandy funding based on a standard that was broader than the standard established by the Act's plain language.

⁵⁶ Request for Applications, supra, at 1; see also NERRS Guidance, supra, at 3; NOAA Employee A, supra.

⁵⁷ See NOAA Employee B, supra; OIG IRF: Key Witness Interview, supra, at 4; see also Key Witness, supra.

⁵⁸ OIG IRF: Interview with NOAA Employee B 4 [hereinafter OIG IRF: NOAA Employee B Interview]; OIG IRF: Interview with NOAA Employee C 5 [hereinafter OIG IRF: NOAA Employee C Interview].

II. NOAA provided guidance to NERRS facilities during the grant application process that expanded the plain language of the Disaster Relief Appropriations Act and subsequently approved funding for assets that did not meet the eligibility criteria for the Hurricane Sandy funding established by the Act.

Facts

To authorize the Hurricane Sandy funding, NOAA drafted Number 11.483 of the Catalog of Federal Domestic Assistance (CFDA).⁵⁹ CFDA 11.483 lists the following as objectives of the funding:

- I. Protect, Restore, and Manage the Use of Coastal and Ocean Resources through an Ecosystem Approach to Management;
- 2. Understand Climate Variability and Change to Enhance Society's Ability to Plan and Respond;
- 3. Serve Society's Needs for Weather and Water Information. 60

The eligibility section provides the following:

Applicant Eligibility (081): . . . Repair and replace ocean observing and coastal monitoring assets damaged by Hurricane Sandy. . .

Beneficiary Eligibility (082): Entities impacted by Hurricane Sandy in 2012; entities benefitting from other activities funded through the Act. 61

As noted above, employees from at least two NERRS facilities expressed concerns to NOAA officials about the appropriateness of claiming the SWMP equipment they wanted to replace with the Hurricane Sandy funding was "damaged" as a result of Hurricane Sandy. 62

NOAA distributed the "National Estuarine Research Reserve – Sandy Supplemental – Equipment," dated April 2013, to assist the NERRS facilities in completing their Hurricane Sandy funding applications. According to a NOAA employee, NOAA distributed this document to ensure uniformity among the applications and to enable a more efficient review process. The introduction section of this document provides: "The disaster assistance awards are used to replace and repair observing systems, equipment, supplies, and infrastructure that

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⁵⁹ CFDA 11.483 addresses the multiple funding objectives listed in Title 10, Chapter 2 of the Act, and it is not limited to the funding designated for the NERRS facilities.

⁶⁰ CFDA, supra, at § (050).

⁶¹ CFDA, supra, at §§ (081), (082).

⁶² See Key Witness, supra.

⁶³ See NERR Guidance, supra, at 3.

⁶⁴ OIG IRF: Interview with NOAA Employee A 4 [hereinafter OIG IRF: NOAA Employee A Interview].

was lost, damaged, or compromised during Hurricane Sandy in October 2012. This guidance provides information for creating your grant application."⁶⁵ This document effectively supplied a template for the NERRS facilities' Hurricane Sandy funding applications. The introduction section of the template provides the following instruction:

The (reserve name) was designated in (year) and is located in (state). The reserve is administered by (state agency name) who is submitting this application for fiscal year 2013 funds under the Sandy Recovery Improvement Act of 2013 to support the repair and replacement of ocean observing and coastal monitoring assets damaged, lost, or compromised by Hurricane Sandy. The (state agency) is requesting (amount of federal funds) for an award period of (award start date) through (award end date).

Effects of Hurricane Sandy to the (reserve name) included (BRIEF description of hurricane impacts). The Reserve's observing and monitoring assets were destroyed, lost, damaged, or compromised as follows: (BRIEF description of deployment during storm and loss, damage, etc.). Funds will be used to purchase (list broad categories: data sondes and sensors, telemetry equipment, replacement of infrastructure associated with monitoring system), which will support the National Estuarine Research Reserve System-wide Monitoring Program (SWMP).

The template also includes a section titled "Task Description:"

The NERRS System-wide Monitoring Program (SWMP) collects quantitative measurements of short-term variability and long-term changes in the water quality, biological systems, and land-use/land-cover characteristics of estuaries and estuarine ecosystems for the purposes of informing effective coastal zone management. (Describe in greater detail what equipment was deployed during the storm and what damage/loss was experienced. A separate task will be included for replaced damaged/lost infrastructure) . . .

The Reserve will procure (reserves should provide details here on the type and number of data sondes and associated equipment, including telemetry, that will be acquired) to replace lost, damaged, and compromised water quality monitoring equipment.

A . . . weather station is required for implementation of the meteorological component of SWMP. The Reserve will procure (reserves should provide details here on the type and number of meteorological monitoring equipment, including telemetry, that will be acquired) to replace lost, damaged, and compromised metrological monitoring equipment.⁶⁷

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⁶⁵ NERR Guidance, supra, at 3.

⁶⁶ Id. at 5.

⁶⁷ *Id.*, at **6**. Based on the amounts requested by the applications for the Hurricane Sandy funding, the average cost of a datasonde and related probes and accessories is approximately \$13,000 to \$14,000.

NOAA's Request for Applications for Funding Opportunity Number: NOAA-NOS-OCRM-2013-2003687 (the "Request for Applications"), sets out the official guidelines for Hurricane Sandy funding applicants. The section entitled "Funding Opportunity Description" states, "NOAA will be providing funds to National Estuarine Research Reserves (NERR) affected by Hurricane Sandy to replace and repair observing systems, equipment, supplies, and infrastructure that was lost, damaged, or compromised during Hurricane Sandy in October 2012."69

NOAA also circulated a memorandum, dated August 30, 2013, regarding "Non-competitive justification for FY 2013 Disaster Relief for National Estuarine Research Reserve System (NERRS) Monitoring Assets Replacement." This memorandum identified the nine NERRS facilities listed above in Chapter I as the only reserves impacted by Hurricane Sandy, and thus these nine facilities were the only reserves eligible for funding. The memorandum explains, "[t]he Estuarine Reserves Division was able to allocate funds to reserves in such a way that all potential recipients received funding to meet their needs and no competition of funding was necessary." The memorandum further explains, "[f]unding supporting reserves under the Disaster Relief Appropriations Act of 2013, Public Law 113-2 has been made available to fund the repair and replacement of NERRS monitoring assets lost, damaged or compromised during Hurricane Sandy in October 2012."

