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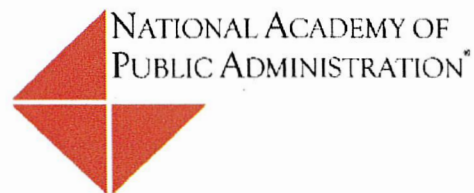
March 2020

A Report by a Panel of the
National Academy of Public Administration
For the National Oceanic and Atmospheric Administration

An Independent Assessment of Allegations of Scientific Misconduct

filed under the

National Oceanic and Atmospheric Administration Scientific Integrity Policy



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**An Independent Assessment of
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National Oceanic and Atmospheric
Administration Scientific Integrity
Policy**

PANEL OF FELLOWS

Admiral (Ret.) Thad Allen*

Dr. Shantanu Agrawal*

Dr. Kaye Husbands Fealing*

Dr. Elizabeth Robinson*

**Academy Fellow*

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National Academy of Public Administration
1600 K Street, NW
Suite 400
Washington, DC 20006
www.napawash.org

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About the Academy

The National Academy of Public Administration is a non-profit, non-partisan, and independent organization of top public management and organizational leaders who tackle the nation's most critical and complex public management challenges. With a network of more than 900 distinguished Fellows and an experienced professional staff, the Academy is uniquely qualified and trusted across government to provide objective advice and practical solutions based on systematic research and expert analysis.

Established in 1967 and chartered by Congress in 1984, the Academy continues to make a positive impact by helping federal, state and local governments respond effectively to current circumstances and changing conditions. Learn more about the Academy and its work at www.napawash.org.

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Foreword

The National Oceanic and Atmospheric Administration (NOAA) is a scientific agency that focuses on the study of climate, weather, oceans, coasts, and the conservation and management of coastal and marine ecosystems and resources. The work of NOAA not only supports the safety and well-being of the public, but also has great importance to the U.S. economy. To maintain public trust in the agency's work, NOAA must keep scientific integrity at the forefront of all aspects of its scientific activities.

In September 2019, NOAA's Scientific Integrity Officer received four complaints of alleged violations of scientific integrity related to a specific NOAA public statement issued on September 6, 2019. To ensure that the investigation into these complaints would be conducted with the highest degree of objectivity and neutrality, NOAA engaged the National Academy of Public Administration to conduct an independent assessment of those allegations. The goal of the assessment was to determine by a preponderance of evidence if the NOAA personnel involved with the development and issuance of the September 6 Statement violated NOAA's Scientific Integrity Policy.

As a congressionally chartered, non-partisan, and non-profit organization with over 900 distinguished Fellows, the Academy is uniquely qualified to assist NOAA with this complex assignment. The Academy convened a Panel of four Academy Fellows with deep experience in the field of public administration, knowledge of scientific research, and execution of agency policy and procedure. The Panel's determinations and recommendations have been provided to the NOAA Determining Official for final adjudication of the allegations.

This report presents the Panel's findings and makes nine recommendations to enhance NOAA's Scientific Integrity Policy. I expect that the Academy Panel's report will guide the Determining Official's deliberation on the allegations and strengthen NOAA's overall framework of scientific integrity.

The Academy is thankful to have the opportunity to serve as an independent integrity review panel on behalf of NOAA.

Teresa W. Gerton
President and Chief Executive Officer
National Academy of Public Administration

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Acronyms and Abbreviations

Acronym or Abbreviation	Definition
Academy	National Academy of Public Administration
Academy Team	The Panel members and study team
AMS	American Meteorological Society
ARS	Agriculture Research Service
Commerce	Department of Commerce
DAO	Department Administrative Order
DOI	Department of the Interior
DSS	Decision Support Service
DUS/O	Deputy Under Secretary of Operations
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FOIA	Freedom of Information Act
FRC	Fundamental Research Communication
FY	Fiscal year
GAO	Government Accountability Office
IRP	Integrity Review Panel
NAO	NOAA Administrative Order
NHC	National Hurricane Center
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
OIG	Office of Inspector General
OMB	Office of Management and Budget

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OSTP	Office of Science and Technology Policy
ROC	Regional Operation Center
SIO	Scientific Integrity Officer
USDA	United States Food Department of Agriculture
WFO	Weather Forecasting Office

Key Terms and Definitions¹

Key Term	Definition
Allegation*	Any written or oral statement or other indication of possible scientific misconduct made to a NOAA employee or contractor, or to an employee of a NOAA research partner.
Complainant*	The person, group, or company that makes an allegation of scientific misconduct or loss of scientific integrity.
Determining Official (DO)*	NOAA official who makes a final determination on an allegation of scientific misconduct or loss of scientific integrity and proposes corrective administrative action, as appropriate.
Integrity Review Panel (IRP)*	Group responsible for conducting an investigation of alleged scientific misconduct or loss of scientific integrity when a determination has been made by the SIO that an investigation is warranted.
Integrity Review Panel Chair (IRPC)*	The agency official responsible for overseeing an investigation, chairing the Integrity Review Panel, and carrying out other responsibilities specified in NOAA's Procedural Handbook. The IRPC is a subject matter expert and is designated for a specific investigation.
Official Communication ²	Any Public Communication by an employee that relates to the Department's programs, policies, or operations and takes place or is prepared: 1. At the direction of a superior of the employee; 2. Substantially during the official working hours of the employee; 3. With the substantial use of U.S. Government resource(s); or 4. With substantial assistance of U.S. Government employee(s) on official duty. All news releases and similar documents are Official Communications.
Preponderance of Evidence	The standard of proof in making a finding of misconduct under NOAA's Scientific Integrity Policy and accompanying Procedural Handbook. Black's Law Dictionary (11 th Ed., 2019) defines this term as "superior evidentiary weight that, though not sufficient to free the mind wholly from all reasonable doubt, is still sufficient to incline a fair and impartial mind to one side of the issue rather than the other." ³

1. Key terms and definitions denoted with an asterisk (*) can be found in the NOAA Scientific Integrity Policy (NOAA Administrative Order 202-735D: Scientific Integrity) and the accompanying Procedural Handbook.

2. U.S. Department of Commerce. 2008. "Department Administrative Order 219-1 Public Communications." April 30.

3. Bryan A. Garner and Henry Campbell Black, *Black's Law Dictionary*, 11th ed. (West Group, 2019).

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Respondent*	<p>The person, group, or NOAA entity who responds or makes a reply to an allegation of scientific misconduct or loss of scientific integrity.</p> <p>Activities that involve inventorying, monitoring, observations, experimentation, study, research, integration, modeling, and scientific assessment. Scientific activities are conducted in a manner specified by standard protocols and procedures and include any of the physical, biological, or social sciences, as well as engineering and mathematics, or any combination of these.</p>
Scientific Activities*	<p>Evaluation of a body of scientific or technical knowledge that typically synthesizes multiple factual inputs, data, models, and assumptions, and implies the use of best professional judgment to bridge uncertainties in the available information.</p>
Scientific Assessment*	<p>The condition resulting from adherence to professional values and practices when conducting and applying the results of science that ensures objectivity, clarity, and reproducibility, and that provides insulation from bias, fabrication, falsification, plagiarism, interference, censorship, and inadequate procedural and information security.</p>
Scientific Integrity*	<p>Presentation of the results of scientific activities including the analysis, synthesis, compilation, or translation of scientific information and data into formats for the use of NOAA, the Department of Commerce, or the Nation.</p>
Scientific Product*	<p>Unattributed Public Statement from the National Oceanic and Atmospheric Administration, issued on September 6, 2019 (See Appendix F).</p>
September 6 Statement	<p>Tweet from the National Weather Service Birmingham Weather Forecast Office, posted on September 1, 2019 (See Appendix F).</p>
September 1 Birmingham Tweet	<p>A brief communication made through the internet-based, for-profit social media platform, Twitter.</p>
Tweet	

Executive Summary

The National Oceanic and Atmospheric Administration (NOAA) is a scientific agency within the United States Department of Commerce that focuses on the study of climate, weather, oceans, coasts, and the conservation and management of coastal and marine ecosystems and resources.

In September 2019, NOAA's Scientific Integrity Officer (SIO) received four complaints of alleged violations of scientific integrity filed under the NOAA Scientific Integrity Policy (NOAA Administrative Order 202-735D: Scientific Integrity). The allegations relate to a specific NOAA public statement issued on September 6, 2019 (the September 6 Statement) regarding a tweet previously issued by the National Weather Service (NWS) Weather Forecast Office (WFO) in Birmingham, Alabama, on September 1, 2019 (the September 1 Birmingham Tweet).

NOAA's SIO engaged the National Academy of Public Administration (the Academy) to conduct an independent assessment of those allegations. The goal of the assessment was to determine by a preponderance of evidence, meaning the standard of proof of making a finding of misconduct under NOAA's Scientific Integrity Policy and accompanying Procedural Handbook, if the NOAA personnel involved with the development and issuance of the September 6 Statement violated NOAA's Scientific Integrity Policy and engaged in the misconduct intentionally, knowingly, or in reckless disregard of the Scientific Integrity Policy. Pursuant to the Scope of Work, the Academy was tasked to:

- Determine if scientific misconduct or loss of scientific integrity has not occurred and the allegation be dismissed; or
- Determine if scientific misconduct or loss of scientific integrity has occurred and recommend any specific action by NOAA to restore scientific integrity.

Conducted from December 2019 through March 2020, the assessment employed primarily qualitative research methods. The Academy Team, comprised of a Panel of Academy Fellows and the study team, gathered and analyzed primary and secondary data through a review of prior testimonies and official documents related to the allegations of scientific misconduct. The Academy Team conducted semi-structured interviews with subject matter experts and NOAA staff including personnel from NWS, the Office of Communications, and other senior leaders. The Academy Team also had conversations with representatives from NOAA's Office of General Counsel and the SIO which provided background on the Scientific Integrity Policy. Appendix H contains a list of all records and documents reviewed by the Academy Team.

The inquiry into the alleged scientific misconduct and loss of scientific integrity associated with the September 6 Statement and the September 1 Birmingham Tweet presented a challenge for the Integrity Review Panel. The facts and circumstances surrounding these allegations of misconduct are not a perfect fit with the existing NOAA policies regarding scientific integrity and scientific communication and the Department of Commerce guidance on public communications. The Academy Team, therefore, created a process to assess the facts developed against existing policy and to determine whether personnel and actions were covered under NOAA and Commerce

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policies. Those rationales are provided later in the report. This process also allowed the development of recommendations as to how policies might be improved.

In considering the allegations, the Panel recognizes that the September 6 Statement and the September 1 Birmingham Tweet discussed herein are inextricably linked. The September 6 Statement directly addressed the September 1 Birmingham Tweet and the underlying science. Second, the Panel considered both the content and process by which the September 6 Statement was developed and released. Finally, it is the considered opinion of the Panel, that in the aggregate, the evidence gathered in this inquiry is appropriate and sufficient to provide a reasonable basis for the findings and conclusions contained herein. Additionally, the report includes a series of Panel recommendations to safeguard against future violations of scientific integrity for the Determining Official (DO) to consider. The following is a summary of the Panel's major findings and recommendations:

Allegation One: Media guidance issued by NOAA leadership between September 1 and 6, 2019, limited the ability of scientists to communicate with the media and the public about their research findings. Policies allegedly violated include Section 4.05; Section 4.06; and Section 5.02 (a), (d), and (k) of NOAA's Scientific Integrity Policy.

Finding One: The Panel determined by a preponderance of the evidence on the record that the allegation that the media guidance issued by NOAA leadership between September 1 and 6, 2019, did not constitute scientific misconduct or a loss of scientific integrity.

Recommendations:

- Develop formal policy guidelines for the issuance of media guidance to NOAA staff. Specifically, these guidelines should clarify roles and responsibilities, institutionalize the process, and identify the circumstances under which the agency should issue media guidance.
- Develop an interagency framework (that includes other federal agencies and the White House) for the sharing of scientific data and materials concerning severe weather-related events. The framework would include protocols for the timely update of information to reflect changing weather conditions and the release of the information to the general public.

Allegation Two: The Birmingham WFO forecasters were not provided the opportunity to review and opine on the September 6 Statement that referenced the September 1 Birmingham Tweet and underlying scientific activity. Policies allegedly violated include Section 7.01. of NOAA's Scientific Integrity Policy.

Finding Two: The Panel determined by a preponderance of the evidence on the record that Dr. Neil Jacobs (Acting Administrator of NOAA) and Julie Roberts (Deputy Chief of Staff and Director

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of Communications for NOAA)⁴ violated the Code of Ethics for Science Supervision and Management set forth in Section 7.01 of NOAA's Scientific Integrity Policy when they failed to engage the Birmingham WFO in the development of the September 6 Statement. Further, the Panel finds that they engaged in the misconduct intentionally, knowingly, or in reckless disregard of the Code of Scientific Conduct or Code of Ethics for Science Supervision and Management in NOAA's Scientific Integrity Policy.

Recommendations:

- Develop a written policy statement on the right of NOAA scientists to review, comment, and amend any Official Communication that relies on their scientific analysis. This policy statement will complement NOAA's Scientific Integrity Policy.
- Revise NOAA's Scientific Integrity Policy's accompanying Procedural Handbook to include criteria and supporting examples to assist with the determination of scientific misconduct and a loss of scientific integrity. For example, NOAA could cite this case as an example of a violation of NOAA's Scientific Integrity Policy and scientific misconduct with regards to several criteria.

Allegation Three: The drafting of the September 6 Statement was driven by external political pressure from Department of Commerce (Commerce) senior leaders and inappropriately criticized the September 1 Birmingham Tweet and underlying scientific activity. Further, the September 6 Statement compromised NOAA's integrity and reputation as an independent scientific agency and violated Section 7.02 of NOAA's Scientific Integrity Policy.

Finding Three: The Panel determined by a preponderance of the evidence on the record that the actions of Dr. Neil Jacobs and Julie Roberts involving the development and issuance of the September 6 Statement violated the Code of Ethics for Science Supervision and Management set forth in Section 7 of NOAA's Scientific Integrity Policy. Further, the Panel determined that they engaged in the misconduct intentionally, knowingly, or in reckless disregard of the Code of Scientific Conduct or Code of Ethics for Science Supervision and Management in NOAA's Scientific Integrity Policy.

Recommendations:

- Establish a formal intra-agency agreement to guide the interactions between Commerce and NOAA officials in the drafting of NOAA communications.
- Establish an intra-agency policy to articulate the role of Commerce political appointees in the communication of scientific findings. Develop supporting procedures and identify examples of political interference.
- Incorporate key principles of scientific integrity, including NOAA's Codes of Ethics for Science Supervision and Management, into NOAA's annual ethics training.

4. Julie Roberts left NOAA in December 2019 to join the Economic Development Administration, which is in the Department of Commerce.

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- Require NOAA staff and NOAA political officials to take scientific integrity training that includes the Code of Ethics for Science Supervision and Management. Once a staff member has completed the training, he/she will sign a statement confirming they will abide by these principles.
- Establish protocols with the Commerce Office of Inspector General (OIG) and/or other agencies to investigate alleged violations of scientific integrity involving senior NOAA and Commerce political leadership.

Chapter 1: Background

Background on the National Oceanic and Atmospheric Administration

The National Oceanic and Atmospheric Administration (NOAA), created in 1970, is a scientific agency within the Department of Commerce (Commerce) that focuses on the study of climate, weather, oceans, and coasts. NOAA's mission of science, service, and stewardship consists of the following components:

- To understand and predict changes in climate, weather, oceans and coasts;
- To share that knowledge and information with others; and
- To conserve and manage coastal and marine ecosystems and resources.⁵

NOAA's wide-ranging services include, but are not limited to, communicating forecasts and weather advisories, managing the fisheries industry, handling operational environmental satellites, and providing the data and products needed to support the economy as it relates to climate, weather, oceans, and coasts. Figure 1 on the next page provides the organizational chart of the various NOAA operations and senior leadership that was effective on September 6, 2019.

Following a 2009 presidential memorandum calling for executive branch departments and agencies to develop scientific integrity policies,⁶ the Department of Commerce instructed NOAA to develop a bureau-specific scientific integrity policy.⁷ NOAA adopted its Scientific Integrity Policy (NOAA Administrative Order 202-735D: Scientific Integrity) on December 7, 2011, and created the position of Scientific Integrity Officer (SIO).

The SIO responds to allegations of scientific misconduct or the loss of scientific integrity. The NOAA Scientific Integrity Committee, comprised of NOAA Line Office SIOs and Staff Office Points of Contact, supports the NOAA SIO in this role.⁸ The SIO must ensure that the entirety of the allegation review process is independent and has a thorough and complete methodology.

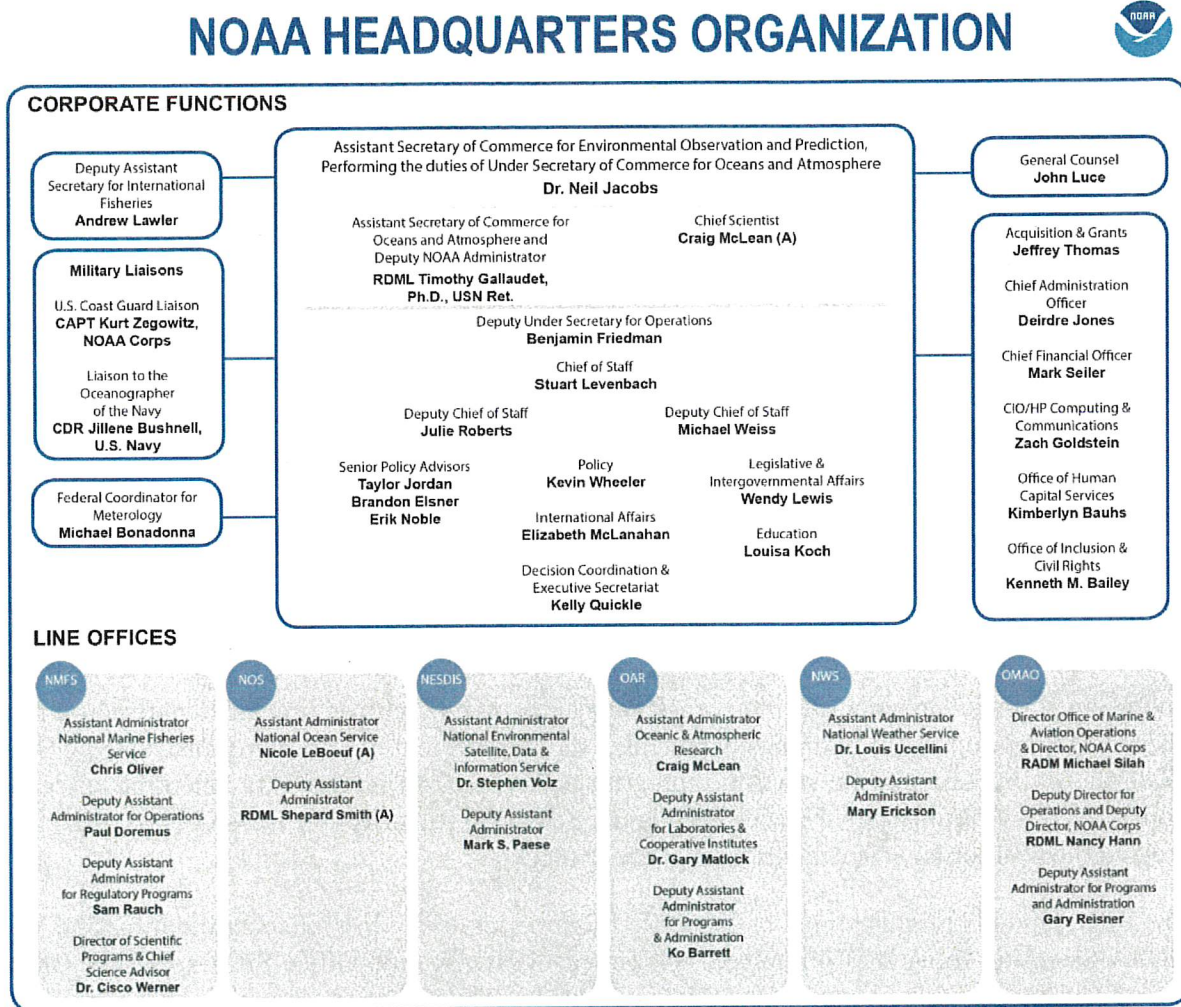
5. "Our mission and values," National Oceanic and Atmospheric Administration, <http://www.noaa.gov/our-mission-and-vision>.

6. White House, Office of the Press Secretary, "Memorandum for the Heads of Executive Departments and Agencies on the Subject of Scientific Integrity," March 9, 2009.

7. Cameron F. Kerry, "Memorandum for all Chief Counsels and General Counsels, Subject: Implementation of Administration Policy on Scientific Integrity," December 16, 2011.

8. Craig N. McLean, "Memorandum for Vice Admiral Michael S. Devany and Dr. W. Richard Spinrad, Subject: Approval of Scientific Integrity Committee Terms of Reference," July 15, 2015.

Figure 1. NOAA Organizational Chart⁹



For the SIO and/or Determining Official (DO) to find that an instance of scientific misconduct or misconduct resulting in the loss of scientific integrity occurred, the SIO must determine by a preponderance of the evidence that a person or entity departed significantly from the Scientific Integrity Policy and engaged in the misconduct intentionally, knowingly, or in reckless disregard of that policy. A loss of scientific integrity can also occur without a finding of misconduct. For example, a loss of scientific integrity could arise from an insufficiently rigorous scientific process with no intentional wrongdoing on the part of the individual and/or entity conducting the

9. This NOAA organizational chart was the version effective on September 6, 2019. An updated chart that reflect changes in NOAA leadership is available on NOAA’s website.

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research.¹⁰ NOAA's Scientific Integrity Policy's Procedural Handbook does not clearly define a loss of scientific integrity.

Background on the alleged violations of NOAA's Scientific Integrity Policy

On Sunday, September 1, 2019, at 10:51 a.m. Eastern Time Zone (ET), President Trump tweeted,

In addition to Florida – South Carolina, North Carolina, Georgia, and Alabama, will most likely be hit (much) harder than anticipated. Looking like one of the largest hurricanes ever. Already category 5. BE CAREFUL! GOD BLESS EVERYONE!

Approximately 20 minutes later, in response to a number of phone calls from individuals worried about Hurricane Dorian's impact to Alabama and unaware of the President's earlier tweet, the National Weather Service's (NWS) Birmingham Weather Forecast Office (WFO) tweeted,

Alabama will NOT see any impacts from #Dorian. We repeat, no impacts from Hurricane #Dorian will be felt across Alabama. The system will remain too far east. #alwx”

A copy of this tweet (referred to as “September 1 Birmingham Tweet”) can be found in Appendix F.

On September 6, 2019, NOAA released an unattributed public statement (referred to as “September 6 Statement”) that stated,

From Wednesday, August 28, through Monday, September 2, the information provided by NOAA and the National Hurricane Center to President Trump and the wider public demonstrated that tropical-storm-force winds from Hurricane Dorian could impact Alabama. This is clearly demonstrated in Hurricane Advisories #15 through #41, which can be viewed at the following link.

The Birmingham National Weather Service's Sunday morning tweet spoke in absolute terms that were inconsistent with probabilities from the best forecast products available at the time.

A copy of the September 6 Statement can be found in Appendix F.

10. This example was provided to the Academy Team by NOAA's SIO and representatives from the Office of General Counsel during background conversations on the Scientific Integrity Policy.

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NOAA subsequently received four complaints of alleged violations of scientific integrity related to the September 6 Statement. Copies of the four complaints can be found in Appendix E. NOAA's SIO determined that further investigation of those allegations was required.

In considering the posture of the Complainants and Respondents to allegations 2019-007, -008, -009, and -0010, the SIO and NOAA General Counsel determined that NOAA required an external independent expert to investigate and make findings and recommendations. In order to ensure that this investigation maintained the highest degree of independence and neutrality, NOAA's SIO, in consultation with NOAA's General Counsel, engaged the National Academy of Public Administration (the Academy) to conduct an independent assessment of the four allegations of scientific misconduct.

As the Panel undertook its assessment, two additional investigations were underway:

- Department of Commerce Office of Inspector General (OIG) began its investigation on September 7, 2019¹¹
- House Committee on Science, Space and Technology began its inquiry on September 11, 2019¹²

While the Panel's review is focused on NOAA personnel and alleged violations of NOAA's Scientific Integrity Policy, the House Committee and OIG investigations are broader. The Panel conducted this inquiry independently of the other two inquiries.

Background on the National Academy of Public Administration

As an independent, non-partisan, non-profit, congressionally chartered organization, the Academy is uniquely situated to provide the expertise and skills required of the external investigation requested by NOAA. Driven by the Academy's core value of independence, the Panel of Fellows and professional staff (the "Academy Team") conducted this investigation in an evidence-based, unbiased, and non-partisan manner. The Panel of Fellows was appointed by the Chair of the Academy Board of Directors, based on their collective experience in the field of public administration, knowledge of scientific research, and execution of agency policy and procedure. Please see Appendix A for Panel member biographical sketches.

1.1 Project Scope and Deliverables

NOAA's SIO engaged the Academy to conduct an independent assessment of allegations of scientific misconduct filed under the NOAA Scientific Integrity Policy. The allegations relate to a specific NOAA public statement issued on September 6, 2019, regarding a tweet previously issued

11. Peggy E. Gustafson, "Memorandum for Dr. Neil Jacobs, Subject: Request for Information Pursuant to the Inspector General Act of 1978, as Amended," September 7, 2019.

12. Eddie Bernice Johnson and Mikie Sherrill, "Letter to Secretary Wilbur Ross," September 11, 2019.

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by the NWS Birmingham WFO on September 1, 2019. The September 6 Statement and the September 1 Birmingham Tweet are included in Appendix F.

Pursuant to the Scope of Work, NOAA tasked the Panel with determining whether the NOAA personnel involved with the development and issuance of the September 6 Statement violated NOAA's Scientific Integrity Policy and engaged in the misconduct intentionally, knowingly, or in reckless disregard of the Scientific Integrity Policy. The Scope of Work tasks the Panel to:

- Determine if scientific misconduct or loss of scientific integrity has not occurred and the allegation be dismissed; or
- Determine if scientific misconduct or loss of scientific integrity has occurred and recommend any specific action by NOAA to restore scientific integrity.

Further, the final report will include the following components:

- Description of allegation(s)
- Summary of process
- List of records reviewed
- Summaries of interviews
- Recommendations

1.2 Limitations to the Panel's Assessment

In completing its assessment, the Panel did not attempt to validate the scientific accuracy of the September 6 Statement and the September 1 Birmingham Tweet. This matter lies outside the charge to the Panel. Further, the Panel's due diligence was subject to the following limitations that may, in the aggregate, have limited the Panel's ability to assess certain aspects of the allegations:

- *The Academy Team had no access to Department of Commerce employees involved with the drafting and release of the NOAA September 6 Statement.*

The Academy Team inquired with NOAA about interviewing two Commerce employees involved with the drafting and release of the NOAA September 6 Statement. NOAA did not provide the Academy Team access to those employees. NOAA's rationale behind the decision to not allow the Academy Team to conduct the interviews was that NOAA's Scientific Integrity Policy and Procedural Handbook pertains to NOAA employees only and that a review of Commerce staff's actions was outside the scope of the assessment.

