

# NOAA Draft Scientific Integrity Policy

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*Disposition of Comments Received*

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## **Introduction:**

NOAA released its draft Administrative Order on Scientific Integrity, along with the draft Procedural Handbook, on June 20 for a two-month public comment period. Throughout the comment period, we engaged with stakeholders and NOAA staff to receive a broad set of comments. When the comment period ended on August 20, 2011, we had received a total of 17,597 comments. Over 16,000 of these comments were identical in their text, as they resulted from a form letter provided by members of the Union of Concerned Scientists' activist and scientist communities. The remaining comments came from a wide range of sources, from large organizations, to individuals, to NOAA employees. NOAA leadership also hosted an internal NOAA "town hall" meeting, which was webcast to NOAA employees; a constituent telecom; and a White House roundtable with high-level science leaders, all focused on providing information about NOAA's draft policy and receiving feedback. This document is our response to the unique set of comments we received, including the changes we plan to make to the final Administrative Order and Handbook as a result of the comments. Additional clarification and guidance will be provided to staff and the public through our Scientific Integrity Commons website: <http://nrc.noaa.gov/scientificintegrity.html>.

## **Process for Addressing Comments:**

We have distilled the comments received and responded here with specific recommendations for changes to the Scientific Integrity Policy. We have combined comments into five major categories for ease of reference: Misconduct, Communication, Culture of Integrity and Transparency, Peer Review and Data Management, and Implementation/General Questions. Within these groups we have further combined similar or overlapping comments for space. We have not addressed comments that were not directly related to the draft Scientific Integrity Policy and Procedural Handbook.

We have included the full set of comments received during the public and internal NOAA reviews as appendices to this document for reference. In some cases, the names of individuals referenced in a comment have been redacted to protect their anonymity. We have not included the names of all who provided comments, as this would have posed an excessive administrative burden.

## **Summary Comments and NOAA Responses:**

### **General Comments, Implementation, and Process Questions**

*Comment:* Scientific discovery and understanding requires the dynamic dialogue between researchers and the dissemination of data, findings, and conclusions...Therefore, we recommend NOAA strengthen Principle .05 in Section 4, by removing the word "encouraged" and adding "expected" so that the second sentence reads, "NOAA scientists are, therefore, expected, consistent with Federal ethics laws and regulation, to engage with their peers in academia, industry..."

*Response:* We understand and agree with the rationale behind the recommendation, but we do not believe a NOAA-wide policy is the best forum for setting expectations for engagement with one's peers.

*Comment:* Section 6.01.d, paragraph 3 instructs scientists to follow laws and policies related to protection of research animals. This paragraph should also apply to human research subjects (e.g., studies of harvesting or consumption of fish, socioeconomic research).

*Response:* We agree and have made the recommended changes (see policy lines 364-365).

*Comment:* These standards should also apply to all staff of USA Fishery Management Councils. Else, there is an inherent discrepancy in expectations of conduct of those participating in USA fishery management.

*Response:* Fishery Management Councils, established by the Magnuson-Stevens Fishery Conservation and Management Act, are quasi-federal entities, with members from the private sector, academia, and state and local governments. The Magnuson-Stevens Act establishes separate requirements for ensuring the quality of scientific information relied upon by the Councils, including peer review, and also establishes rules pertaining to conflicts of interests. Each Fishery Management Council is funded through federal grants. Section 2 of the NOAA Scientific Integrity Policy provides that it applies only to 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 all contractors who assist NOAA staff with such activities. For purposes of the Policy, employees of Fishery Management Councils are not considered NOAA employees or contractors. However, as recipients of NOAA financial assistance awards, the Fishery Management Councils are subject to the Department of Commerce Financial Assistance Standard Terms and Conditions and to NOAA award conditions that address scientific or research misconduct and codes of conduct, including having the primary responsibility for promptly notifying NOAA concerning allegations of scientific or research misconduct in connection with a NOAA award, investigating such allegations of scientific or research misconduct, and reporting the results of its investigations to NOAA for appropriate disposition. For this purpose, the Councils may rely on their internal policies and procedures for investigating allegations of scientific or research misconduct. The responsibilities of NOAA grant recipients are referenced in Section 5.03 of the Policy and Section 6 of the Handbook. In addition, as described in Section 4 of the Policy, NOAA commits to disseminating information to its grantees, including the Councils, to ensure that they are fully aware of their rights regarding publication of their research, communication with the media and the public, participation in professional scientific societies, and their responsibility to report waste, fraud, and abuse. NOAA will also work to ensure that required training for Fishery

Management Council members and employees includes information about scientific integrity and conflicts of interest.

*Comment:* How does NOAA deal with an issue when an authorizing body above NOAA (i.e., for example DOC, Congress, etc...) submits in public documents or records that a person or persons have had or has expertise in an subject area, when its peer scientific organizations does not or has not recognized that person (or persons) as experts in that subject area, especially when the authorizing body does not possess experts in the same area of expertise? Basically, can someone "higher up" in your organization state that you are an expert in a field without having any knowledge or expertise in that field?

*Response:* The answer to the final question is "no." Should such an event happen, it will be addressed on a case-by-case basis and will rely on the codes of conduct established in the Policy.

*Comment:* How does NOAA address any conflict of interest, educational background or expertise of a NOAA employee or contractor PRIOR to their employment with NOAA? (Example: An employee or contractor is known to have educational training and/or experience in one subject area, but speaks on behalf of the government as a NOAA employee or contractor in another area in which there is no evidence of basic education, knowledge, or expertise in that area).