The Form CD-450, "Financial Assistance Award," which constitutes an obligation of Federal funding to the recipient and an agreement by the recipient to comply with certain terms and conditions, was accepted by each NERRS facility on dates ranging from September 24, 2013 to October 22, 2013.⁷⁴

OIG conducted interviews of NOAA officials that participated in the Hurricane Sandy funding application review and approval process. These interviews included a NOAA employee that processed each application, a NOAA employee that worked directly with the NERRS facilities throughout the application process, and personnel from NOAA's Grants Management Division (GMD) and DOC's Office of General Counsel (OGC) that provided Hurricane Sandy funding approval and legal sufficiency reviews for each application.

OIG spoke with a NOAA employee (NOAA Employee A) that assisted with both the execution of the grant awards at issue and the processing of all nine of the NERRS facilities' applications for Hurricane Sandy funding. NOAA Employee A also participated in the drafting and editing of CFDA II.483, which was ultimately approved by OMB, and helped draft the

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⁶⁸ See Request for Applications, supra.

^{°&#}x27; ld. at 1.

⁷⁰ See Memorandum on Non-competitive Justification, supra.

⁷¹ See id.

⁷² *Id.* at 1.

⁷³ Id.

⁷⁴ Information acquired from https://grantsonline.rdc.noaa.gov (accessed on Mar. 5, 2014).

⁷⁵ OIG IRF: NOAA Employee A Interview, supra, at 1-2.

⁷⁶ Id. at 3.

document titled: "National Estuarine Research Reserve – Sandy Supplemental – Equipment," which served as a template for the NERRS facilities' applications. While NOAA Employee A did not claim to have added the term "compromised" to the "National Estuarine Research Reserve – Sandy Supplemental – Equipment," the employee indicated the word "compromised" was used in this document in relation to creating and maintaining a complete observing and monitoring system. NOAA Employee A viewed "compromised" as "damaged in a different way."

NOAA's GMD, along with DOC's OGC, reviewed and approved the Request for Applications and each NERRS facility's application for Hurricane Sandy funding. OIG was informed that GMD and OGC review requests for applications for the purpose of determining whether they accurately reflect the intent of Congress. GMD approved the Request for Applications, which included the language "lost, damaged, or compromised," because it believed the terms "lost, damaged, or compromised" were within the confines of the term "damaged" as used in the Act. GMD pointed out that the NERRS facilities self-certified that the condition of their SWMP equipment met the requirements of the Request for Applications, and NOAA had to rely on this self-certification when reviewing the Hurricane Sandy funding applications.

OGC cited the DOC Grants and Cooperative Agreements Manual as the source of OGC's authority to interpret Congress' intent in appropriating funds for a particular purpose. ⁸⁴ The Manual states that OGC provides legal analysis to program officials and grants officers regarding appropriations acts. ⁸⁵ Accordingly, OGC provided legal analysis of NOAA's interpretation of the Act's intent and concluded NOAA's addition of the term "compromised" was within the Act's intent. ⁸⁶ To support the approval of this interpretation, OGC specifically pointed to the first sentence of the Act which states that the Act is "making supplemental appropriations for the fiscal year ending September 30, 2013, to improve and streamline disaster assistance for Hurricane Sandy, and for other purposes." ⁸⁷ OGC noted this particular sentence gave NOAA the ability to add the word "compromised" to the standard for funding eligibility when drafting the Request for Applications. ⁸⁸ The draft of the Request for Applications that OGC reviewed and approved included of the term "compromised." OGC did not recall any discussions about the term "compromised" during the review, but OGC determined the words "lost, damaged, or compromised" were within the Act's intent. ⁸⁹

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⁷⁷ See id. at 4.

⁷⁸ Id. at 5.

⁷⁹ *Id.* (quoting NOAA Employee A).

⁸⁰ OIG IRF: Interview with NOAA GMD and OGC I-3 [hereinafter OIG IRF: GMD and OGC Interview].

⁸¹ See id. at 3.

⁸² See id. at 2.

⁸³ See id.

⁸⁴ E-mail from OGC to OIG (Jan. 23, 2014) (on file with OIG).

⁸⁵ Manual, supra, at $\{4(C)(1)(b)(2)$.

⁸⁶ OIG IRF: GMD and OGC Interview, supra, at 3.

⁸⁷ Disaster Relief Appropriations Act, supra; OIG IRF: GMD and OGC Interview, supra, at 3.

⁸⁸ OIG IRF: GMD and OGC Interview, supra, at 3.

⁸⁹ Id.

A NOAA employee (NOAA Employee B) had discussions with the NERRS facilities about the assets eligible for the Hurricane Sandy funding. NOAA Employee B was instrumental in the early stages of planning for the Hurricane Sandy funding and noted the conditions surrounding the funding were difficult, due to a short time frame for organizing the funding. Further complicating matters, the funding implementation process was different than the appropriations process to which NOAA is accustomed. NOAA Employee B noted there was a question about the intent of the funding because the Act only provided one line of information. NOAA Employee B asserted the intent of the Act was to maintain an operating observation system that was able to function when the next storm hit.

Origin of the Term "Compromised"

NOAA Employee B explained the term "compromised" came about when one of the NERRS facilities reported a monitoring instrument's terminals showed signs of corrosion. ⁹⁵ This instrument was still functioning properly, but the corrosion indicated a potential problem. ⁹⁶ NOAA Employee B believes "compromised" may have been added to the Request for Applications as a result of this issue, in order to answer other NERRS facilities' questions regarding whether SWMP equipment could be considered "damaged" for purposes of the Act if it was still functioning and operational. ⁹⁷

OIG interviewed another NOAA employee (NOAA Employee C) that worked closely with the NERRS facilities on the Hurricane Sandy funding. Similar to NOAA Employee B, NOAA Employee C believed the purpose of the Hurricane Sandy funding under the Act was to restore and continue the observational capacity of the NERRS facilities. NOAA Employee C confirmed the term "compromised" was introduced during a discussion with NERRS facilities regarding the replacement of a monitoring instrument with corroded terminals. NOAA Employee C discussed the funding with employees at the NERRS facilities and thought the NERRS facilities interpreted the word "damaged" too literally. The employee provided the word "compromised" to clarify funding eligibility requirements and to guide the NERRS facilities' determinations of SWMP equipment eligible for replacement. NOAA Employee C explained to OIG that the addition of the word "compromised" was based on an interpretation of the word "damaged," and stated that "damaged," in the context of the Act, meant an instrument's ability to collect data is compromised. NOAA Employee C attempted to limit

 ⁹⁰ OIG IRF: NOAA Employee B Interview, supra, at 2, 4.
 91 Id. at 1-2.
 92 Id.
 93 Id. at 3.
 94 Id.
 95 Id. at 4.
 96 Id.
 97 Id.
 98 OIG IRF: NOAA Employee C Interview, supra, at 4.
 99 Id.
 100 Id.
 101 Id. at 5.