- *The Academy Team had no access to information gathered by the Commerce OIG and the House Committee on Science, Space and Technology investigations.*

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At the time that the Panel conducted its assessment, two additional investigations were underway. The Academy Team had neither access to the individuals conducting those investigations nor to the evidence gathered by those teams.

- *NOAA's Scientific Integrity Policy and Procedural Handbook lack clear and explicit criteria to determine a loss of scientific integrity and only provide limited guidance.*

While NOAA's Scientific Integrity Policy defines scientific integrity the policy does not provide explicit criteria for determining a potential loss of scientific integrity.¹³

- *The Academy Team had limited access to underlying documentary evidence.*

The Academy Team received an abundance of documentation from NOAA including transcribed statements from key NOAA employees, related email correspondence, and a copy of relevant NOAA and Department of Commerce policies. However, certain evidence related to the events leading up to the drafting and release of the September 6 Statement was not provided to the Academy Team. Specifically, the text messages from the two key Respondents—Dr. Neil Jacobs and Julie Roberts—were not provided to the Panel.¹⁴

In addition, certain emails provided to the Academy Team had also been released to requesters pursuant to the Freedom of Information Act (FOIA) and were redacted in accordance with FOIA's exemptions.

1.3 Organization of Report

The report is organized as follows:

- Chapter 1 provides an introduction to the report, which includes background information, project scope, and deliverables.
- Chapter 2 summarizes the inquiry methodology and process.
- Chapter 3 provides a summary of the NOAA's Scientific Integrity Policy and adjudication procedures.
- Chapter 4 provides a description of the allegations.

13. National Oceanic and Atmospheric Administration, "NOAA Administrative Order 202-735D: Scientific Integrity," December 7, 2011: Section 3.

14. The Panel was informed that the text messages from Dr. Jacobs contained outside equities and would need to be submitted to the holders of the privilege for a determination concerning assertion of the privilege. Such a determination had not been made in time for the Panel to be provided access to the text messages. Further, Julie Roberts testified that—prior to the Panel's investigation—she had deleted text messages sent to her. Julie Kay Roberts, "Interview of Julie Roberts," interview by NOAA General Counsel, October 11, 2019: Page 81-82.

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- Chapter 5 provides a chronology of key events.
- Chapter 6 provides the Panel's findings and recommendations.

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Chapter 2: Summary of Methodology and Process

For this assessment, the Academy appointed four Fellows to serve on the Panel. The Panel provided ongoing guidance to the study team throughout the project, including approving the project work plan; participating in the interview process; reviewing the study team's progress; developing, reviewing, and approving the study findings, conclusions, and recommendations; and approving the draft and final report. Their biographical information can be found in Appendix A.

The Panel for this study included the following Academy Fellows:

- Admiral (Ret.) Thad Allen (Chair)
- Dr. Shantanu Agrawal
- Dr. Kaye Husbands Fealing
- Dr. Elizabeth Robinson

Conducted from December 2019 through March 2020, the assessment employed primarily qualitative research methods. This review was conducted in accordance with generally accepted research standards which required that the Academy Team plan and perform the study to obtain sufficient, appropriate evidence to provide a reasonable basis for the findings and conclusions based on the study objectives. The Panel believes the evidence obtained provides a reasonable basis for the findings and conclusions based on the study objectives.

To identify the appropriate criteria for the assessment, the Academy Team reviewed a broad array of publicly available literature and official documentation including NOAA's Scientific Integrity Policy (NOAA Administrative Order 202-735D: Scientific Integrity), the Department of Commerce's Public Communication Policy (Department Administrative Order 219-1: Public Communication), federal guidance on scientific integrity policies as promulgated by the Office of Science and Technology Policy (OSTP) guidance, Congressional hearings on scientific integrity, reports authored by the Government Accountability Office (GAO), and other publicly available related literature from several Offices of Inspector General. The review provided a baseline for the Panel's findings and additional context for the Academy Team interviews. See Appendix H for a full list of records reviewed by the Academy team.

Reflecting the requirements of the Scope of Work, the Academy Team focused on several overarching issues to inform the scope of research and selection of assessment questions:

- **Applicable Jurisdiction:** Are the alleged activities; allegations related to the development and release of the September 6, 2019, NOAA unattributed public statement (the September 6 Statement); and Respondents covered under the NOAA Scientific Integrity Policy?

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- **Applicable Policies:** What are the applicable NOAA and Department of Commerce policies and procedures that relate to Scientific Integrity and Communication activities?
- **Applicable Assessment Criteria:** What are the applicable assessment criteria to be used to assess a possible breach of NOAA Scientific Integrity and Communication policies?

The Academy Team gathered and analyzed primary and secondary data through a review of prior testimonies and official documents related to the allegations of scientific misconduct. The Academy Team conducted semi-structured in-person interviews with NOAA staff including personnel from NWS and the Office of Communications, and other senior leaders. Academy Team submitted interview topics and procedures to the interviewees prior to the interviews. See Appendix D for a list of interviews and interview questions. The Academy Team also had conversations with representatives from NOAA's Office of General Counsel and SIO which provided background on the Scientific Integrity Policy.

To provide greater context to the study and to better understand how social science research can inform the effective communication of severe weather event risk, including emergency preparedness, the Academy Team interviewed subject matter experts from the University of Colorado at Boulder and the National Center for Atmospheric Research.

The Academy Team interviewed representatives from GAO to discuss leading practices to safeguard scientific integrity at federal agencies.

Subject matter experts spoke to the Academy Team under the condition that their comments would not be for attribution. Copies of the questions asked during the Academy Team's interviews are included in Appendix D.

2.1 Consideration of Alleged Activities, Allegations, and Respondents under the NOAA Scientific Integrity Policy

As the first step of its assessment, the Academy Team determined that the September 1 Birmingham Tweet and the September 6 Statement, the activities underlying the alleged violations, the allegations related to the development and release of September 6 Statement, and certain Respondents named in the allegations were all covered under the NOAA Scientific Integrity Policy. Further, the Academy Team determined that the above NOAA communications were covered under the Department of Commerce's Public Communication Policy, as NOAA does not possess its own communication policy. Separately, NOAA's SIO, Dr. Cynthia Decker,

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confirmed that the four complaints met the basic criteria to be adjudicated pursuant to the NOAA Scientific Integrity Policy's accompanying Procedural Handbook.¹⁵

The Academy Team's analysis was informed by a review of supporting documentation as well as interviews with NOAA staff. The following decision points provide the underlying analysis used to determine the status of individuals and applicability of policy.

Decision Point: Applicability of Policy to Respondents

The allegations list several Respondents. Are those Respondents subject to the NOAA Scientific Integrity Policy and Commerce Public Communication Policy?

Analysis: Although the list of Respondents presented in the allegations includes both NOAA and non-NOAA employees, only NOAA staff (career and political) and certain NOAA contractors are covered under NOAA's Scientific Integrity Policy. The Department of Commerce Public Communication policies extends to all employees of the Commerce Department including NOAA staff.

Pursuant to Section 2.02 of NOAA Scientific Integrity Policy, the policy applies to:

All NOAA employees, political and career, who are engaged in, supervise, or manage scientific activities, analyze and/or publicly communicate information resulting from scientific activities, or use scientific information or analyses in making bureau or office policy, management, or regulatory decisions; and contractors who engage in or assist with activities identified above.

Pursuant to Section 1.01 of Commerce's Public Communications Policy, the policy applies to "Department of Commerce employees engaging in public communications." This policy is also applicable to the Respondents, as they publicly communicated information resulting from scientific activities.

Decision Point: Applicability of NOAA Scientific Integrity Policy to the Communications

The allegations refer to the September 6 Statement and the September 1 Birmingham Tweet. Are the September 6 Statement and September 1 Birmingham Tweet covered under the NOAA Scientific Integrity Policy?

Analysis: In considering this question, the Academy Team reviewed NOAA's Scientific Integrity Policy and concluded that the September 6 Statement and September 1 Birmingham Tweet are covered under NOAA's Scientific Integrity Policy for the following reasons:

15. Cynthia J. Decker, "Memorandum from Cynthia J. Decker for The Record, Subject: Scientific Integrity Allegations 2019-007/8/9/10 Inquiry and Investigation Process," 2019.

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Section 3 of the NOAA Scientific Integrity Policy defines a scientific assessment as the:

Evaluation of a body of scientific or technical knowledge that typically synthesizes multiple factual inputs, data, models, and assumptions, and implies the use of best professional judgment to bridge uncertainties in the available information.

The persons involved in developing the September 1 Birmingham Tweet and September 6 Statement conducted a scientific assessment by evaluating and synthesizing the scientific and technical knowledge available to them. To develop the September 1 Birmingham Tweet, Birmingham WFO forecasters evaluated models, forecasts, and other information. In the case of the September 6 Statement, individuals involved in developing the statement evaluated National Hurricane Center (NHC) advisories.

A scientific assessment is included in the list of activities that define a scientific activity per the NOAA Scientific Integrity Policy. Section 3 of the policy defines a scientific activity as:

Activities that involve inventorying, monitoring, observations, experimentation, study, research, modeling, and scientific assessment. Scientific activities are conducted in a manner specified by standard protocols and procedures and include any of the physical, biological, or social sciences, as well as engineering and mathematics, or any combination of these.

In developing the September 1 Birmingham Tweet and September 6 Statement, individuals engaged in activities that can be considered scientific activities.

As defined in Section 3 of the NOAA Scientific Integrity Policy, a scientific product is the:

Presentation of the results of scientific activities including the analysis, synthesis, compilation, or translation of scientific information and data into formats for the use of NOAA, the Department of Commerce, or the Nation.

Therefore, it can be reasonably deduced that the September 1 Birmingham Tweet and September 6 Statement are examples of a scientific product. The Academy Team's interviews with NOAA and NWS staff and conversations with representatives from NOAA's Office of General Counsel and SIO about the Scientific Integrity Policy, supported the Academy Team's interpretation.

As scientific products based on scientific activities and assessments, the September 1 Birmingham Tweet and September 6 Statement are subject to the NOAA Scientific Integrity Policy.

Interviews with NOAA and GAO personnel provided guidance that a communication can be considered a scientific product if:

- The communication is based on scientific analysis and
- The communication is related to the core mission of the agency.

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In the case of the September 1 Birmingham Tweet and September 6 Statement, both communications involve scientific assessments and activities and relate to the core mission of the agency. Informed by this guidance, the Academy Team determined that both criteria were met and that both the September 1 Birmingham Tweet and September 6 Statement should be considered scientific products because they are based on scientific activities and scientific assessments. The Academy Team determined that the drafting and public release of both communications were consistent with these covered activities.

Decision Point: Applicability of Department of Commerce Public Communication Policy to the Communications

Are the September 6 Statement and September 1 Birmingham Tweet covered under the Department of Commerce Public Communication Policy?

Analysis: The Academy Team determined that the September 6 Statement and September 1 Birmingham Tweet can be considered Official Communications and are covered under the Department of Commerce Public Communication Policy for the following reasons:

The Department of Commerce Public Communication Policy defines Official Communications as:

Any Public Communication by an employee that relates to the Department's programs, policies, or operations and takes place or is prepared: (i) At the direction of a superior of the employee; (ii) Substantially during the official working hours of the employee; (iii) With the substantial use of U.S. Government resource(s); or with substantial assistance of U.S. Government employee(s) on official duty.

Section 8 of Commerce's Public Communications Policy provides that:

Any Official Communication intended for the media (e.g., news releases, interviews/news conferences), all written and audiovisual materials that are, or are prepared or received in connection with, the Official Communication must be submitted in a timely manner before the communication occurs to the head of the operating unit or Secretarial office, or their designee(s), and to the Appropriate Public Affairs Office (as defined in Section 8.05) for approval in a timely manner.

Based on the definition of an Official Communication, the Commerce Public Communication Policy is applicable to both the September 1 Birmingham Tweet and September 6 Statement.

Analysis: As the September 1 Birmingham Tweet and September 6 Statement are defined as "Official Communications" per the Commerce Public Communication Policy, they are also subject to the provisions of Section 7 of NOAA's Scientific Integrity Policy which states:

Appropriate rules and procedures are in place and implemented to preserve the integrity of the scientific process and the dissemination of its scientific products and information, including providing scientists the right to review and correct any

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official document (such as a press release or report) that cites or references their scientific work, to ensure that accuracy has been maintained after the clearance and editing process.

Section 7 of the NOAA Scientific Integrity Policy mandates a review from the scientists whose scientific work was referenced in the Official Communication. As Official Communications per the Department of Commerce Public Communication Policy, the September 1 Birmingham Tweet and September 6 Statement are subject to Section 7 of the NOAA Scientific Integrity Policy.

Decision Point: Applicability of Policy to Alleged Violations

The allegations cite violations of numerous provisions of NOAA's Scientific Integrity Policy. Are the alleged violations covered under the NOAA Scientific Integrity Policy and Commerce Public Communication Policy?

Analysis: In considering this question, the Academy Team reviewed NOAA's Scientific Integrity Policy, Commerce's Public Communication Policy, OSTP policies, GAO guidance, guidelines followed by other federal agencies, and conversations with NOAA's SIO and representatives from the Office of General Counsel on the Scientific Integrity Policy. The Academy Team concluded that the alleged violations are covered under the NOAA Scientific Integrity Policy and Commerce Public Communication Policy.

Decision Point: Filing of Allegations in Accordance with Policy

Were the allegations filed in accordance with the provisions in the NOAA Scientific Integrity Policy's accompanying Procedural Handbook?

Analysis: In considering this question, the Academy Team reviewed NOAA's Scientific Integrity Policy and the accompanying Procedural Handbook, GAO guidance and guidelines followed by other federal agencies, and conversations with NOAA's SIO and representatives from the Office of General Counsel on the Scientific Integrity Policy. The Academy Team concluded that the allegations were filed in accordance with the provisions in the NOAA Procedural Handbook. The allegations provided sufficient information for adjudication and were filed within the stipulated time frame. See Sections 3.02 and 3.04 of the Procedural Handbook for additional guidance.

2.2 Methodological Approach to Review and Assess the Allegations

The Academy Team's methodological approach to review and assess the allegations comprised seven key tasks:

Task One: Review allegations of scientific misconduct or loss of scientific integrity related to the development and release of September 6 Statement.

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For the purposes of this evaluation, NOAA requested the Panel to consider the following four allegations:

Complainant and Filing Date	Allegation Number
Craig McLean; September 10, 2019	Allegation 2019-007
Jane Lubchenco, Andrew Rosenberg, and Richard Spinrad; September 9, 2019	Allegation 2019-008
Carl Childs; September 11, 2019	Allegation 2019-009
Rep. Paul Tonko; September 10, 2019	Allegation 2019-0010

Task Two: Review the applicable NOAA and Commerce policies that relate to scientific integrity and communication activities.

For the purposes of this evaluation, the Panel considered the following applicable NOAA and Commerce policies and procedures:¹⁶

- NOAA's Scientific Integrity Policy and related Procedural Handbook
- NOAA Framework for Internal Review and Approval of Fundamental Research Communications (FRC)
- Department of Commerce's Public Communication Policy
- Department of Commerce's Social Media Guidebook January 2013
- Memorandum for the Heads of Executive Departments and Agencies: March 9, 2009
- Memorandum for the Heads of Executive Departments and Agencies: December 17, 2010 (from the Director of the OSTP)
- Memorandum for all Chief Counsels and General Counsels, on the implementation of administration policy of scientific integrity: December 16, 2011 (from the General Counsel of the Department of Commerce)

16. NOAA's SIO and representatives from the Office of General Counsel confirmed that these documents encompass all scientific integrity and communication policies applicable to NOAA.

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- Federal Register, Volume 65, Number 235, Notice from the Science and Technology Policy Office on the Federal Policy on Research Misconduct: Wednesday, December 6, 2000¹⁷

Task Three: Select and define criteria to be used to assess a possible violation of NOAA's Scientific Integrity Policy and Commerce's Public Communication Policy. For the purposes of this evaluation, the Panel considered assessment criteria drawn from the applicable documents listed above in Task Two. Criteria include broad standards and specific procedural guidance.

Task Four: Develop a fact-based chronology of activities and individuals involved in the events leading up to and the development and release of the September 6 Statement and determine in what context the September 6 Statement was produced.

To develop the chronology, the Panel conducted semi-structured interviews and reviewed prior testimonial evidence and related documents.

Task Five: Develop a concise understanding of the adjudication standards, criteria, and process.

Task Six: Determine whether the NOAA personnel involved in events leading up to, and in the issuance of, the September 6 Statement violated the Scientific Integrity Policy.

For the purpose of this evaluation, the Panel took the following steps:

- Map the prescribed procedures and activities related to the September 6 Statement according to NOAA's policies. This creates a baseline as to what procedures and steps should have been followed to comply with NOAA and Commerce policies.
- Compare the fact-based chronology of the events, activities, and individuals determined in Task Four with NOAA policies and procedures. Identify departures from the baseline policies and procedures.
- Determine whether the departures or variance from the baseline procedures significantly departed from accepted practices and rises to the level of a violation of the Code of Scientific Conduct or Code of Ethics for Science Supervision and Management set forth in NOAA's Scientific Integrity Policy.
- Determine whether the individuals engaged in the misconduct intentionally, knowingly, or in reckless disregard of the Code of Scientific Conduct or Code of Ethics for Science Supervision and Management in NOAA's Scientific Integrity Policy.

Task Seven: In the event that scientific misconduct or misconduct resulting in a loss of scientific integrity has occurred, determine what steps are necessary to restore the loss of integrity.

17. The federal definition of research misconduct is defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.

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Separately, formulate recommendations for NOAA to help safeguard against future violations of scientific integrity related to political interference.

For the purpose of this evaluation, the Panel considered the analysis included in Tasks One through Seven as well as their professional expertise and experience to develop recommendations intended to support more effective adherence to the Scientific Integrity Policy in the future.

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Chapter 3: Summary of NOAA's Scientific Integrity Policy and Adjudication Procedures

The National Oceanic and Atmospheric Administration's (NOAA) Scientific Integrity Policy (NOAA Administrative Order 202-735D: Scientific Integrity) outlines the agency's scientific integrity principles, code of conduct, code of ethics, and criteria to determine scientific and research misconduct. Section 3 of the policy defines scientific integrity as follows:

The condition resulting from adherence to professional values and practices when conducting and applying the results of science that ensures objectivity, clarity, and reproducibility, and that provides insulation from bias, fabrication, falsification, plagiarism, interference, censorship, and inadequate procedural and information security.

NOAA's Scientific Integrity Policy and accompanying Procedural Handbook provide criteria for determining scientific misconduct and five core procedures for adjudicating alleged violations.

3.1 Criteria for Determining Scientific Misconduct

Section 2.01 of the Procedural Handbook for NOAA's Scientific Integrity Policy states that:

A finding of scientific misconduct or misconduct resulting in the loss of scientific integrity requires a determination by the NOAA Scientific Integrity Officer (SIO) and/or Determining Officer (DO) by a preponderance of the evidence on the record before him or her that the person or entity has:

- Significantly departed from accepted practices of the relevant research community and violated the Code of Scientific Conduct or Code of Ethics for Science Supervision and Management set forth in NOAA's Scientific Integrity Policy; and
- Engaged in the misconduct intentionally, knowingly, or in reckless disregard of the Code of Scientific Conduct or Code of Ethics for Science Supervision and Management in NOAA's Scientific Integrity Policy.

3.2 Core Procedures for Adjudicating Alleged Violations of Scientific Integrity

The accompanying Procedural Handbook to NOAA's Scientific Integrity Policy articulates a precise process for NOAA to use in responding to allegations of scientific misconduct or a loss of scientific integrity by a NOAA employee, contractor, or recipient of NOAA financial assistance. The Procedural Handbook provides the following core procedures for identifying and adjudicating alleged violations of scientific integrity.

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Reporting the Allegation

Allegations are to be submitted in writing to NOAA's SIO within 90 calendar days of the discovery of the alleged misconduct.¹⁸ If applicable, an allegation should contain all of the following information to evaluate the complaint:

- a. The name of the person or organization alleged to have committed the misconduct;
- b. A statement of facts (including dates, locations, and actions) that support the allegation, including when and how the Complainant first learned of such facts;
- c. A list of documents supporting the allegation;
- d. A list of witnesses who may corroborate the allegation;
- e. An explanation of how the criteria for scientific misconduct or loss of scientific integrity are met, including for loss of scientific integrity: citations or other information identifying the accepted practices of the relevant scientific community; an explanation of how the alleged misconduct constitutes a significant departure from those practices and violates the Code of Scientific Conduct or Code of Ethics for Science Supervision and Management set forth in NOAA's Scientific Integrity Policy
- f. An explanation of any conflicts of interest, as defined in section 4.04(b)(i), the Complainant has with the subject of the allegation;
- g. A statement indicating whether the allegation has been submitted elsewhere, such as the NOAA Employee and Labor Relations Division, Office of Special Counsel, or Office of the Inspector General.¹⁹

Screening the Allegation

NOAA's Scientific Integrity Policy's Procedural Handbook provides that the SIO is to screen the allegation to decide whether it should be dismissed or should proceed to an inquiry and possible investigation. The official may also form a committee for assistance with that assessment. Pursuant to this requirement, the NOAA SIO, Dr. Cynthia Decker, concluded that the allegations of misconduct were credible and consulted with NOAA General Counsel on appropriate

18. National Oceanic and Atmospheric Administration, "Procedural Handbook for NAO 202-735 D: Scientific Integrity," December, 2011: Section 3.02.

19. NOAA, Section 3.04.

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procedures to move the adjudication forward.²⁰ Detailed descriptions of the allegations can be found in tables 4-1, 4-2, 4-3, and 4-4, all found in Chapter 4.

Investigating the Allegation

The purpose of this procedure is to determine whether scientific misconduct and/or loss of scientific integrity occurred and to recommend corrective action. NOAA's procedures include a step for the SIO or other designated body to investigate the allegation and to decide whether it should be dismissed or, if a violation occurred, assess whether an allegation sufficiently specifies scientific misconduct or the loss of scientific integrity and whether that misconduct or loss can be resolved with evidence and expertise that can be collected by the Inquiry Team, or if a more extensive investigation is warranted.²¹

If the Inquiry Team determines by a preponderance of evidence that a more extensive investigation is warranted, an Integrity Review Panel (IRP) is formed, tasked to determine whether scientific misconduct or loss of scientific integrity occurred, and recommends corrective action.²²

In considering the posture of the Complainants and Respondents to allegations 2019-007, -008, -009, and -0010, the SIO with consultation from NOAA General Counsel determined that NOAA was not suited to adjudicate this matter internally and required an external independent expert to investigate and make findings and recommendations. In a Memorandum for The Record explaining this discussion, the NOAA SIO, Dr. Cynthia Decker, explains, "Due to the posture of the complainant and respondent in the proceeding, no one at NOAA is suited to adjudicate this matter internally, and NOAA requires a neutral expert to investigate and make findings and recommendations in order for a NOAA Determining Official to resolve the complaints."²³ To ensure an unbiased proceeding, the Academy was contracted to serve as a combined Inquiry/Investigation Team, carry out all functions the Procedural Handbook bestows to an Inquiry Team and IRP, and submit a report with findings and recommendations to the DO for review and further action, as appropriate.

20. Cynthia J. Decker, "Memorandum from Cynthia J. Decker for The Record, Subject: Scientific Integrity Allegations 2019-007/8/9/10 Inquiry and Investigation Process," 2019; National Oceanic and Atmospheric Administration, "Procedural Handbook for NAO 202-735D: Scientific Integrity," December, 2011: Section 4.03(d).

21. National Oceanic and Atmospheric Administration, "Procedural Handbook for NAO 202-735D: Scientific Integrity," December, 2011: Section 4.04.

22. NOAA, Section 4.05.

23. Cynthia J. Decker, "Memorandum from Cynthia J. Decker for The Record, Subject: Scientific Integrity Allegations 2019-007/8/9/10 Inquiry and Investigation Process," 2019.

Responding to the Violation

If the DO finds that scientific misconduct or loss of scientific integrity has occurred, the DO or Deputy Under Secretary for Operations will refer the matter to an appropriate manager in the Respondent's reporting structure for corrective administrative action.

Opportunity for Input from the Complainant and Respondent

During the investigation process, the Complainant and Respondent may provide written exceptions to the findings of the final investigation report within 10 calendar days.

Chapter 4: Description of the Allegations

Following the release of the September 6 Statement, NOAA’s Scientific Integrity Officer (SIO), Dr. Cynthia Decker, received four complaints alleging a violation of NOAA’s Scientific Integrity Policy (NOAA Administrative Order (NAO) 202-735D: Scientific Integrity). These complaints were then cataloged by the SIO and numbered as Scientific Integrity Allegations 2019-007 through 2019-0010.

The following tables summarizes the four allegations submitted to NOAA’s SIO. The allegations can be found in Appendix E.

Table 4-1. Allegation 2019-007

<p>Complainant: Craig McLean²⁴</p>	<p>Date Submitted: September 10, 2019</p>
<p>Allegation Summary: The complaint alleges that, “intervention to contradict the forecasters was not based in science but on external factors including reputation and appearance, or simply put, political. Our NOAA Scientific Integrity Policy and Code of Scientific Conduct found in NAO 202-735D make clear that all NOAA employees shall approach all scientific activities with honesty, objectively, and completely, without allegiance to individuals, organizations, or ideology. The content of this press release is very concerning as it compromises the ability of NOAA to convey life-saving information necessary to avoid substantial and specific danger to public health and safety. If the public cannot trust our information, or we debase our forecaster’s warnings and products, that specific danger arises.”</p>	<p>Policies Allegedly Violated: NAO 202-735D: Scientific Integrity Section 5.02(d): <i>Guidance for Scientists to Speak with the Media</i> Section 5.02(k): <i>Sharing of Best Administrative and Management Practices</i> Section 6.01: <i>NOAA Employee and Contractors Code of Scientific Conduct</i> Section 7.01: <i>Code of Ethics for Science Managers</i> Section 7.02: <i>Code of Ethics for All Science Supervisors and Management</i> Section 7.03: <i>Fundamental Research Communication Approval</i> Section 8.01: <i>Definitions of Scientific and Research Misconduct</i> Procedural Handbook Section 2.03: <i>Coercive manipulation, intimidation, misrepresentation, etc.</i> Department of Commerce Administrative Order (DAO) 219-1: <i>Public Communications</i> Section 4.01 (a)(b) Section 5.03 (a) (b) 18 U.S. Code § 2074. <i>False Weather Reports</i></p>

24. Craig McLean is the NOAA Assistant Administrator for Oceanic and Atmospheric Research. He also serves NOAA in the acting role of Chief Scientist.