*Response:* The Code of Scientific Conduct requires employees to report any actual or apparent conflicts of interest, the nature and scope of which are defined by federal statute. The Department of Commerce Office of General Counsel ethics staff is available for consultations and to provide guidance if a conflict of interest exists. However, we do not believe the example highlighted represents a conflict of interest. Instead, we believe this scenario would be addressed through Section 7d of the Policy, which states "when scientific or technological information is considered in policy decisions, the information will be subject to well-established scientific processes, including peer review, where appropriate, and policy decisions shall appropriately and accurately reflect the best available science in compliance with the relevant statutory standards." In the stated scenario, the employee is either accurately representing the science or is not, regardless of her education or expertise in the area. Similarly, if an employee is falsely representing herself as an expert, this would be a violation of the Code of Scientific Conduct and a violation of the Scientific Integrity Policy. Note, of course, that any employee is free to express their personal opinion on any scientific matters, so long as they make clear they are expressing a personal opinion.

*Comment:* Section 4, NOAA Principles of Scientific Integrity. These principles represent the foundation for all that NOAA undertakes in the scientific realm, and as such, are paramount for the development of practical standards of performance by all at NOAA. My point is that there is a bit of an inconsistency in tone throughout the set of principles identified in Section 4; specifically, in some cases the tone is one of tolerance on the part of the agency, while in other cases that tone is, more appropriately, one

of encouragement. Even the comparative language bears this out. Note that, for example paragraph 2 states that "NOAA scientists are encouraged to publish data ...", while paragraph 6 states that "NOAA supports the election ..." In paragraph 6 NOAA should make unequivocal its strong advocacy for, and encouragement of the election or appointment of its scientists and engineers in professional organizations. Merely "supporting" such sends, at best, a weak message, and will not place NOAA in a unique position to attract the best scientists and engineers to its ranks. I would note that in this section (Section 4) of the policy, paragraphs 3, 6, and 7 are notably limp in their tone of encouragement, and if this language could be made stronger and more of an "encouraging" nature, it would be a powerful statement of leadership by NOAA.

*Comment:* Review document carefully for tone. Should be positive (e.g., "foster" vs. "allow").

*Response:* We agree and have reviewed the documents and made a variety of changes to make the overall tone more positive and encouraging.

*Comment:* Test the policy by applying a case study (e.g., Deep Water Horizon)

*Response:* While we feel it is important to continually evaluate the policy and our performance in implementing the policy, we believe that each case would be different enough that any lessons-learned would be too unique to justify the effort involved. We will review and assess the policy annually and will report the results of our review to the public, either through our scientific integrity web pages or through the Federal Register, in the case of major changes to the policy.

*Comment:* Misuse of science once it leaves NOAA – scientist can make complaint. DOI created council of career representatives to take concerns outside of home agency. Consider similar council within DOC (i.e., NIST, ESA). Also could call on DOC Council if DUS conflicted in misconduct allegation. Set up system to have SAB review policy for effectiveness every X years.

*Comment:* That the policy consider including an obligation for the NOAA Ombudsman Office to investigate alleged violations of the Integrity Policy brought by the stakeholder community.

*Response:* This idea merits consideration, and we will raise it with the other bureaus within the Department of Commerce. As stated above, we will conduct internal reviews of the policy on an annual basis through the NOAA Research Council. If we determine that creating an ombudsman would be worthwhile, then we will update the policy and handbook. In the meantime, the stakeholder community may make use of the services provided by the Office of the National Ombudsman, part of the Small Business Administration.

*Comment:* Clarify and state up front in the policy how it applies to grantees, partners, CIs, Sea Grant, contractors, etc.

*Response:* We have revised Section 2.02 of the Policy to provide better clarity.

## **Definitions**

*Comment:* We received a range of comments on the definitions in the draft policy.

*Response:* We have evaluated the suggestions and have added some definitions to the policy (e.g. traceability, bias, and transparency) and slightly modified others (see policy Section 3). We used definitions from accepted public sources for science (e.g. National Science Foundation) or from existing NOAA documentation (e.g. Next Generation Strategic Plan) where available. We have not included all the recommendations here, but they are available in the Appendices of this document.

## **Implementation**

*Comment:* Despite the broad coverage established in Section 2.01, the bulk of the draft policy appears to be applicable only to a subset of NOAA employees. Section 5.01 states that “NOAA scientists, science managers, and supervisors shall uphold the fundamental Principles of Scientific Integrity, the Code of Scientific Conduct, and the Code of Ethics for Science Supervision and Management outlined in the following sections of this Order.” Given that these three elements constitute a majority of the substance of the policy, Section 5.01 appears to nullify the coverage established in Section 2.01. The Code of Scientific Conduct (Section 6.01) adds further confusion by stating that it is applicable to the personnel defined in Section 2.01.

In order to clarify the intensions of the policy, NOAA should revise Section 5.01 to state:

“All NOAA employees and contractors identified in Section 2.01 shall uphold the fundamental Principles of Scientific Integrity, the Code of Scientific Conduct, and the Code of Ethics for Science Supervision and Management outlined in the following sections of this Order.”

*Response:* We have made changes to the policy Section 5.01 to reference Section 2.01.

*Comment:* A policy isn't worth the paper it is printed on unless and until NOAA program representatives follow their own guidelines and policies.