¹⁰² *Id.* at **4**.

the SWMP equipment eligible for replacement by advising the NERRS facilities they could only request Hurricane Sandy funding for items that were: (1) deployed during Hurricane Sandy; and (2) lost, damaged, or compromised. ¹⁰³ This employee did not think the addition of the word "compromised" changed the pool of SWMP equipment that would otherwise be eligible for replacement. ¹⁰⁴

OIG also interviewed an employee at the NERRS facility identified in the original complaint (the "Key Witness"). This Key Witness works with the researchers and technicians who interact with the SWMP equipment for which the funding was intended and has worked directly with the SWMP equipment. The Key Witness stated the SWMP equipment at his NERRS facility worked properly before, during, and after Hurricane Sandy. The Key Witness reviewed the language of the Act and was aware the funding was limited to assets "damaged by Hurricane Sandy. Accordingly, the Key Witness expressed concerns and reservations as to the propriety of requesting funding for SWMP equipment he could not truthfully specify was "damaged. The Key Witness specifically addressed his concerns to NOAA personnel and to employees at the other NERRS facilities affected by Hurricane Sandy. In connection with the Hurricane Sandy funding request, the Key Witness insisted he could only specify that the SWMP equipment was exposed and in the water during the storm, and that there was a need to maintain a robust monitoring system. The Key Witness maintained he would agree with acceptance of the Hurricane Sandy funding if NOAA approved his specification and description of the SWMP equipment.

OIG's Attempt to Delay Reimbursements and/or Purchases under the Act

After receiving a complaint alleging the fraudulent use of Hurricane Sandy funding and conducting an initial assessment of the matter, on November 18, 2013, OIG distributed a memorandum to NOAA's Acquisitions and Grants Office requesting that NOAA place a hold on reimbursements and/or purchases by the NERRS facilities using the Act's funding. The memorandum explained OIG received a complaint raising concerns that a NERRS facility improperly used Hurricane Sandy funding to replace aging assets that were not damaged by the storm. The memorandum informed NOAA's Acquisitions and Grants Office that OIG's preliminary investigation into the matter appeared to substantiate portions of the complaint and that Hurricane Sandy funding awarded to other NERRS facilities may also be inappropriate.

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103 Id.
104 Id. at 5.
105 OIG IRF: Key Witness Interview, supra, at 1-2.
106 Id. at 4.
107 Id.
108 Id.
109 Id.
110 Id.
111 Id. at 4-5.
112 Memorandum from OIG to NOAA Acquisitions and Grants Office (Nov. 18, 2013) (on file with OIG) (requesting delay in reimbursements and/or purchases under the Act).
113 Id.
114 Id.
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The memorandum requested that NOAA's Acquisitions and Grants Office delay any reimbursement using Hurricane Sandy funding to the involved NERRS facilities until OIG could determine whether the funding was properly awarded in accordance with the Act. The memorandum also recommended the NERRS facilities in question delay any purchases using Hurricane Sandy funding. Following receipt of the memorandum, NOAA's Acquisitions and Grants Office temporarily complied with OIG's request to delay any purchases of SWMP equipment using Hurricane Sandy funding. OIG met with members of NOAA's GMD and OGC on November 21, 2013. During this meeting, OIG provided the details of and circumstances surrounding the complaint as well as the information discovered during the investigation that corroborated portions of the complaint. Later that day, NOAA's GMD lifted the hold on the Hurricane Sandy funding on November 21, 2013. NOAA's GMD informed OIG that in order to extend the hold, NOAA would have to notify the grantees of an enforcement action, and the grantees would have a right to appeal the hold.

OIG Analysis

Based on interviews of relevant individuals, along with a review of applicable regulations, documents and NERRS facilities' applications for Hurricane Sandy funding, OIG concludes that NOAA provided guidance to NERRS facilities during the grant application process that expanded the plain language of the Act. OIG also concludes that NOAA subsequently approved Hurricane Sandy funding for assets that should not have been eligible for funding under the Act.

The Act and CFDA 11.483 use only the word "damaged" when specifying the assets eligible for replacement with Hurricane Sandy funding. NOAA expanded the eligibility requirements of the Act and CFDA 11.483 by distributing documents to the NERRS facilities that included the term "compromised" and by advising the NERRS facilities that equipment "compromised" by Hurricane Sandy was eligible for replacement with funding under the Act.

Through questions about whether corroded assets were eligible for funding and through an email to NOAA officials directly addressing the subject, NOAA officials were aware employees at NERRS facilities had concerns about legitimately claiming SWMP assets were "damaged" by Hurricane Sandy. ¹²² The term "compromised" originated during discussions between NOAA officials and employees at NERRS facilities regarding assets that operated properly following Hurricane Sandy but that showed signs of corrosion. As a result of these discussions, NOAA determined "compromised" assets should be eligible for replacement with this funding and further determined "compromised" was a form of "damaged" and within the Act's intent. According to NOAA, the term "compromised" was added to the eligibility standards to clear

¹¹⁵ **Id**.

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¹¹⁷ See e-mail from NOAA/GMD official to OIG (Dec. 18, 2013) (on file with OIG).

¹¹⁸ OIG IRF: GMD and OGC Interview, supra, at 1.

¹¹⁹ Id. at 3-4.

¹²⁰ See NOAA/GMD official, supra.