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Table 4-2. Allegation 2019-008

<p>Complainant Dr. Jane Lubchenco,²⁵ Dr. Richard Spinrad,²⁶ Dr. Andrew Rosenberg²⁷</p>	<p>Date Submitted: September 9, 2019</p>
<p>Allegation Summary: The complaint alleges that, “recent actions to censor NWS scientists put the public safety at risk, are inconsistent with NOAA’s scientific integrity principles, violate the public trust, and compromise the independence and reliability of the National Weather Service.”</p>	<p>Policies Allegedly Violated: NAO 202-735D: Scientific Integrity Section 4.05: <i>NOAA Scientists May Freely Speak to the Media</i> Section 7.01: <i>Code of Ethics for Science Managers</i></p>

Table 4-3. Allegation 2019-009

<p>Complainant: Dr. Carl Childs²⁸</p>	<p>Date Submitted: September 11, 2019</p>
<p>Allegation Summary: The complaint alleges that, “no attempt was apparently made to contact the NOAA staff who generated the original (unmodified) hurricane forecast before the statement release. The September 6 statement was an intentional misrepresentation of scientific findings that damages the scientific standing of the NWS and the entire agency. It casts unwarranted doubt on the performance of NWS forecasters and jeopardized public faith in NOAA as an impartial communicator of vital public safety information. It is clear</p>	<p>Policies Allegedly Violated: NAO 202-735D: Scientific Integrity Sections 7.01: <i>Code of Ethics for Science Managers</i> Section 8.01: <i>Definitions of Scientific and Research Misconduct</i> 18 U.S. Code § 2074. False Weather Reports</p>

25. Dr. Jane Lubchenco is the University Distinguished Professor and Marine Studies Advisor to the President at Oregon State University. She previously served as Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator from 2009-2013.

26. Dr. Richard Spinrad is the president of the Marine Technology Society. He previously served as the Chief Scientist of NOAA from 2014-2017 and as director for various NOAA offices from 2003-2010.

27. Dr. Andrew Rosenberg is director of the Center for Science and Democracy at the Union of Concerned Scientists. He previously served as the Deputy Director of NOAA’s National Marine Fisheries Service from 1998-2000.

28. Dr. Carl Childs is a scientist on NOAA’s Scientific Support Team, located within the Emergency Response Division (ERD) of the NOAA Office of Response & Restoration. Dr. Childs is the president of the bargaining unit representing the scientists in NOAA’s Emergency Response Division (IFPTE Local 8A).

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<p>that the statement from NOAA management serves only to deflect criticism of the source of the misleading information at the expense of NWS employees who safeguard the public in a manner consistent with the best scientific information available.”</p>	
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Table 4-4. Allegation 2019-0010

<p>Complainant: Congressman Paul Tonko²⁹</p>	<p>Date Submitted: September 10, 2019</p>
<p>Allegation Summary: The complaint alleges that recent reports published by media outlets, “indicate that political leadership responsible for overseeing NOAA may have communicated threats and applied political pressure in an effort to suppress the release of vital, current forecasting information critical to emergency preparedness,” and, “an agency-wide directive sent on September 1, 2019 restricting National Weather Service from releasing information that could be seen as contradicting President Trump.” These “reported abuses by high ranking political appointees in contravention of agency convention and best practices, appear to violate the NOAA Administrative Order on Scientific Integrity.”</p>	<p>Policies Allegedly Violated: NAO 202-735D: Scientific Integrity <i>No specific sections mentioned.</i> Although Congressman Tonko does not explicitly mention a section, his allegation does directly quote Section 7.02: <i>Code of Ethics for All Science Supervisors and Management</i> of NOAA’s Scientific Integrity Policy.</p>

29. Congressman Paul Tonko represents New York’s 20th Congressional District. Tonko serves on the House Committee on Energy and Commerce; House Committee on Science, Space, and Technology; and the House Committee on Natural Resources. He chairs the Subcommittee on Environment and Climate Change.

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Chapter 5: Chronology of Key Events

The following is a chronology of key events that occurred leading up to the formulation and release of the September 1 Birmingham Tweet by the National Weather Service (NWS) Birmingham Weather Forecast Office (WFO) and the subsequent September 6 Statement by the National Oceanic and Atmospheric Administration (NOAA). All of the times in the chronology below are in Eastern Time Zone. The events and accuracy of the descriptions were validated using several different sources of information including interviews conducted by the Academy Team and NOAA General Counsel, text and email communications, and other documentation. Appendix B provides a more comprehensive overview including the events, dates, parties involved, and supporting documentation.

Wednesday, August 28, 2019

- 5:02 p.m.: Susan Buchanan (NWS Communications Director) releases NOAA Communications media plan for Hurricane Dorian.

Thursday, August 29, 2019

- Dr. Neil Jacobs (NOAA Acting Administrator) leads a briefing on Hurricane Dorian at the White House. A NOAA graphic (the one that later appears altered with a black marker) is used in the briefing.

Saturday, August 31, 2019

- 4:00 p.m.: President Trump receives a briefing on Hurricane Dorian via video teleconference while he is at Camp David.

Sunday, September 1, 2019

- 8:00 a.m.–11:00 a.m.: NWS Birmingham WFO receives multiple phone calls from the public. Two of the calls come in directly after the President's tweet at 10:51 a.m.
- 10:51 a.m.: President Trump tweets that Alabama, "will most likely be hit (much) harder than anticipated."
- 11:11 a.m.: NWS Birmingham WFO tweets that, "Alabama will NOT see any impacts from #Dorian." ("the September 1 Birmingham Tweet").
- 12:31 p.m.: President Trump is briefed on Hurricane Dorian at Federal Emergency Management Administration (FEMA) Headquarters. Ken Graham (Director of the National Hurricane Center (NHC)) leads the briefing.
- 3:00 p.m.: Chris Vaccaro (Senior Media Relations Specialist at NOAA) sent an email to the NWS Public Affairs team directing that all media inquiries be sent to him and Julie Roberts (Deputy Chief of Staff and Director of Communications at NOAA).

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- 3:06 p.m.: Julie Roberts sends an email asking all NWS offices to consult with NOAA Office of Communications before responding to any social media inquiries.
- 4:49 p.m.: Andrew Stern (Manager of NWS Operations Center) sends an email to the NWS Operations Center staff to inform all Regional Operation Centers (ROC) and WFOs to “only stick with official NHC forecasts if questions arise from some national level social media posts this afternoon. Staff should not provide any opinion about the national level post and should direct any questions that cannot be satisfied to NOAA Public Affairs.”
- 9:41 p.m.: Chris Darden (Meteorologist-in-Charge, NWS Birmingham WFO) sends an email out to all NWS Birmingham WFO staff updating them on the day’s events and to forward any calls or questions to him.

Wednesday, September 4, 2019

- 12:57 p.m.: President Trump is briefed on Hurricane Dorian at the Oval Office in front of the press. A NOAA graphic appears to be altered with black marker. This becomes national news.
- 2:42 p.m.: Julie Roberts emails George Jungbluth (NWS Chief of Staff) and tells him that NOAA Communications is handling “the situation” and “there should be no action taken by anyone within the National Weather Service or the National Hurricane Center.”
- 3:37 p.m.: NWS Operations Center sends out a media guidance to all ROCs and National Centers asking that they do not respond via social media or other modes to any questions related the tweets.
- 4:45 p.m.: Chris Darden sends an email out to all NWS Birmingham WFO staff updating them that NOAA Headquarters called Darden and asked all further media inquiries to be forwarded to Chris Vaccaro at NOAA Communications.

Thursday, September 5, 2019

- 5:36 p.m.: Chris Vaccaro sends an email asking NWS to resend the September 4 media guidance. Vaccaro states in the email that forecasters should not communicate with media via their personal Twitter accounts.
- 7:48 p.m.: George Jungbluth resends September 4 media guidance to NWS personnel.
- Approximately 7:00 p.m.: Secretary Wilbur Ross (Commerce) calls Dr. Neil Jacobs and asks him to prepare a timeline of events and communications surrounding Dorian.
- 10:53 p.m.: Dr. Neil Jacobs calls Julie Roberts and informs Roberts of Jacobs’ phone call with Secretary Ross.

Friday, September 6, 2019

- 2:30 a.m.: Julie Roberts receives a phone call from Secretary Wilbur Ross' personal assistant and Mike Walsh (Department of Commerce Chief of Staff, who had also been delegated the duties of General Counsel).
- 2:30-3:48 a.m.: Julie Roberts compiles a summary document of all events and communications that have happened surrounding Dorian [REDACTED] and sends the summary to Mike Walsh and other Commerce and NOAA employees.
- 7:00 a.m.: Julie Roberts calls Dr. Neil Jacobs and fills him in on the calls she received from the Secretary earlier that morning.
- 8:30 a.m.: Julie Roberts and Dr. Neil Jacobs arrive at the Commerce office and meet in the Deputy Secretary's conference room.³⁰ Commerce officials who participated in all or a portion of this meeting include: David Dewhirst (Deputy General Counsel), Kevin Manning (Press Secretary and Deputy Director of Public Affairs), Deputy Secretary Karen Dunn Kelley, Joe Semsar (Chief of Staff for Deputy Secretary Karen Dunn Kelley), and Cordell Hull (Deputy General Counsel and also performing the duties of Assistant Secretary for Legislative and Intergovernmental Affairs).
- Deputy Secretary Karen Dunn Kelley goes to [REDACTED] a meeting. [REDACTED]
[REDACTED]
- A statement is drafted on David Dewhirst's tablet.
- 10:30 a.m.: Julie Roberts goes upstairs and asks Scott Smullen (NOAA Deputy Director of Communications) and Chris Vaccaro to look at the statement.
- Roberts, Jacobs, Vaccaro, and Smullen edit the September 6 Statement. Jacobs and Roberts work to ensure that the statement is technically accurate. There was a debate about Birmingham. Specifically, Jacobs, Roberts, Vaccaro, and Smullen wanted to remove the Birmingham part of the statement but were told no by Commerce officials.
- Secretary Ross and his staff call to discuss the statement.
- Jacobs and Roberts raise their concern about the Birmingham part of the statement but are told they cannot take out the reference to the Birmingham office.

30. According to Julie Roberts, the meeting was never officially convened, "it was just everyone sitting around the table working on whatever we were working on at the time." Julie Kay Roberts, "Interview of Julie Roberts," interview by NOAA General Counsel, October 11, 2019: Page 91, Line 18-21; According to Dr. Neil Jacobs, "when Julie [Roberts] and I showed up there was already a couple drafts versions of the statement going back and forth floating around." Neil Jacobs, "Interview of Neil Jacobs," interview by NOAA General Counsel, November 6, 2019: Page 105, Line 19-21.

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- 3:00 p.m.: Dr. Neil Jacobs calls Stuart Levenbach (NOAA Chief of Staff) and tells him about the statement.
- 3:11 p.m.: David Dewhirst emails Mike Walsh a copy of the statement for approval.
- Between 3:30 and 4:00 p.m.: Dr. Neil Jacobs calls Stuart Levenbach, Dr. Louis Uccellini (NOAA Assistant Administrator, Director of NWS), and Taylor Jordan (NOAA Senior Policy Advisor) to tell them about the statement before it goes out.
- 3:43 p.m.: David Dewhirst emails Julie Roberts a copy of the statement after it has been approved by senior political leaders at Commerce.
- 4:00 p.m.: Julie Roberts and Dr. Neil Jacobs reach out to Benjamin Friedman (NOAA Deputy Under Secretary for Operations) to let him know about the statement before it goes out.
- 4:40 p.m.: Dr. Louis Uccellini and other NOAA officials speak over the phone with Chris Darden to give him a heads up before the statement goes out.
- 4:45 p.m.: NOAA Communications releases September 6 Statement that says Hurricane Dorian could have impacted Alabama and that the September 1 Birmingham Tweet was “inconsistent with probabilities from the best forecast products available at the time.”
- 4:52 p.m.: Chris Vaccaro sends out an email to NOAA personnel informing them that the statement has been distributed and that inquiries “should solely be directed to” the NOAA Office of Communications line. Email gets forwarded to other NOAA staff.
- 5:31 p.m.: NOAA Communications posts the statement on Twitter.
- 6:00 p.m.: Chris Darden sends out an email to the NWS Birmingham WFO staff informing them of the statement and commending them on the work they do to support Alabama. Darden asks the staff to “please be cautious about commenting publicly” on the statement.
- 8:22 p.m.: Stuart Levenbach emails Dr. Louis Uccellini and tells Uccellini that he (Levenbach) was not involved in any part of drafting the statement. To Levenbach’s knowledge, Roberts and Jacobs were the only people from NOAA involved in writing the statement.

Saturday, September 7, 2019

- 2:26 a.m.: Stuart Levenbach emails Kevin Wheeler (NOAA Deputy Chief of Staff for Policy) with a summary of how the statement was developed as Levenbach understood it from a call with Dr. Jacobs.
- 3:11 p.m.: All hands email sent out to NWS staff thanking them for their work on Hurricane Dorian.

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Monday, September 9, 2019

- Dr. Jane Lubchenco, Dr. Richard Spinrad, and Dr. Andrew Rosenberg file an allegation of violation of NOAA's Scientific Integrity Policy.

Tuesday, September 10, 2019

- Representative Paul Tonko files an allegation of violation of NOAA's Scientific Integrity Policy.
- Craig McLean files an allegation of violation of NOAA's Scientific Integrity Policy.

Wednesday, September 11, 2019

- Dr. Carl Childs files an allegation of violation of NOAA's Scientific Integrity Policy.
- Craig McLean provides more alleged violations of NOAA's Scientific Integrity Policy to expand upon his allegation filed on September 10.

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Chapter 6: Findings and Recommendations

6.1 Criteria to Assess Allegations of Scientific Misconduct

Based on its review of applicable policies and rules, the Panel identifies five criteria to guide the assessment of allegations of scientific misconduct filed under NOAA's Scientific Integrity Policy.

Criteria One: Scientific research should be independent from political interference. Political officials and agency employees should not suppress or alter scientific findings and conclusions.³¹

NOAA is a scientific agency, and its ability to advance its mission relies on the “transparency, traceability, and scientific integrity at all levels.”³² The intent of NOAA's Scientific Integrity Policy (NOAA Administrative Order 202-735D: Scientific Integrity) is to protect the independence of the agency's scientific research and strengthen public confidence in the quality and reliability of NOAA scientific activities. Scientists should feel that they can focus on their research free of political concerns. For example, the policy states:

Section 7.02. All individuals [NOAA employees and contractors] identified in Section 2.02 must not:

- Suppress, alter, or otherwise impede the timely release of scientific or technological findings or conclusions, unless explicitly required by a Department or government-wide statute, regulation, Executive Order, Presidential Memorandum, or other legal authority.
- Intimidate or coerce employees, contractors, recipients of financial assistance awards, or others to alter or censor scientific findings.
- Implement institutional barriers to cooperation and the timely communication of scientific findings or technology.

In addition, the Department of Commerce Public Communication Policy (Department Administrative Order 219-1: Public Communications) clarifies that the role of the Office of Communications is to provide media expertise and assist with the communication of scientific information.

31. Barack Obama, "Memorandum to the Heads of Executive Departments and Agencies, Subject: Scientific Integrity," March 9, 2009.

32. National Oceanic and Atmospheric Administration, "NOAA Administrative Order 202-735D: Scientific Integrity," December 7, 2011: Section 4.01

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Section 5.03. All public affairs employees shall adhere to the following best practices:

- Assist with presentation, style, and logistics of scientific and engineering information, but not alter its substance in any way.

Criteria Two: Scientists have the right to communicate with media and the public about scientific research findings based on their official work.

NOAA has adopted policies and procedures to ensure a culture of transparency and openness and facilitate the free flow of scientific information. NOAA's Scientific Integrity Policy includes provisions that provide scientists the right to speak publicly about their scientific research:

Section 4.05. To be open and transparent about their work, and consistent with DAO 219-1 on (Public Communications) and their official duties, NOAA scientists may freely speak to the media and the public about scientific and technical matters based on their official work, including scientific and technical ideas, approaches, findings, and conclusions based on their official work. Additional guidance for employees is available in DAO 219-1. Communication by email or other electronic means in response to inquiries from the media, and concerning scientific or technical matters based on an employee's official work, are considered to be the same as oral communication and not subject to approval, but are still subject to the restrictions on protected non-public information set forth in DAO 219-1. Social media communications are governed by the Department of Commerce Policy on the Approval and Use of Social Media and Web 2.0, as well as DAO 219-1.

Section 4.06. NOAA scientists are free to present viewpoints, for example about policy or management matters, that extend beyond their scientific findings to incorporate their expert or personal opinions, but in doing so they must make clear that they are presenting their individual opinions- not the views of the Department of Commerce or NOAA. In such cases, NOAA personnel may also note their NOAA affiliation as part of their biographical information, provided that their NOAA affiliation is noted as one of several biographical details, or, if the information is being published in a scientific or technical journal, their NOAA affiliation may be listed with an appropriate disclaimer. Appropriate disclaimers for use by NOAA scientists when expressing such opinions will be posted to the Scientific Integrity Commons website.

Section 5.02. NOAA will:

- (a) Ensure the free flow of scientific information online and in other formats, consistent with privacy and classification standards, and in keeping with the Department of Commerce and NOAA data sharing and management policies. Whenever appropriate, this information will include data and models underlying regulatory proposals and other policy decisions.

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(d) Ensure that NOAA and Department of Commerce public communications guidance provides procedures by which scientists may speak to the media and the public about scientific and technical matters based on their official work and areas of expertise. In no circumstances may any NOAA official ask or direct Federal scientists or other NOAA employees to suppress or alter scientific findings.

(k) Ensure the sharing of best administrative and management practices that promote the integrity of NOAA's scientific activities.

Similarly, Commerce's Public Communication Policy explicitly allows scientists to engage with the media to discuss their scientific research.

Section 4.01(d). In support of a culture of openness, and consistent with this Order and their official duties, Department employees may speak to the media and the public about their official work and freely and openly discuss scientific and technical ideas, approaches, findings, and conclusions based on their official work.

Criteria Three: Scientists have the right to review and correct any official document that cites or references their scientific work to ensure the accuracy of the information.

NOAA's Scientific Integrity Policy requires that NOAA official documents, including press releases, be reviewed by scientists who conduct the research to ensure the integrity of its scientific process and products:

Section 7.01. Science managers and supervisors will ensure:³³

- Appropriate rules and procedures are in place and implemented to preserve the integrity of the scientific process and the dissemination of its scientific products and information, including providing scientists the right to review and correct any official document (such as a press release or report) that cites or references their scientific work, to ensure that accuracy has been maintained after the clearance and editing process.

Criteria Four: NOAA employees and supervisors should report suspected cases of scientific or research misconduct.

NOAA's Scientific Integrity Policy requires that NOAA employees and supervisors report suspected scientific misconduct:

Section 6.01(d). All NOAA employees and contractors should:

33. National Oceanic and Atmospheric Administration, "NOAA Administrative Order 202-735D: Scientific Integrity," December 7, 2011: Section 2.02.

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- Immediately report any observed, suspected, or apparent Scientific and Research Misconduct through means established in Section 8 and the Procedural Handbook for this Order.

Section 7.05. NOAA science managers and supervisors will immediately report suspected cases of scientific or research misconduct through means established under Section 8 and the Procedural Handbook for this Order.

Criteria Five: Any Official Communication intended for the media must be submitted in a timely manner before the communication occurs to the head of the operating unit or Secretarial office, or their designee(s), and to the Appropriate Public Affairs Office (as defined in Section 8.05) for approval.

Commerce's Public Communication Policy clearly lays out the Department's approval process for Official Communication materials intended for the media. The head of the operating unit and the Public Affairs Office must sign off on Official Communication materials prior to their public release.

Section 8.01. Approval. For any Official Communication intended for the media (e.g., news releases, interviews/news conferences), all written and audiovisual materials that are, or are prepared or received in connection with, the Official Communication must be submitted in a timely manner before the communication occurs to the head of the operating unit or Secretarial office, or their designee(s), and to the Appropriate Public Affairs Office (as defined in Section 8.05) for approval in a timely manner. The Appropriate Public Affairs Office will be responsible for coordinating the finalization of the communication with the originating offices, including pertinent staff. Unless otherwise authorized by the Appropriate Public Affairs Office, all Official Communications with the media will be on-the-record (i.e., attributable to the person making the remarks or providing information or materials).

6.2 Adjudication Standards

The Panel followed the procedures and processes provided by the Scientific Integrity Policy's accompanying Procedural Handbook to conduct this assessment. The Procedural Handbook identifies two categories of potential violation of the Scientific Integrity Policy: (1) scientific misconduct and (2) loss of scientific integrity.

Section 8.01 of NOAA's Scientific Integrity Policy defines scientific misconduct:

Section 8.01. Scientific and Research Misconduct is defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing scientific and research activities, or in the products or reporting of these activities. Scientific and Research Misconduct specifically includes:

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- intentional circumvention of the integrity of the science and research process by violation of NOAA's Code of Ethics for Science Supervision and Management; and
- actions that compromise the scientific process by violating NOAA's Code of Scientific Conduct.
- Scientific and Research Misconduct does not include honest error or differences of opinion.

The adjudication standards for scientific misconduct are set forth in Section 2.01 of the Procedural Handbook. The evidence required to support findings of scientific misconduct are:

- Significant departure from accepted practices of the relevant research community and violated the NOAA Code of Scientific Conduct or Code of Ethics for Science Supervision and Management set forth in NAO 202-735D;
- Commit misconduct intentionally, knowingly, or in reckless disregard of the Code of Scientific Conduct or Code of Ethics for Science Supervision and Management in NAO 202-735 D;
- The allegation is supported by a preponderance of evidence.

The Procedural Handbook does not include explicit criteria to determine a loss of scientific integrity and only provides limited guidance:

Section 2.03. Coercive manipulation, intimidation, misrepresentation, censorship, or other misconduct that affects the quality or reliability of scientific information may involve the loss of scientific integrity.

Section 2.04. In the event the NOAA SIO and/or DO determines by a preponderance of the evidence that a loss of scientific integrity has taken place, but no misconduct is evident, the NOAA SIO and/or DO will propose and ensure appropriate action is taken to restore NOAA's scientific integrity.

6.3 Findings and Recommendations

Having conducted its analysis, the Panel selected three key allegations for deliberation. The Panel notes that certain allegations submitted for review were either subsumed by one of the three selected or did not rise to the level of an actual violation. The table following the copies of allegations in Appendix E provides a summary of the rationale for selection of the allegations under review. For each, the report provides the supporting facts, analysis, findings, and recommendations. The attendant facts were drawn from the team's review of prior testimonies, supplemental interviews, and a review of documents listed in Appendix H.

In considering the allegations, the Panel recognizes that the September 6 Statement and the September 1 Birmingham Tweet discussed herein are inextricably linked. The September 6

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Statement directly addressed the September 1 Birmingham Tweet and the underlying science. Second, the Panel considered both the content and process by which the September 6 Statement was developed and released. The Panel acknowledges the unique nature of the circumstances surrounding the September 6 Statement, including the extensive involvement of the media. Finally, it is the reasoned opinion of the Panel, that in the aggregate, the evidence gathered in this inquiry is appropriate and sufficient to provide a reasonable basis for the findings and conclusions contained herein.

Allegation One: NOAA Media Guidance limited the ability of scientists to communicate with the media and the public about their research findings.

Media guidance issued by NOAA leadership between September 1 and 6, 2019, limited the ability of scientists to communicate with the media and the public about their research findings. Policies allegedly violated include Section 4.05, Section 4.06, Section 5.02 (a), (d), and (k) of NOAA’s Scientific Integrity Policy; and Section 4.01 of Commerce’s Public Communication Policy.

Conditions Observed

Between September 1 and 6, 2019, NOAA Office of Communications sent out various emails to National Weather Service (NWS) leadership, the NWS Public Affairs team, and Communications staff directing NWS offices and staff to route any media request to NOAA Office of Communications and not to respond to any questions via media and social media either officially or through personal Twitter accounts. NWS issued several media guidance communications instructing staff to stick with official forecasts and direct media inquiries to NOAA Office of Communications. Table 6-1 below summarizes the media instructions from NOAA Communications and NWS.

Table 6-1. Media Guidance (September 1, 2019 – September 6, 2019)

Times Shown in Eastern Time Zone (ET)

Emails from NOAA Communications	September 1, 2019, 3:00 p.m. Chris Vaccaro, Senior Media Relations Specialist, sent an email to the NWS Public Affairs team and communication staff—“all media inquiries about the President’s tweet and the Birmingham tweet should be directed to me and Julie Roberts.”
	September 1, 2019, 3:06 p.m. Julie Roberts, Deputy Chief of Staff, sends an email to the NWS Public Affairs team and communication staff—“please ask all NWS offices to consult with us before responding to any social media inquiries.”
	September 4, 2019, 2:42 p.m. Julie Roberts emails George Jungbluth (NWS Chief of Staff) –“we are handling the situation there should be no

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	<p>action taken by anyone within the National Weather Service or the National Hurricane Center.”</p>
	<p>September 4, 2019, 2:44 p.m. Julie Roberts emails George Jungbluth, Jeremy Andrucyk (NWS Director of Communications), Mary Erickson (NWS Deputy Director), and Dr. Louis Uccellini (NWS Director)— “Please ask NWS Social Media not to respond to the messages going out. Any media inquiries to NWS should be directed to Chris to handle.”</p>
	<p>September 5, 2019, 5:36 p.m. Chris Vaccaro sends an email to George Jungbluth; Susan Buchanan (NWS Public Affairs Officer); and Jeremy Andrucyk, asking NSW to resend the September 4 media guidance. Vaccaro also states in the email that forecasters should not communicate with media via their personal Twitter accounts.</p>
	<p>September 6, 2019, 4:52 p.m. Chris Vaccaro sends out an email to NOAA personnel informing them that the statement has been distributed and that inquiries “should solely be directed to” the NOAA Office of Communications line. Email gets forwarded around between NOAA staff.</p>
Emails from NWS Operations Center	<p>September 1, 2019, 4:49 p.m. Andrew Stern (Operations Center Manager, NWS) sends out an email to the NWS Operations Center to inform all Regional Operation Centers (ROC) and Weather Forecast Offices to “only stick with official NHC forecasts if questions arise from some national level social media posts this afternoon. Staff should not provide any opinion about the national level post and should direct any questions that cannot be satisfied to NOAA Public Affairs.”</p>
	<p>September 4, 2019, 9:41 p.m. NWS Operations Center sends out a media guidance to all ROCs and National Centers asking that they do not respond via social media, or other, to any questions related to the tweets.</p>
	<p>September 5, 2019, 7:48 p.m. George Jungbluth sent an email asking all media questions to be forwarded to NOAA Communications.</p>

Criteria

The NOAA Scientific Integrity Policy and Commerce Public Communication Policy affords scientists the right to freely communicate their scientific opinions with the media in Section 4.05, Section 4.06, and Section 5.02 (a), (d), and (k) of NOAA’s Scientific Integrity Policy and Section 4.01 of Commerce’s Public Communication Policy.

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Analysis

As presented above, NOAA and NWS leadership issued multiple media instructions between September 1 and 6, 2019. Some Complainants perceived the media guidance as restricting the ability of WFO meteorologists to communicate with the media and the public about their research findings.³⁴ They allege that the media guidance violated Section 4.05, Section 4.06, and Section 5.02 (a), (d), and (k) of NOAA's Scientific Integrity Policy. Supporting this position, Chris Darden noted in the interview that he felt he was not at liberty to speak to the press—"we certainly felt pressure not to say anything."³⁵

In contrast, staff from NOAA's Office of Communications explained that the purpose of the media instructions was to shield NOAA forecast offices and forecasters from aggressive media reporters—not to prevent scientists from discussing their research with the media.³⁶ Further, as Hurricane Dorian was still active during this period, NOAA senior management felt it was critical for the affected scientists to focus on their work and avoid the press.

