

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

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December 19, 2012

Dr. Jane Lubchenco
Under Secretary of Commerce for Oceans and Atmosphere
and NOAA Administrator
U.S. Department of Commerce
1401 Constitution Avenue, N.W.
Washington, DC 20230

Dear Administrator Lubchenco:

Thank you for your recent response (Attachment A) to my November 20, 2012 letter regarding the termination of the NWS Sandy Service Assessment. While I appreciate your timely reply and update on the progress of the new Sandy assessment team, I am disappointed that you elected not to answer many of my questions. Moreover, while your letter, and a NOAA statement released on December 2, 2012 (Attachment B), provide a rationale for the termination of the initial Sandy assessment team, they also raise additional questions that require explanation.

For instance, in the December 2 statement, NOAA explains that the two concerns which led the NWS to dissolve the proposed team were:

- 1) NOAA and NWS interest in the potential for assessing Sandy through broader federal collaboration, which would include at minimum inviting participation from other NOAA line offices and other government agencies to serve on the NWS assessment team.
- 2) For the first time ever, the draft charter proposed a co-lead from outside the government. This proposal led to questions regarding FACA [Federal Advisory Committee Act] compliance, and ultimately to a review by counsel and policy officials who determined that including non-federal participants on our service assessment teams did not comply with FACA.

Additionally, your reply to me goes on to state that generally:

[A]ny group composed of federal and non-federal officials that meets to provide consensus, advice, or recommendations to a federal agency or official must comply with the Federal Advisory Committee Act (FACA) of 1972 (5 U.S.C. App., 2). In order to assess our services during Sandy in a timely manner, NOAA opted to conduct a Sandy assessment using only federal team members.

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First, I agree with NOAA that a broader federal assessment would benefit the public. However, while the new team does appear to have broader federal collaboration given the participation of Federal Emergency Management Agency (FEMA) and the Centers for Disease Control and Prevention (CDC) staff, the assessment itself is not a broader review when compared to the draft charter of the initial, now-terminated assessment team (Attachment C).

When I compare the draft charter for the initial, terminated Sandy assessment with the charter for the new Sandy assessment (Attachment D), the new charter has a much narrower focus than the original terminated charter. For instance, the terminated charter had five objectives compared to the three in the new charter. Objectives one and two of the terminated charter are arguably critical issues worth investigating as they relate to the "timeliness, quality, accuracy, and usefulness of NWS hazardous weather products and services," as well as the impacts of the "transition from National Hurricane Center (NHC) product issuances to Hydrometeorological Prediction Center (HPC) product issuances." Conversely, the new charter's second objective is to focus on "NOAA's - and in particular NWS's - Web presence as a tool for communicating with the public," and does not even list the NHC as one of the "NOAA offices significantly engaged."

The differences between the two charters further highlight the inadequacy of the new document. The new charter states that, "[t]he scope of this assessment is limited to three main focus areas, but does not preclude separately commissioned assessments, within or external to NOAA, from evaluating other topics." The problem with this sentence is that having already terminated one assessment team with a broader mandate, the new assessment team's "limited" three-focus-area charter is now the only assessment going forward, and its objectives are the only standards by which NWS and NOAA's performance will be evaluated. By not allowing the opportunity for additional reviews, NOAA has in essence limited the scope of its inquiry, and by default, this assessment precludes other topics from being evaluated.

The new charter also raises questions about the new team's independence as it confers significant authority on the Deputy Under Secretary for Operations, and especially to you, as NOAA Administrator, since your approval is required prior to the release of the Sandy assessment. Conversely, the terminated assessment team's charter suggested vetting recommendations through the Corporate Board, the Office of Climate, Water, and Weather Services (OCWWS), and appropriate Regions and Headquarters offices. My concern about this level of control over the assessment's operations and findings is compounded by the fact that the new charter requires that participants sign non-disclosure agreements - further undermining NOAA's claim of independence and transparency.

Second, it is not logical that NOAA would prohibit external advisors because of FACA, when NOAA could make the outside panelists special government employees, or simply charter the Assessment under FACA - thereby keeping with the past precedent of including non-governmental expertise. Using FACA to justify the exclusion of outside experts turns the

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purpose of FACA on its head. As the Congressional Research Service points out, "FACA was originally enacted to make executive branch advisory committee operations more accessible and transparent."¹ NOAA's use of FACA to conceal agency operations and limit expert participation is contrary to the Act's spirit and intent.