¹²¹ See id

¹²² OIG IRF: NOAA Employee C Interview, supra at 4, 5; OIG IRF: NOAA Employee B, supra, at 4; see Key Witness, supra.

up the NERRS facilities' confusion and concern regarding what SWMP equipment could be replaced with the Hurricane Sandy funding. ¹²³ As a result, the NERRS facilities supported their claims for funding eligibility by stating the SWMP assets were "compromised" by Hurricane Sandy and the addition of the term "compromised" to the funding eligibility standards served to address concerns of NERRS employees who questioned the use of Hurricane Sandy funding to replace SWMP equipment they could not legitimately claim was "damaged" by the storm. NOAA officials justified this addition of language by reasoning that "compromised" assets met the Act's standard for replacement insofar as the intent of the Act was to restore and continue a robust monitoring and observational system. NOAA officials did not indicate they consulted or sought approval from any outside sources regarding their interpretation of the Act.

OIG determined NOAA potentially approved a total of approximately \$550,200 in Hurricane Sandy funding under the Act to replace SWMP equipment for which the NERRS facilities made no clear specification of damage. To determine this amount, OIG reviewed each of the nine NERRS applications for Hurricane Sandy funding and counted the items about which a NERRS facility either made no claims as to damage and/or described as "compromised." As displayed in Appendices B and C, the justification for the replacement of the majority of these assets is largely based on the term "compromised," an eligibility standard that can neither be definitively shown nor easily denied. Furthermore, the NERRS facilities were only required to describe the condition of the assets, and they did not provide any detailed proof of the condition of the assets they were seeking to replace (e.g. photographs or data logs showing failure of SWMP assets). OIG concludes the addition of the term "compromised" resulted in the NERRS facilities receiving Hurricane Sandy funding for assets they could not truthfully specify as "damaged." The addition of the term "compromised" to the Request for Applications was inconsistent with the plain language of the Act.

¹²³ Id.

¹²⁴ See Appendix C.

¹²⁵ See Appendix C.

Chapter 4: Conclusions and Recommendations

I. Findings

- A. The NERRS facility that was the subject of the whistleblower's complaint submitted a grant application to NOAA that requested funds under the Act to replace assets that were not "damaged" by Hurricane Sandy, the Act's threshold eligibility criterion. OIG did not find evidence of fraud in this particular application, or similar applications from other NERRS facilities. However, these applications were, at a minimum, inappropriate insofar as they requested Hurricane Sandy funding for assets that did not appear to be covered by the plain language of the Act. As a result, there was an expenditure of funds that was not in accordance with the Act. The NERRS facility's request for Hurricane Sandy funding for these assets was based on NOAA's interpretation of the Act and resulting guidance that assets which were "lost, damaged, or compromised" were eligible for Hurricane Sandy funding.
- B. NOAA provided guidance to NERRS facilities during the grant application process that expanded the plain language of the Act. NOAA subsequently approved funding for assets that should not have been eligible for the Hurricane Sandy funding. In many cases, the NERRS facilities simply stated an asset was "damaged" or "compromised" and did not submit any documentation or information regarding the claim that an asset was compromised or damaged.
- C. OIG, upon determining the existence of a potential conflict between the plain language of the Act and NOAA's guidance to the NERRS facilities as to what was eligible for Hurricane Sandy funding, advised NOAA's Acquisitions and Grants Office to suspend the funding for any purchases of replacement SWMP equipment until OIG could determine whether the funding was properly awarded. NOAA suspended the funding for approximately 48 hours, after which it reversed its agreement to suspend the funding and allowed the NERRS facilities to resume requests for reimbursement. (See Appendix D, Memorandum from OIG Assistant Inspector General for Investigations (AIGI) to NOAA, Acquisitions and Grants Office (November 18, 2013) (requesting delay in reimbursement and/or purchases under the Act))

II. Conclusions

A. While OIG did not find evidence of fraud, the NERRS facilities' applications requested Hurricane Sandy funding for assets that were not eligible for coverage under the Act because they were not "damaged" by the storm – the threshold requirement under the Act. Rather, the applications stated that NERRS assets had been "lost, damaged, or compromised" by Hurricane Sandy. This expanded eligibility standard resulted from an interpretation of the intent of the Act by NOAA officials that was subsequently approved by officials from NOAA's Grants Management Division and DOC's Office of General Counsel.

- B. NOAA considered assets that were "lost, damaged, or compromised" to be eligible for Hurricane Sandy funding and believed this eligibility standard provided clarity to the NERRS facilities. According to NOAA officials, the Act's intent was to restore and continue the observational capacity of the NERRS facilities, and this "lost, damaged, or compromised" standard (which was an interpretation of the Act's stricter standard of "damaged") fulfilled that intent. The NERRS facilities' hesitation to specify that their SWMP equipment was "damaged" should have given NOAA officials cause to seek a fuller explanation of the Act's intent or possibly submit a reprogramming request to the Appropriations Committee, rather than leading it to expand the plain language of the Act to assuage the concerns of the NERRS facilities. By advising the NERRS facilities that "compromised" assets were eligible for replacement, NOAA introduced a vague and ambiguous standard that could not be definitively shown and encouraged NERRS facilities to apply for Hurricane Sandy funding for assets that should not have been eligible under the Act. The NERRS facilities utilized this expansion in the language of the Act and provided little, if any, supporting information regarding the state of the assets to be replaced.
- C. By using disaster relief funds to purchase new SWMP assets to replace (I.) aging SWMP assets that have experienced normal wear and tear and (2.) SWMP assets with deteriorating conditions existing before the storm, NOAA defeated the purpose of the Act and deprived itself and potentially others from using the funds for purposes that would more directly benefit the victims of Hurricane Sandy or remediate damage caused by the storm.

III. Recommendations

We recommend that NOAA:

- A. Make a determination on the recovery of questioned costs identified in Appendix C.
- B. In consultation with OGC, determine whether NOAA violated any laws or regulations when funds for items listed in Appendix B were spent by grantees.
- C. Review other NOAA programs to determine whether the scope of the Act was similarly expanded and report on results.
- D. Develop an internal approval process for all substantive changes to eligibility standards or requirements in NOAA grant programs, including documentation related to the justification for interpretations of laws or regulations resulting in such changes.
- E. Make a determination on supplementing grantee self-certifications with additional documentation, validation or other controls.