For example, an email from Chris Vaccaro (Senior Media Relations Specialist, NOAA Office of Communications) to NWS leadership instructed forecasters not to engage with the media on their personal Twitter accounts," In light of today's additional tweets, can this message be resent as a reminder? Additionally, I hear that reporters may be contacting forecasters on their personal Twitter accounts and they should not engage."³⁷

In separate interviews, Roberts and Vaccaro from NOAA's Office of Communications explained that, similar to prior media instructions, Vaccaro's email was not intended to limit scientists' ability to communicate their views on their personal social media accounts but rather to protect NOAA employees from the social media storm surrounding the September 1 Birmingham Tweet.

In addition, several NOAA officials stated in their interviews that it is the agency's standard operating procedure to issue this type of media guidance in controversial situations or if there is a high level of media inquiries.³⁸ Moreover, the officials stated that it is the responsibility of

34. Jane Lubchenco, Richard Spinrad, and Andrew Rosenberg, "Allegation 2019-008," September 9, 2019; Craig N. McLean, "Allegation 2019-007," September 10, 2019.

35. Chris Darden, "Interview of Chris Darden," interview by NOAA General Counsel, October 21, 2019: Page 157, Line 13.

36. Julie Kay Roberts, "Interview of Julie Roberts," interview by NOAA General Counsel, October 11, 2019; Chris Vaccaro, "Interview of Chris Vaccaro," interview by Academy Team, January 17, 2020.

37. Julie Kay Robert, "Interview of Julie Kay Roberts," interview by NOAA General Counsel, October 11, 2019: Exhibit 17.

38. Neil Jacobs, "Interview of Neil Jacobs," interview by NOAA General Counsel, November 6, 2019: Page 158, Lines 13-14.; Julie Kay Roberts, "Interview of Julie Roberts," interview by NOAA General Counsel, October 11, 2019: Page 46, Line 11; Louis Uccellini,

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NOAA's Office of Communications to develop a coordinated, agency-wide communication strategy in such circumstances.

While NOAA and NWS Communication officials maintain that issuing media guidance is standard operating procedure, the agency does not have formal processes in place, and it is not clear who has the final authority to review and approve media guidance. As Vaccaro noted, the decision to issue media guidance is typically made in consultation with the leaders within the Office of Communications and the impacted line office/operating branch.³⁹

Findings

The Panel determined by a preponderance of the evidence on record that the allegation that the media guidance issued by NOAA leadership between September 1 and 6, 2019, did not constitute scientific misconduct or a loss of scientific integrity.

The Panel recognizes that a key component of the Scientific Integrity Policy is to ensure the free flow of scientific information and for scientists to communicate with the media and the public about their research findings. Conversely, in times of an emergency, it is important to develop a coordinated, effective communication approach with the press and public at large.

Recommendations

The Panel proposes the following recommendations for the Determining Officer to consider to safeguard against future violations of scientific integrity:

- Develop formal policy guidelines for the issuance of media guidance to NOAA staff. Specifically, these guidelines should clarify roles and responsibilities, institutionalize the process, and identify the circumstances under which the agency should issue media guidance.
- Develop an interagency framework (that includes other federal agencies and the White House) for the sharing of scientific data and materials concerning severe weather-related events. The framework would include protocols for the timely update of information to reflect changing weather conditions and the release of the information to the general public.

³⁹ "Interview of Louis Uccellini," interview by NOAA General Counsel, November 26, 2019: Page 41-43.

³⁹ Chris Vaccaro, "Interview of Chris Vaccaro," interview by Academy Team, January 17, 2020: Page 31, Lines 19-22.

Allegation Two: Contrary to the NOAA Scientific Integrity Policy, forecasters in the Birmingham office were not permitted to review the draft September 6 Statement prior to its release.

NWS Birmingham WFO forecasters were not provided the opportunity to review and opine on the September 6 Statement that referenced the September 1 Birmingham Tweet and underlying scientific activity. The policy allegedly violated is Section 7.01 of NOAA's Scientific Integrity Policy.

Conditions Observed

As discussed below in Allegation 3, senior Commerce officials largely directed the drafting of the September 6 Statement. In addition, two senior NOAA political appointees were involved in the development of September 6 Statement: Dr. Neil Jacobs (NOAA Acting Administrator) and Julie Roberts (Deputy Chief of Staff and Director of Communications). Two NOAA senior career officials, Chris Vaccaro (Senior Communication Specialist) and Scott Smullen (Deputy Director of Communications), reviewed an early draft of the statement and offered their comments. However, they left the meeting before the statement was finalized.⁴⁰

Shortly before the release of the statement, Jacobs and Roberts contacted other NOAA officials, including Benjamin Friedman (NOAA Deputy Under Secretary for Operations), Dr. Louis Uccellini, Stuart Levenbach (NOAA Chief of Staff), and Taylor Jordan (Senior Policy Advisor) to inform them of the statement. These officials were not provided the opportunity to provide substantive input in the drafting of the draft statement.⁴¹

Dr. Louis Uccellini and several other NWS officials contacted Chris Darden (Meteorologist-in-Charge, NWS Birmingham Office) to advise him that the statement would be released. However, according to Darden, by the time he actually read the statement, it had already been released.⁴² As such, the forecasters in the Birmingham office were not afforded an opportunity to review the September 6 Statement before it went out.

40. Julie Kay Roberts, "Interview of Julie Roberts," interview by NOAA General Counsel, October 11, 2019: Page 98, Line 1-17; Chris Vaccaro, "Interview of Chris Vaccaro," interview by Academy Team, January 17, 2020: Page 58-64.

41. Neil Jacobs, "Interview of Neil Jacobs," interview by NOAA General Counsel, November 6, 2019: Page 160, Line 12-15; Julie Kay Roberts, "Interview of Julie Roberts," interview by NOAA General Counsel, October 11, 2019: Page 109, Line 4-7.

42. Chris Darden, "Interview of Chris Darden," interview by NOAA General Counsel, October 21, 2019: Page 162, Line 21-23.

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Criteria

The NOAA Scientific Integrity Policy provides scientists the right to review and correct any official document that cites or references their scientific work to ensure the accuracy of the information. Section 7.01 of NOAA's Scientific Integrity Policy states:

Appropriate rules and procedures are in place and implemented to preserve the integrity of the scientific process and the dissemination of its scientific products and information, including providing scientists the right to review and correct any official document (such as a press release or report) that cites or references their scientific work, to ensure that accuracy has been maintained after the clearance and editing process.⁴³

Analysis

NOAA's Scientific Integrity Policy defines a "scientific product" as the "presentation of the results of scientific activities including the analysis, synthesis, compilation, or translation of scientific information and data into formats for the use of NOAA, the Department of Commerce, or the Nation."⁴⁴ According to this definition, the September 1 Birmingham Tweet is a scientific product, as it reflects the forecasters' professional judgment and is based on the results of the forecasters' scientific activities. Further, as discussed above, Section 7.01 of NOAA's Scientific Integrity Policy provides scientists the right to review and correct any official document that cites or references their scientific work to ensure the accuracy of the information.

As the September 6 Statement references and criticizes the September 1 Birmingham Tweet, a draft of the statement should have been provided to the Birmingham office for review and comment—prior to its release.

In contrast with this requirement, the Birmingham office was not afforded the opportunity to review the draft September 6 Statement. By the time Jacobs and Roberts communicated with other NOAA and NWS senior officials and Uccellini had been in contact with Darden, the draft statement was already in its finished form. According to Uccellini, the purpose of the phone call with Chris Darden was not to solicit his feedback, but rather to give him notice that the statement would be released shortly.⁴⁵

Certain interviewees explained that while the September 6 Statement was released by NOAA Communications, it was not a true NOAA Official Communication as the drafting of the statement

43. National Oceanic and Atmospheric Administration, "NOAA Administrative Order 202-735D: Scientific Integrity," December 7, 2011: Section 7.01.

44. NOAA, Section 3, Definition of Scientific Product.

45. Louis Uccellini, "Interview of Louis Uccellini," interview by NOAA General Counsel, November 26, 2019: Page 108, Line 3-12.

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did not follow NOAA's standard press release development process and protocols.⁴⁶ Further, senior Commerce officials took the lead in the development and release of the statement. Roberts stated in her first interview that, under the circumstances, there was no practical opportunity to engage the Birmingham office in the development of the statement and Roberts felt that even if she had raised the issue with Commerce officials, it would not have made any difference.⁴⁷ Jacobs also stated in his interview that "feedback probably wasn't going to make a whole lot of difference."⁴⁸

The September 6 Statement was issued as a NOAA Official Communication and distributed through NOAA's system and as a result, NOAA's relevant policies and procedural requirements are applicable. According to Section 8.01 of Commerce's Public Communication Policy, the head of the operating unit and the Public Affairs office have the authority to approve and issue Official Communication materials and therefore are responsible for ensuring compliance with NOAA's procedural requirements.

The Panel recognizes that the September 6 Statement is different from a normal NOAA press release but nonetheless concludes that it is an Official Communication. Consequently, as the NOAA Acting Administrator and the Director of NOAA Communications,⁴⁹ Jacobs and Roberts had a responsibility to ensure that NOAA's Scientific Integrity Policy and other procedural requirements were followed. This did not happen during the meeting with Commerce officials or at other critical points on September 6.

Additionally, Jacobs stated in his interview with NOAA General Counsel that his interpretation of the Scientific Integrity Policy is that a NOAA press release should be reviewed by scientists, but not necessarily the scientist who was involved in the original research. Jacobs said he reviewed the draft statement and that in his opinion as a trained scientist, the September 6 Statement was technically accurate.⁵⁰ However, section 7.01 of the Scientific Integrity Policy requires that the scientists who actually produced the scientific work have the opportunity to offer comments.

46. Julie Roberts, "Interview of Julie Roberts," interview by NOAA General Counsel, October 11, 2019.; Chris Vaccaro, "Interview of Chris Vaccaro," interview by Academy Team, January 17, 2020.

47. Julie Roberts, "Interview of Julie Roberts," interview by NOAA General Counsel, October 11, 2019.

48. Neil Jacobs, "Interview of Neil Jacobs," interview by NOAA General Counsel, November 6, 2019: Page 162, Line 13.

49. NOAA does not have an Office of Public Affairs. NOAA Communications serves as the agency's Office of Public Affairs. Julie Roberts' title was Deputy Chief of Staff, but she also served as the Director of Communications.

50. Neil Jacobs, "Interview of Neil Jacobs," interview by NOAA General Counsel, November 6, 2019: Page 162.

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Moreover, Section 7.01 of the Scientific Integrity Policy requires that NOAA science managers and supervisors ensure appropriate rules and procedures are in place to provide scientists the opportunity to review and comment on the agency's official documents. Some interviewees stated that NOAA scientists are normally involved in the development of the agency's communication materials.⁵¹ However, the Panel learned that NOAA lacks formal procedures to ensure compliance with Section 7.01 of the Scientific Integrity Policy.

Findings

The Panel determined by a preponderance of the evidence on the record that Dr. Neil Jacobs and Julie Roberts violated the Code of Ethics for Science Supervision and Management, set forth in Section 7.01 of NOAA's Scientific Integrity Policy, when they failed to engage the Birmingham office in the development of the September 6 Statement. Further, the Panel finds that they engaged in the misconduct intentionally, knowingly, or in reckless disregard of the Code of Scientific Conduct or Code of Ethics for Science Supervision and Management in NOAA's Scientific Integrity Policy.

Recommendations

The Panel proposes the following recommendations for the Determining Officer to consider to safeguard against future violations of scientific integrity:

- Develop a written policy statement on the right of NOAA scientists to review, comment, and amend any Official Communication that relies on their scientific analysis. This statement will complement NOAA's Scientific Integrity Policy.
- Revise NOAA's Scientific Integrity Policy's accompanying Procedural Handbook to include criteria and supporting examples to assist with the determination of scientific misconduct and a loss of scientific integrity. For example, NOAA could cite this case as an example of a violation of NOAA's Scientific Integrity Policy and scientific misconduct with regards to several criteria.

Allegation Three: The drafting and release of the September 6 Statement was driven by external political pressure.

The drafting and release of the September 6 Statement was driven by external political pressure from Commerce senior leaders. Further, the September 6 Statement inappropriately criticized Birmingham's September 1 Tweet and underlying scientific activity and compromised NOAA's reputation as an independent scientific agency. These actions violated Section 7.02 of NOAA's Scientific Integrity Policy.

51. Julie Roberts, "Interview of Julie Roberts," interview by NOAA General Counsel, October 11, 2019.; Chris Vaccaro, "Interview of Chris Vaccaro," interview by Academy Team, January 17, 2020.

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Conditions Observed

The drafting and release of the September 6 Statement did not follow standard NOAA policies and procedures. Although NOAA policies call for NOAA scientists and Communications officials to work collaboratively on an Official Communication, senior Commerce officials largely directed the drafting of the September 6 Statement.⁵²

On the morning of September 6, senior Commerce officials convened a meeting to develop the public statement. The meeting took place in a conference room of the Commerce office building. Commerce officials (and their titles at the time of the events in question) who participated in all or a portion of this meeting include:

- David Dewhirst, Deputy General Counsel;
- Kevin Manning, Press Secretary and Deputy Director of Public Affairs;
- Joe Semsar, Chief of Staff for Deputy Secretary Karen Dunn Kelley;
- Deputy Secretary Karen Dunn Kelley; and
- Cordell Hull, Deputy General Counsel and also performing the duties of Assistant Secretary for Legislative and Intergovernmental Affairs.

Four NOAA officials, including Dr. Neil Jacobs, Julie Roberts, Chris Vaccaro, and Scott Smullen, were involved in the preparation of the September 6 Statement, Vaccaro and Smullen reviewed an early draft version of the statement and offered comments but did not participate in other parts of the discussion.

Jacobs and Roberts joined the meeting around 8:30 a.m. Eastern Time Zone. At that point, the draft statement had already been drafted on Dewhirst's tablet and was subsequently read to everyone in the room. Jacobs and Roberts said in their interviews that they participated in the discussion on the technical aspect of the statement to ensure it was scientifically accurate.⁵³

According to several interviews,⁵⁴ there was a discussion about the draft statement's criticism of the Birmingham WFO. NOAA officials (Jacobs, Roberts, Vaccaro, and Smullen) proposed to

52. Neil Jacobs, "Interview of Neil Jacobs," interview by NOAA General Counsel, November 6, 2019: Page 104, Lines 17-22; Julie Roberts, "Interview of Julie Roberts," interview by Academy Team, January 23, 2020: Page 36, Lines 10-12; Chris Vaccaro, "Interview of Chris Vaccaro," interview by Academy Team, January 17, 2020: Page 76, Lines 12-18.

53. Neil Jacobs, "Interview of Neil Jacobs," interview by NOAA General Counsel, November 6, 2019: Page 122; Julie Roberts, "Interview of Julie Roberts," interview by NOAA General Counsel, October 11, 2019: Page 99.

54. Neil Jacobs, "Interview of Neil Jacobs," interview by NOAA General Counsel, November 6, 2019: Page 106, Line 7; Julie Roberts, "Interview of Julie Roberts," interview by

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remove the reference to the Birmingham office from the statement, but this suggestion was rejected by Commerce officials. At some point, other Commerce officials joined the discussion by phone.⁵⁵ Jacobs and Roberts raised the concern about the Birmingham reference again, but were told that the Birmingham reference needed to stay in.

Dewhirst sent the draft statement to Mike Walsh at 3:11 p.m. Eastern Time Zone and forwarded the statement to Julie Roberts at 3:43 p.m. Eastern Time Zone. [REDACTED]

[REDACTED]⁵⁶

Roberts, Smullen, and Vaccaro discussed how to release the statement.⁵⁷ Roberts noted that there was a request from Commerce to not only distribute the statement through the NOAA media distribution system, Meltwater, but also post it on NOAA website.⁵⁸ NOAA Communications released the statement at 4:52 p.m. Eastern Time Zone:

From Wednesday, August 28, through Monday, September 2, the information provided by NOAA and the National Hurricane Center to President Trump and the wider public demonstrated that tropical-storm-force winds from Hurricane Dorian could impact Alabama. This is clearly demonstrated in Hurricane Advisories #15 through #41, which can be viewed at the following link.

The Birmingham National Weather Service's Sunday morning tweet spoke in absolute terms that were inconsistent with probabilities from the best forecast products available at the time.

NOAA Communications posted the statement to the agency's website and through Twitter.

The second paragraph of the above statement is widely viewed by NOAA officials and scientific staff as a criticism of the September 1 Birmingham Tweet and underlying scientific activity. For example, Dr. Louis Uccellini stated that the September 6 Statement criticizes the Birmingham office publicly when forecasters had done their job according to all scientific and operational

NOAA General Counsel, October 11, 2019: Page 98, Line 10; Chris Vaccaro, "Interview of Chris Vaccaro," interview by Academy Team, January 17, 2020: Page 46, Lines 10-15.

55. Neil Jacobs, "Interview of Neil Jacobs," interview by NOAA General Counsel, November 6, 2019; Julie Roberts, "Interview of Julie Roberts," interview by NOAA General Counsel, October 11, 2019.

56. Neil Jacobs, "Interview of Neil Jacobs," interview by NOAA General Counsel, November 6, 2019: Page 180; Julie Roberts, "Interview of Julie Roberts," interview by NOAA General Counsel, October 11, 2019: Page 104.

57. Julie Roberts, "Interview of Julie Roberts," interview by NOAA General Counsel, October 11, 2019: Page 104, Lines 12-19.

58. Roberts, Page 111, Lines 7-11.

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standards.⁵⁹ Chris Darden, Meteorologist-in-Charge, Birmingham office, said that the impact of the September 6 Statement on his staff was harsh—"when they feel like they're basically being told they don't know how to do their job or they can't do a job, and that's how they perceive this, then it was a real kick in the gut."⁶⁰

Criteria

The principal intent of the Scientific Integrity Policy is to remove politics from scientific research and prevent the intentional or unintentional suppression of scientific findings and conclusions. Section 7.02 of NOAA's Scientific Integrity Policy states:

All individuals identified in Section 2.02 of this Order must not:

- Suppress, alter, or otherwise impede the timely release of scientific or technological findings or conclusions, unless explicitly required by a Department or government-wide statute, regulation, Executive Order, Presidential Memorandum, or other legal authority.
- Intimidate or coerce employees, contractors, recipients of financial assistance awards, or others to alter or censor scientific findings.
- Implement institutional barriers to cooperation and the timely communication of scientific findings or technology.

Further, the Office of Science and Technology Policy (OSTP) Memo requires that agencies develop policies to:

Ensure a culture of scientific integrity. Scientific progress depends upon honest investigation, open discussion, refined understanding, and a firm commitment to evidence. Science, and public trust in science, thrives in an environment that shields scientific data and analyses from inappropriate political influence; political officials should not suppress or alter scientific or technological findings.⁶¹

Analysis

Section 7.02 of the NOAA's Scientific Integrity Policy prohibits NOAA employees, including political officials, from suppressing or altering scientific findings. As discussed below, the

59. Louis Uccellini, "Interview of Louis Uccellini," interview by NOAA General Counsel, November 26, 2019: Page 108-109.

60. Chris Darden, "Interview of Chris Darden," interview by NOAA General Counsel, October 21, 2019: Page 166, Lines 19-23.

61. John P. Holden, "Memorandum to the Heads of Executive Departments and Agencies, Subject: Scientific Integrity," December 17, 2019.

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development and release of the September 6 Statement violated NOAA's scientific integrity and reputation as an independent scientific agency in several respects.

First, the development and release of the September 6 Statement did not follow NOAA's normal process and appear to be the result of strong external pressure. Second, the criticism of the Birmingham office in the September 6 Statement is not consistent with the intent and requirements of the NOAA Scientific Integrity Policy. This could result in a chilling effect on other NOAA staff who might be reluctant to share their scientific opinions in the future to avoid similar criticism.

The development of the September 6 Statement did not follow NOAA's normal process.

Under normal conditions, a weather-related statement would be drafted by NWS. The head of NWS and his/her senior staff would be involved in reviewing the statement. If there were a contentious issue, all of the discussions would take place at the line office level first. NWS would then send the draft statement to NOAA Communications and NOAA leadership for review.⁶² In this case, four NOAA officials reviewed the draft September 6 Statement and offered comments before its release, but none of the NOAA/NWS senior career officials or forecasters played a meaningful role in the development of the September 6 Statement.

The September 6 Statement appears to be the result of strong external pressure.

The direction to develop and release the September 6 Statement came from Commerce officials. Jacobs said in his first interview that "I think Dewhirst and other DOC folks had probably also spoken to him [Walsh] earlier in the morning...it was pretty clear that, you know, they were given instructions to not just fix the problems, but do it with some type of statement."⁶³ During the meeting on September 6, Commerce officials took the lead in developing the statement. The draft statement was reviewed and approved by Commerce officials before its release. The September 6 Statement was issued as a NOAA public statement and attributed to a NOAA spokesperson. As Jacobs said, NOAA officials thought it was not a good idea to put out this statement, and "no one wanted to own it for obvious reasons."⁶⁴

Jacobs said that, during the process, no one told him directly, "do this or you will get fired."⁶⁵ However, as Jacobs noted in the interview, given "the amount of panic and concern, and getting called at 3 in the morning, it was pretty well implied that this was something that was a fireable

62. Craig McLean, "Interview of Craig McLean," interview by Academy Team, January 23, 2020: Page 16; Julie Kay Roberts, "Interview of Julie Roberts," interview by Academy Team, January 23, 2020: Page 22.

63. Neil Jacobs, "Interview of Neil Jacobs," interview by NOAA General Counsel, November 6, 2019: Page 104, Lines 17-22.

64. Jacobs, Page 124.

65. Jacobs, Page 100.

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offense if you disobeyed.”⁶⁶ Indeed, Jacobs’ perception was that all the political staff at the meeting thought their jobs were in jeopardy.⁶⁷

Several NOAA officials, such as Benjamin Friedman and Craig McLean, mentioned that they talked to Jacobs subsequent to the release of the September 6 Statement, and Jacobs sounded very depressed and appeared to be under great stress.⁶⁸ Roberts spoke with Mike Walsh, Commerce Chief of Staff, on the phone on September 6 around 2:30 a.m. Walsh told Roberts, “There are jobs on the line. It could be the forecast office, or it could be somebody higher than that and that’s less palatable to me.”⁶⁹ Roberts said she did not think her job was on the line and felt that the forecasters in the Birmingham office or Dr. Neil Jacobs could lose their jobs.

The criticism of the Birmingham office in the September 6 Statement is not consistent with the intent and requirements of the NOAA Scientific Integrity Policy.

The September 6 Statement’s criticism of the September 1 Birmingham Tweet’s use of absolute terms was inappropriate and inconsistent with the NOAA Scientific Integrity Policy for several reasons. First, the use of absolute terms in communicating weather-related risks to the general public is commonly used by meteorologists across the country. A review of various WFOs’ tweets show that it is common to incorporate absolute terms in messages to the public. Appendix G shows examples of these messages.

Second, the use of absolute terms is viewed as an effective tool to communicate weather related risk—or the lack thereof—on social media. As NOAA meteorologists posit, a key challenge for forecasters during a severe weather event is to convert the public’s perception of safety (optimism bias) to a perception of risk and to induce them to take appropriate measures.⁷⁰ Conversely, a scientifically accurate weather forecast using risk probabilities and scenario analysis may not be very useful to the general public who do not understand probabilities.⁷¹ Indeed, a 2016 study on how forecast and warning messages are perceived by the general public highlights the importance

66. Jacobs, Page 100-101.

67. Jacobs, Page 168, Lines 4-6.

68. Friedman, Benjamin, “Interview of Benjamin Friedman,” interview by NOAA General Counsel, October 24, 2019: Page 58; Craig McLean, “Interview of Craig McLean,” interview by Academy Team, January 23, 2020: Page 61.

69. Julie Roberts, “Interview of Julie Roberts,” interview by NOAA General Counsel, October 11, 2019: Page 70.

70. National Oceanic and Atmospheric Administration, National Weather Service Office of the Chief Learning Officer. “Radar & Applications Course, Storm-Based Warning Fundamentals, Lesson 12: Impact Based Warnings: Overview,” 2017.

71. World Meteorological Organization, “Guidelines on Communicating Forecast Uncertainty,” WMO/TD No. 1422, 2008.

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of separating the technical details from the actions that must be taken to protect as individual citizens are not concerned about hurricanes in a scientific sense.⁷²

The National Weather Service states that its primary mission is to protect lives and property through the timely issuance of watches and warnings when there are hazardous weather conditions.⁷³ Accordingly, the purpose of the September 1 Birmingham Tweet was to communicate the risks related to the hurricane to the public so the message should be phrased in ways that allow the general public to quickly understand it.⁷⁴ An analysis of public hurricane evacuation decisions and responses to forecast and warning messages conducted by scientists from the National Center for Atmospheric Research in 2016 also found that when issuing safety messages, NWS uses strong, personalized language in order to get people to follow the instructions of the message.⁷⁵

In a prior interview, Dr. Neil Jacobs commented that NWS is still in the learning stage and has engaged social scientists to figure out the most effective approach to communicating risk probability to the general public.⁷⁶ Supporting the benefit of engaging social scientists to assist with risk communication, the American Meteorological Society (AMS) posits that there is a “clear and compelling need to enhance the utility of weather and climate research and the dissemination of atmospheric information using knowledge from the social sciences about how individuals and society interact with weather and climate.”⁷⁷

Third, if a forecast office were to issue an inappropriate or inaccurate forecast, it would not be the agency’s typical correction process to issue a public statement. Jacobs stated that when the wording of a forecast is not appropriate, NWS leaders or someone from the regional headquarters will send out an email to forecasters.⁷⁸ McLean said that a forecast office will immediately issue a correction if there is an inaccurate forecast or a local misunderstanding. NOAA and NWS would

72. Julie L. Demuth et al., "Creation and Communication of Hurricane Risk Information," *Bulletin of the American Meteorological Society* 93, no. 8 (2012): 1133-1145.

73. National Oceanic and Atmospheric Administration, National Weather Service, “2019-2022 Strategic Plan,” 2018.

74. Chris Darden, “Interview of Chris Darden,” interview by NOAA General Counsel October 21, 2019: Page 144-145.

75. Rebecca E. Morss et al., "Understanding public hurricane evacuation decisions and responses to forecast and warning messages," *Weather and Forecasting* 31, no. 2 (2016): 395-417.

76. Neil Jacobs, “Interview of Neil Jacobs,” interview by NOAA General Counsel, November 6, 2019: Page 129, Line 10.

77. American Meteorological Society, “Strengthening Social Sciences in Weather – Climate Enterprise: Professional Guidance Statement,” February 2, 2014.

78. Neil Jacobs, “Interview of Neil Jacobs,” interview by NOAA General Counsel, November 6, 2019: Page 114, Lines 21-22; Page 115, Lines 1-3; Page 129, Lines 21-22.