The only reason I can see for not complying with FACA is that it may slow down the establishment of the Service Assessment, because a "timely notice"² must be posted in the *Federal Register*. As I have said before, it is imperative that NOAA act quickly and decisively in performing this assessment, but it has been seven weeks since Hurricane Sandy made landfall, and over a month since the draft charter for the initial assessment was created.

The decision by NOAA and the NWS to limit outside participation is even more surprising when one considers that just months before Hurricane Sandy, the National Academy of Sciences issued a report that recommended that the NWS should:

consider whether having an independent entity conduct all post-event evaluations of performance after false alarms and significant events would be more effective. These evaluations should address the full scope of response issues, from forecasts and warnings, to communication and public response, and be conducted by an appropriate mix of individuals from within and outside the NWS.³

In order to better understand the rationale for terminating the original NWS Sandy Service Assessment, as well as the limited objectives of the new broader assessment team, I once again ask for your timely response to the following inquiries. Some of these questions may appear familiar as they were included in my November 20, 2012 letter to you. I am resubmitting them as they remain unanswered. Further, for the sake of clarity, and to ensure that I do not misunderstand your reply, please answer the questions by referencing the numbered sequence below:

- 1) In NOAA's statement of December 2, 2012, the bureau stated that "NWS service assessment teams have included external participants for some years." NOAA then went on to state that, "[u]nfortunately, this practice has not been done in ways that comply with the Federal Advisory Committee Act (FACA)."
 - a. Should the Subcommittee interpret these two statements as an admission that NWS or NOAA has violated FACA?
 - b. If so, please explain the implications, as you understand them to be, for such violations.

¹ *Federal Advisory Committees: An Overview*, Congressional Research Service, June 26, 2012.

² *Ibid.*

³ "Weather Services for the Nation: Becoming Second to None," National Academy of Sciences, Committee on the Assessment of the National Weather Service's Modernization Program; Board on Atmospheric Sciences and Climate; Division on Earth and Life Studies; National Research Council; 2012.

- c. How many violations of FACA have NWS or NOAA identified? Please provide a list of those instances.
 - d. What has prevented NOAA from complying with FACA in each instance?
- 2) It is my understanding that the initial Sandy assessment had a draft charter for a team of panelists already in place, whose tasks had been established, whose logistics had been discussed, and who "began organizing and held preliminary conference calls." What prevented NOAA from complying with FACA for the now-terminated Sandy Service Assessment?
- 3) Why did NOAA decide to terminate the initial assessment team, rather than make the non-government panelists special government employees?
- 4) Have any other service assessment teams in NWS' history ever been terminated prior to completion of their task?
 - a. If yes, please provide a list of all the times this has occurred, including the timeframe in which they occurred, the reasons for their termination, and the results. For example, were new teams created or were there no service assessments for those weather events?
- 5) According to the new charter, the budget for the new Sandy assessment is \$40,000, and the final report is due to you by March 31, 2013.
 - a. How does this budget and timeframe for the Sandy Service Assessment compare with those of other NWS service assessments?
 - b. Please explain discrepancies, if any, between the Sandy Service Assessment compared to other NWS service assessments.
- 6) Previously, have there been any larger multi-agency reviews of the NWS' performance in response to a weather-related event? If yes, please provide all pertinent details relative to the reviews, including the reasons such reviews were conducted, their charters, whether such reviews replaced the typical NWS service assessments, and their final reports.
- 7) What assurance can you provide the American public that the new Sandy assessment team will maintain the same level of independence as the recently decommissioned team, which had selected a co-chair from the private sector - whereas the new assessment will be conducted by all government employees, and whose report cannot be released without your approval?
 - a. Will the new assessment team be allowed to access and interview all NOAA staff, including those at the National Hurricane Center in Florida (NHC)? Note that the new charter does not identify the NHC in its list of "offices significantly engaged," even though NHC is listed in the "offices significantly impacted" in the initial terminated charter. I understand that NHC is part of the National Centers

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for Environmental Prediction (NCEP), but I do not understand why NOAA made this change in the new charter.

- 8) Who are the members of the new assessment team, and how were they selected?
 - a. Please provide their name, title, and reason for selection to the new Sandy assessment team.

- 9) Please provide a list of all prior NWS service assessments where the Deputy Under Secretary for Operations had to be consulted for the final report, and the NOAA Administrator had to approve the final report prior to its release, as is the case under the new charter.

I remain concerned that the NWS Sandy Service Assessment lacks sufficient independence as non-governmental participation has been scaled back, confidentiality clauses have been added, and management influence has grown. NOAA has also narrowed the focus of the assessment to the point that it may not substantively inform future agency actions.