Appendix A: National Ocean Service Spend Plan for \$7,000,000 Designated for Ocean Observing and Coastal Monitoring Asset Repair and Replacement

Program, Project, or Activity (PPA)	Amount (\$000)	Sequester Amount (\$000)	Description
NERRS	\$1,100	\$1,045	Replace coastal monitoring infrastructure related to NERRS System-wide Monitoring Program (SWMP) at nine reserves affected by Hurricane Sandy. The request includes SWMP water quality data loggers, telemetry, meteorological stations and other equipment and infrastructure for access to SWMP stations.
Tide and Current Data Base	\$2,000	\$1,900	A 2008 gaps analysis of National Water Level Observation Network (NWLON) documented 20 NWLON gaps in moderate to heavily populated coastal areas between Cape Cod and North Carolina. The National Ocean Service (NOS) requires \$2.0M to repair and strengthen NWLON stations (no additional O&M costs) that will provide real time storm surge and meteorological data. All NWLON data feeds directly into the NWS Global Telecommunications System and is used by the National Hurricane Center for storm surge modeling, local weather forecasts, and NOS Operational Forecast System models. Emergency managers directly access the real-time data to assess local conditions for search and rescue, evacuation decisions, and other preparedness and response actions. The data also improves coastal inundation models for both short term extreme events to long term sea level rise.
Tide and Current Data Base	\$1,150	\$1,092	CO-OPS Physical Oceanographic Real-Time System (PORTS) stations in coastal areas (VA through RI) were significantly impacted by Hurricane Sandy. NOS requests \$1.2M to assess damage, conduct geodetic surveys to document station stability, and conduct emergency repairs ranging from minor through complete replacement of the station equipment. Funds will be used for equipment and support components, contracts to replace/repair stations, and assessment, travel and overtime. Timely, accurate and reliable data from the PORTS stations are critical for safe and efficient maritime operations, storm surge and tsunami warnings, oil spill response and other safety of life and property decisions.
IOOS Regional Observations	\$2,750	\$2,613	Repair or replace damaged high frequency radar systems, observing buoys and other equipment in affected regions. NOS estimates that the storm damaged 17 Integrated Ocean Observing System (IOOS) high frequency radar sites and two damaged buoys. These requested funds are necessary to repair or replace the affected equipment. These instruments provide surface current measurements in support of a variety of high-return applications, including search and rescue operations, marine transportation, water pollutant tracking, and harmful algal bloom forecasting.
TOTAL	\$7,000	\$6,650	

Source: Disaster Relief Act Spending Plan, supra.

Appendix B: Justification for Replacement SWMP Equipment in NERRS Facilities' Applications for Hurricane Sandy Funding

NERRS Facility	Funding Justification	SWMP Equipment Requested
Chesapeake Bay, MD	"Effects of Hurricane Sandy included damage to the pier holding the System-wide Monitoring Program (SWMP) station at Monie Bay, and high water levels compromising the functioning of the sonde deployed in this site [S]torm surge and associated high water levels resulting from Hurricane Sandy caused severe damage to the pier that physically supported the sonde and telemetry unit for the Monie Bay component of the Reserve, compromising both (the sonde and telemetry unit) as they were deployed during the storm. Currently, the cable that connected to both the sonde and telemetry unit is still trapped within the damaged pier (under water)."	 I sonde with probes and associated accessories I telemetry unit including necessary accessories
Chesapeake Bay, VA	"While no catastrophic failure was noted, water quality sondes were compromised at the two (2) most open water stations Water quality sondes at these stations incurred significant shock impact stress with the station infrastructure leading to reduced life expectancy."	• 2 sondes with probes and associated accessories
Delaware	"Four aging sondes were deployed during Hurricane Sandy (3 in the St. Jones and I in Blackbird Creek) and incurred significant stress to the units and probes; especially due to increased sediment loads and currents. The water quality telemetry unit became compromised due to an enclosure seal leak allowing water leakage during heavy rain and winds. This leakage caused severe corrosion to the communication port of the telemetry unit rendering laptop interface with the unit impossible. Meteorological station damages were limited to a single barometric pressure unit failed during Hurricane Sandy."	 4 sondes with probes and associated accessories I telemetry unit and field cable I barometric pressure sensor
Great Bay, NH	"The sondes are very old (all but two are at least eight years old and five are more than ten years old) and, we believe, compromised in their ability to support near and real-time data in future weather events such as occurred during Super-Storm Sandy The telemetry on at least one sonde was not working directly after the storm hit; and although it is working now, we believe that these systems were impacted by the storm and could not make it through another large event. The meteorological station is located in an open agricultural field and the high winds caused some damage that needed to be repaired immediately, and also caused wear and tear on the structure and equipment."	 4 sondes with probes and associated accessories Various telemetry equipment Weather station sensors and associated accessories

NERRS Facility	Funding Justification	SWMP Equipment Requested
Hudson River, NY	"At the time of the storm, the Reserve had six data sondes deployed, along with two telemetry stations. Out of this equipment, one sonde was lost, and two sondes and one telemetry station were inundated and sustained significant damage. The remaining three sondes and second telemetry station, which were nearly a decade old, were further compromised by the surge, increased suspended sediments, and floating debris. Replacement sondes must be [new models] as the original models are being phased out by the company. Therefore, two additional sondes and two additional sets of probes must also be acquired to provide backup equipment to maintain a continuous record when other sondes require routine calibration and repair."	 8 sondes and associated accessories, including ten sets of sonde sensors 2 telemetry stations and associated structural components and power supplies
Jacques Cousteau, NJ	"[O]ne datasonde was lost and three were damaged, a 27 foot coastal research vessel was destroyed including all electronics and engines, field sampling and sensing gear was lost including hydrophones and acoustic equipment used for fish tracking studies, an emergency generator was destroyed, and of course major alterations to habitat and water quality occurred." "Sonde 02A1048AB was deployed at B6 on telemetry. Leakage and corrosion at the field-cable/sonde juncture was detected after the event, suggesting high current velocity and debris that had collected on the cable strained the connection, compromising seals and allowing water intrusion. Sonde 09E100822 was deployed at B9 and had damage due to leakage/corrosion. Sonde 01A0197AA was deployed on telemetry at Chestnut Neck; the telemetry station was wiped out, the field cable connecting it to the sonde submerged, and saltwater intrusion through this connection was observed. Sonde 99K0599AA was deployed at BA; the mounting at this station failed due to current/debris, strain was exerted on the field cable, and moisture was detected at the cable/sonde juncture, indicating water intrusion into the sonde body. Regarding the JCNERR's weather station, while the tower still stands, it was twisted and was deemed unstable during post-event inspection." "Significant infrastructure and associated equipment was destroyed during Superstorm Sandy which enabled reserve staff to access SWMP stations and store and maintain SWMP samples. These included a 25.4 foot coastal research vessel including 2 outboard engines and electronics, an emergency generator that supports data collection during power outages, and a freezer for sample storage."	 6 sondes with probes and associated accessories I telemetry station with associated structural components and power supplies I weather station with associated structural components, sensors, and cables 25' 4" research vessel including 2 outboard engines, and trailer I emergency generator I ultra-low -80 freezer for storage of nutrient and biological samples Various "marine electronics" including GPS, radios, binoculars, and combo chartplotter/fishfinder GPS/Sonar unit Field sampling sensing gear Boat sampling sensing gear