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not issue an agency-level public statement to correct an inappropriate weather forecast and criticize a forecast office.⁷⁹

Finally, the criticism of the Birmingham office could potentially have a chilling effect on other NOAA staff who might be reluctant to share their scientific opinions in the future to avoid similar criticism. Several NOAA officials expressed their concerns about the possible chilling effects of the September 6 Statement. For example, Darden said that scientists in other forecast offices felt “there is a little bit of a fear of ‘this could happen to us’ kind of thing.”⁸⁰ McLean said that NOAA is a resilient agency, but many people worry that this kind of issue might happen again.⁸¹ Several NOAA officials reported that they received hate emails from the public that included threatening language.⁸² As McLean noted, the September 6 Statement “stirred a lot of people and stirred a lot of emotion.”⁸³

Findings

The Panel determined by a preponderance of the evidence on the record that the actions of Dr. Neil Jacobs and Julie Roberts involving the development and issuance of the September 6 Statement violated the Code of Ethics for Science Supervision and Management set forth in Section 7 of NOAA’s Scientific Integrity Policy. Further, the Panel finds that they engaged in the misconduct intentionally, knowingly, or in reckless disregard of the Code of Scientific Conduct or Code of Ethics for Science Supervision and Management in NOAA’s Scientific Integrity Policy.

The Panel concludes that the development and issuance of the September 6 Statement is not consistent with the intent and requirements of NOAA Scientific Integrity Policy.⁸⁴ The September 6 Statement is viewed by many NOAA/NWS scientists as an inappropriate criticism of the Birmingham office, and the development of the statement was not based on science but appears to be largely driven by external influences from senior Commerce officials who drafted the September 6 Statement. As a result, while there was no direct suppression or alteration of scientific findings, the September 6 Statement might suppress the willingness and ability of NOAA scientific staff to express their scientific opinions without reservation in the future.

According to the Commerce Public Communication Policy, the head of the operating unit and the public affairs office have the ultimate responsibility to approve and issue press releases. For the purpose of this analysis, the September 6 Statement was issued as an official NOAA statement,

79. Jacobs, Page 115, Lines 5-7.

80. Chris Darden, “Interview of Chris Darden,” interview by NOAA General Counsel, October 21, 2019: Page 168, Line 5.

81. Craig McLean, “Interview of Craig McLean,” interview by Academy Team, January 23, 2020: Page 106, Lines 2-13.

82. Craig McLean, “Interview of Craig McLean,” interview by Academy Team January 23, 2020: Page 92, Lines 1-6. Page 92, Lines 1-6.

83. McLean, Page 92.

84. National Oceanic and Atmospheric Administration, “NOAA Administrative Order 202-735D: Scientific Integrity,” December 7, 2011: Section 7.02.

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and as the head of the agency and the Director of Communications, Dr. Neil Jacobs and Julie Roberts should take responsibility for the September 6 Statement.

While Jacobs and Roberts violated NOAA's Scientific Integrity Policy, there is a contextual factor for the Determining Official to consider. NOAA officials—Dr. Neil Jacobs and Julie Roberts—followed the direction from Commerce officials to issue the September 6 Statement. While they expressed their objections to criticizing the Birmingham WFO in the statement, they were overridden by Commerce officials. While it was Jacobs' and Roberts' choice to issue the September 6 Statement as the pertinent leaders of the agency, they purported to believe that it was out of their hands. It is important for the Determining Official to take into account the circumstances under which the September 6 Statement was developed and released when making final determinations.

Recommendations

The Panel proposes the following recommendations for the Determining Officer to consider to safeguard against future violations of scientific integrity:

- Establish a formal intra-agency agreement to guide the interactions between Commerce and NOAA officials in the drafting of NOAA communications.
- Establish an intra-agency policy to articulate the role of Commerce political appointees in the communication of scientific findings. Develop supporting procedures and identify examples of political interference.
- Incorporate key principles of scientific integrity, including NOAA's Codes of Ethics for Science Supervision and Management, in the agency's annual ethics training.
- Require NOAA staff and NOAA political officials to take scientific integrity training that includes the Code of Ethics for Science Supervision and Management. Once a staff member has completed the training, he/she will sign a statement confirming they will abide by these principles.
- Establish protocols with the Commerce OIG and/or other agencies to investigate alleged violations of scientific integrity involving senior NOAA and Commerce political leadership.⁸⁵

85. In some federal agencies, such the Department of the Interior (DOI), the Scientific Integrity Officer has an informal agreement with the DOI OIG that the OIG would handle a case that involves a senior official in DOI or one of the bureaus. The Academy Team's interview with GAO suggests that a formal agreement between an agency and its OIG to address scientific integrity issues would be helpful. Some agencies, such as the Federal Aviation Administration (FAA), have contingencies built into their policies to handle the allegations that involve high-level political officials.

Concluding Thoughts

Scientific integrity is the cornerstone of the public's trust in the nation's scientific institutions, which the nation relies on for accurate and honest scientific and technical information. In the ever-changing dynamic of social media, people frequently turn to social media platforms for life-saving information, especially in the event of a severe weather event. The advent of social media and its ubiquity create an immediate interactive context for all actions taken by government that affect the public.

In this dynamic environment, public officials must gauge the potential effects of actions and communications, including on social media, on the public's perception and behavior. It was the concern for public perception and public safety that motivated the September 1 Birmingham Tweet. Public servants on the frontline of communicating the risks of storms must be able to continue to act quickly and responsibly when warranted by the situation at hand. Future policy guidance must reflect this dynamic and the need for local officials to act quickly and responsibly when the need arises. Moving ahead, there needs to be a directed effort to inform policy development through the use of the social sciences so that public servants and government officials can effectively convey the risk to the public so they can act accordingly.

Appendices

Appendix A: Panel Biographies and Study Team Members

Panel of Academy Fellows

Admiral (Ret.) Thad Allen, Panel Chair. 23rd Commandant, U.S. Coast Guard; James S. Tyler Chair, Institute for Leadership, U.S. Coast Guard Academy; Member and Board Director, Council on Foreign Relations; Chair, Space Based Positioning, Navigation, and Timing Advisory Board (NASA); Member, Homeland Security Advisory Committee; Senior Executive Advisor at Booz Allen Hamilton, HudsonAnalytix and Fortinet; Former Board Director, Partnership for Public Service. Former Senior Fellow, RAND Corporation; Principal Federal Official in the responses to Hurricanes Katrina and Rita (2005); National Incident Commander, Deepwater Horizon Oil Spill (2010).

Dr. Kaye Husbands Fealing. Full Professor and Chair, School of Public Policy, Georgia Institute of Technology; Senior Study Director, Center for National Statistics, National Academy of Sciences; Professor, Humphrey School of Public Affairs, University of Minnesota; Program Director, Social, Behavioral and Economic Sciences, National Science Foundation; William Brough Professor (also tenured full, associate, assistant professor), Economics Department, Williams College.

Dr. Shantanu Agrawal. President and CEO, National Quality Forum. Former Deputy Administrator and Center Director, Centers for Medicare & Medicaid Services; Managing Director, Clinical Analytics and Efficiency, ChenMedical, LLC; Former Positions with Center for Program Integrity (CPI), Centers for Medicare & Medicaid Services: Director, Data Sharing and Partnership, Chief Medical Officer; Former Positions with McKinsey & Company, Inc.: Engagement Manager, Senior Associate, Associate.

Dr. Elizabeth Robinson. Chief Financial Officer, Air Line Pilots Association. Former Chief Financial Officer, National Aeronautics and Space Administration; Assistant Director for Budget, Budget Review Division, U.S. Office of Management and Budget; Deputy Director, Congressional Budget Office; Deputy Assistant Director for Budget Review and Concepts, and Program Examiner for Energy Issues, U.S. Office of Management and Budget; Staff Member, House Committee on Science, Space and Technology, U.S. House of Representatives; Project Director and Expert, Office of Technology Assessment, U.S. Congress; Congressional Science Fellow, Geological Society of America; Assistant Professor of Geophysics, Stanford University.

Study Team

Brenna Isman, Director of Academy Studies

Mark Thorum, Project Director

Chloe Yang, Senior Research Analyst

Elise Johnson, Research Associate

Gillian Townsend, Research Associate

Appendix B: Chronology of Key Events

All times are in Eastern Time Zone.

DATE	EVENT	WHO WAS INVOLVED	WHERE IS IT REFERENCED
Wednesday, August 28, 2019, 5:02 p.m.	Susan Buchanan (NWS Communications Director) releases NOAA Communications media plan for Hurricane Dorian	<ul style="list-style-type: none"> • Susan Buchanan • Maureen O'Leary • Lauren Gaches • Jasmine Blackwell • Dennis Feltgen • Jeremy Andrucyk • NWS Executive Council 	Copies of Dr. Louis Uccellini's emails relevant to the investigation were provided to the Academy by NOAA. This email is page 60 of that document.
Thursday, August 29, 2019	Dr. Neil Jacobs leads a briefing on Hurricane Dorian at the White House. A NOAA graphic (the one that later appears altered with a black marker) is used in the briefing.	<ul style="list-style-type: none"> • Dr. Neil Jacobs • President Trump • Vice President Pence • Admiral Pete Brown • Pete Gaynor • Julie Roberts (not in the Oval Office for the briefing) 	<p>Dr. Neil Jacobs' interview with NOAA General Counsel: <i>Page 11, Line 2.</i></p> <p>Julie Roberts' interview with NOAA General Counsel: <i>Page 24, Line 19.</i></p> <p>The official White House press release and photos from the briefing can be found online.</p>
Saturday, August 31, 2019, 4:00 p.m.	The President receives a briefing on Hurricane Dorian via video teleconference while he is at Camp David.	<ul style="list-style-type: none"> • Dr. Neil Jacobs • Julie Roberts, • Secretary McAleenan • Pete Gaynor • Other FEMA leadership • Gov. DeSantis (FL) • Gov. Kemp (GA) • Gov. Cooper (NC) • Gov. McMaster (SC) • President Trump • Jeff Bayard • Dan Kaniewski • Members of National Security Council • Senator Rick Scott 	<p>Dr. Neil Jacobs' interview with NOAA General Counsel: <i>Page 13, Line 7.</i></p> <p>Julie Roberts' interview with NOAA General Counsel: <i>Page 31, Line 6.</i></p>

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DATE	EVENT	WHO WAS INVOLVED	WHERE IS IT REFERENCED
Sunday, September 1, 2019, 8:00 a.m.-11:00 a.m.	National Weather Service Birmingham Weather Forecast Office (WFO) receives multiple phone calls from the public. Two of the calls are directly after the President's tweet.	<ul style="list-style-type: none"> Birmingham Weather Forecast Office 	Phone log of the Birmingham Weather Forecast Office was provided to the Academy Team by NOAA.
Sunday, September 1, 2019, 10:51 a.m.	President Trump tweets that Alabama, "will most likely be hit (much) harder than anticipated."	<ul style="list-style-type: none"> President Trump 	Tweet is on the President's personal Twitter account (@realDonaldTrump).
Sunday, September 1, 2019, 11:11 a.m.	National Weather Service Birmingham WFO tweets that, "Alabama will NOT see any impacts from #Dorian."	<ul style="list-style-type: none"> Birmingham Weather Forecast Office 	Tweet is on NWS Birmingham WFO's Twitter account.
Sunday, September 1, 2019, 12:31 p.m.	The President is briefed on Hurricane Dorian at FEMA Headquarters. Ken Graham from the Hurricane Center leads the briefing.	<ul style="list-style-type: none"> Ken Graham (over VTC) Members of the Press Dr. Neil Jacobs Julie Roberts President Trump Gov. DeSantis (FL) Gov. Kemp (GA) Gov. Cooper (NC) Gov. McMaster (SC) 	<p>Dr. Neil Jacobs' interview with NOAA General Counsel: <i>Page 16, Line 1; Page 25, Line 17.</i></p> <p>Julie Roberts' interview with NOAA General Counsel: <i>Page 36, Line 2.</i></p> <p>The briefing was also open to the press.</p>
Sunday, September 1, 2019, 3:00 p.m.	Chris Vaccaro sent an email to the Weather Service Public Affairs team –all media inquiries about the President's tweet and the Birmingham tweet should be directed to Julie Roberts and Vaccaro.	<ul style="list-style-type: none"> Julie Roberts Chris Vaccaro NWS Public Affairs Dennis Feltgen David Miller Jeremy Andrucyk Corey Pieper Scott Smullen Kate Brogan 	Vaccaro's email is Exhibit 9 of Julie Roberts' interview with NOAA General Counsel.

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DATE	EVENT	WHO WAS INVOLVED	WHERE IS IT REFERENCED
Sunday, September 1, 2019, 3:06 p.m.	Julie Roberts sends emails asking all NWS offices to consult with NOAA Office of Communications before responding to any social media inquiries.	<ul style="list-style-type: none"> • Julie Roberts • Chris Vaccaro • NWS Public Affairs • Dennis Feltgen • David Miller • Jeremy Andrucyk • Corey Pieper • Scott Smullen • Kate Brogan 	Copies of Julie Roberts' emails relevant to the investigation were provided to the Academy Team by NOAA. This email is page 190 of that document.
Sunday, September 1, 2019, 4:49 p.m.	Andrew Stern (Operations Center Manager, NWS) sends out an email to the National Weather Service Operations Center to inform all Regional Operation Centers (ROC) and Weather Forecast Offices to "only stick with official NHC forecasts if questions arise from some national level social media posts this afternoon. Staff should not provide any opinion about the national level post and should direct any questions that cannot be satisfied to NOAA Public Affairs."	<ul style="list-style-type: none"> • Andrew Stern • National Weather Service Operations Center • John Murphy • Mary Erickson • Susan Buchanan • Lauren Gaches 	The email is page 1 of Exhibit 5 of Julie Roberts' interview with NOAA General Counsel.
Sunday, September 1, 2019, 9:41 p.m.	Chris Darden sends an email out to all NWS Birmingham WFO staff updating them on the day's events and to forward any calls or questions to forward them to him.	<ul style="list-style-type: none"> • Chris Darden • NWS Birmingham WFO Staff • Mike Coyne • Jose Garcia • Susan Buchanan 	Copies of Chris Darden's emails relevant to the investigation were provided to the Academy Team by NOAA. This email is page 63 of the document.

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DATE	EVENT	WHO WAS INVOLVED	WHERE IS IT REFERENCED
Wednesday, September 4, 2019, 12:57 p.m.	The President is briefed on Hurricane Dorian at the Oval Office in front of the press. A NOAA graphic appears to be altered with black marker. This becomes national news.	<ul style="list-style-type: none"> • President Trump • Kevin McAleenan • Karl Schultz • Adm. Peter Brown • Pete Gaynor • Press 	The briefing was covered by the press and coverage is available online.
Wednesday, September 4, 2019, 2:42 p.m.	Julie Roberts emails George Jungbluth and tells him that NOAA Communications is handling "the situation" and "there should be no action taken by anyone within the National Weather Service or the National Hurricane Center."	<ul style="list-style-type: none"> • Julie Roberts • George Jungbluth 	The email is page 3 of Exhibit 5 of Julie Roberts' interview with NOAA General Counsel.
Wednesday, September 4, 2019, 3:37 p.m.	NWS Operations Center sends out a media guidance to all ROCs and National Centers asking that they do not respond via social media or other to any questions related the tweets.	<ul style="list-style-type: none"> • NWS Operations Center 	Exhibit 17 of Julie Roberts' interview with NOAA General Counsel.
Wednesday, September 4, 2019, 4:45 p.m.	Chris Darden sends an email out to all NWS Birmingham WFO staff updating them that NOAA Headquarters called Darden and asked all further media inquiries to be forwarded to Chris Vaccaro at NOAA Communications.	<ul style="list-style-type: none"> • Chris Darden • NWS Birmingham WFO Staff • Chris Vaccaro 	Copies of Chris Darden's emails relevant to the investigation were provided to the Academy Team by NOAA. This email is page 19 of the document.

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DATE	EVENT	WHO WAS INVOLVED	WHERE IS IT REFERENCED
Thursday, September 5, 2019, 5:36 p.m.	Chris Vaccaro sends an email asking NWS to resend the September 4 media guidance. Vaccaro states in the email that forecasters should not communicate with media via their personal Twitter accounts.	<ul style="list-style-type: none"> • Chris Vaccaro • George Jungbluth • Susan Buchanan • Jeremy Andrucyk • Julie Roberts 	Exhibit 17 of Julie Roberts' interview with NOAA General Counsel.
Thursday, September 5, 2019, 6/7:00 p.m.	Secretary Wilbur Ross calls Dr. Neil Jacobs and asks him to prepare a timeline of events and communications surrounding Dorian. ⁸⁶	<ul style="list-style-type: none"> • Wilbur Ross • Dr. Neil Jacobs 	<p>Dr. Neil Jacobs' interview with NOAA General Counsel: <i>Page 27 line 9, Page 28 line 11.</i></p> <p>Julie Roberts' interview with NOAA General Counsel: <i>Page 64, line 21.</i></p>
Thursday, September 5, 2019, 10:53 p.m.	Dr. Neil Jacobs calls Julie Roberts and informs Roberts of Jacobs' phone call with Secretary Ross.	<ul style="list-style-type: none"> • Dr. Neil Jacobs • Julie Roberts 	<p>Screenshots of Julie Roberts' phone calls are Exhibit 6 of Roberts' interview with NOAA General Counsel.</p> <p>Dr. Neil Jacobs' interview with NOAA General Counsel: <i>Page 27, line 9.</i></p> <p>Julie Roberts' interview with NOAA General Counsel: <i>Page 63, line 16.</i></p>
Friday, September 6, 2019, 2:30 a.m.	Julie Roberts receives a phone call from Secretary Wilbur Ross's personal	<ul style="list-style-type: none"> • Julie Roberts • Steven Barranca • Mike Walsh 	Julie Roberts' interview with NOAA General Counsel:

86. Dr. Neil Jacobs is the only one with firsthand knowledge that we have access to. Julie Roberts has secondhand knowledge of this call.

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DATE	EVENT	WHO WAS INVOLVED	WHERE IS IT REFERENCED
	assistant and Chief of Staff.		<p>Pages 68-71.</p> <p>Screenshots of Roberts' phone calls are Exhibit 6 of Roberts' interview with NOAA General Counsel.</p>
<p>Friday, September 6, 2019, 2:30-3:48 a.m.</p>	<p>Julie Roberts compiles a summary document of all events and communications that have happened surrounding Dorian [REDACTED] and sends the summary to Mike Walsh and other Commerce and NOAA employees.</p>	<ul style="list-style-type: none"> • Julie Roberts • Mike Walsh • Joe Semsar • Rebecca Glover • Kevin Manning 	<p>Copies of Julie Roberts' emails relevant to the investigation were provided to the Academy Team by NOAA. The email is page 12 of that document.</p> <p>The summary is Exhibit 7 of Julie Roberts' interview with NOAA General Counsel.</p>
<p>Friday, September 6, 2019, 7:00 a.m.</p>	<p>Julie Roberts calls Dr. Neil Jacobs and fills him in on the calls she received from the Secretary earlier that morning.</p>	<ul style="list-style-type: none"> • Julie Roberts • Dr. Neil Jacobs 	<p>Julie Roberts' interview with NOAA General Counsel: <i>Page 83, Line 20.</i></p> <p>Neil Jacobs' interview with NOAA General Counsel: <i>Page 29, Line 12.</i></p>
<p>Friday, September 6, 2019, 8:30 a.m.</p>	<p>Julie Roberts and Dr. Neil Jacobs arrive at the Commerce office and meet in the Deputy Secretary's conference room.</p>	<p>In room prior to their arrival:</p> <ul style="list-style-type: none"> • David Dewhirst • Kevin Manning • Joe Semsar <p>Dr. Neil Jacobs and Julie Roberts arrive next.</p>	<p>Julie Roberts' interview with NOAA General Counsel: <i>Page 84, Line 9.</i></p> <p>Dr. Neil Jacobs' interview with NOAA General Counsel: <i>Page 102, Line 13.</i></p>

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DATE	EVENT	WHO WAS INVOLVED	WHERE IS IT REFERENCED
		Present in the meeting room sporadically throughout the day: <ul style="list-style-type: none"> • Deputy Secretary Karen Dunn Kelley • Cordell Hull • Chris Vaccaro • Scott Smullen 	
Friday, September 6, 2019, 8:30 a.m.	According to Julie Roberts, the meeting was never officially convened, "it was just everyone sitting around the table working on whatever we were working on at the time." ⁸⁷	<ul style="list-style-type: none"> • Julie Roberts • Dr. Neil Jacobs • David Dewhirst • Kevin Manning • Joe Semsar 	Julie Roberts' interview with NOAA General Counsel: <i>Page 91, Line 15.</i>
Friday, September 6, 2019, 8:30 a.m.	According to Dr. Neil Jacobs, "when Julie [Roberts] and I showed up there was already a couple draft versions of the statement going back and forth floating around." ⁸⁸	<ul style="list-style-type: none"> • Dr. Neil Jacobs • Julie Roberts • David Dewhirst • Kevin Manning • Joe Semsar 	Dr. Neil Jacobs' interview with NOAA General Counsel: <i>Page 105, Line 19.</i>
Friday, September 6, 2019	Deputy Secretary Karen Dunn Kelley goes to [REDACTED] a meeting [REDACTED] Kelley asks that all advisories and communications [REDACTED] [REDACTED]	<ul style="list-style-type: none"> • Karen Dunn Kelley • Commerce Staff • [REDACTED] • [REDACTED] 	Julie Roberts' interview with NOAA General Counsel: <i>Page 88, Line 16.</i>

⁸⁷ Julie Roberts' initial perspective when she arrived at the meeting is not echoed in Dr. Neil Jacobs' interview.

⁸⁸ Dr. Neil Jacobs' initial perspective when he arrived at the meeting is not echoed in Julie Roberts' interview.

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DATE	EVENT	WHO WAS INVOLVED	WHERE IS IT REFERENCED
	about Dorian be compiled. ⁸⁹		
Friday, September 6, 2019	A statement is drafted on David Dewhirst's tablet.	<ul style="list-style-type: none"> • David Dewhirst • Julie Roberts • Dr. Neil Jacobs • Kevin Manning • Joe Semsar 	<p>Julie Roberts' interview with NOAA General Counsel: <i>Page 96, Line 22.</i></p> <p>Dr. Neil Jacobs' interview with NOAA General Counsel: <i>Page 109, Line 6.</i></p>
Friday, September 6, 2019, 10:30 a.m.	Julie Roberts goes upstairs and asks Scott Smullen and Chris Vaccaro to help look at the statement. ⁹⁰	<ul style="list-style-type: none"> • Julie Roberts • Scott Smullen • Chris Vaccaro 	Julie Roberts' interview with NOAA General Counsel: <i>Page 97, Line 22.</i>
Friday, September 6, 2019	<p>Roberts, Jacobs, Vaccaro, and Smullen edit the statement. Jacobs and Roberts work to ensure that the statement is, technically accurate.</p> <p>There was a debate about Birmingham specifically. Jacobs, Roberts, and Vaccaro wanted to remove the Birmingham part of the statement but were told no.</p>	<ul style="list-style-type: none"> • Julie Roberts • Chris Vaccaro • Dr. Neil Jacobs • Scott Smullen 	<p>Julie Roberts' interview with NOAA General Counsel: <i>Page 98, Line 7.</i></p> <p>Dr. Neil Jacobs' interview with NOAA General Counsel: <i>Page 108, Line 9.</i></p>
Friday, September 6, 2019	Secretary Ross and his staff call to discuss the statement.	<ul style="list-style-type: none"> • Secretary Wilbur Ross • Mike Walsh • Earl Comstock • Julie Roberts 	Julie Roberts' interview with NOAA General Counsel: <i>Page 100, Line 4.</i>

89. The only account of this event comes from Julie Roberts' interview with NOAA General Counsel.

90. The only account of this event comes from Julie Roberts' interview with NOAA General Counsel.

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DATE	EVENT	WHO WAS INVOLVED	WHERE IS IT REFERENCED
	Jacobs and Roberts raised their concern about the Birmingham part of the statement but were told they cannot take Birmingham out.	<ul style="list-style-type: none"> • Dr. Neil Jacobs • David Dewhirst • Joe Semsar • Cordell Hull 	Dr. Neil Jacobs' interview with NOAA General Counsel: <i>Page 109, Lines 7-20.</i>
Friday, September 6, 2019, 3:00 p.m.	Dr. Neil Jacobs calls Stuart Levenbach and tells him about the statement. ⁹¹	<ul style="list-style-type: none"> • Dr. Neil Jacobs • Stuart Levenbach 	Stuart Levenbach's interview with NOAA General Counsel: <i>Page 13, Line 4.</i>
Friday, September 6, 2019, 3:11 p.m.	David Dewhirst emails Mike Walsh a copy of the statement for approval.	<ul style="list-style-type: none"> • David Dewhirst • Mike Walsh 	Copies of Julie Roberts' emails relevant to the investigation were provided to the Academy Team by NOAA. The email is page 23 of that document.
Friday, September 6, 2019, 3:30-4:00 p.m.	Dr. Neil Jacobs calls Stuart Levenbach, Dr. Dr. Louis Uccellini, and Taylor Jordan to tell them about the statement before it goes out.	<ul style="list-style-type: none"> • Dr. Neil Jacobs • Dr. Louis Uccellini • Stuart Levenbach • Taylor Jordan 	Stuart Levenbach's interview with NOAA General Counsel: <i>Page 13, Line 4; Page 36, Line 6.</i> Dr. Neil Jacobs' interview with NOAA General Counsel: <i>Page 138, Line 10.</i> Dr. Louis Uccellini's interview with NOAA General Counsel: <i>Page 69, Line 11.</i>
Friday, September 6, 2019, 3:43 p.m.	David Dewhirst emails Julie Roberts a copy of the statement after it has been approved by higher ups at Commerce.	<ul style="list-style-type: none"> • David Dewhirst • Julie Roberts 	Copies of Julie Roberts' emails relevant to the investigation were provided to the Academy Team by NOAA. The email is

91. The only account of this phone call comes from Stuart Levenbach's interview.

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DATE	EVENT	WHO WAS INVOLVED	WHERE IS IT REFERENCED
			page 23 of that document.
Friday, September 6, 2019, 4:00 p.m.	Julie Roberts and Dr. Neil Jacobs reach out to Benjamin Friedman to let him know about the statement before it goes out.	<ul style="list-style-type: none"> • Benjamin Friedman • Julie Roberts • Dr. Neil Jacobs • Stuart Levenbach 	<p>Benjamin Friedman's interview with NOAA General Counsel: <i>Page 38, Line 9;</i> <i>Page 41, Line 6.</i></p> <p>Julie Roberts' interview with NOAA General Counsel: <i>Page 106, Line 13.</i></p> <p>Dr. Neil Jacobs' interview with NOAA General Counsel: <i>Page 149, Line 13.</i></p>
Friday, September 6, 2019, 4:40 p.m.	Dr. Louis Uccellini and other NOAA officials get in touch with Chris Darden to give him a heads up before the statement goes out.	<ul style="list-style-type: none"> • Dr. Louis Uccellini • George Jungbluth • Mary Erickson • Chris Darden • John Murphy • Steven Cooper 	<p>Dr. Louis Uccellini's interview with NOAA General Counsel: <i>Page 73, Line 1.</i></p> <p>Chris Darden's interview with NOAA General Counsel: <i>Page 56, Line 22.</i></p>
Friday, September 6, 2019, 4:45 p.m.	NOAA Communications releases statement that says Hurricane Dorian could have impacted Alabama and that the Birmingham National Weather Service's tweet was "inconsistent with probabilities from the best forecast products available at the time."	<ul style="list-style-type: none"> • NOAA Communications 	Statement is available on the NOAA website.
Friday, September 6, 2019, 4:52 p.m.	Chris Vaccaro sends out an email to NOAA personnel informing them that the statement has been	<ul style="list-style-type: none"> • Chris Vaccaro • National Weather Service Office of Public Affairs • Dennis Feltgen 	Copies of Chris Darden's emails relevant to the investigation were provided to the

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DATE	EVENT	WHO WAS INVOLVED	WHERE IS IT REFERENCED
	distributed and that inquiries “should solely be directed to” the NOAA Office of Communications line. Email gets forwarded around between NOAA staff.	<ul style="list-style-type: none"> • Julie Roberts • Scott Smullen 	Academy Team from NOAA. This email is page 10 of the document.
Friday, September 6, 2019, 5:31 p.m.	NOAA Communications posts the statement on Twitter.	<ul style="list-style-type: none"> • NOAA Communications 	Tweet with statement is on NOAA Communications’ Twitter (@NOAAComms).
Friday, September 6, 2019, 6:00 p.m.	Chris Darden sends out an email to the National Weather Service Birmingham Weather Forecast Office staff informing of the statement and commending them on the work they do to support Alabama. Darden asks the staff to “please be cautious about commenting publicly” on the statement.	<ul style="list-style-type: none"> • Chris Darden • NWS Birmingham WFO Staff 	Copies of Chris Darden’s emails relevant to the investigation were provided to the Academy by NOAA. This email is page 106 of the document.
Friday, September 6, 2019, 8:22 p.m.	Stuart Levenbach emails Dr. Louis Uccellini and tells Uccellini that he (Levenbach) was not involved in any part of drafting the statement. To Levenbach’s knowledge Roberts and Jacobs were they only people from NOAA involved in	<ul style="list-style-type: none"> • Stuart Levenbach • Dr. Louis Uccellini 	Exhibit 3 of Stuart Levenbach’s interview conducted by NOAA General Counsel.