*Response:* We agree and are building on the spirit and culture of integrity throughout the Agency. We will accomplish this through a deliberate roll-out of the policy across the agency and through our efforts to establish an ongoing program of training on scientific integrity. We fully intend to build the strongest possible culture of integrity within NOAA. Furthermore, this policy applies to all NOAA staff and will be communicated and supported internally through the Scientific Integrity Commons website (<http://nrc.noaa.gov/scientificintegrity.html>). We will provide training on the integrity policy, along with regular ethics training for our employees. And, as stated previously, we will evaluate the policy and our training efforts annually for effectiveness.

*Comment:* One thing not covered that I think will help ensure scientific integrity is to urge that everyone use multiple hypotheses even with policy questions. Use of multiple hypotheses is a win-win

approach because it avoids the trap of a single favorite hypothesis. Exploring only a single hypothesis leads to inadvertent bias at best and advertent fraud at worst.

*Response:* We agree the exploration of multiple hypotheses is important for the overall conduct of science; however, we do not believe this policy should dictate how individuals or groups of scientists structure their investigations. Evaluation of the need to incorporate multiple studies and/or hypotheses should take place more appropriately during research planning and the peer review and publication processes.

*Comment:* Please see that you don't make up the data and don't ask for more money.

*Response:* Two stated purposes of the Policy are to ensure data and findings are not falsified and data and findings are made available for open discussion through the process of publication and peer review.

*Comment:* The policy considers the merits of the secret ballot when making important scientific judgments. In such cases contractors and NOAA employees would be able to express their opinions free from fear of retaliation involving their job or grant for expressing scientific dissent.

*Response:* NOAA currently uses anonymous commentary for reviews when appropriate. In addition, one stated purpose for the Policy is to provide employees security from the type of retaliation indicated. So, while we agree with the spirit of the comment, we do not feel there is a need for further process modifications.

*Comment:* We also note that we see no mechanism for enforcing the Scientific Integrity Policy. Perhaps this is a good thing if NOAA intends to pursue a policy that makes it difficult for scientists to communicate with the public through the public's proxy, the news media.

*Response:* We respectfully disagree with the comment, as there are specific provisions and processes in the Procedural Handbook which address how NOAA will address violations of the Policy, otherwise known as scientific misconduct. And we state throughout that NOAA encourages publication of its research findings and the open communication of its scientific information and data. We believe these two components address the concern.

*Comment:* In Section 4 .02, NOAA PRINCIPLE OF SCIENTIFIC INTEGRITY, the last line, beginning: "Development and dissemination..." The concluding portion of that sentence refers to "other legislative and policy mandates." Because of the relevance of this is a description, perhaps those mandates should be named or referenced for clarity.

*Response:* We understand the concern expressed, but have not named every applicable policy and legislative mandate in the Scientific Integrity Policy itself, as the list would be prohibitively long and very difficult to keep up to date. We believe the language allows sufficient room for the inclusion



of current and future legislative and policy decisions, while still requiring that any decisions NOT to disseminate information be based on a formal policy or piece of legislation. In this way, these decisions cannot be arbitrary. We will not make any change to the Policy based on this comment; however, to the degree possible, we will add important mandates and requirements to the Scientific Integrity Commons website.

*Comment:* In some situations, conducting sound science involves the collaborative funding by multiple agencies and funding to extramural researchers or contractors. Therefore, there is a potential intersection with the other Federal agencies' scientific integrity policies and with the policies of institutions receiving "financial assistance" for conducting research. In the current version of these documents, NOAA should explicitly define who bears responsibility for maintaining scientific integrity and misconduct prevention in cases of multiple agency involvement. Furthermore, NOAA should specifically outline procedures to be taken when working with a research institution, which takes the primary prevention and detection steps to uphold scientific integrity.

*Response:* We agree there are points of potential confusion and possible conflict for extramural researchers that could arise from this Policy. Accordingly, we have modified the Policy and Handbook to specifically provide that, in cases of joint or collaborative Federal funding, the Federal funding agencies will jointly investigate any allegations of scientific or research. In addition, Section 5.03 of the Policy and Sections 3.06 and 6 of the Handbook provide a general framework of the NOAA procedures for addressing allegations of scientific or research misconduct in connection with a NOAA financial assistance award. We do not believe that the Policy and the Handbook appropriately lend themselves to a discussion of specific procedures to be taken by NOAA when working with research institutions and other grant recipients in addressing allegations of scientific or research misconduct, as these matters are generally guided by the unique facts and circumstances of each case and result in remedies tailored to the particular organization and matter at issue. Therefore, while we appreciate the desire for more specificity, we do not believe that the Policy and the Handbook are the proper venue for such a discussion.

*Comment:* The implementation of this policy will require trainings and educational tools. In the current document, Section 4, Principle .08 introduces the concept of "establishing a culture of transparency, integrity, and ethical behavior..." through regular trainings. We recommend the mention of more specific tools, goals, timelines, and milestones for training programs to establish such a culture within NOAA.

*Response:* We agree and appreciate the desire for more specificity. Due to the fluidity inherent in developing a policy and training simultaneously, we do not believe the policy document is the best place to include these details. The Procedural Handbook contains some specifics with respect to training and resources, but the full range of materials will need to be developed over time and will be best presented through the Scientific Integrity Commons website.