NERRS Facility	Funding Justification	SWMP Equipment Requested
Narragansett Bay, RI	"During Hurricane Sandy, a total of four multi-parameter datasondes were deployed at each of the Reserve's long-term monitoring station As a result of intense wave activity, mounting brackets holding some of these instruments in place were broken off, sending them to the bottom where they were repeatedly exposed [to] extreme impacts of waves and debris. These instruments, while robust, are not designed to sustain extreme and repeated impacts, thus compromising the integrity of seals, circuit boards, and delicate optical sensors. Other datasondes were repeatedly subject to intense impacts and showed signs of water leakage upon retrieval The Reserve will procure a temperature sensor that was damaged during Hurricane Sandy."	 4 sondes with probes and associated accessories Weather station meteorological temperature sensor Calibration standards and miscellaneous lab supplies
Waquoit Bay, MA	" during Sandy, the Reserve's SWMP system was fully operational. The Reserve's observing and monitoring assets were compromised as follows: four sondes, exposed (GOES) Satlink system at our Menauhant SWMP station, exposed sensors for our meteorological station, exposed antenna for our (GOES) telemetry system. While all SWMP instruments and systems remained operational during the storm, it is assumed that these equipment and related infrastructure underwent significant stress from winds and waves. For example, we have since experienced a series of problems (and associated downtime) with our telemetry system at our very storm-exposed Menauhant station, and more frequent breakdowns of sondes sensors and our system weather sensors."	4 sondes with probes and associated accessories Meteorological and satellite communications equipment including associated infrastructure and sensors GOES satellite telemetry (solar) system

NERRS Facility	Funding Justification	SWMP Equipment Requested
Wells, ME	"Effects of Hurricane Sandy to the Wells National Estuarine Research Reserve included high winds, increased tidal and storm surges, and flooding which carried debris and storm/flood water into and around our monitoring platforms which compromised the Reserve's observing and monitoring assets. These assets were destroyed, lost, damaged, or compromised as follows: Four [sondes] and their associated sensors, two I5M vented field cables, one telemetry station including enclosure, antennas, transmitter, transmission cable, battery, solar array, and regulator."	 4 sondes with probes and associated accessories I temp/RH probe I chlorophyll probe I telemetry unit and field cable
	"Four aging [sondes] along with their associated sensors used to collect required SWMP parameters were deployed during Hurricane Sandy and were compromised by increased sedimentation in and around the sensors/connections and water leakage into the bulkheads/connectors. Stations/platforms had visibly shifted due to large likely 'woody' debris in the water causing 'impacts and shock' to the units housed inside, and in one case water intrusion into the bulkhead, causing electrical/communications issues as well as 2 optical probes (Turb and Chl-a) being damaged. Two 15M vented field cables were also in use during the storm, one of which is showing signs of failure and corrosion at the connector. Our telemetry enclosure was flooded leaving standing water in the box for 2 days until we could access the site to assess damage. Corrosion is visible on the [t]ransmitter com ports, and the battery, regulator, and all connections to the logger/yagi/etc., were exposed to salt water intrusion. Our Temp and RH probes on our MET station are old and no longer supported by the manufacturer, and, therefore, in need of replacement. One of these probes was deployed during the storm and high winds forced sand and debris into the protective housing around the probe, which likely caused further damage and wear on this already aging probe."	

Source: https://grantsonline.rdc.noaa.gov, NERRS facilities' applications for Hurricane Sandy funding under Funding Opportunity Number NOAA-NOS-OCRM-2013-2003687.

Appendix C: Questioned Costs for Replacement SWMP Equipment 126

NERRS Facility	Inadequate Funding Justification and Reason for Questioning Costs	Questioned SWMP Equipment and Amount
Chesapeake Bay, MD	"Effects of Hurricane Sandy included damage to the pier holding the System-wide Monitoring Program (SWMP) station at Monie Bay, and high water levels compromising the functioning of the sonde deployed in this site [S]torm surge and associated high water levels resulting from Hurricane Sandy caused severe damage to the pier that physically supported the sonde and telemetry unit for the Monie Bay component of the Reserve, compromising both (the sonde and telemetry unit) as they were deployed during the storm. Currently, the cable that connected to both the sonde and telemetry unit is still trapped within the damaged pier (under water)." Reason for questioning costs: The facility did not claim the SWMP equipment was damaged.	 I sonde with probes and associated accessories 25-foot cable for sonde and telemetry unit I telemetry unit and associated accessories Shipping Total amount: \$22,775
Chesapeake Bay, VA	While no catastrophic failure was noted, water quality sondes were compromised at the two (2) most open water stations Water quality sondes at these stations incurred significant shock impact stress with the station infrastructure leading to reduced life expectancy." Reason for questioning costs: The facility did not claim the SWMP equipment was damaged.	 2 sondes with probes and associated accessories Total amount: \$30,118
Delaware	"Four aging sondes were deployed during Hurricane Sandy (3 in the St. Jones and I in Blackbird Creek) and incurred significant stress to the units and probes; especially due to increased sediment loads and currents. The water quality telemetry unit became compromised due to an enclosure seal leak allowing water leakage during heavy rain and winds. This leakage caused severe corrosion to the communication port of the telemetry unit rendering laptop interface with the unit impossible." Reason for inadequacy of request: With the exception of a barometric pressure sensor that "completely failed during Hurricane Sandy," the facility did not claim the SWMP equipment was damaged. It is not clear if the "enclosure seal leak" was a pre-existing condition, and we question whether the resulting corrosion was a direct effect of Hurricane Sandy.	 4 sondes with probes and associated accessories I telemetry unit and field cable Other: audit costs Total amount: \$53,151

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¹²⁶ By questioning these costs, OIG is not asserting all the requests for funding in this appendix are improper. A questioned cost may be resolved, for example, by the NERRS facility providing more specific proof of damage to the equipment.