I look forward to your response by January 4, 2013. If you have any questions regarding this inquiry, please contact Mr. Raj Bharwani with the Subcommittee on Investigations and Oversight at 202-225-6371.

Sincerely,



Rep. Paul Broun, MD
Chairman
Subcommittee on Investigations
and Oversight

cc: Rep. Ralph Hall
Chairman
Committee on Science, Space,
and Technology

Rep. Eddie Bernice Johnson
Ranking Member
Committee on Science, Space,
and Technology

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Rep. Paul Tonko
Ranking Member
Subcommittee on Investigations
and Oversight

Dr. Rebecca Blank
Acting Secretary of Commerce
Department of Commerce

Attachments



UNITED STATES DEPARTMENT OF COMMERCE
The Under Secretary of Commerce
for Oceans and Atmosphere
Washington, D.C. 20230

DEC 10 2012

The Honorable Paul Broun, MD
Chairman, Subcommittee on Investigations
and Oversight
Committee on Science, Space, and Technology
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Broun:

Thank you for your letter regarding the National Oceanic and Atmospheric Administration's (NOAA's) Hurricane/Post-Tropical Cyclone Sandy Service Assessment. I understand your concerns and assure you that we are indeed moving forward with an assessment of NWS services during Sandy.

Since your letter of November 20, 2012, we have finalized an assessment charter that includes knowledgeable and independent federal experts from a wide range of disciplines, including the Federal Emergency Management Agency and the Centers for Disease Control and Prevention. I have also elevated oversight of the assessment to NOAA and included team members from other NOAA line offices. The team leader is a National Marine Fisheries Service scientist with 20 years of service at NOAA and extensive team lead experience. The team composition is robust, diverse, and ensures that the review will be thorough, collaborative, and multi-disciplined.

The primary focus of the Sandy assessment will be to examine and evaluate the effectiveness of the policies underlying NWS watch and warning products, the production and issuance of storm surge products, and public communications, particularly forecast information dissemination and NWS Web sites as a public communication tool. The assessment will result in a concise report that identifies best practices and provides recommendations for service improvements. The team will begin its work by January, and a draft of the best practices, findings, and recommendations are due to me by March 31, 2013.

Your letter included several questions related to an earlier effort to develop a team and charter for the Sandy assessment. The initial team was in its formation stages, with no charter signed and therefore never commissioned. In addition, the initial team included proposed team members, including the proposed co-lead, who were not federal employees. Generally, any group composed of federal and non-federal officials that meets to provide consensus, advice, or recommendations to a federal agency or official must comply with the Federal Advisory Committee Act (FACA) of 1972 (5 U.S.C. App., 2). In order to assess our services during Sandy in a timely manner, NOAA opted to conduct a Sandy assessment using only federal team members.

THE ADMINISTRATOR

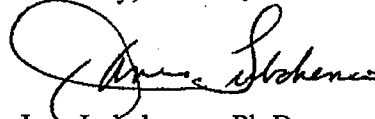


While NWS program staff were proceeding to initiate an assessment following established practices, my leadership team was discussing the potential for broader federal collaboration and elevating the review from the NWS-level to the NOAA-level, as we did for the recent Hurricane Irene assessment. The proposed team began organizing and held preliminary conference calls. Regrettably, at least one team member who was unaware that the assessment had not yet been formally approved and chartered made his invitation public. This led to media reports giving the impression that the proposed team had been officially commissioned to carry out the assessment.

I can assure you the newly established, formally approved Sandy assessment team will conduct interviews and collect information from a broad range of external parties. In addition to avoid this misunderstanding in the future, NOAA anticipates addressing non-federal participation in service assessments by the start of the next hurricane season on June 1, 2013.

I appreciate your continued support of NOAA and its programs. If you have further questions, please contact Amanda Hallberg Greenwell, Acting Director of NOAA's Office of Legislative and Intergovernmental Affairs, at (202) 482-4981.

Sincerely,

A handwritten signature in black ink, appearing to read "Jane Lubchenco". The signature is fluid and cursive, with a large initial "J" and "L".

Jane Lubchenco, Ph.D.
Under Secretary of Commerce
for Oceans and Atmosphere

Sandy Service Assessment Overview

National Weather Service (NWS) service assessment teams have included external participants for some years. This is the right thing to do because it brings important, relevant expertise to bear that NWS does not have, or has in only very limited ways – notably social science skills. It also helps assure external parties that the assessment itself is conducted without bias or intent to hide any NWS shortcomings that might be discovered.