*Comment:* On our webpage ([www.singaporestatement.org](http://www.singaporestatement.org)) we welcome use of the Statement but request that anyone using it acknowledge the source. Since we would like to encourage others to make similar use, it is important that anyone reading your Scientific Integrity Policy know that a portion of it draws and builds on the Singapore Statement. Additionally, the verbatim use of the principles could be construed as the "...appropriation of another person's ideas, processes, results, or words without giving appropriate credit," something I am sure you would like to avoid in an integrity policy.

*Response:* We are very pleased the authors have read our document and apologize for releasing the draft to the public without including the proper final references. We believe we have now referenced all quoted material accurately and completely in the final policy (see Policy footnotes).

*Comment:* The Marine Mammal Commission ... also suggests that NOAA should provide specific measures to ensure that they are followed. For example, such measures might include training, formal acknowledgement of the policy, inclusion of performance standards, or use of incentives or disincentives. In addition, NOAA should describe how it will document the scientific information considered in decision making.

*Response:* We agree there is a need for training related to the policy and have already begun work with an interagency group to develop a basic curriculum. We will continue to develop these components as the policy is finalized and implemented. We have not included these components in the policy specifically, as they are subject to frequent change. We will instead provide this detail through our scientific integrity web pages and guidance to employees.

*Comment:* Section 5.02g of the policy states that NOAA will "communicate policies for ensuring scientific integrity and responsibilities to employees, contractors, and grantees that assist with developing or applying the results of scientific activities, as appropriate." Here too, the Marine Mammal Commission recommends that NOAA revise its policy to require communication of scientific integrity policies to employees, contractors, and grantees who assist with developing and applying the results of scientific activities, and that it specify those special situations in which it would not be appropriate to communicate that information.

*Response:* In order to be responsive, we have removed the phrase "as appropriate" from the NAO. We believe this should address the concern raised in the comment.

*Comment:* The memo also requires agencies to establish policies that promote the professional development of Govt scientists and engineers including removing barriers for serving as officers or on governing boards of non-profit professional societies. It's this a conflict of interest? Many people get huge financial incentives to serve on these boards and the govt is making policy that could affect these non-profit organizations. On the other hand, organizations themselves may have an agenda, which influences the govt employee. In essence, this seems to give the non-profit organization a huge advantage on gaining inside information and influencing policy.

*Response:* NOAA employees may generally serve in their personal capacity as officers and on governing boards of outside organizations. The U.S. Office of Government Ethics (OGE) has also recently proposed to allow Federal employees to serve in their official capacities on the boards of directors and as officers of nonprofit organizations, including scientific organizations, professional societies, and similar bodies that are actively involved in matters under the jurisdiction of the Department of Commerce. We support of this proposal and will update the policy as appropriate if new guidance is provided by OGE. Of course, an individual's participation is subject to federal ethics rules. Rules governing the participation of NOAA employees in outside organizations may be found on the website of the Ethics Law and Programs Division of the Department of Commerce of General Counsel. The Department of Commerce Office of General Counsel is also available to assist employees in determining whether involvement in an outside organization complies with federal ethics rules.

*Comment:* Page 6/Article 4.06 Add language to explicitly ensure consistency with Dr. Holdren's Scientific Integrity guidance memo of 12-17-2010

*Response:* We appreciate the comment and have reviewed the language. We believe the draft language is consistent with current federal ethics statutes, so we have decided to not make changes to the text.

*Comment:* Page 8/Article 6.01a add a requirement for "fully and accurately attributing the work and findings of others as used in or related to the work of NOAA scientists"

*Response:* We agree this is an important point and have incorporated language in the Policy from the Singapore Statement on Research Integrity to address the point.

*Comment:* Page10/Article 7.01 add item "h. Respect and protect the intellectual property rights of others."

*Response:* We agree and have added a new item to address intellectual property rights.

*Comment:* While NOAA's draft appears strong, it can be difficult to predict how a policy will perform in reality, especially a wholly new and untested policy. In addition, even the best policy can be hamstrung if it is not wisely and consistently implemented. For these reasons, OMB Watch recommends NOAA establish a regular process to review the policy's effectiveness and the agency's performance under the policy. This process should lead NOAA to adopt revisions to the policy or its management practices as circumstances warrant in pursuit of continually improving the agency's scientific integrity.

We refer NOAA to the U.S. Environmental Protection Agency's (EPA) draft policy in this regard. The EPA policy would establish a Scientific Integrity Committee within the agency and charge the committee to "generate and make publicly available an annual report on the status of scientific integrity within the

Agency.” The committee would also be tasked with reviewing the policy every two years “to ensure its effectiveness” and to recommend revisions to the policy. We recommend that NOAA, in its final policy, adopt similar practices.

*Response:* We agree and have committed to review and assess the policy annually and will report the results of our review to the public, either through our scientific integrity web pages or through the Federal Register in the case of major changes to the policy. We have also added text to Section 10 of the Policy to clarify this requirement. During the course of future reviews, NOAA will consider the need to create a separate committee. In the meantime, the Office of the Chief Scientist and the NOAA Research Council will have primary responsibility for ensuring effectiveness.

*Comment:* It is unclear how NOAA’s strong commitment to prevent political manipulation will be resolved with the possibility of interference during interagency reviews. While NOAA’s authority in such situation is limited, NOAA should empower its personnel to protect the scientific integrity of their work to the greatest extent possible. We encourage NOAA to add a statement that authorizes its personnel to object to interagency actions that they feel would damage the scientific integrity of their work and to bring such situations to their supervisor’s attention.

*Response:* As the comment suggests, NOAA’s authority in this situation is limited, especially where this internal policy is concerned. We believe this is best handled through guidance from the Office of Science and Technology Policy.