NERRS Facility	Inadequate Funding Justification and Reason for Questioning Costs	Questioned SWMP Equipment and Amount
Great Bay, NH	"The sondes are very old (all but two are at least eight years old and five are more than ten years old) and, we believe, compromised in their ability to support near and real-time data in future weather events such as occurred during Super-Storm Sandy The telemetry on at least one sonde was not working directly after the storm hit; and although it is working now, we believe that these systems were impacted by the storm and could not make it through another large event. The meteorological station is located in an open agricultural field and the high winds caused some damage that needed to be repaired immediately, and also caused wear and tear on the structure and equipment." Reason for questioning costs: The application stated inconsistent claims in different sections of the report. In the "Budget and Budget Justification" section, the facility claimed the sondes were "destroyed and/or damaged"; however, in the "Introduction" section, quoted above, the facility only "believes" the sondes were "compromised." Similarly, with respect to the "Supplies," the "Budget and Budget Justification" section states an overall claim that the telemetry and weather station equipment were "damaged" and that the "[c]ables and solar panels were among the items most damaged by the storm," yet the "Introduction" section states this equipment experienced "wear and tear." Furthermore, the "Budget and Budget Justification" section notes the "met station had a crack in it, and the storm worsened this crack and led us to replace a part of the tower this year." As such, this application appears to request Hurricane Sandy funding to pay for repairs that were completed prior to the award of the Hurricane Sandy funding.	 4 sondes with C/T, DO, pH, and turbidity sensors and wiper 3 adapters I underwater junction box and adapter (\$695 each) 4 batteries 2 temperature & humidity sensors I barometer I optical DO sensor I guarded pH sensor Supplies Total amount: \$58,720

NERRS Facility	Inadequate Funding Justification and Reason for Questioning Costs	Questioned SWMP Equipment and Amount
Hudson River, NY	"The remaining three sondes and second telemetry station, which were nearly a decade old, were further compromised by the surge, increased suspended sediments, and floating debris. Replacement sondes must be [a new model] as the original models are being phased out by the company. Therefore, two additional sondes and two additional sets of probes must also be acquired to provide backup equipment to maintain a continuous record when other sondes require routine calibration and repair." "The program requires continual deployment at four monitoring stations. Reserves should have at least six datasondes to provide continuity of data collection and to provide time to recalibrate and maintain equipment in the laboratory The Reserve will procure four sondes to replace equipment compromised at the four SWMP stations, two sondes to replace equipment at the two non-SWMP stations, and two additional sondes for recalibration and maintenance for a total of eight sondes. Sensors will be acquired to fully equip all eight sondes plus two additional sensors of each type for maintenance and repair." Reason for questioning costs: The facility claimed six sondes and two telemetry stations were deployed during the storm. Of this equipment, "one sonde was lost, and two sondes and one telemetry station sustained significant damage." The application did not claim the remaining three sondes were damaged. In addition, the facility requested an additional two sondes for backup (for a total of eight) and ten sets of sonde sensors, which is four more sets of sensors than were deployed during the storm. (Note: OIG is aware NOAA requires back-up sondes to comply with continuous data collection requirements; however, sondes that were not damaged by Hurricane Sandy do not meet the plain language requirement for funding under the Act and by their nature are not replacements for sondes that were damaged.) Also, the facility distinguished between SWMP sondes and telemetry equipment. Four sondes and one telemetry station were designated	 5 10 m non-vented sondes 5 smart wipers 7 CT sensors 7 pH sensors 7 optical DO sensors 7 turbidity sensors 7 algae sensors 3 SOA cables 3 10 m DCP SDI-12 cables I SWMP telemetry station and associated structural components and power supplies, basic SatLink2-V2 Total amount: \$105,915

NERRS Facility	Inadequate Funding Justification and Reason for Questioning Costs	Questioned SWMP Equipment and Amount
Jacques Cousteau, NJ	" [A] 27 foot coastal research vessel was destroyed including all electronics and engines, field sampling and sensing gear was lost including hydrophones and acoustic equipment used for fish tracking studies" "Regarding the JCNERR's weather station, while the tower still stands, it was twisted and was deemed unstable during post-event inspection." Reason for questioning costs: The application is inconsistent with respect to damage to the datasondes. In the "Introduction" section of the application, the facility noted "one datasonde was lost and three were damaged." In the "Task Description" section of the application, one datasonde is described as having "damage due to leakage/corrosion," and the telemetry station with one datasonde was "wiped out." The other two datasondes that were deployed were not specified as "damaged." Additionally, six datasondes and associated probes and accessories are requested, and the application only claims four datasondes were deployed during Hurricane Sandy. (Please see note above regarding backup sondes.) Regarding the SWMP weather station, the application did not claim any of the sensors or cables on the station were "damaged." The application only stated the tower was "twisted" and "deemed unstable." As such, we do not question the request for funds to replace the tower structure. However, because the application does not provide any information regarding the status of the equipment on the tower, we must question whether this equipment should be replaced with Hurricane Sandy funding. (Note: The lack of detailed information in the application regarding exactly what "observing system infrastructure" was lost and/or on the coastal research vessel at the time of the storm, prevented OIG from determining whether the items requested as replacements are appropriate. OIG did not include these items in its list of questioned SWMP equipment.)	 4 sondes and associated probes and accessories SWMP weather station and associated structural components, sensors, and cables Total amount: \$72,577