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DATE	EVENT	WHO WAS INVOLVED	WHERE IS IT REFERENCED
	writing the statement. ⁹²		
Saturday, September 7, 2019, 2:26 a.m.	Stuart Levenbach emails Kevin Wheeler with a summary of how the statement was developed as Levenbach understood it from a call with Dr. Jacobs. ⁹³	<ul style="list-style-type: none"> • Stuart Levenbach • Kevin Wheeler • Dr. Neil Jacobs 	Exhibit 7 of Stuart Levenbach's interview conducted by NOAA's General Counsel.
Saturday, September 7, 2019, 3:11 p.m.	All hands email sent out to National Weather Service Staff thanking them for their work on Hurricane Dorian.	<ul style="list-style-type: none"> • Dr. Louis Uccellini • Mary Erickson • John Potts • John Murphy • Kevin Cooley • Peyton Robertson • All NWS Personnel 	Exhibit 5 of Dr. Louis Uccellini's interview conducted by NOAA's General Counsel.
Monday, September 9, 2019	Dr. Jane Lubchenco, Dr. Richard Spinrad, and Dr. Andrew Rosenberg file a complaint of violation of NOAA's Scientific Integrity Policy	<ul style="list-style-type: none"> • Dr. Jane Lubchenco • Dr. Richard Spinrad • Dr. Andrew Rosenberg 	Copy of allegation provided
Tuesday, September 10, 2019	Representative Paul Tonko files a complaint of violation of NOAA's Scientific Integrity Policy	<ul style="list-style-type: none"> • Representative Paul Tonko 	Copy of allegation provided
Tuesday, September 10, 2019	Craig McLean files a complaint of violation of NOAA's Scientific Integrity Policy	<ul style="list-style-type: none"> • Craig McLean 	Copy of allegation provided
Wednesday, September 11, 2019	Dr. Carl Childs files a complaint of violation of NOAA's Scientific Integrity Policy	<ul style="list-style-type: none"> • Dr. Carl Childs 	Copy of allegation provided

92. Secondhand knowledge—Stuart Levenbach was not in the room when the statement was drafted.

93. Secondhand knowledge—Stuart Levenbach was not in the room when the statement was drafted; his understanding of the process comes from a phone call with Dr. Neil Jacobs.

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Appendix C: Policies

Copies of Department of Commerce and National Oceanic and Atmospheric Administration policies relevant to the inquiry are linked below.

- National Oceanic and Atmospheric Administration Scientific Integrity Policy (NOAA Administrative Order 202-735D: Scientific Integrity)
https://www.corporateservices.noaa.gov/ames/administrative_orders/chapter_202/202-735-D.pdf
- Procedural Handbook to NOAA's Scientific Integrity Policy
https://www.corporateservices.noaa.gov/ames/administrative_orders/chapter_202/Procedural_Handbook_NAO_202-735D_%20FINAL_Aug2017%20Ammendment.pdf
- Department of Commerce Public Communication Policy (Department Administrative Order 219-1)
http://www.osec.doc.gov/opog/dmp/daos/dao219_1.html
- Department of Commerce Social Media Guidebook.
http://osec.doc.gov/webresources/socialmedia/DOC_Social_Media_Guidebook%202013-01-31.pdf
- NOAA Framework for Internal Review and Approval of Fundamental Research Communications.
https://www.corporateservices.noaa.gov/ames/administrative_orders/chapter_202/FRC%20Guidance%20Nov%208%202016.pdf

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Appendix D: Summaries of Interviews Conducted and Interview Questions

Summaries of interviews conducted, and the associated interview questions appear in the following order in Appendix D:

- Chris Darden, Meteorologist-in-Charge, National Weather Service Birmingham Weather Field Office
- Dr. Neil Jacobs, Acting Administrator, National Oceanic and Atmospheric Administration
- Craig McLean, Acting Chief Scientist, National Oceanic and Atmospheric Administration
- Julie Roberts, Deputy Chief of Staff, Director of Communications, National Oceanic and Atmospheric Administration⁹⁴
- Chris Vaccaro, Media Relations Specialist, National Oceanic and Atmospheric Administration

Interview questions for the Subject Matter Expert interviews conducted appear in the following order in Appendix D:

- U.S. Government Accountability Office, Authors of Scientific Integrity Policies: Additional Actions Could Strengthen Integrity of Federal Research Report.
 - Wyatt R. Hundrup, Analyst in Charge
 - Douglas Hunker, Staff Contributor
 - Robert Marek, Assistant Director of Science, Technology Assessment, and
 - John Neumann, Managing Director
- Dr. Leysia Palen, Professor and Founding Chair of Information Science; Professor of Computer Science
- Dr. Rebecca Morss, Deputy Director, Mesoscale & Microscale Meteorology Lab

⁹⁴. Julie Roberts left NOAA in December 2019 to join the Economic Development Administration within the Department of Commerce.

Chris Darden Interview Summary

Meteorologist-in-Charge, NWS Birmingham Weather Forecast Office
January 21, 2020, at 3:09 p.m. Central Time Zone
NWS Birmingham Weather Forecast Office, Calera, AL

Reason for Selection

The Academy Team selected Chris Darden to be interviewed for a second time because as the Meteorologist-in-Charge of the NWS Birmingham WFO,⁹⁵ he oversees the office that sent out the September 1 tweet affirming that Alabama will not see any impacts from Hurricane Dorian. Through a second interview with Chris Darden, the Academy Team hoped to learn about the policies and procedures of the Birmingham WFO, and the involvement of Chris Darden and Birmingham WFO staff in the development and release of both the September 1 Birmingham Tweet and September 6 Statement.

Interview Objectives

The interview sought to learn more about how a WFO fits into the larger NWS and NOAA organizational structure and how a WFO collaborates with other branches of NOAA, such as the National Hurricane Center and other WFOs. A prominent theme of this interview was policies and procedures, particularly as they relate to communications and typical WFO operating procedures. To gain a better understanding of how this WFO operates, the Academy Team asked about this office's social media practices, corrective processes, and how NOAA's Office of Communications works with WFOs like Birmingham. Chris Darden was asked to expand on answers previously given in the first interview. Additionally, the Academy Team asked Chris Darden about NOAA's Scientific Integrity Policy as it relates to his office's involvement in the events that transpired.

Summary of Interview

Chris Darden informed the Academy Team that not only is his office responsible for covering 39 counties in Alabama, but also the WFO is the state liaison office, meaning that the state of Alabama will request a Birmingham WFO meteorologist to come to the State Emergency Operations Center to provide 24/7 support to the state in the event of a major weather-related event. Darden spoke of common communication channels maintained during a hurricane between the WFO, the National Hurricane Center (NHC), the Weather Prediction Center, and Regional Operations Centers.

As Darden explained, the Birmingham WFO has a dedicated decision support service (DSS) meteorologist on most of their shifts whose responsibilities include coordinating communication with FEMA and posting on the office's social media. On September 1, the DSS communicated with other meteorologists on shift—who looked at forecasts, probabilistic models, and the latest morning guidance—to determine the correct response to the influx of phone calls and Facebook

95. NOAA General Counsel first interviewed Chris Darden on October 21, 2019.

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messages from people in Alabama asking if Alabama was going to be affected by Hurricane Dorian. Based on the meteorologists' determination, the DSS issued the September 1 Birmingham Tweet and a Facebook post about how Alabama will see no impacts from the hurricane.

In the event of issuing an inadvertently wrong warning, the Birmingham WFO's typical process of correcting a mistake, while not a formal written policy, would involve immediately cancelling the warning, posting on social media explaining that the warning was issued in error, and sending the correction on NWSChat. NWSChat is the communication group between NWS, FEMA, core media partners, and some private sector entities such as the Weather Channel, for example. No corrective action was taken by the Birmingham WFO because the September 1 Birmingham Tweet was consistent with the scientific information reviewed by the WFO meteorologists. In the event of a discrepancy with another WFO's forecast, the Birmingham WFO will communicate with the other WFO to determine the correct forecast or warning to issue.

As for using absolute terms, Chris Darden provided the reasoning that as a WFO, they try to communicate with the public in a way that will solicit a desired response to a weather event or lack thereof. He stressed that their mission is to save lives and their communications need to reflect the action people need to take to remain safe.

Chris Darden confirmed that on September 1, the Birmingham WFO forecasters conducted scientific activities, such as looking at model data and forecast information from NHC, and made a scientific assessment based off of the best available information to inform the development of the September 1 tweet from the Birmingham WFO. Chris Darden characterized the September 1 Birmingham Tweet as a scientific product.

Chris Darden received several emails between September 1 and 6 directing all NWS offices and staff to forward media inquiries to the NOAA Office of Communications and to not respond to any questions either officially or through personal social media accounts. Darden explained that it is common to receive guidance from NOAA Communications requesting that all media inquiries be directed to that office during situations that require a coordinated media effort.

In regard to the September 6 Statement, Chris Darden explained that neither he nor anyone in his office was given the opportunity to review the statement prior to its release. Chris Darden was not made aware of the statement until approximately 4:00 p.m. on September 6, when he was called by Dr. Louis Uccellini, who is the NWS Director, and other NWS officials. Chris Darden was not afforded the opportunity to make revisions to the statement as he was told that there was nothing he could do. By the time he finished the phone call, the September 6 Statement had already been released.

Interview Questions for Chris Darden

Current Position and Responsibilities

- Current position, duties and reporting line.

Birmingham Weather Forecast Office Policies and Procedures

- Role of the Birmingham Weather Forecast Office within NOAA.
- In the event of a serious weather-related event such as Hurricane Dorian, how does your office typically interact with the National Hurricane Center and other NOAA offices?

Activities Related to the Development and Release of the September 1 Tweet

- How would you characterize the September 1 Tweet including the underlying science used to inform the tweet?
- What is the typical internal process to draft and release a social media communication such as the September 1 Tweet? Are there any formal policies and procedures in place?

Activities Related to the Development and Release of the September 6 Statement

- Describe your involvement with the activities leading up to the September 6 Statement including your interaction with other NOAA offices and any external entities.
- Describe your involvement with the development and release of the September 6 Statement.
- Is there anything else you would like to share with the Academy Team for the record?

Dr. Neil Jacobs Interview Summary

Acting Administrator, NOAA
February 3, 2020, at 3:12 p.m. Eastern Time Zone
National Academy of Public Administration, Washington, DC

Reason for Selection

The Academy Team selected Dr. Neil Jacobs for a second interview because he is the Acting Administrator of NOAA and was involved with the development and release of the September 6 Statement.⁹⁶ Through a second interview, the Panel hoped to learn more about the policies and procedures of NOAA as they relate to scientific integrity, how he interacts with the Department of Commerce leadership, and Dr. Neil Jacobs' involvement in the development and release of the September 6 Statement.

Interview Objectives

The purpose of this interview was to understand relevant NOAA policies and procedures and inquire further about Dr. Neil Jacobs' involvement in the development and release of the NOAA September 6 Statement. The Academy Team aimed to learn how Dr. Jacobs interacts with Commerce leadership and what Commerce's typical role in the development and release of NOAA communications is. Additionally, the Academy Team requested that Dr. Jacobs explain how he ensures compliance with NOAA's Scientific Integrity Policy and Commerce's Public Communication Policy. The Academy Team also sought to learn from Dr. Jacobs what the agency's standard process for issuing media guidance is. As Dr. Jacobs was involved in the development and release of the September 6 Statement, a prominent component of this interview was inquiring about his involvement in the development and release of the September 6 Statement.

Summary of Interview

Dr. Neil Jacobs explained that he is only involved in the communications process when there is a need to elevate the matter to his level—particularly when there is a quote from him involved. Usually, no agency-level communications are released without someone in his office reviewing them first.

As for Commerce's involvement in the drafting of NOAA communications, Dr. Jacobs explained that Commerce will often review NOAA agency-level communications as part of the clearance process. Dr. Jacobs explained that NOAA communications typically originate with a NOAA line office before Dr. Jacobs reviews it and then sends it to Commerce before Dr. Jacobs performs the final review. Another typical chain of approval is that the communication originates within NOAA, is then sent to a line office for review, is then sent to Commerce, and finally is sent to Dr. Jacobs for final review. Dr. Jacobs expressed that to his knowledge, the process of NOAA working with

96. NOAA General Counsel first interviewed Dr. Neil Jacobs on November 6, 2019.

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Commerce staff on communications is not formally written in a policy but he has never looked to determine if such a policy exists.

As for communicating risk, Dr. Jacobs offered his perspective that there is no consensus within the National Weather Service on how to best communicate probabilities and the associated risks with the public in the messages. Generally speaking, Dr. Jacobs elaborated that people do not necessarily understand probabilities, however, probabilities are more objective than other choices of phrasing. The purpose of communications about weather forecasts is to communicate the risk to the public. State and local emergency managers play an important role in translating the probability and risk to their audiences, according to Dr. Jacobs.

All forecasts eventually become inaccurate, so NWS constantly updates the forecasts with every shift of forecasters, as Dr. Jacobs explained. Typically, NWS WFOs will communicate with each other and other NOAA centers because forecasts are constantly evolving. NOAA headquarters does not typically comment on the public communications of a WFO, and there is no formal policy in place that determines the process of publishing a statement on a WFO's work, according to Dr. Jacobs.

The media guidance, Dr. Jacobs explained, came from an internal NWS decision, not NOAA, and media guidance such as the guidance sent between September 1 and 6 are not uncommon. Forecasters may receive similar guidance several times a year. The purpose of the media guidance was for continuity of operations. NOAA does not have a standard process for issuing media guidance to staff.

Dr. Jacobs explained that he became involved in the development of the September 6 Statement fairly late because his phone was off during the early morning hours of September 6 and arrived at the office after there may have been earlier versions of the statement already drafted. He missed several calls in the early morning hours of September 6 but did not speak to Secretary Ross or anyone on his staff about developing a statement until he arrived in the office on the morning of September 6. Commerce officials were involved from the start of the statement development process because they were present before Dr. Jacobs arrived. Dr. Jacobs also stated that the Commerce officials who had been drafting the statement likely did not understand probabilistic forecasting. During the drafting of the statement, Commerce officials called in, but Dr. Jacobs did not know everyone was on the line.

Dr. Jacobs characterized the September 6 Statement as a NOAA product because everything coming out of the agency is a NOAA product. As he understands it, Dr. Jacobs stated that the intent of the statement was to reconcile the Birmingham WFO's tweet with the National Hurricane Center's forecast products. Dr. Jacobs was not thrilled by the September 6 Statement because the statement singled out the Birmingham WFO for its tweet, despite other WFOs and the National Hurricane Center tweeting variations of the same idea. For that reason, Dr. Jacobs explained that he objected to the statement during the development, but no action was taken by Commerce officials in the room in respect to considering his objection. Dr. Jacobs stated that the people in

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the room may have felt pressure to release the statement because Commerce wanted the statement released.

Dr. Jacobs also offered his perspective on the correctness of the September 1 tweet from the Birmingham WFO by explaining that in a technical sense, while relatively small, the probability of Hurricane Dorian impacting a portion of southeast Alabama existed. However, in terms of communicating the risk to the people of Alabama, the Birmingham WFO was correct, according to Dr. Jacobs.

In regard to the September 6 Statement complying with the NOAA Scientific Integrity Policy, Dr. Jacobs expressed that the September 6 Statement did not necessarily meet the standards of the Scientific Integrity Policy. Additionally, Dr. Jacobs explained that his understanding is that the Scientific Integrity Policy was written for science and research and not necessarily press releases. Dr. Jacobs often reviews communications originally written by non-scientists, including people from Commerce and other parts of NOAA, when the science is incorrect. The correction process typically requires scientists to check the validity of the communication and ensure that in a technical sense, the communication is accurate before it is published.

Interview Questions for Dr. Neil Jacobs

Position and Responsibilities

- Position, duties and responsibilities.

NOAA Policies and Processes

- As the Acting Administrator, how do you typically interact with the Department of Commerce leadership?
- Is Commerce typically involved in the development and release of official NOAA communications? If yes, how?
- If a severe weather event occurs, what is the most effective way/vehicle to communicate probabilistic forecasts to the general public?
- In performing your responsibilities as the Acting Administrator, how do you ensure compliance with NOAA's Communication and Scientific Integrity Policy?
- What is NOAA's standard process for issuing media guidance? Are there any formal policies in place?

Activities Related to the Development and Release of the September 6 Statement

- Describe your involvement with the development and release of the September 6 Statement.
- Is there anything else you would like to share with the Academy team for the record?

Craig McLean Interview Summary

Assistant Administrator for Oceanic and Atmospheric Research and Acting Chief Scientist,
NOAA

January 23, 2020, 8:30 a.m. Eastern Time Zone
National Academy of Public Administration, Washington D.C.

Reason for Selection

The Academy Team selected Craig McLean to be interviewed because of McLean's position as NOAA's Acting Chief Scientist and because of McLean's role in this specific inquiry as one of the four Complainants. As the Acting Chief Scientist of NOAA, McLean serves as the senior scientist for the agency, providing direction for science and technology priorities. McLean also serves NOAA as the Assistant Administrator for Oceanic and Atmospheric Research and is responsible for overseeing, directing, and implementing NOAA's research enterprise. McLean has served over 25 years with NOAA and during his tenure McLean has been heavily involved in the development of NOAA's Scientific Integrity Policy. The Academy Team hoped to learn more about NOAA's standard operating procedures specifically regarding communications and how the Scientific Integrity Policy operates within the agency, as well as learning the specific reasoning behind Craig McLean filing an allegation.

Interview Objectives

The Academy Team had two main objectives for the interview of Craig McLean. First, the interview sought to learn more about how communication and collaboration occurs across NOAA, specifically looking at how the Office of Communications interacts with the different NOAA line offices and scientists, and how the Department of Commerce typically interacts with NOAA. Prominent themes for this section of the interview were policies and procedures, particularly as they relate to NOAA communications and interactions with Commerce. The second objective of the interview was to learn about the rationale McLean had for filing his allegations of violations of NOAA's Scientific Integrity Policy. The Academy Team asked McLean to walk through his allegation and how he perceived actions surrounding the September 6 Statement violating specific sections of the Scientific Integrity Policy.

Summary of Interview

Craig McLean informed the Academy Team that NOAA relies on Weather Forecast Offices (WFO) and local expertise to carry out the mission of NOAA. The public often looks to their local resources for news and local offices have expertise on the location that they cover. The forecasters in the WFOs are given specific training related to communicating with the press and social media and it is unusual for the Office of Communications to direct forecasters not to speak with the media. It is imperative to the core mission of NOAA that forecasters have free access to

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communicate with the media.⁹⁷ However, McLean did understand that the purpose of the Office of Communications asking forecasters not to comment of the events of September 1 through 6 was to protect them from being pulled into a political debate.

According to Craig McLean, it was completely within the responsibilities of the Birmingham WFO to send out the September 1 tweet. The forecasts and related messages produced by NOAA WFOs are based in science and produced by trained scientists who have the skills to produce conclusions and messages to the public based on technical scientific inputs. The forecasters in Birmingham acted swiftly and accurately to convey a message to the public that addressed their concerns and kept them safe from any unwarranted panic. The absolute terms of the tweet were not only accurate as the perceived threat to Alabama had passed, but also a necessary step to quell the fears of the public.

Regarding NOAA communication policies, McLean explained that NOAA's Communications Office has the responsibility of issuing press releases and in many cases, producing the original drafts of those press releases. The Communications Office has representatives from each NOAA line office who liaise between the line offices, scientists, and communications officials.

When discussing NOAA communications policies and standard operating procedures related to those policies, McLean brought up the typical interactions between NOAA and the Department of Commerce. According to McLean, there is a political pervasiveness from the Department of Commerce throughout the daily life of NOAA's senior leaders. The influence has such a far reach that even the NOAA Administrator cannot send an all hands message to NOAA staff without having it first reviewed by the Department of Commerce. The NOAA Office of Communications often needs to go to Commerce for approval before NOAA issues the communication. McLean sees this pervasiveness as an underlying issue for NOAA that hinders the agency's ability to carry out its core mission.

In regard to the September 6 Statement from NOAA, Craig McLean explained that the statement was unprecedented and anomalous in many ways. McLean elaborated that it was unusual for a statement to be attributed to NOAA with no point of contact for further information. The anonymity of the September 6 Statement harms NOAA's reputation because there is a need for the agency to be transparent and open to the public.⁹⁸ From McLean's understanding, no line offices or career NOAA staff were consulted on the statement, which is a violation of the Scientific Integrity Policy.⁹⁹ If a WFO were to put out an incorrect statement or forecast, a correction would have been made soon after the original posting and have been done by a competent authority close to the original source such as the National Weather Service or the National Hurricane Center.

97. National Oceanic and Atmospheric Administration, "NOAA Administrative Order 202-735D: Scientific Integrity," December 7, 2019: Section 5.02(d).

98. NOAA, Section 4.01.

99. NOAA, Section 7.01.

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McLean perceived numerous violations of the NOAA Scientific Integrity Policy. The section of the policy that upholds the need for public access to information was violated because the September 6 Statement contradicted science that was known to be factually correct and put out untruthful information to the public.¹⁰⁰

The Scientific Integrity Policy also upholds that in no circumstance may any NOAA official ask or direct a federal scientist to suppress or alter scientific findings.¹⁰¹ In the events surrounding the September 6 Statement, NOAA parties were directed to say that the WFO was wrong. These actions also violated the section of the Scientific Integrity Policy that directs scientists to approach scientific activity objectively, without allegiance to individuals, organizations, or ideology.¹⁰² The way in which the September 6 Statement was constructed and the message that it contained had an allegiance to entities outside of NOAA. According to McLean, the actions taken by NOAA officials regarding the creation and release of the September 1 statement were dishonest and attempted to convey fraudulent information using deceit and misrepresentation which is a violation of the Code of Scientific Conduct and Code of Ethics upheld by the fundamental Principles of Scientific Integrity.¹⁰³

The Scientific Integrity Policy covers all employees of NOAA.¹⁰⁴ McLean sees Dr. Neil Jacobs as responsible for the September 6 Statement as he is the Acting Administrator of NOAA. According to McLean, Dr. Neil Jacobs should have raised concerns about potential violations of scientific integrity and filed a complaint as soon as the statement was released. McLean also saw Julie Roberts as responsible for the September 6 Statement as she was the Director of Communications and had authority over the statement's released.

100. National Oceanic and Atmospheric Administration, "NOAA Administrative Order 202-735D: Scientific Integrity," December 7, 2011: Section 5.02(b).

101. NOAA, Section 5.02(d).

102. NOAA, Section 6.01(a).

103. NOAA, Section 6 and Section 7.

104. NOAA, Section 2.02(a).

Interview Questions for Craig McLean

Current Position and Responsibilities

- Current position, duties and responsibilities.

NOAA Policies and Processes

- What is the typical internal process for NOAA to review and release an organization wide statement such as the September 6 Statement?
- What is the typical internal process to draft and release a social media communication such as the September 1 tweet? What are the leading practices for communicating scientific/forecast information via social media?
- What's NOAA's standard process for issuing media guidance? Are there any formal policies in place?

Activities Related to the Development and Release of the September 6 Statement

- Describe your involvement with the development and release of the September 6 Statement.

Allegation of Scientific Misconduct

- On September 10, 2019, you submitted a complaint alleging violations of NOAA's Scientific Integrity Policy (NAO 202-735D), the Department of Commerce Administrative Order (DAO)219-1, Public Communications, and 18 USC 2074. Please explain the rationale behind the allegations.
- Is there anything else you would like to share with the Academy Team for the record?

Julie Roberts Interview Summary

Deputy Chief of Staff and Director of Communications, NOAA
January 23, 2020, at 2:36 p.m. Eastern Time Zone
National Academy of Public Administration, Washington, DC

Reason for Selection

The Academy Team selected Julie Roberts for a second interview because as Deputy Chief of Staff and Director of Communications,¹⁰⁵ she was involved with the development and release of the NOAA September 6 Statement and the media guidance distributed between September 1 and 6.

Interview Objectives

In this interview, the Academy Team desired to understand standard NOAA communications procedures in order to determine if the media guidance and September 6 Statement deviated from standard procedures. Additionally, the Academy Team sought to better understand Julie Roberts' involvement in the development and release of the September 6 Statement, including her interactions with other NOAA offices and external entities.

Summary of Interview

Julie Roberts informed the Academy Team that in her former role at NOAA as Director of Communications she was responsible for overseeing the entire agency's communication strategy. Roberts then went on to discuss the standard procedures that are followed by NOAA's Office of Communications. Roberts explained that staff from the Office of Communications are embedded within the different line offices of NOAA and the standard practice would be that scientist from the different line offices would work with the NOAA Office of Communications to create communications for the public on their work. Sending media guidance to NOAA scientists is also a standard practice of the Office of Communications, according to Roberts. When there is a large-scale, high-profile situation, the office sends media guidance to NOAA staff to ensure that the same messaging given to the public and media is consistent across the agency. Roberts further elaborated that a many of press documents go to the Department of Commerce for review or approval [REDACTED]. Roberts explained to the Academy Team that while NOAA's Office of Communications follows these standard practices, there are no formal policies or procedures that guide how these practices are followed.