## Misconduct

### Roles and Responsibilities

*Comment:* The DOI policy is still clearer and more detailed about roles and responsibilities of staff and supervisors at various levels. Adopt their language.

*Response:* We reviewed the handbook based on this comment, but believe the current explanations of roles and responsibilities are sufficient. We have likewise not adopted Department of the Interior language here, because its internal processes are unique. The NOAA Research Council will be responsible for regularly reviewing the policy (see revised Section 10 of the Policy) and will determine if there is a need for additional clarity.

*Comment:* The professional level of the Determining official should be clearly defined, at a minimum not below a Deputy AA. The DO should not be in the Line Office chain of command of either the person making the allegation or the person alleged to be in violation.

*Response:* We agree and have revised the definitions section of the Handbook to incorporate this suggestion.

*Comment:* The language about DO prior involvement suggesting that prior involvement in “preliminary assessment of an allegation, appointment of an individual to assess allegations of Scientific and Research Misconduct, or to serve on an inquiry or investigation committee” would not prevent such a person from DO [sic – text missing from original] leads to an appearance of bias and a conflict of interest and thus is in violation of this draft policy. This language should be stricken and ANY participation in the case, including the listed items, should disqualify someone from being the DO.

*Response:* We were not fully able to understand the issue, possibly due to some missing text in the email. We have not made any changes to the policy based on this comment, but did review the documents with respect to prior involvement of the DO and conflict of interest.

*Comment:* The responsibilities of the DO need to have the same responsibility for ensuring confidentiality (especially on their own part) with respect to all parties as included for the IPRC and the DUS/O.

*Response:* We agree and have revised the handbook to incorporate this suggestion.

*Comment:* Section 5.01a. There should be at least one IPRC panel member who is from outside the “type of research in which the alleged misconduct occurred”. This is standard practice for instance in Animal Care and Use Committees and Institutional Review Boards under Federal law and regs and should be adopted here as well.

*Comment:* There is no definition of the term “most significant interest in the matter” that is used throughout. This is subject to abuse. As above the key is that DO and IRPC members should be outside of the chain of command of all parties.

*Comment:* Guidance, including qualifications and selection criteria, should be added to clarify who can serve as Determining Official when the Deputy Under Secretary for Operations does not fill the role. Given the powerful role this individual could play in the procedures, it is important that an appropriately qualified person is selected.

*Response:* We believe the DO interpretation of “most significant interest in the matter” will be sufficient. The NOAA Research Council will be responsible for regularly reviewing the policy (see revised Section 10 of the Policy) and will determine if there is a need for additional clarity. We have also updated the language in the handbook with respect to the DO.

*Comment:* Section 6. There is no discussion of NOAA FPO roles in discovering or reporting scientific conduct by grantees (or COTRs for that matter). Yet FPOs are responsible for reviewing and signing off on grantee progress reports, where scientific misconduct can first come to light. Revise this and Section 5.03 of the policy which has the same problem.

*Response:* NOAA Federal Program Officers (FPOs) and Contracting Officer's Technical Representatives (COTRs) play an important role in identifying, reporting, and helping to resolve allegations or actual instances of scientific or research misconduct by grantees, and are an integral part of NOAA's overall efforts in protecting the scientific integrity of its research investments. We have therefore revised Section 6 of the Handbook to reference the roles of the FPO and COTR in assisting the Grants Officer and the Contracting Officer in reviewing and responding to allegations of scientific or research misconduct in connection with a NOAA financial assistance award or contract.

### **Procedural Issues**

*Comment:* How will an innocent employee get assistance in responding to an unjust allegation? It seems it might be a good idea to have a cadre of employees available to assist a charged individual through the process and serve as their representative. Sort of like "public defenders." An employee should not have to hire an attorney to defend themselves due to a baseless allegation from someone who is trying to "bring them down." If someone really did commit the offense, these employees could also be there to advise the offender in what their best course of action might be (i.e. admit it and take the punishment).

*Response:* We appreciate the comment and believe the issue of scientists being falsely accused of misconduct or having their integrity questioned as a form of reprisal is quite serious. NOAA presumes its employees are acting with integrity and will not undertake personnel actions based on an allegation of misconduct, either external or internal, until a full, confidential investigation has been completed and a finding issued. While NOAA does not have the resources to provide a full-time legal team available to defend and advise employees, the DUS/O will seek to inform the affected party of all avenues that are available to him/her.

*Comment:* The policy needs to be clear on what constitutes financial conflict of interest. For example, if an employee has \$10,000 of their personal money invested in a for-profit company, and then later or concurrently has dealings with that company that would influence whether or not they get contracts, awards, jobs, etc...is that a conflict of interest? Is there a threshold where this is an issue? And what about disclosure? Shouldn't someone have to disclose outside their local office if they have a financial conflict of interest?

*Response:* The Ethics Law and Programs Division of the Department of Commerce Office of General Counsel provides a great deal of information about financial conflicts of interest on its website ([www.commerce.gov/os/ogc/ethics-law-and-programs-division](http://www.commerce.gov/os/ogc/ethics-law-and-programs-division)). That office also conducts annual Agency-wide training on ethics rules so that NOAA employees are aware of potential conflicts. Because every situation is different, we will not attempt to address specific conflicts in the Scientific Integrity Policy. The Department of Commerce Office of General Counsel is always

available to NOAA employees to provide guidance and advice on matters related to conflicts of interest. With regard to disclosure, many NOAA employees are already required to complete annual financial disclosure forms, which are collected and reviewed by the Ethics Law and Programs Division to identify potential conflicts and to advise employees on corrective measures.