Unfortunately, this practice has not been done in ways that comply with the Federal Advisory Committee Act (FACA). We discovered this through the following manner:

- During development of the initial Sandy assessment team, previous practices were followed, including identifying outside non-federal participants for the assessment team and asking their willingness to serve on the team.
- While the draft assessment charter was being reviewed by NWS leadership, the proposed team began organizing and held preliminary conference calls to discuss logistics.
- Unfortunately, at least one team member was unaware that the charter was still draft and preliminary, and made their invitation public. This apparently gave some in the public the impression that the proposed team had been officially chartered to carry out the assessment, when in fact the charter was not yet approved and signed.
- While reviewing the draft charter, NWS leadership flagged two concerns and asked program staff to dissolve the proposed team until these issues could be fully explored and resolved.

These concerns were:

1. NOAA and NWS interest in the potential for assessing Sandy through broader federal collaboration, which would include at minimum inviting participation from other NOAA line offices and other government agencies to serve on the NWS assessment team.
2. For the first time ever, the draft charter proposed a co-lead from outside the government. This proposal led to questions regarding FACA compliance, and ultimately to a review by counsel and policy officials who determined that including non-federal participants on our service assessment teams did not comply with FACA.

While the attorneys were reviewing the FACA issue, the media began inquiring about why the team was dissolved. In an effort to be as transparent as possible with known facts, our answers to the media focused on the first issue (i.e., the potential for broader federal collaboration) until we could receive more detailed guidance from the NOAA attorneys about the FACA issue.

FACA can be complex, but in general terms it requires that consensus advice from a group that includes non-federal participants be conducted under a specific set of rules and authorities by a “registered” Federal Advisory Committee.

Per guidance from our attorneys, NOAA must comply with FACA, leaving us to conduct a Sandy assessment using only federal team members. The assessment team will conduct interviews and collect information from a broad range of external parties, in compliance with FACA.

By the start of next hurricane season on June 1, NOAA will have time to address non-federal participation in service assessments, as well as the recommendation from the Academy of Science that such surveys should be conducted by an independent external group, in a more comprehensive and orderly fashion.

NOAA is working on a response to the committee's letter and will meet their Dec. 14 deadline for a response.

**Team Charter For
NOAA NWS Operations and Services during
Hurricane "Superstorm" Sandy
October 22-30, 2012**

Purpose: One of the National Oceanic and Atmospheric Administration's (NOAA's) strongest commitments is to help guard the Nation against loss of life and property and minimize economic impacts from weather-related hazards. NOAA's National Weather Service (NWS) mission is to fulfill this commitment through building a Weather Ready Nation. As such, the NWS must contribute to hazard resiliency by continually assessing and improving its services to the Nation. This task will be accomplished by the NOAA NWS Hurricane Irene Service Assessment Team. This team is tasked with documenting and evaluating the performance and overall effectiveness of NWS products and services, decision support, collaboration and communication, operational procedures, and preparedness activities with respect to the event briefly described below.

Event Summary: Tropical Storm Sandy was upgraded to a Hurricane on Wednesday Morning, October 22, 2012, and as of 5 p.m. EDT Wednesday, the center of Sandy was located just offshore of northeastern Jamaica about 560 miles south-southeast of Miami, Florida. Hurricane Sandy had maximum sustained winds of 80 mph and was moving north around 14 mph. Sandy tracked over eastern Cuba Wednesday night and then moved north northwest over the Bahamas on Thursday and Friday teetering between a high end Tropical Storm and a low end Hurricane. Although the center of Sandy was well offshore of the Florida east coast, Sandy with its large wind field brought tropical storm winds on Thursday through Saturday morning over portions of the east coast of Florida. Sandy continued moving northeast through Sunday then curved back to the northwest, accelerated, and made landfall about 5 miles southwest of Atlantic City, NJ at 8 pm ET, Monday, October 29, 2012. Sustained winds at landfall were 80 mph and its central barometric pressure was 946 mb. Wind gusts of 90 mph were recorded at Islip, NY and 87 mph at Sandy Hook, NJ. At 5 a.m. EDT, Tuesday, Sandy was located approximately 15 miles east of York, Pennsylvania with maximum sustained winds of 65 mph. By 11 p.m. EDT, Tuesday, Sandy had only traveled to approximately 50 miles east-northeast of Pittsburgh, Pennsylvania. Sandy continued to move toward the northwest at 8 mph then turned northward across western New York and Lake Erie and moved into Canada on Wednesday. In addition to producing strong, damaging winds along its path, sandy dropped copious amounts of rain and snow, and produced damaging storm surges.