Julie Roberts explained that she was not really involved in the creation of the September 6 Statement. Roberts stated that she was tasked with creating a timeline of NOAA communications [REDACTED] while the statement was being crafted by Commerce officials in the room. Roberts explained that she had no substantive comments on the statement besides pushing back on the part that discussed the Birmingham office. Roberts did not see this part of

105. NOAA General Counsel first interviewed Julie Roberts on October 11, 2019.

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the statement as being productive, as Roberts thought that the September 1 Birmingham Tweet was not political.

Roberts felt that there was external pressure regarding the September 6 Statement. Based on the call that Dr. Neil Jacobs received in the early morning hours of September 6 and the close of business deadline set by Secretary Ross, Roberts perceived the September 6 Statement as a Commerce statement that was given to NOAA to release. According to Roberts, there was pressure from Commerce officials for Roberts to be the attributed spokesperson for the September 6 Statement, but Roberts pushed back because she did not feel comfortable being attributed to a statement that she did not draft.

Julie Roberts explained to the Academy Team that she was so tired and overworked from monitoring Hurricane Dorian for the past 10 days that she did not consider how the September 6 Statement could potentially violate NOAA's Scientific Integrity Policy or Commerce's Public Communication Policy. She elaborated that while she and Dr. Jacobs could have resigned in an attempt to stop the statement from being released, they felt the need to stay and try to help fix the situation.

Interview Questions for Julie Roberts

Position and Responsibilities

- Position, duties and involvement with the formulation and/or release of NOAA communications.

Office of Communications Policies and Procedures

- Role of the Office of Communications/Public Affairs within the agency?
- How does your office typically interact with the National Weather Service (NWS) and other offices? How does your office typically work with NOAA scientists to ensure compliance with NOAA's Scientific Integrity Policies?
- What is NOAA's standard process for issuing media guidance? Are there any formal policies and procedures in place?
- What is the typical internal process for NOAA to draft and release an organization wide statement such as the *September 6 Statement*?

Activities Related to the Development and Release of the September 6 Statement

- Describe your involvement with the activities leading up to the September 6 Statement including your interaction with NWS, other NOAA offices and any external entities.
- Describe your involvement with the development and release of the September 6 Statement.
- Is there anything else you would like to share with the Academy team for the record?

Chris Vaccaro Interview Summary

Senior Media Relations Specialist, NOAA
January 20, 2020, at 2:02 p.m. Eastern Time Zone
National Academy of Public Administration, Washington, DC

Reason for Selection

The Academy Team chose to interview Chris Vaccaro, Senior Media Relations Specialist in the NOAA Office of Communications, because he was largely involved with the media guidance issued between September 1 and 6 and was present, although briefly, during the development of the September 6 NOAA statement. As Senior Media Relations Specialist, Chris Vaccaro is responsible for facilitating communications that originate at the NOAA headquarters level and coordinating press-related materials that originate in the line offices and field offices.

Interview Objectives

Through this interview, the Academy Team desired to understand NOAA Office of Communications policies and procedures as they relate to the media guidance and the September 6 Statement, how the office works with other offices inside and outside of NOAA, and the involvement of Chris Vaccaro and other NOAA officials in the development of the September 6 Statement. A prominent component of this interview was the standard process for issuing media guidance because the Panel is tasked with assessing the allegation that the media guidance violated the Scientific Integrity Policy. Similarly, because the Panel must assess whether the September 6 Statement violated the Scientific Integrity Policy, the interview aimed to understand the standard process for developing and releasing NOAA communications and determine whether the process on September 6 deviated from the standard process and constitutes a violation of scientific integrity.

Summary of Interview

The NOAA Office of Communication coordinates with the National Hurricane Center and other line offices during a large weather-related event, such as a hurricane, according to Chris Vaccaro. His role is coordinating with the media and NOAA leadership during such an event.

Chris Vaccaro explained that the Department of Commerce historically is not involved in most NOAA Communications, with the exception being that Commerce may become involved in a controversial issue or a matter requiring the secretary's involvement. There is no intra-agency agreement outlining when it is appropriate for the Department of Commerce to become involved in NOAA's communications.

Regarding the involvement of scientists in developing NOAA communications, Chris Vaccaro expressed that scientists are regularly involved in the communications process because all of their communications are derived from science. Often, scientists will write the communication for NOAA's Office of Communications or at a minimum, be involved in the drafting of the

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communication, according to Chris Vaccaro. The scientists would also see the cleared product before it goes out, which Vaccaro stated was the normal procedure.

Chris Vaccaro elaborated on the Office of Communication's approval procedures for communications and touched on the Department of Commerce's Public Communication Policy (DAO 219-1). Vaccaro explained that communications are signed off by the head of the operating unit and the appropriate public affairs officer for approval, per the DAO. He also explained that any entity that has equities in the communication, especially those directly referenced therein, also typically sign off on the communication before the communication's release.

Typically, as Chris Vaccaro mentioned, NOAA infrequently uses agency statements and when they do, the statements are attributed to a NOAA spokesperson. Unattributed statements are exceptionally rare. The avenue used to communicate a NOAA message depends on the subject and the expediency of the matter. In regard to the September 6 Statement from NOAA, Chris Vaccaro explained that the statement qualifies as an Official Communication from NOAA because the statement is perceived to be from the agency.

Chris Vaccaro explained that media guidance is often issued by the NOAA Office of Communications in consultation with NOAA Communications leaders and the head of the impacted office. Per his explanation, media guidance commonly is used to protect an individual or office from getting involved into a difficult situation from a communications standpoint. The media guidance offered between September 1 and 6 requesting that NWS staff direct all inquiries to NOAA Communications was issued by NWS in conjunction with NOAA Office of Communications leadership. In his interview, Vaccaro explained that the email he sent on September 5 asking NWS to resend the September 4 media guidance that mentioned that forecasters should not communicate with the media via their personal Twitter accounts was not intended to stifle forecasters' ability to communicate with the media. As explained by Chris Vaccaro, the intent of the guidance was to tell NWS offices that they are free to send media inquiries to NOAA public affairs officers because the agency was the subject of national news. He explained the need for a coordinated media response from NOAA and to return normalcy from a chaotic situation.

As for Chris Vaccaro's involvement in the development of the September 6 Statement, he was minimally involved. A Commerce official, whose name was unknown to Vaccaro, read aloud from his iPad an earlier version of the statement during the time that Vaccaro was present in the Commerce Deputy Secretary's conference room at approximately 10:00 a.m. on September 6. After hearing the statement, he and Scott Smullen (Deputy Director of NOAA Communications) vocalized that it was not necessary to mention the Birmingham WFO in the statement, but there was no action taken then after he gave his input. A Commerce official in the conference room received a phone call and requested that the rest of the people in the room leave, which prompted Chris Vaccaro and Scott Smullen to return to their desks. Vaccaro did not see the statement again until it was emailed to him by Julie Roberts at approximately 4:00 p.m. that day. The final version of the statement that was sent to Vaccaro in the afternoon was different than the version he heard in the conference room in the morning. According to Vaccaro, his only official role in the

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development and release of the September 6 Statement was to get the statement to a colleague whose job was to distribute the statement through their press release channels and post the statement to NOAA's website and Twitter.

Chris Vaccaro stated that he did not think the statement was necessary as it was sent out five days after the events on September 1. From his perspective, he did not think that the September 6 Statement is a statement that would have originated from within the agency.

Interview Questions for Chris Vaccaro

Current Position and Responsibilities

- Current position, duties and involvement with the formulation and/or release of NOAA communications

Office of Communications Policies and Procedures

- Role of the Office of Communications/Public Affairs within the agency
- How does your office typically interact with the National Weather Service and other offices? How does your office typically work with NOAA scientists to ensure compliance with NOAA's Scientific Integrity Policy?
- What is NOAA's standard process for issuing media guidance? Are there any formal policies and procedures in place?
- What is the typical internal process for NOAA to draft and release an organization wide statement such as the September 6 Statement?

Activities Related to the Development and Release of the September 6 Statement

- Describe your involvement with the activities leading up to the September 6 Statement including your interaction with NWS, other NOAA offices and any external entities.
- Describe your involvement with the development and release of the September 6 Statement.

Government Accountability Office (GAO) Interview Questions

February 11, 2020, at 10:30 a.m. Eastern Time Zone
National Academy of Public Administration, Washington, DC

- As your team assessed the scientific integrity policies of nine federal agencies—including NOAA, can you comment on the relative strengths and weaknesses of those policies?
- Where would you rank NOAA's policies among the nine you analyzed?
- Do the nine federal agencies you assessed have similar processes to adjudicate allegations of scientific misconduct?
- Your report and Congressional testimony allude to allegations of federal officials adversely affecting the integrity of scientific information. Does GAO have recommendations for federal agencies to avoid inappropriate political influence in the gathering, analysis and release of scientific data?
- How do federal agencies differ in their definition of a loss of Scientific Integrity?
- How do federal agencies differentiate between scientific misconduct and loss of scientific integrity?
- Do you have any suggestions as to federal guidance on the “generally accepted practices of scientific research?”
- As discussed in the GAO report, one key component of scientific integrity policies is “facilitating the free flow of scientific and technological information.” On the other hand, many agencies issue media guidance (e.g., instructing staff to forward all media inquiries to the communication office) when there is a major event or a high level of media inquiries. Does GAO have recommendations for federal agencies to maintain balance between free flow of scientific information and the need for a coordinated communication approach?
- Does the initial Sept 1 tweet from the Birmingham Office and/or the Sept 6 statement fall under the purview of NOAA's Scientific Integrity Policies?
- If one or both does, can the explain their reasoning for their inclusion? For example, for the Sept 1 tweet, was the tweet a “scientific assessment”?
- Regarding the tweet and statement, would all requirements from the policy apply? For example, for the Sept 6 statement, would the requirement to solicit a review of the statement by the authors of the tweet (to which the statement refers) apply?

Dr. Leysia Palen Interview Questions

Professor of Computer Science, and Professor and Founding Chair of the Department of Information Science, University of Colorado Boulder
February 20, 2020, at 11:00 a.m. Eastern Time Zone
Videoconference

The National Weather Service (NWS) states that its primary mission is to protect lives and property through the timely issuance of watches and warnings when there are hazardous weather conditions. We understand that the use of social media by NWS to communicate severe weather-related risks is increasingly common.

- When is it appropriate/effective for NWS to use social media (Twitter, You Tube and Facebook) as a platform to communicate weather risks?
- How might this practice complement traditional approaches such as official NOAA communications on web sites?
- What is the possible downside of using social media to communicate severe weather-related risks? Is social media vulnerable to false and inaccurate reports?

We understand that a key challenge for forecasters during a severe weather event is to convert the public's perception of safety (optimism bias) to a perception of risk and to induce them to take appropriate measures.

- In your view, what is the most effective way to communicate those risks to the general public to induce them to react appropriately to the risks? Please comment on the advantages/disadvantages of using clear and certain terms versus probabilistic forecasts? Should impact statements be conditional—what may occur if ...?
- In your view, what is the most effective way to communicate information when you face uncertain probabilities?
- Is there a related risk of losing credibility with the public by issuing false alarms?

In a 2014 Position Statement, The American Meteorological Society (AMS) posits that there is a "clear and compelling need" to enhance the utility of weather and climate research and the dissemination of atmospheric information using knowledge from the social sciences about how individuals and society interact with weather and climate."

- Would you agree with this statement? If so, how can social science research improve the dissemination of severe weather events to the public.
- How do you bridge the gap between technical science and social science when disseminating information to the public?

Dr. Rebecca Morss Interview Questions

Senior Scientist and Deputy Director of the Mesoscale and Microscale Meteorology Laboratory,
National Center for Atmospheric Research
February 22, 2020, at 12:00 p.m. Eastern Time Zone
Videoconference

The National Weather Service (NWS) states that its primary mission is to protect lives and property through the timely issuance of watches and warnings when there are hazardous weather conditions. We understand that the use of social media by NWS to communicate severe weather-related risks is increasingly common.

- When is it appropriate/effective for NWS to use social media (Twitter, You Tube and Facebook) as a platform to communicate weather risks?
- Is the use of social media more effective with certain demographics than others?
- Is the use of social media more effective with certain information products? For example—text versus a graphic depiction of risk.
- How might this practice complement traditional approaches such as official NOAA communications on web sites?
- What is the possible downside of using social media to communicate severe weather-related risks? Is social media vulnerable to false and inaccurate reports?

We understand that a key challenge for forecasters during a severe weather event is to convert the public's perception of safety (optimism bias) to a perception of risk and to induce them to take appropriate measures.

- In your view, what is the most effective way to communicate those risks to the general public to induce them to react appropriately to the risks?
- Please comment on the advantages/disadvantages of using clear and absolute terms versus probabilistic forecasts.
- In your view, what is the most effective way to communicate information when you face uncertain probabilities?
- Is there a related risk of losing credibility with the public by issuing false alarms?

In a 2014 Position Statement, The American Meteorological Society (AMS) posits that there is a "clear and compelling need" to enhance the utility of weather and climate research and the dissemination of atmospheric information using knowledge from the social sciences about how individuals and society interact with weather and climate."

- Would you agree with this statement? If so, how can social science research improve the dissemination of severe weather events to the public.

Appendix E: Allegations of Scientific Misconduct

Copies of the complaints submitted alleging violations of NOAA's Scientific Integrity Policy (NAO 202 735D: Scientific Integrity) appear in the following order in Appendix E.

- Allegation 2019-007; Craig McLean
- Allegation 2019-008; Dr. Lubchenco, Dr. Richard Spinrad, and Dr. Andrew Rosenberg
- Allegation 2019-009; Dr. Carl Childs
- Allegation 2019-0010; Representative Paul Tonko

The copies of the complaints are followed by a table that summarizes of the rationale for selection of the allegations under review.

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Scientific Integrity Filing

Craig McLean - NOAA Federal <craig.mclean@noaa.gov>

To: Cynthia Decker - NOAA Federal <cynthia.decker@noaa.gov>, DUS Scientific And Research Misconduct <research.misconduct@noaa.gov>

Cc: Tom Gleason <Tom.Gleason@noaa.gov>, Benjamin Friedman - NOAA Federal <benjamin.friedman@noaa.gov>

Wed, Sep 11, 2019 at 7:02 PM

Further to my initial complaint of September 10th, reporting among other conduct violations of scientific integrity policies of NOAA, found in NOAA Administrative Order (NAO) 202-735D, I provide the following further information:

1. Name of person making allegation: Craig N. McLean, Acting Chief Scientist, NOAA; Assistant Administrator for Research, NOAA.

2. Name of person or organization alleged to have committed the misconduct, contributed to the misconduct, or, should be interviewed in relation to the misconduct:

(a) The Executive Branch of the United States.

(b) President Donald J. Trump.

(c) Acting White House Chief of Staff, Mick Mulvaney.

(d) Secretary of Commerce Wilbur Ross.

(e) Department of Commerce Chief of Staff and Director of Policy, Earl Cornstock.

(f) NOAA acting Administrator, Neil Jacobs.

(g) NOAA director of Communications, Julie Roberts.

3. Facts: During the course of the recent development and passage of Hurricane Dorian, there was a complex issue involving the President publicly commenting on the path of the hurricane and conveying inaccurate and outdated information. The NWS Forecaster(s) corrected any public misunderstanding as a result of the President's public comments, and did so in an expert and timely way. There followed, on Friday, September 6, an unsigned press release from "NOAA" that inappropriately and incorrectly contradicted the NWS forecaster statement. My understanding is that this intervention to contradict the forecaster was not based on science but on external factors including reputation and appearance, or simply put, political. Our NOAA Scientific Integrity Policy and Code of Scientific Conduct found in NAO 202-735D make clear that all NOAA employees shall approach all scientific activities with honesty, objectivity, and complete, without allegiance to individuals, organizations, or ideology. The content of this press release is very concerning as it compromises the ability of NOAA to convey life-saving information necessary to avoid substantial and specific danger to public health and safety. If the public cannot trust our information, or we debate our forecaster's warnings and products, that specific danger arises.

4. Documents Generally Supporting the Allegation. Numerous. NOAA Press Release: <https://www.noaa.gov/news/statement-from-noaa>, and, <https://www.nytimes.com/2019/09/11/politics/trump-alabama-noaa>, Mulvaney Asked Agency to Repudiate Weather Forecasters, Trump Ordered Staff to Force Federal Agency to Contradict ... and others.

5. List of potential witnesses:

(a) Stu Levensbach, Chief of Staff, NOAA.

(b) Scott Smullen, deputy director, NOAA Public Affairs.

6. The Agency's conduct likely violates these and other provisions of NAO 202-735D, in at least but not limited to: §§5.01; 5.02 including 5.02(d) ("In no circumstance may any NOAA official ask or direct Federal scientists or other NOAA employees to suppress or alter scientific findings); 5.02(k) (ensure the sharing of best administrative and management practices that promote the integrity of NOAA's scientific activities); 5.01 (Code of Scientific Conduct, all subsections (a)-(d)); 7.01 (providing scientists the right to review and correct any official document such as a press release or report that cites or references their scientific work); 7.02 (suppress, alter, or otherwise impede the timely release of scientific or technological findings or conclusions, and, intimidate or coerce employees, contractors, recipients of financial assistance awards, or others to alter or censor scientific findings); 7.03 (decisions to approve or not approve a Fundamental Research Communication must be based only on whether the work is scientifically meritorious); 7.05 (NOAA science managers and supervisors will immediately report suspected cases of scientific or research misconduct through means established); and, generally, by §7.07, these violations also include violations of Guidelines for Scientific Integrity established in the March 9, 2009, Presidential Memo to Heads of the Executive Departments and Agencies; 8.01 (fabrication, falsification, or plagiarism in proposing, performing, or reviewing scientific and research activities, or in the products or reporting of these activities). The Agency's conduct likely violates this NAO including the Code of Scientific Conduct, and the Code of Ethics for Science Supervision and Management, as well as Presidential Memorandum for Heads of Executive Departments and Agencies, Guidelines for Scientific Integrity (March 9, 2009) with multiple deliberate violations and transgressions. The application of these rules and violation thereof should be apparent from the Facts in paragraph (3).

7. The Agency's conduct likely violates Department of Commerce Administrative Order (DAO) 219-1, Public Communications in at least but not limited to: §§4.01(a) (Release of public information about the Department's activities will be made promptly, accurately, and completely); 4.01(b) (In an emergency, and especially where there is an imminent risk to life or property, an official communication related to the emergency may be made, so long as the procedures of the relevant operating unit (if any) are followed and applicable law is complied with); 5.03(a) (be honest and accurate in all communications); 5.03(b) (act promptly to correct mistakes or erroneous information, both internally and externally); 5.03(c) (promote the free flow of scientific and technical information, 5.03(f) (provide prompt, accurate, and complete information to the public) and other sections. The application of these rules and violation thereof should be apparent from the Facts in paragraph (3).

8. The Executive Branch's conduct may violate 18 USC §2074 (knowingly issues or publishes any counterfeit weather forecast or warning that has been issued or published by the Weather Bureau, United States Signal Service, or other branch of the Government service). The facts currently being reported in the news media constitute matters to be investigated at a level higher than an administrative inquiry to the Scientific Integrity policies of NOAA.

9. The Agency's conduct likely rises to the value expressed in NAO 202-735D, Procedural Handbook, §2.03 (coercive manipulation, intimidation, misrepresentation, censorship, or other misconduct that affects the quality or reliability of scientific information may involve the loss of scientific integrity).

10. Conflict of interest: None.

11. Other submissions of Allegations: I took action to notify the Inspector General under the Whistle Blower Protection Act of these potential violations on September 7, I drafted and submitted an unpublished Letter to the Editor at the Washington Post on September 7, and I drafted and sent an all-hands memo to all OAR employees on September 8, addressing the impropriety of these collective actions.

I believe this is a comprehensive submission of allegations. I will cooperate with any government investigation to these matters, though I have limited personal knowledge of the direct matters involved. When the press release was issued was the first time I learned of any of this.

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September 9, 2019

Cynthia Decker
NOAA Scientific Integrity Officer
cynthia.decker@noaa.gov

Craig McLean
NOAA Acting Chief Scientist
Craig.mclean@noaa.gov

Dear Dr. Decker and Mr. McLean:

As former NOAA leaders, we are writing to request a comprehensive investigation into all potential violations of the NOAA Scientific Integrity Policy (cf. NOAA Administrative Order 202-735D: Scientific Integrity, and associated Procedural Handbook) related to communication around Hurricane Dorian. Recent actions to censor NWS scientists put public safety at risk, are inconsistent with NOAA's scientific integrity principles, violate the public trust, and compromise the independence and reliability of the National Weather Service.

We also request that you encourage NOAA and Department of Commerce political leadership to make positive, proactive statements that reaffirm the rights of NWS experts to share their expertise publicly regardless of the political inconvenience of that work. Public safety depends on unfettered access to accurate scientific information, and both NWS staff and the public are looking for affirmation that political interference in the communication of such information will not be tolerated.

First, an inaccurate, non-attributable press release was issued on Friday, September 6 that repudiated correct information provided by the National Weather Service that happened to contradict an erroneous presidential tweet. More troublingly, according to multiple reports, experts were told during Hurricane Dorian not to speak publicly about risks to various states, and to route any media requests to public affairs. It is unconscionable that government experts would be prevented from communicating relative risk of hurricanes directly to the public, or to go through political filters to do so, particularly in times of emergency.

The NOAA Scientific Integrity Policy explicitly gives experts the right to speak publicly about their scientific work without asking for permission. Section 4.05 states that:

"To be open and transparent about their work, and consistent with DAO 219-1 on (Public Communications) and their official duties, NOAA scientists may freely speak to the media and the public about scientific and technical matters based on their official work, including scientific and technical ideas, approaches, findings, and conclusions based on their official work. Additional guidance for employees is available in DAO 219-1. Communication by email or other electronic means in response to inquiries from the media, and concerning scientific or technical matters based on an employee's official work, are considered to be the same as oral communication and not subject to approval..."

The policy also gives scientists the right to review official communications that rely on their work. Specifically, Section 7.01 requires that NOAA ensures that:

"Appropriate rules and procedures are in place and implemented to preserve the integrity of the scientific process and the dissemination of its scientific products and information, including providing scientists the right to review and correct any official document (such as a press release or report) that cites or references their scientific work, to ensure that accuracy has been maintained after the clearance and editing process..."

We are encouraged by Mr. McLean's pledge to investigate the circumstances around the September 6 NOAA press release. However, we believe that the investigation should be considerably more comprehensive to measure the full extent of losses of scientific integrity at NOAA in order to develop a plan that prevents future losses of scientific integrity.

Specifically, we would ask you to consider the following:

- Did the White House or Department of Commerce put pressure on NOAA to publicly undermine the NWS Birmingham social media?
- Who within NOAA and NWS was involved in developing the NOAA September 6 statement?
- Who within NOAA, NWS, the Department of Commerce, and the White House was involved in restricting the ability of NWS staff to publicly communicate up-to-date information about Hurricane Dorian and when were those restrictions communicated?
- Why were these restrictions deemed necessary?

Maintaining high scientific integrity standards is essential to the ability of NOAA and the National Weather Service to protect the public and maintain their trust. Thank you in advance for considering this request for a thorough investigation.

Sincerely,

Dr. Jane Lubchenco, Oregon State University
NOAA Administrator, 2009-2013

Dr. Richard Spinrad, Marine Technology Society
NOAA Chief Scientist, 2014-2017
NOAA Assistant Administrator, 2003-2010

Dr. Andrew Rosenberg, Union of Concerned Scientists
NOAA Deputy Director, National Marine Fisheries Service, 1998-2000

NOAA Scientific Integrity Office
Allegation 2019-009 Allegation

Carl Childs, President, Emergency Response Division Chapter

Email Message 09/11/19

Dear Sir or Madam,

I am writing in regard to the series of events that occurred last week surrounding warnings and advisories from the federal government about the approach of hurricane Dorian. Several of these events constitute scientific misconduct under NOAA's Scientific Integrity Policy (NAO 202-735D).

On the morning of Sept. 1, the President tweeted that Alabama, as well as Florida, South Carolina, North Carolina and Georgia, would "most likely be hit (much) harder than anticipated." This did not agree with the National Hurricane Center (Miami FL) discussion 32, produced at 0500 EDT on Sept 1 by Forecaster Pasch, or any later discussions.

It is unclear what led up to the President's mistaken remarks. He may have received an inadequate briefing by representatives of the agency or he may have disregarded what he was told. Regardless of the reason, the statements of the President regarding potential hazards from Dorian in the state of Alabama were incorrect.

About 20 minutes after the President's tweets, the National Weather Service's (NWS) Weather Forecast Office (WFO) in Birmingham, Ala., appeared to step in on Twitter to clear up the confusion about the storm's effects on the state.

"Alabama will NOT see any impacts from #Dorian. We repeat, no impacts from Hurricane #Dorian will be felt across Alabama. The system will remain too far east."

Misleading guidance from any part of the Federal government regarding threats to the public health and welfare are potentially dangerous in and of themselves. The quick response of the Birmingham WFO was entirely necessary and appropriate to counter a high profile incorrect message affecting public safety. Additionally, this statement as well as the forecasted hurricane impact maps constitute emergency official communications, covered by Department of Commerce Directive DAO- 209-Section 10. As such, they may be made "without first obtaining approval, so long as the procedures of the relevant operating unit (if any) are followed and applicable law is complied with."

The White House subsequently released an altered NWS forecast of the hurricane risk area ("the Sharpie map"). It is unclear who was responsible for this modification. If this alteration was done by a NOAA employee then this constitutes a clear violation of NAO 202-735D on the grounds of falsifying data. It is also possible that this alteration of the forecast trajectory could constitute a crime as a counterfeit forecast under 18 U.S. Code § 2074.

On September 6, with no attribution to a specific official, NOAA public relations released the following statement

"From Wednesday, August 28, through Monday, September 2, the information provided by NOAA and the National Hurricane Center to President Trump and the wider public demonstrated that tropical-storm-force winds from Hurricane Dorian could impact Alabama. This is clearly demonstrated in Hurricane Advisories #15 through #41, which can be viewed at the following link (not provided here)."

"The Birmingham National Weather Service's Sunday morning tweet spoke in absolute terms that were inconsistent with probabilities from the best forecast products available at the time."

No attempt was apparently made to contact the NOAA staff who generated the original (unmodified) hurricane forecast before the statement release. The September 6 statement was an intentional misrepresentation of scientific findings that damages the scientific standing of the NWS and the entire agency. It casts unwarranted doubt on the performance of NWS forecasters and jeopardizes public faith in NOAA as an impartial communicator of vital public safety information. It is clear that the statement from NOAA management serves only to deflect criticism of the source of the misleading information at the expense of NWS employees who safeguarded the public in a manner consistent with the best scientific information available.

NAO 202-735D: (Scientific Integrity) Section 7.01 requires that appropriate rules and procedures are in place and implemented to preserve the integrity of the scientific process and the dissemination of its scientific products and information, including providing scientists the right to review and correct any official document (such as a press release or report) that cites or references their scientific work, to ensure that accuracy has been maintained after the clearance and editing process.

This was not done in the September 6 release.