*Comment:* “[P]reponderance of evidence” standard: used by both NOAA (p.1) and DOI (p.5), also in ORI’s sample policy (p. 16 and 18). Is the standard used in the 2000 OSTP Fed Policy on Scientific Misconduct ([http://ori.hhs.gov/policies/fed\\_research\\_misconduct.shtml](http://ori.hhs.gov/policies/fed_research_misconduct.shtml)).

*Response:* The comment above appeared to be more a statement than a question, so we have not made any changes to the policy in response. We will say for clarity, that the preponderance of the evidence standard is an established and well-understood legal standard. It is the uniform standard of proof for establishing culpability in most civil fraud cases and many federal administrative proceedings.

*Comment:* Check use of “inquiry” vs. “investigation.”

*Response:* We reviewed the documents and made one change where there was an inaccuracy.

*Comment:* NOAA’s draft procedural handbook provides an extremely lengthy timeframe for resolving allegations of misconduct: up to 370 days from the time an allegation is received until, if confirmed, it begins adjudication. Some stages contain the flexibility of even further extending the timeframe. While some complex allegations may require such a long period of time to resolve, most allegations should not require so much time. Nevertheless, the deadlines in the procedural handbook imply expectations, which may result in lengthy processes.

*Comment:* We encourage NOAA to carefully review the timelines in the procedural handbook and consider shortening time frames where possible, adding the flexibility of extensions where unusual circumstances may warrant. Additionally, NOAA should consider mechanisms to expedite its procedures in exigent circumstances.

*Comment:* The timeframe for securing evidence, including all original research records and materials relevant to the allegation, should be considerably shorter than is currently proposed. As written, the draft procedures would result in evidence being collected as late as 120 days after the alleged misconduct is discovered. Earlier steps need to be taken to ensure that evidence is collected and secured in order to allow for an accurate and complete investigation.

*Response:* The purpose of the timeframes provided in the procedural handbook is to ensure a fair process and a complete investigation. Conducting fair and full investigations takes time, whereas limiting the timeframe for conducting an investigation could result in adverse consequences for the person accused of misconduct. Nevertheless, we have modified the handbook to state that efforts

should be made to collect evidence and complete the investigation as quickly as possible, but only to the extent that a fair and full investigation is guaranteed. The stated timelines will not change, but will instead be considered the maximum allowable time.

*Comment:* Allegations of scientific misconduct that involve alleged fraud, waste, abuse, or criminal law violations should be referred to the Department of Commerce Office of Inspector General. The United States Geological Survey (USGS) handles such incidents in this manner.

*Response:* We agree and have modified the Procedural Handbook to provide that credible evidence of waste, fraud, or abuse uncovered during an investigation will be provided to the Department of Commerce Office of the Inspector General. Evidence of violations of criminal law will be referred to the Department of Justice.

*Comment:* Section 3.02, which outlines how to report allegations of misconduct, should be revised to include a list of the information that is required to be submitted to the Deputy Under Secretary for Operations. The USGS scientific integrity policy could serve as a good model in this regard (see USGS Survey Manual 500.25.8.A.1).

*Comment:* The handbook does not currently address how the review panel will reach a decision. NOAA might consider the model used by the USGS. For the USGS, a Scientific Misconduct Review Panel is directed to “arrive at consensus decision, if possible.... The Panel will take the time necessary to address all of the relevant issues associated with the allegation in order to reach a consensus finding. If, after all efforts are exhausted, the Panel is still unable to reach consensus about whether or not misconduct has occurred, then a majority decision will be made” (USGS Survey Manual 500.25.8.C.4-5). Panel members then write majority and minority reports to record their differences.

*Response:* We have not included these procedures in the Handbook at this point to allow the DUS/O some flexibility to create specific procedures and guidelines. The Handbook and the Scientific Integrity Commons website are living documents in this respect and are expected to evolve over time.

*Comment:* We echo the concerns of Public Employees for Environmental Responsibility regarding the responsibility of complainants to “maintain confidentiality” (draft Procedural Handbook, Section 4.01). While we understand the potential impact of a misconduct allegation on a respondent’s career, a blanket requirement of confidentiality may not be the proper way to manage those impacts. NOAA should revise its policy, seeking a solution that is fair and sensitive to respondents without such universal restrictions on a complainant’s ability to speak publicly about troubling allegations.

*Response:* NOAA strongly believes in the concept of “innocent until proven guilty.” Therefore, we believe it is important for all parties to maintain confidentiality while the inquiry and investigation phases of the process run their course. We have updated the documents to enforce this concept.



## **Adverse Actions**

*Comment:* The handbook is weak on the degree of adverse actions that could occur should a charge be upheld. If a big mistruth is promoted and it significantly degrades the trust of the American public in NOAA as an ethical institution then that person should be fired if the misconduct was done deliberately for personal gain, notoriety, etc...If it is a matter of inexperience, or simply poor judgment that doesn't tarnish the reputation of NOAA, then the punishment should be something like additional training or closer supervision. If you don't say in this policy and handbook that violating the integrity policy can result in you being fired, then I'm not sure how much weight it will carry. NOAA needs to be able to fire people for eroding the trust of the public and frankly establish there is zero tolerance for such behavior.