The NWS Service Assessment team should center its attention on New York City and the New Jersey coastal locations, which were most severely affected by the weather-related impacts of Superstorm Sandy. In addition, the team should also evaluate other eastern seaboard locations Florida through New England, flooding in the Mid-Atlantic and Northeast, and heavy snowfall in the Appalachians.

Expected Outcomes/Activities: The assessment team shall identify best-case operations, procedures, and practices, and make recommendations to address service deficiencies. The report shall contain key facts surrounding the event and include an evaluation of involved Warning and Forecast Offices, River Forecast Centers, NWS National Centers, and regional and

national operations centers. In addition, the assessment team should examine collaboration and communication with the White House, FEMA, USACE, USGS, USDOT and other entities most impacted by the winds, storm surge, coastal and inland flooding, and precipitation that caused casualties, significant property damage, and impact on commerce.

The service assessment team should investigate the following issues and topics:

1. Timeliness, quality, accuracy, and usefulness of NWS hazardous weather products and services. This includes the accuracy of Sandy's forecast track, intensity, and storm surge, as well as wind speeds, quantitative precipitation forecasts and movement of the system after landfall. Note: Forecast model comparisons and effects of increased upper air observations should be provided by NCEP.
2. Impacts of the transition from National Hurricane Center (NHC) product issuances to Hydrometeorological Prediction Center (HPC) product issuances including the NHC to HPC storm surge information. Focus should be on identifying best practices and the potential for future policy changes. The following questions should be addressed by the team:
 - Did the absence of hurricane warnings on the mid-Atlantic seaboard hamper emergency management preparation or response (e.g., CMAS/WEA alerts)?
 - Did the absence of hurricane warnings on the mid-Atlantic seaboard hamper/enhance public perceptions?
 - Did the absence of hurricane warnings on the mid-Atlantic seaboard hamper/enhance media ability to convey message?
3. Effectiveness of NWS internal and external coordination/collaboration for the storm surge, wind damage, and flooding events including any impact-based decision support to federal, state, and local governments, Environment Canada, and other partners. The following questions should be addressed by the team:
 - What can be learned from pre-coordination efforts between the ERH and NCEP with respect to the use of non-tropical products?
 - Did the storm surge, wind, and flooding decision support meet emergency management, media, and public needs?
4. Effectiveness and efficiency of NWS end-to-end communication and information dissemination (including the value of social media and decision-support activities).
 - Include interviews with high level officials and others in impacted areas such as, Governors, congressional staffers, mayors, media, FEMA, national and regional directors, state and local emergency responders, impacted citizens, Red Cross, power companies, flood control/water management, transportation officials, and other impacted decision-makers
5. Effectiveness/Appropriateness of Public Response and other societal impacts
 - Did naming the storm (e.g., Frankenstorm, Superstorm) influence the public's response?
 - What were the societal impacts from the transportation shutdowns, power outages, and homelessness?

Other more specific items the team should examine include (but are not limited to):

- Flooding and Flash Flooding: To support this effort, the team may review the RFCs' communication logs. The team should review the best practices, lessons learned, impacts up to their arrival, and interagency coordination efforts associated with the flooding and flash flooding that occurred in association with the heavy rainfall.
- MICs/HICs Observations/Comments: What were the MICs'/HICs' perspectives with regard to successes and shortcomings in their operations and services?
- Responses by Officials: What actions were taken by officials to protect the public in response to NWS products, services, and briefings?
- Effectiveness of NWS web pages, including ease of access to critical information and standardization of page format
- Performance of NWS Aviation Weather Center and affected CWSUs

Scope of Authority/Limitations: The team has the authority to:

- Obtain and use all products, logs (e.g., NWChat, 12Planet), etc., produced by offices significantly impacted (e.g., WFOs, RFCs, NCEP, NWSHQ, ERH, SRH, NHC, HPC, EMC). Obtain and use communication logs for NERFC and MARFC. Interview any employees including training providers (e.g., Warning Decision Training Branch) in the NWS.
- Make recommendations for improving NWS services and operations. Recommendations will be vetted through the Corporate Board; then the Office of Climate, Water, and Weather Services (OCWWS) will determine which recommendations will become action items by collaborating with the appropriate Regions and Headquarters offices.
- The team must limit spending to "reasonable expenses." Total expenses are not to exceed **\$40K**, unless approved by OCWWS.