Section 8.01 of the same directive says that Scientific and Research Misconduct is defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing scientific and research activities, or in the products or reporting of these activities. Scientific and Research Misconduct specifically includes: intentional circumvention of the integrity of the science and research process by violation of NOAA's Code of Ethics for Science Supervision and Management; and actions that compromise the scientific process by violating NOAA's Code of Scientific Conduct. At minimum, there is the appearance of violation of Section 8.01 by NOAA Public Affairs.

I am the president of the bargaining unit representing the scientists in NOAA's Emergency Response Division (OR&R/NOS) and this matter is of immediate and direct concern to our members. We are charged with providing scientific assessments of the threat to the public welfare resulting from natural disasters, oil spills and hazardous materials releases. We cannot be expected to perform these critical responsibilities in an environment where our

own leadership will second guess our judgement based on trivial political concerns. I look forward to your rapid response and the results of your investigation into these clear violations of our Scientific Integrity Policy.

Respectfully,
Carl R. Childs, Ph.D
President, ERD Chapter
IFPTE Local 8A

carl.childs@noaa.gov

206-856-8815

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TONKO.HOUSE.GOV
@REP.PAUL.TONKO

2369 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-5076

19 DOVE STREET, SUITE 302
ALBANY, NY 12210
(518) 465-0700

61 CHURCH STREET, ROOM 309
AMSTERDAM, NY 12010
(518) 843-3400

105 JAY STREET, ROOM 15
SCHENECTADY, NY 12305
(518) 374-4547



PAUL D. TONKO

U.S. HOUSE OF REPRESENTATIVES
20TH DISTRICT, NEW YORK

September 10, 2019

COMMITTEE ON ENERGY AND COMMERCE
CHAIR, SUBCOMMITTEE ON ENVIRONMENT
AND CLIMATE CHANGE
SUBCOMMITTEE ON ENERGY
SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS
COMMITTEE ON NATURAL RESOURCES
SUBCOMMITTEE ON NATIONAL PARKS, FORESTS,
AND PUBLIC LANDS
COMMITTEE ON SCIENCE, SPACE,
AND TECHNOLOGY
SUBCOMMITTEE ON ENVIRONMENT
SUBCOMMITTEE ON RESEARCH AND TECHNOLOGY

Dr. Cynthia J. Decker, Scientific Integrity Officer
National Oceanic and Atmospheric Administration (NOAA)
1401 Constitution Avenue NW, Room 5128
Washington, DC 20230

Dear Dr. Decker,

I am writing to request a formal investigation by the National Oceanic and Atmospheric Administration (NOAA) into actions allegedly taken by Administration appointees following President Trump's unsupported public statements about Hurricane Dorian path projections, in order to determine precisely whether these actions violated the NOAA Administrative Order on Scientific Integrity.

Recent reporting in *The New York Times*, conducted by three veteran political reporters who cite multiple sources with knowledge of the acts in question, indicates that political leadership responsible for overseeing NOAA may have communicated threats and applied political pressure in an effort to suppress the release of vital, current forecasting information critical to emergency preparedness. I have also received evidence of an agency-wide directive sent on September 1, 2019 restricting National Weather Service (NWS) from releasing information that could be seen as contradicting President Trump's false claim that Alabama would "most likely be hit (much) harder than anticipated," even as forecast guidance indicated that the state was not at risk. This was reportedly followed by an unsigned statement on September 6, 2019 attributed only to NOAA generally that supported the president's scientifically groundless assertions.

When the National Weather Service office in Birmingham, Alabama identified the presence of inaccurate information about the storm, it clarified to the public that Alabama would not see any impacts from Hurricane Dorian. Following this correction, the office was rebuked by NOAA in a September 6, 2019 statement attributable to an unnamed NOAA spokesperson, who asserted that the Birmingham office "spoke in absolute terms that were inconsistent with probabilities from the best forecast products available at the time." Since its release, numerous former NOAA leaders as well as meteorologists around the country have criticized NOAA's statement for its rebuke of the Birmingham office, and voiced concerns about political interference in science. *The Washington Post* reported that NOAA's acting Chief Scientist Craig McLean found that this "intervention to contradict the forecaster was not based on science but on external factors including reputation and appearance, or simply put, political," and that he will be pursuing potential violations of the NOAA Administrative Order on Scientific Integrity.

Countless state and local leaders, first responders, emergency managers and American households depend on the communication of clear, scientifically sound information by the National Weather Service to make critical and sometimes life-saving decisions. The NOAA Administrative Order on Scientific Integrity has instituted measures to ensure that such science conducted by the agency is safeguarded from interference. The order states clearly that NOAA employees, whether political appointees or civil servants, must not "intimidate or coerce employees, contractors...into altering or censoring scientific findings" or "suppress, alter, or otherwise impede the timely release of scientific or technological findings or conclusions unless explicitly required by a Department or government-wide statute, regulation, Executive Order, Presidential Memorandum, or other legal authority."


As one of America's foremost scientific agencies responsible for supporting public safety, NOAA's policy of upholding scientific integrity standards is one of the most important in our federal government. The reported abuses by high-ranking political appointees, in contravention of agency convention and best practices, appear to violate the NOAA Administrative Order on Scientific Integrity. This policy exists for the very purpose of preventing political interests from interfering with the agency's protection of the safety and welfare of the American people.

Accordingly, I ask NOAA to follow the guidance of your own Administrative Order on Scientific Integrity, which says it is intended to strengthen widespread confidence in the quality, validity, and reliability of NOAA science, and uphold your agency's commitment to support for science, the safety of the American people and the official duties of your employees. I respectfully request you open an investigation into this matter immediately.

Should any employee or contractor of NOAA experience retaliation in relation to this matter, Congress will exercise its oversight authority and will expect NOAA to fully investigate such subsequent violations of your agency's scientific integrity policy.

Thank you for your prompt attention to this critical matter.

Sincerely,

A handwritten signature in cursive script that reads "Paul D. Tonko".

PAUL D. TONKO
Member of Congress

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Table E-1. Rationale for Selection of Reviewed Allegations

Policies Allegedly Violated	Complainants	Response
NAO 202-735 D		
Section 4.05: NOAA scientists may freely speak to the media and public about scientific and technical matters based on their official work.	Lubchenco, Rosenberg, Spinrad. Allegation 2019-008	Allegation was accepted and subsumed as part of Allegation 1
Section 5.02(d): Ensure NOAA and Department of Commerce public communication guidance's provide procedures by which scientist may speak to the media and public about scientific and technical matters based on their official work and areas of expertise.	McLean. Allegation 2019-007	Allegation was accepted and subsumed as part of Allegation 1
Sections 5.02(k): Ensure the sharing of best administrative and management practices that promote the integrity of NOAA's scientific activities.	McLean. Allegation 2019-007	Allegation was accepted and subsumed as part of Allegation 1.
Section 6.01: <i>Code of Scientific Conduct</i> .	McLean. Allegation 2019-007	Allegation was dismissed, did not rise to the level of this inquiry. Section 6.01 focuses on the agency's research and scientific efforts.
Section 7.01: NOAA science managers and supervisors will adhere to the guidelines for Scientific Integrity established in the March 9, 2009, <i>Presidential Memo to Heads of the Executive Department and Agencies</i> and NOAA's Scientific Integrity Policy.	McLean. Allegation 2019-007 Lubchenco, Rosenberg, Spinrad. Allegation 2019-008 Childs. Allegation 2019-009	Allegation was accepted and discussed herein as Allegation 2.

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<p>Section 7.02: NOAA science managers and supervisors must adhere to NOAA's Code for Ethics for Science Supervision and Management.</p>	<p>McLean. Allegation 2019-007 Tonko. Allegation 2019-0010</p>	<p>Allegation was accepted and discussed herein as Allegation 3.</p>
<p>Section 7.03: Decisions to approve or not approve a Fundamental Research Communications (FRCs) must be based ONLY on where the work is scientifically meritorious NOT on policy, budget, or management implications.</p>	<p>McLean. Allegation 2019-007</p>	<p>Allegation was dismissed; the September 6 Statement is not an FRC.</p>
<p>Section 8.01: Scientific and Research Misconduct is defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing scientific and research activities, or in the products or reporting of these activities.</p>	<p>McLean. Allegation 2019-007 Childs. Allegation 2019-009</p>	<p>Allegation was accepted but subsumed as part of the Panel's adjudication standards (6.2 Adjudication Standards).</p>
<p>Procedural Handbook accompanying NAO 202-735D</p>		
<p>Section 2.03: Coercive manipulation, intimidation, misrepresentation, censorship, or other misconduct that affects the quality or reliability of scientific information may involve the loss of scientific integrity.</p>	<p>McLean. Allegation 2019-007</p>	<p>Allegation was accepted but subsumed as part of the Panel's adjudication standards (6.2 Adjudication Standards).</p>
<p>Department of Commerce DAO 219-1</p>		
<p>Section 4.01: Guidelines for the release and development of Department of Commerce Public Communications.</p>	<p>McLean. Allegation 2019-007</p>	<p>Allegation was accepted and subsumed as part of Allegation 1.</p>
<p>Section 5.03: All Commerce public affairs employees shall follow best practices.</p>	<p>McLean. Allegation 2019-007</p>	<p>Allegation was accepted and subsumed as part of Allegation 1, 2, and 3.</p>

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U.S. Code: Title 18—Crimes and Criminal Procedures		
18 U.S. Code § 2074 False weather reports	McLean. Allegation 2019-007	Allegation was dismissed, out of the scope of this investigation.
	Childs. Allegation 2019-009	

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Appendix F: September 1 Birmingham Tweet and September 6 Statement

September 1 Birmingham WFO Tweet



NWS Birmingham ✓
@NWSBirmingham

Alabama will NOT see any impacts from #Dorian. We repeat, no impacts from Hurricane #Dorian will be felt across Alabama. The system will remain too far east.
[#alwx](#)

9:11 AM · Sep 1, 2019 · [TweetDeck](#)

September 6 NOAA Public Statement



NOAA COMMUNICATIONS
UNITED STATES DEPARTMENT OF COMMERCE



Statement attributable to a NOAA Spokesperson

September 6, 2019

From Wednesday, August 28, through Monday, September 2, the information provided by NOAA and the National Hurricane Center to President Trump and the wider public demonstrated that tropical-storm-force winds from Hurricane Dorian could impact Alabama. This is clearly demonstrated in Hurricane Advisories #15 through #41, which can be viewed at the following [link](#).

The Birmingham National Weather Service's Sunday morning tweet spoke in absolute terms that were inconsistent with probabilities from the best forecast products available at the time.

.....

NOAA's mission is to understand and predict changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and to conserve and manage our coastal and marine resources. Join us on [Twitter](#), [Facebook](#), [Instagram](#) and our other [social media channels](#).

Stay Connected:    

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Appendix G: Weather Forecast Office Tweets Using Absolute Terms

Tweet 1

National Weather Service (NWS) New Orleans Weather Forecast Office (WFO). September 4, 2013. "TD 7 has strengthened into a tropical storm. It has been named TS Gabrielle and is the 7th named storm of the season. No impact to LA/MS."



NWS New Orleans ✓
@NWSNewOrleans

TD 7 has strengthened into a tropical storm. It has been named TS Gabrielle and is the 7th named storm of the season. No impact to LA/MS.

10:37 PM · Sep 4, 2013 · [Twitter Web Client](#)

Tweet 2

NWS Birmingham WFO. November 6, 2017. "This will have no impact whatsoever on central Alabama."



NWS Birmingham ✓
@NWSBirmingham

This will have no impact whatsoever on central Alabama.



National Hurricane Center ✓ @NHC_Atlantic · Nov 6, 2017

Tropical Storm #Rina Advisory 4: Depression Becomes Tropical Storm Rina.
go.usa.gov/W3H

9:37 PM · Nov 6, 2017 · [Hootsuite](#)

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Tweet 3

NWS Mobile WFO. May 28, 2016. "Tropical Depression #2 forecast to become TS Bonnie later today. NO IMPACT TO GULF COAST."



NWS Mobile ✓
@NWSMobile

Tropical Depression #2 forecast to become TS Bonnie later today. NO IMPACT TO GULF COAST.

[hurricanes.gov](https://www.hurricanes.gov)



National Hurricane Center ✓ @NHC_Atlantic · May 28, 2016

Tropical Depression #Two advisory 4 issued. Depression forecast to become a tropical storm later today [go.usa.gov/W3H](https://www.go.usa.gov/W3H)

11:04 AM · May 28, 2016 · [TweetDeck](#)

Tweet 4

NWS Mobile WFO. May 19, 2019. "HEADS UP (5/19) – Special Tropical Weather Outlook issued by the National Hurricane Center for an area of low pressure expected to form southwest of Bermuda. This will have NO IMPACT to our area. #mobwx"



NWS Mobile ✓ @NWSMobile · May 19, 2019

HEADS UP [05/19] - Special Tropical Weather Outlook issued by the National Hurricane Center for an area of low pressure expected to form southwest of Bermuda. This will have NO IMPACT to our area. #mobwx

[hurricanes.gov](https://www.hurricanes.gov)

[weather.gov/srh/tropical?o...](https://www.weather.gov/srh/tropical?o...)



National Hurricane Center ✓ @NHC_Atlantic · May 19, 2019

130p Sunday: An area of low pressure expected to form SW of Bermuda has a 40% (medium) chance of becoming a short-lived subtropical or tropical cyclone by Tuesday while moving to the N or NE. Interests in Bermuda should monitor this system's progress. More [hurricanes.gov](https://www.hurricanes.gov)

[Show this thread](#)

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Tweet 5

NWS Hanford WFO. March 5, 2019. "7:55 PM: Current radar imagery shows moderate to heavy rain with embedded thunderstorms moving through the southern San Joaquin Valley this evening, Blackwells Corner, Delano, Cocoran, Alpaugh, and Porterville will be impacted over the next couple of hours."



NWS Hanford ✓ @NWSHanford · Mar 5, 2019

7:55 PM: Current radar imagery shows moderate to heavy rain with embedded thunderstorms moving through the southern San Joaquin Valley this evening. Blackwells Corner, Delano, Corcoran, Alpaugh, and Porterville **will be impacted** over the next couple of hours.

Tweet 6

NWS Salt Lake City WFO. June 12, 2019. "We have issued a Flood Warning for the Duchesne River in Duchesne County through early next week. Lowland areas along the Duchesne River from Hanna downstream to Myton as well as upstream roads, bridges, and infrastructure will be impacted by flood waters."



NWS Salt Lake City ✓
@NWSsaltLakeCity

We have issued a Flood Warning for the Duchesne River in Duchesne County through early next week.

Lowland areas along the Duchesne River from Hanna downstream to Myton as well as upstream roads, bridges, and infrastructure will be impacted by flood waters.

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Tweet 7

NWS Glasgow WFO. June 9, 2016. "Areas along and south of Highway 200 will be impacted with large hail and winds to 60 mph possible. #mtwx"



NWS Glasgow ✓
@NWSGlasgow

Areas along and south of Highway 200 will be impacted with large hail and winds to 60 mph possible. #mtwx
weather.gov/images/crh/imp...

6:58 PM · Jun 9, 2016 · Twitter Web Client

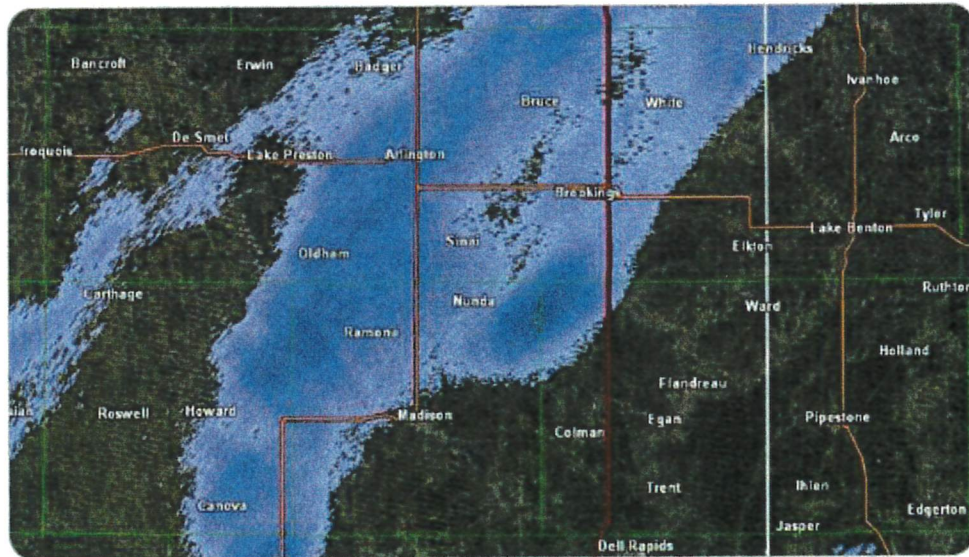
Tweet 8

NWS Sioux Falls WFO. February 14, 2019. "Look for light snow and visibilities to a half mile or lower along the I-29 corridor through 1 pm. Areas from Brookings south through Sioux Falls and Beresford will be impacted."



NWS Sioux Falls ✓ @NWSSiouxFalls · Feb 14, 2019

Look for light snow and visibilities to a half mile or lower along the I-29 corridor through 1 pm. Areas from Brookings south through Sioux Falls and Beresford **will be impacted.**



Appendix H: List of Records Reviewed

The following is a record of documents received from NOAA that the Academy Team reviewed.

Allegations Submitted to the NOAA Scientific Integrity Officer

Childs, Carl R. 2019. "Allegation 2019-009." September 11.

Lubchenco, Jane, Richard Spinrad, and Andrew Rosenberg. 2019. "Allegation 2019-008." September 9.

McLean, Craig N. 2019. "Allegation 2019-007." September 10.

Tonko, Paul D. 2019. "Allegation 2019-0010." September 10.

Interview Transcripts and their Associated Exhibits and Documents

Darden, Chris, interview by Academy Team. 2020. "Interview of Chris Darden." Calera, AL, (January 21).

Darden, Chris, interview by NOAA General Counsel. 2019. "Interview of Chris Darden." Calera, AL, (October 21).

Friedman, Benjamin, interview by NOAA General Counsel. 2019. "Interview of Benjamin Friedman." Silver Spring, MD, (October 24).

Jacobs, Neil, interview by Academy Team. 2020. "Interview of Neil Jacobs." Washington, DC, (February 3).

Jacobs, Neil, interview by NOAA General Counsel. 2019. "Interview of Neil Jacobs." Washington, DC, (November 6).

Levenbach, Stuart, interview by NOAA General Counsel. 2019. "Interview of Stuart Levenbach." Washington, DC, (October 29).

McLean, Craig, interview by Academy Team. 2020. "Interview of Craig McLean." Washington, DC, (January 23).

NWS Birmingham WFO Meteorologist. 2020. "Written Statement from Decision Support Services Staff Member on September 1, 2019." Calera, AL, (January 22).

Roberts, Julie Kay, interview by Academy Team. 2020. "Interview of Julie Roberts." Washington, DC, (January 23).

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Roberts, Julie Kay, interview by NOAA General Counsel. 2019. "Interview of Julie Roberts." Washington, DC, (October 11).

Uccellini, Louis, interview by NOAA General Counsel. 2019. "Interview of Louis Uccellini" Silver Spring, MD, (November 26).

Vaccaro, Chris, interview by Academy Team. 2020. "Interview of Chris Vaccaro." Washington, DC, (January 20).

Social Media Related to This Investigation

National Weather Service Birmingham Weather Forecast Office. 2019. Twitter post. September 1, 10:11 a.m. Eastern Time Zone.

NOAA Communications. 2019. "Statement attributable to a NOAA Spokesperson." September 6, 4:45 p.m. Eastern Time Zone.

President Donald Trump. 2019. Twitter post. September 1, 9:51 a.m. Eastern Time Zone.

Freedom of Information Act (FOIA) Documents

Documents released from FOIA requests.

Memoranda, Letters, and Transmittals Regarding this Investigation

Decker, Cynthia J. 2019. "Memorandum from Cynthia J. Decker for The Record, Subject: Scientific Integrity Allegations 2019-007/8/9/10 Inquiry and Investigation Process."

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Friedman, Benjamin. 2019. "Recusal of DUS-O Benjamin Friedman, appointing Stephen Volz the Determining Officer."

Congressional Documents

Memoranda and Letters Regarding Other Ongoing Investigations

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Johnson, Eddie Bernice. 2019. "Letter to Peggy E. Gustafson." September 10.

—. 2019. "Letter to President Donald J. Trump." September 5.

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—. 2019. "Letter to Secretary Wilbur Ross." October 10.

Johnson, Eddie Bernice, and Mikie Sherrill. 2019. "Letter to Secretary Wilbur Ross." September 11.

Johnson, Eddie Bernice, Lizzie Fletcher, and Mikie Sherrill. 2019. "Letter to Acting Under Secretary Dr. Neil Jacobs." September 12.

Testimony

Clement, Joel. 2019. "Testimony of Joel Clement from the Joint Hearing on Scientific Integrity in Federal Agencies." July 17.

Halpern, Michael. 2019. "Testimony for Michael Halpern from the Joint Subcommittee Hearing on Scientific Integrity in Federal Agencies." July 17.

Johnson, Eddie Bernice. 2019. "Opening Statement from the Joint Subcommittee Hearing: Scientific Integrity in Federal Agencies." July 17.

Pielke Jr., Roger. 2019. "Statement of Dr. Roger Pielke, Jr. to the Subcommittee on Research and Technology & Subcommittee on Investigations and Oversight." July 17.

Sherrill, Mikie. 2019. "Opening Statement from the Joint Subcommittee Hearing: Scientific Integrity in Federal Agencies." July 19.

Stevens, Haley. 2019. "Opening Statement from the Joint Subcommittee Hearing: Scientific Integrity in Federal Agencies." July 17.

Tonko, Paul. 2019. "Opening Statement from the Joint Subcommittee Hearing: Scientific Integrity in Federal Agencies." July 17.

Federal Agencies' Policies, Procedures, Reports, and Other Sources

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Other Federal Agencies

National Aeronautics and Space Administration, Office of Inspector General. 2008. "Investigation Summary Regarding Allegations that NASA Suppressed Climate Change Science and Denied Media Access to Dr. James E. Hansen, a NASA Scientist." June 2.

National Institutes of Health, Office of the Director. 2012. "NIH Policies and Procedures for Promoting Scientific Integrity." November.

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U.S. Department of Interior, Office of Inspector General. 2019. "FWS Alleged Scientific Integrity Violation and Retaliation." August 28.

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U.S. Government Accountability Office. Scientific Integrity Policies. Additional Actions Could Strengthen Integrity of Federal Research (GAO-19-265). April 2019.

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Holden, John P. 2010. "Memorandum to the Heads of Executive Departments and Agencies, Subject: Scientific Integrity." December 17.

Kerry, Cameron F. 2011. "Memorandum to all Chief Counsels and General Counsels, Subject: Implementation of Administration Policy on Scientific Integrity." December 16.

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Other Social Media

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Relevant News Articles Related to this Investigation

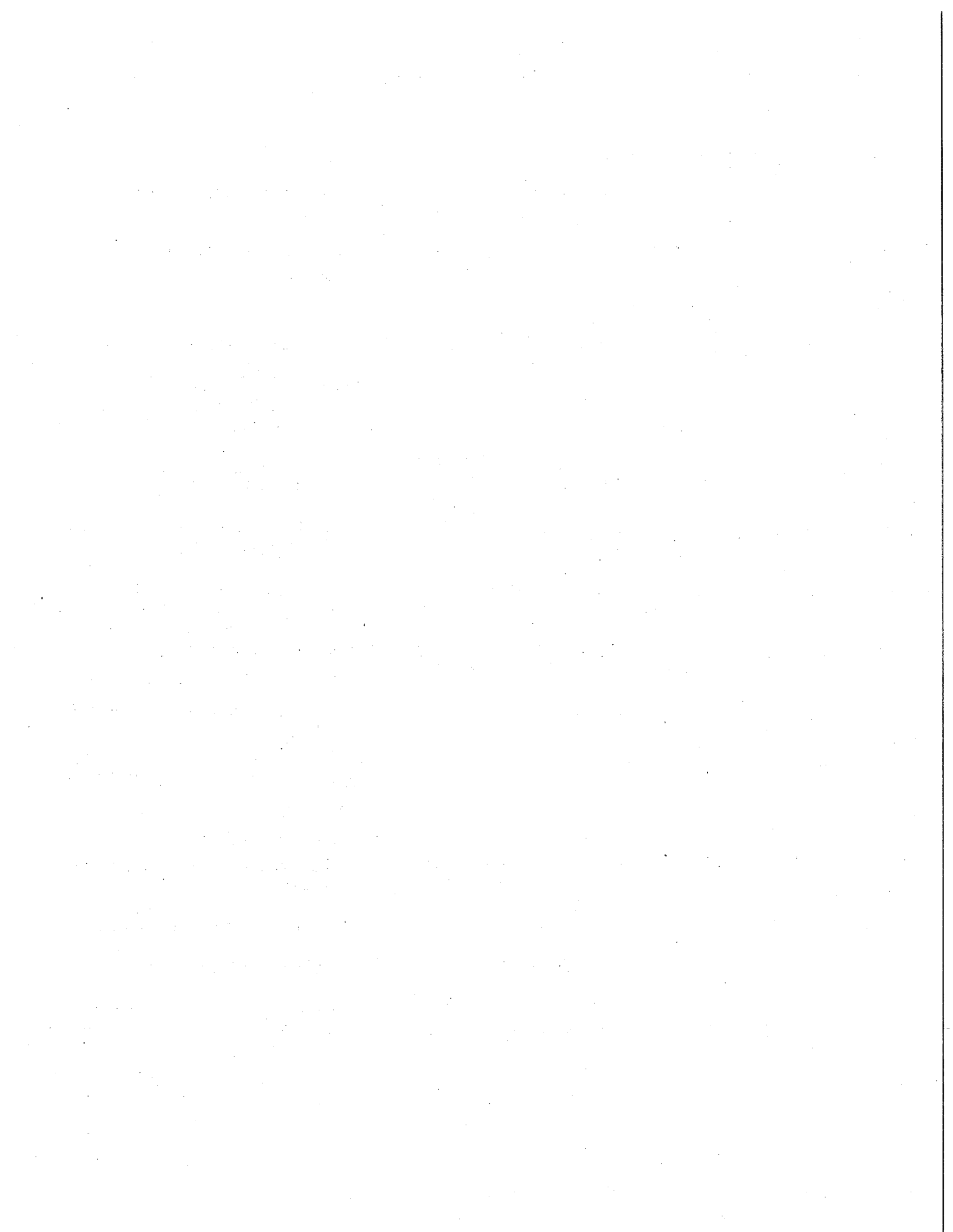
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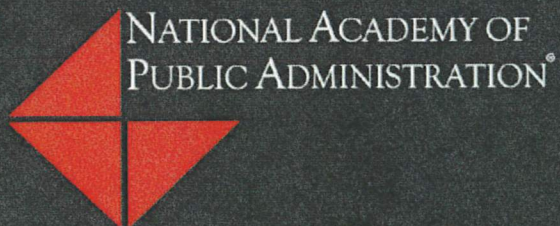
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1600 K Street, NW
Suite 400
Washington, DC 20006

Phone: (202) 347-3190
Fax: (202) 223-0823
Website: www.napawash.org