*Comment:* The Federal Research Misconduct Policy outlines several criteria to guide appropriate administrative actions to respond to research misconduct, including "the degree to which the misconduct was knowing, intentional, or reckless; was an isolated event or part of a pattern; or had significant impact on the research record, research subjects, other researchers, institutions, or the public welfare." Section 5.04 (a) should be revised to reflect these criteria.

*Response:* The Handbook refers the reader to Chapter 75 of Section 5 of the United States Code (<http://uscode.house.gov/download/pls/05C75.txt>), which provides specific adverse actions, including removal, for consideration. We believe this is sufficient and have not modified the text.

## **"Whistleblower" Protections**

*Comment:* Unfortunately, a statement of policy may not be sufficiently enforceable under existing statutory protections. Specifically, 5 U.S.C. 2302(b)(8) protects disclosures of information reasonably believed to evidence "a violation of any law, rule, or regulation, or; gross mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety." While the latter category of disclosures could encompass disclosures of scientific integrity violations, their inclusion is not certain. To ensure whistleblowers have legal recourse and for the avoidance of doubt, NOAA should issue its scientific integrity policy as a regulation. Additionally, the NOAA policy should clearly state that any violation of scientific integrity policy represents an abuse of authority and/or gross mismanagement.

*Comment:* Strengthen whistleblower protections for those who report political interference in science. This can be accomplished by clearly stating and expanding on current protections to ensure that whistleblowers do not face intimidation nor fear retaliation for exposing misconduct. Under the draft policy, these rights and protections are not listed. The policy should specifically describe protections for whistleblowers and should commit to establishing a culture that supports whistleblowing rights.

*Comment:* NOAA's scientific integrity policy explicitly states that it cannot be interpreted inconsistently with the Whistleblower Protection Act, which accordingly trumps the DAO 219-1 prior restraint when the communications would be covered by the Whistleblower Protection Act. Climate Science Watch suggests that NOAA place more emphasis on defining these communications in the Scientific Integrity Policy.

*Comment:* Here, we lay out some specific recommendations on how NOAA can incorporate additional whistleblower protections into its Scientific Integrity Policy:

Commit to scientific freedom provisions in Section 110 of S.743 (the Whistleblower Protection Enhancement Act of 2011), without waiting for Congress to act.

Make communication of and compliance with whistleblower rights a critical element for performance appraisals of all staff with supervisory responsibilities.

Commit that upon any civil service or contract employee filing of an allegation and request for investigation, the Administrator shall request an investigation by the Commerce OIG, and share the report of the investigation and recommendations for corrective action with the alleged.

Establish a table of penalties for accountability of anyone found guilty of scientific misconduct or retaliation/suppression of scientific freedom.

*Comment:* Section 5.02f of the policy states that NOAA will "provide information to employees on whistleblower protections." NOAA's reputation rests on the quality and integrity of the science that underpins all of its policy decisions and management actions. Section 5.04 of the policy states: "It is NOAA policy to protect those who uncover and report allegations of scientific and research misconduct, as well as those accused of scientific and research misconduct in the absence of a finding of misconduct, from prohibited personnel practices (as defined in 5 U.S.C. 2302(b))." These statements will not provide employees with sufficient understanding of the processes designed to protect whistleblowers, nor will they give employees the confidence that, if they do come forward, they will be protected from retaliation and retribution. The statements also do not necessarily convey to employees that they will be treated justly if they do suffer retaliation or retribution. Section 7.01g, which echoes the Holdren memo, does state that "science managers and supervisors will ensure [that] additional procedures are adopted, including any appropriate whistleblower protections, as are necessary to ensure the integrity of scientific and technological information." But this statement falls well short of providing sufficient details on how whistleblowers will be protected. For the sake of clarity and completeness the Commission believes that the policy must be explicit about whistleblower protections. The Marine Mammal Commission recommends that NOAA revise the policy to stipulate explicitly and in detail what whistleblower protections are or will be put in place, and revise the Handbook to describe the procedures to be followed to ensure that whistleblowers are protected, and treated justly and fairly. These changes also should be reflected in the code of ethics.

*Response:* We received a large number of comments requesting enhancement of the whistleblower protections. NOAA recognizes the importance of protecting those who report violations of NOAA policy. For that reason, the Scientific Integrity Policy provides strong protections for those who report suspected violations. Specifically, Section 5.04 of the policy states that: “It is NOAA policy to protect those who uncover and report allegations of scientific and research misconduct ... from prohibited personnel practices.” The Code of Ethics, Section 7.05, also requires that science managers and supervisors report any evidence of misconduct brought by a NOAA employee. Therefore, the policy explicitly protects those who disclose evidence of misconduct. Additionally, whistleblower disclosures are currently protected under federal statutes and regulations, and whistleblowers can file a complaint with the U.S. Office of Special Counsel or the Department of Commerce Office of Inspector General. We are fully committed to providing information about whistleblower protections to NOAA employees, as part of the Agency’s communication of the policy required by Section 10, and will provide additional materials explaining whistleblower protections on the Scientific Integrity Commons website. Finally, we believe issuing the policy as a regulation is unnecessary and would lead to substantial delay.

## Communication

### Internal Document Approval

*Comment:* Standardize the process for publishing scientific research. NOAA scientists sometimes face confusion and excessive delays when attempting to publish their research. An agency-wide publishing policy would ensure that all research is properly reviewed and released in a timely manner.