The team should employ the most efficient method for gathering information (i.e., telephone interviews, video teleconferencing, civil air patrol, high resolution satellite imagery [National Geospatial Intelligence Agency], travel, etc.). Trip authorizations must be reviewed and initialed by the budget office in OCWWS. Travel authorizations should be generated by the local office supporting the traveler and the first page provided to the Performance Branch by email to douglas.young@noaa.gov or FAX 301.713.1598, as soon as practical for coordination and approval in OCWWS.

Time Frame: Team activities should be prioritized based upon the issues that most significantly and directly influenced NWS performance during the event. The preliminary itinerary is as follows:

- Travel to initial on-site locations/initial team meeting: **Sunday, November 11, 2012**
- Begin on-site, assessment activities (e.g., office visits): **Monday, November 12, 2012**
- End on-site, assessment activities: **Saturday, November 17, 2012**
- Team debrief; writing assignments, etc. and travel home: **Sunday, November 18, 2012**
- Draft report sent to OCWWS Performance Branch: **Sunday, January 20, 2013**
- Team briefs NWS Corporate Board: **Tuesday, March 26, 2013**

Communication Requirements:

- Team leaders should report progress of the team in weekly messages to the Director of the affected Region(s), the OCWWS Director, NCEP Director, and the Performance Branch Chief.
- This report should contain travel itineraries, a list of people interviewed, and a brief description of important findings, recommendations, and/or issues.
- Team leaders should coordinate on spending, keeping the Performance Branch Chief informed on money spent, as well as spending plans.
- Team Leaders should conduct meetings as necessary to assess the team's progress, modify or develop new assignments for the day, and address issues regarding the release of information.
- Draft materials will be shared with the Executive Sponsor prior to editing by OCWWS.
- Team Leaders and team members will be asked to review the report before it is finalized.

Members: Team members have been selected based upon their expertise, experience, and potential for contributing significantly to a constructive and thorough service assessment. The team should make use of subject matter experts to answer questions regarding policy, technological capabilities (e.g., software, communications, dissemination, etc.), training options, or other issues as they arise. It is not necessary for these "consultants" to be members of the team. The assessment team is comprised of the following members:

1. [TBD] External Team Co-Leader, National Ocean Service
2. Internal Team Co-Leader, Nezette Rydell, Meteorologist in Charge, Boulder, CO
3. Dr. Ethel Taylor, Centers for Disease Control and Prevention, Atlanta, GA
4. Dr. Vankita Brown, Social Scientist, NWSHQ, OCWWS
5. Dr. Laura Meyers, Research Professor (Social Scientist), University of Mississippi
6. Gina Eosco, Ph.D. Student in Social Science, Cornell University, NY
7. Lance Wood, Science and Operations Officer, Houston, TX
8. Jeff Garmon, Warning Coordination Meteorologist, Mobile, AL
9. Greg Carbin, Warning Coordination Meteorologist, Storm Prediction Center, Norman, OK
10. Ray Murphy, ITS Specialist, U.S. Department of Transportation
11. Seth Binau, Science and Operations Officer, Wilmington, OH
12. [TBD], US Army Corps of Engineers

Other Team Support for on-site activities:

Matt Ocana, NWS Public Affairs Specialist, Salt Lake City, UT (PA Technical Adviser)
Donna Franklin, NWS Awareness Branch, Silver Spring, MD (Logistical Support)

The team leaders are responsible for engaging the collaboration that will result in the success of the team. Their roles include:

- Keeping the purpose, goals, and approach of the team relevant and meaningful
- Building commitment and confidence in team members
- Utilizing the skills and expertise within in the team through task delegation and cooperation
- Managing feedback from outside of the team and soliciting advice/input from outside of the team when needed
- Working closely with the National Service Assessment Program Leader to ensure the process is efficient and the results are timely and effective
- Preparing and presenting a briefing to the NWS Corporate Board

All members of the team can provide leadership in the achievement of the assessment team objectives and should assume personal accountability for the success of the team. The role of each team member includes:

- Communicating with the team in an open and courteous manner
- Providing support, suggestion, opinion, and information toward the objectives of the team
- Encouraging creativity and innovation among fellow team members

Team Charter
NOAA Operations and Assessment
Hurricane and Post-Tropical Cyclone Sandy

Purpose:

The National Oceanic and Atmospheric Administration's (NOAA) mission is to protect lives and property through observation and prediction of changes in the Earth's environment. NOAA, in coordination and collaboration with external partners and stakeholders, will assess its performance during the Hurricane/post-tropical cyclone Sandy event (hereafter referred to as "Sandy"). Although there are a broad range of services, products, and other elements that could and may be assessed by other teams, this assessment will focus on the following issues:

1. The philosophies/policies underlying National Weather Service (NWS) weather forecast and/or impact watch and warning products and their dissemination/communication, specifically addressing the complexities of Sandy
2. NOAA's – and in particular NWS's – Web presence as a tool for communicating with the public
3. The production and issuance of "storm surge"-related products from multiple NOAA Line Offices

This assessment will result in a concise report that identifies best practices and provides recommendations for improvements and a suggested implementation plan.

Event Summary:

Sandy was first identified as a disturbance in the Caribbean by the National Hurricane Center on October 19, 2012. Sandy reached hurricane status on October 24. It made landfall across the Caribbean – first Jamaica, then eastern Cuba – then moved the Bahamas before moving generally northward parallel to the U.S. eastern seaboard. On October 24, NOAA issued the first forecast products showing the possibility of Sandy making landfall in the Mid-Atlantic and began communicating that Sandy had the potential to combine with a powerful frontal system approaching from the central United States and become a cross between a strong Nor'easter and tropical cyclone.

Sandy made landfall just south of Atlantic City, NJ, around 8:00 p.m. EDT on October 29. The storm brought a record water level of 13.88 ft to New York City's Battery Park and isolated total rainfall amounts of 10 inches to extreme southern New Jersey, Delaware, and Maryland. Widespread total rainfall amounts of six inches occurred across the Washington, Baltimore, and Philadelphia metropolitan areas. Wind gusts reached 90 mph along the New Jersey shore and Long Island, NY, gusts in the Baltimore and Washington metropolitan areas reached over 70 mph, and gusts also reached over 60 mph as far away as Boston and Chicago. The same storm was also responsible for over a foot of snow across portions of the Central Appalachians from North Carolina to Pennsylvania, with parts of West Virginia experiencing blizzard conditions and up to three feet of snow.

Sandy's central pressure of 940 millibars was the lowest recorded pressure for a landfalling tropical cyclone north of Cape Hatteras. When Sandy made landfall, it broke Philadelphia's, Harrisburg's, and Baltimore's all time low pressure records. The tropical storm force wind field measured approximately 950 miles in diameter, making Sandy one of the largest Atlantic tropical storms ever recorded. Shortly after making landfall, NOAA satellite imagery determined that Sandy covered 1.8 million square miles.

Expected Outcomes:

The assessment team shall produce a focused, succinct report that contains a statement of facts, findings, recommendations, and best practices. The recommendations should primarily focus on improvements or process

changes that can be implemented within six months of the finalization of the report. The recommendations should be adjudicated by the team leader, in consultation with the Deputy Under Secretary for Operations, who will serve as Executive Sponsor, before being included in the final report; recommendations that have value, but do not make the final report should be included in an appendix.

The Report shall be released to the public upon approval of the NOAA Administrator.

Scope:

This assessment will not supersede or duplicate efforts undertaken by the Federal Emergency Management Agency (FEMA), the U.S. Coast Guard, or other entities, but rather is intended to focus on NOAA's activities, products, and services during Sandy. The scope of this assessment is limited to three main focus areas, but does not preclude separately commissioned assessments, within or external to NOAA, from evaluating other topics.

The primary focus of this assessment will be to examine and evaluate the effectiveness of the following areas, identifying best practices and offering recommendations NOAA can implement, particularly within six months from the date of the report.

Focus 1: The philosophies/policies underlying NWS weather forecast, watch, and warning products and their dissemination/communication. When issuing products, should NOAA focus on the specific characteristic of the weather (e.g., high wind, heavy rain) or on the meteorological definition (e.g., tropical storm, hurricane), or indeed on the forecast severity of impact (e.g., life-threatening conditions)? How did the public/partners respond to the types of warnings that were issued? Did the formal or informal names of the storm (e.g., Sandy, 'Frankenstorm', 'Superstorm') influence the public's response? Were the impacts clearly articulated so they knew what to expect and what actions to take? Do NOAA/NWS current watch, warning and advisory policies and procedures provide flexibility and clarity to generate the appropriate actions from both the general public and Emergency Management community? If not, what should be changed? What can be learned from pre-coordination efforts between the NWS Eastern Region Headquarters (ERH) and the National Centers for Environmental Prediction (NCEP) with respect to the use of non-tropical products?