NERRS Facility	Inadequate Funding Justification and Reason for Questioning Costs	Questioned SWMP Equipment and Amount
Narragansett Bay, RI	"During Hurricane Sandy, a total of four multi-parameter datasondes were deployed at each of the Reserve's long-term monitoring station As a result of intense wave activity, mounting brackets holding some of these instruments in place were broken off, sending them to the bottom where they were repeatedly exposed [to] extreme impacts of waves and debris. These instruments, while robust, are not designed to sustain extreme and repeated impacts, thus compromising the integrity of seals, circuit boards, and delicate optical sensors. Other datasondes were repeatedly subject to intense impacts and showed signs of water leakage upon retrieval." Reason for questioning costs: The facility did not directly state the sondes were damaged, nor did it claim the SWMP equipment did not work following the storm. The facility mentioned Hurricane Sandy's effects on the sondes, but it did not specify the damage to each sonde. Accordingly, OIG could not verify which or how many sondes Hurricane Sandy actually damaged.	 4 sondes 4 conductivity/temp sensors 4 pH sensor assemblies 4 DO sensors 4 turbidity sensors 4 central wipers I signal adapter 4 anode kits 4 algae sensors I calibration standards and miscellaneous lab supplies Total amount: \$62,890

NERRS Facility	Inadequate Funding Justification and Reason for Questioning Costs	Questioned SWMP Equipment and Amount
Waquoit Bay, MA	"The Reserve's observing and monitoring assets were compromised as follows: four sondes, exposed (GOES) Satlink system at our Menauhant SWMP station, exposed sensors for our meteorological station, exposed antenna for our (GOES) telemetry system. While all SWMP instruments and systems remained operational during the storm, it is assumed that these equipment and related infrastructure underwent significant stress from winds and waves. For example, we have since experienced a series of problems (and associated downtime) with our telemetry system at our very storm-exposed Menauhant station, and more frequent breakdowns of sondes, sensors and our system weather sensors." Reason for questioning costs: The facility did not claim the items were damaged, and it only "assumed" that the equipment "underwent significant stress."	 4 sondes with probes and associated sensors, cables and anti-fouling accessories I meteorological and satellite communications equipment including 30 ft instrument tower, temperature/RH, Wind, PAR, precipitation sensors, Yagi antenna, and associated mounts and cables I GOES satellite telemetry (solar) system Total amount: \$75,840
Wells, ME	"Four aging [sondes] along with their associated sensors used to collect required SWMP parameters were deployed during Hurricane Sandy and were compromised by increased sedimentation in and around the sensors/connections and water leakage into the bulkheads/connectors. Stations/platforms had visibly shifted due to large likely 'woody' debris in the water causing 'impacts and shock' to the units housed inside Our Temp and RH probes on our MET station are old and no longer supported by the manufacturer, and, therefore, in need of replacement. One of these probes was deployed during the storm and high winds forced sand and debris into the protective housing around the probe, which likely caused further damage and wear on this already aging probe." Reason for questioning costs: The facility only claimed two optical probes were damaged. No specific claims of damage were made with respect to the sondes. The application states only one Temp/RH probe was deployed during Hurricane Sandy, but it requests two replacement Temp/RH probes. The description of the telemetry equipment did not specify damage caused by the storm.	 2 sondes and probes 2 vented sondes and probes I temp/RH probe I telemetry unit and field cable Total amount: \$68,214
Total questioned amount:		<u>\$550,200</u>

Source: https://grantsonline.rdc.noaa.gov, NERRS facilities' applications for Hurricane Sandy funding under Funding Opportunity Number NOAA-NOS-OCRM-2013-2003687 and OIG analysis.

Appendix D: Memorandum from OIG AIGI to NOAA Acquisitions and Grants Office



Date: November 18, 2013

Memorandum For: , Acquisitions and Grants Office,

National Oceanic and Atmospheric Administration (NOAA)

From:

Assistant Inspector General for Investigations

Subject: Request to Delay Reimbursements and/or Purchases Under Grant Awards

to National Estuarine Research Reserves (NERR) for Hurricane Sandy

Supplemental Relief Funding

The Office of Inspector General (OIG) received a detailed anonymous complaint claiming a NERR facility applied for a grant under the Disaster Relief Appropriations Act (Public Law 113-2; H.R. 152) to which it was not entitled under the terms of the Act. Specifically, the complaint alleges that grant funds were used (or planning to be used) to replace aging assets not damaged by Hurricane Sandy. The OIG's preliminary investigation revealed credible information that appears to substantiate portions of the complaint. Further investigation revealed grants were also awarded to other NERR facilities under the Disaster Relief Appropriations Act and those grants may also be inappropriate. The involved NERRs include:

- Chesapeake Bay Maryland (Maryland Department of Natural Resources)
- Chesapeake Bay Virginia (College of William & Mary)
- Delaware (Delaware Department of Natural Resources and Environmental Control)
- Great Bay (University of New Hampshire)
- Hudson River (Greenway Conservancy)
- Jacques Cousteau (Rutgers University)
- Narragansett Bay (Rhode Island Department of Environmental Control)
- Waquoit Bay (Massachusetts Department of Environmental Management)
- Wells (Wells Management Authority).

The total amount awarded through the grants to the above facilities is approximately \$1 million dollars. The OIG requests your office delay any reimbursement to the above listed NERRs under grant awards for Hurricane Sandy Supplemental Relief Funding until the OIG can determine whether the grants were awarded properly in accordance with the Public Law 113-2. Additionally, the OIG recommends that the NERRs facilities in question delay any purchases of equipment reportedly damaged, lost, or compromised by Hurricane Sandy using grant award funds.

If you have any questions concerning this memorandum, please contact

Appendix E: Table of Abbreviations

AIGI Assistant Inspector General for Investigations

CFDA Catalog of Federal Domestic Assistance

DOC Department of Commerce

EO Executive Order

ERD Estuarine Reserves Division

FEMA Federal Emergency Management Agency

GMD Grants Management Division

IOOS Integrated Ocean Observing System

IRF Investigative Record Form

NERRS National Estuarine Research Reserve System

NOAA National Oceanic and Atmospheric Administration

NOS National Ocean Service

OCRM Office of Ocean and Coastal Resource Management

OGC Office of General Counsel

OIG Office of Inspector General

OMB Office of Management and Budget

PPA Program, Project, or Activity

SWMP System-Wide Monitoring Program

Appendix F: Contributors to the Report

OIG would like to acknowledge and thank the Office of Audit and Evaluation for providing review of and assistance with Appendix C and the recommendations portion of this report.