Focus 2: NOAA's – and in particular NWS's – Web presence as a tool for communicating with the public. The Internet is NOAA's most visible public presence and direct communication tool. For high-impact events, the ideal should be a one-stop, enterprise-spanning Website for related/relevant NOAA products and services. NOAA has some established paradigms in this respect: drought.gov and climate.gov. During Sandy, some attempt was made to move closer to this vision. How did the public and Emergency Management Community use the internet to obtain weather information from NOAA during Sandy? Did they visit more than one NOAA Website? What feedback is available regarding the clarity and usability of NOAA's websites as related to Sandy? How can NOAA's web presence, especially for complex storms, be improved?

Focus 3: The production and issuance of "storm surge"-related products. Several entities within NOAA create and/or contribute to storm-surge related products, including the National Ocean Service, the National Geophysical Data Center (NGDC), and various component elements within the NWS. What is the best way to produce a forecast/warning product that has value for NOAA's external constituents and reflects the best science available? Was the storm surge information included in NWS products understandable? Were the public and Emergency Management Community able to easily and quickly use the information (i.e., did it provide value and/or offer clarification for response and follow-on actions)?

Authority:

The assessment team will have the authority to:

- Obtain and use all products, logs (e.g., NWS Chat, 12 Planet) produced by any NOAA offices significantly engaged (e.g., Weather Forecast Offices, River Forecast Centers (RFC), NCEP, NWS Headquarters (NWSHQ), ERH, Southern Region Headquarters (SRH)), communications logs for Northeast RFC and Mid Atlantic RFC, and interview any employees, including training providers in the NWS.
- Make recommendations for improving NOAA products and services, with a particular focus on, but not necessarily limited to the NWS.
- The team must limit spending to “reasonable expenses.” Total expenses are not to exceed **\$40K**, unless approved by the NWS Chief Financial Officer.

Time Frame: Team activities should be prioritized based upon the issues that most significantly and directly influenced NOAA’s—and in particular NWS’s—performance during the event. The team will kick-off in December 2012. The preliminary itinerary is as follows:

- Team organization / initial team meeting: **Monday 17 December, 2012**
- Travel to initial on-site locations: **Sunday, January 6, 2013**
- Begin on-site, assessment activities (e.g., office visits): **Monday, January 7, 2013**
- End on-site, assessment activities: **NLT Saturday, January 12, 2013**
- Team debrief; writing assignments, etc. and travel home: **NLT Saturday, January 12, 2013**
- Preliminary findings provided for leadership review: **Friday, February 15, 2013**
- Updated findings delivered to NOAA leadership: **Friday, March 15, 2013**
- Draft report sent to Office of Climate, Water and Weather Services (OCWWS) Performance Branch: **Monday, March 18, 2013**
- Final consolidated list of all findings, recommendations, and best practices provided to NOAA Administrator: **Sunday, March 31, 2013**

A schedule of activities should be transmitted to the Executive Sponsor within **15 days** of finalizing this charter.

Communication Requirements:

Team leaders will report the team’s progress biweekly to the Executive Sponsor, the Deputy Under Secretary for Operations. These interim reports should include activities undertaken and progress made and report any preliminary findings or recommendations that could be considered for action.

Members:

This assessment will be led by NOAA, engaging external stakeholders and interested communities as appropriate and consistent with past practice.

Team members have been selected based upon their expertise, experience, and potential for contributing significantly to a constructive and thorough service assessment. The team should make use of subject matter experts (SMEs) to answer questions regarding policy, technological capabilities (e.g., software, communications, dissemination, etc.), training options, or other issues as they arise; however the team has the authority to reach out to others beyond the SMEs, as appropriate and in concert with federal guidelines. It is not necessary for these “subject-matter experts/consultants” to be members of the team.

Team Confidentiality and Prerelease of Information:

- Information collected by the service assessment team, report drafts, briefings and discussions, are internal and confidential until the final report is publicly released. All employees with access to these data are also expected to maintain confidentiality.
- Team leaders, in consultation with the OCWWS Performance Branch, are strongly encouraged to initiate contact with appropriate office(s) before the report is officially released. This includes both operational (e.g., WFOs/RFCs, regional offices) and programmatic (e.g., training, awareness) entities. Contact can occur at any time during the service assessment process. In no instance, will there be prerelease of information without the express consent of Executive Sponsor. Confidentiality requirements will be followed.