*Response:* We agree there is a need for minimum standards across the Agency to provide more clarity, both for researchers and their supervisors. The broad range of NOAA’s science mission, however, poses difficulties for standardization. We do not want to hinder our researchers from publishing their work. We also want to maintain a very high quality standard for all research issued by the agency. The NOAA Research Council, therefore, is developing revisions to our internal communications guidance consistent with the Department of Commerce Public Communications policy (DAO 219-1). The new guidance will provide a framework for all approvals and timelines for publication of data and findings for peer review. The guidelines will also provide scientists the right to publish if review timelines are ignored or abused. We have provided more details in the Communications section below.

*Comment:* Climate Science Watch also recommends that NOAA work with the Department of Commerce to repeal aspects of DAO 219-1, and draft a new media communications policy as part of NOAA’s Scientific Integrity Policy, which covers all speech, even those communications outside the scope of the Whistleblower Protection Act. NOAA’s Scientific Integrity Policy must ensure accurate, transparent, and accessible communications of scientific information to the public.

In addition, this Scientific Integrity Policy must ensure that there are no barriers for scientists when communicating with the press and the public. In order to achieve this, NOAA's Media Communications Policy must express the fundamental rights of scientists and other agency personnel as they relate to the expression of personal views in media communications, provided that the individuals specify that they are not speaking on behalf of, or as a representative of, the agency, but rather in a private capacity. These rights and protections must be explicit in the policy if NOAA is to ensure that there are in fact "no barriers for scientists when communicating with the press and the public." A failure to explicitly incorporate these protections into a Media Communications Policy ultimately does not sufficiently meet the Presidential mandate, or NOAA's goal of ensuring open and transparent communications of scientific information.

*Response:* Prior to releasing our draft policy, we consulted at great length with the Department regarding DAO 219-1 and the draft was informed by those discussions. Given the large number of comments regarding communications, we will inform the Department of public concerns and, if appropriate, open a new dialog. With respect to the rights of scientists, especially concerning their personal expression, we believe these are explicitly expressed in Sections 4.03 and 4.04 of the draft document. We have not made any additional changes. We will further reinforce these rights in the Research Council's communications guidance.

*Comment:* [The policy] could go farther to protect scientists' rights to free-speech, which is a freedom guaranteed them by the US Constitution, and to strengthen their protection if they have to expose attempts to silence them...And there should be no regulation or approval process for NOAA scientists in regard to when, where and what they publish.

*Response:* We agree the protection of scientists' rights to free speech is critical and have crafted the Scientific Integrity Policy to explicitly protect these rights by encouraging NOAA staff to speak freely about their research, their, data, and their findings (termed Fundamental Research Communications). Employees are free to express their personal views, so long as they make clear that the views are theirs and that they are not representing NOAA or the Department. Finally, and most importantly, NOAA must carefully balance the desire to release the highest quality science to the public with the right of our scientists to get their data and findings out for peer review and debate. The NOAA Research Council's revised guidelines will provide a minimum quality assurance review standard and timelines for NOAA to ensure the quality of science products submitted for publication, while still protecting the scientists' right to publish.

*Comment:* Following are my comments on parts of Sections 1 and 4. I examined the Department of Commerce's policy statement on public communications, DOC 219-1 as it is referred to in the NOAA Draft policy as a source of "additional guidance" for scientists. I found this document to be confusing and internally contradictory, and therefore not a suitable guide for scientists engaged in public

communication. I recommend substantial revision of that document to make it an appropriate additional guide for scientists.

Important goals of the NOAA Scientific Integrity Policy, for example 4.03 adopt the exact language of DAO 219-1 (Section 4.01d), adding that further guidance is available in DAO 219-1. However, Sections 6-9 and 11 give a tangle of protocols for approval requirements for a confusing and overlapping set of types of communication. Involvement of non-scientific approvals of public affairs offices are inconsistent and unnecessary. Navigating these instructions is difficult and uncertain, and likely to result in unnecessary delay in communicating important scientific information to the public.

The DOC Memorandum For All Bureau Chief Counsels and General Counsels regarding Implementation of Administration Policy on Scientific Integrity, dated June 15, 2011 does not alleviate these problems, stating ambiguously as it does, *"This memorandum confirms that DAO 219-1 allows scientists to engage in oral fundamental research communications (based on their official work) with the media and the public without notification or prior approval to their supervisor or to the Office of Public Affairs."*

I recommend that DAO 219-1 be revised for clarification and consistency with the apparent intent of the June 15, 2011 memorandum.

*Response:* We refer the commenter to our earlier response for more detail, but need to clarify here that only the Department of Commerce is able to update the Administrative Order. Given the large volume of comments we received regarding the communications policy, NOAA will consult with its sister bureaus and representatives from the Department to determine whether changes to the DAO are necessary.

*Comment:* Section 8, "Official Communication with the News Media" requires advance approval by the public affairs office whenever NOAA staff scientists give interviews or otherwise make statements about their work. The policy further generally requires public affairs officials to sit in on all interviews unless other arrangements are approved by the public affairs staff.

These sorts of limitations on scientists' communications with the news media (and through the media, the public) are simply unacceptable in a free society.

The Society of Environmental Journalists agrees with the Union of Concerned Scientists, which said in a 2008 report ([http://www.ucsusa.org/assets/documents/scientific\\_integrity/interference-at-the-epa.pdf](http://www.ucsusa.org/assets/documents/scientific_integrity/interference-at-the-epa.pdf)) that government agency media policies regarding scientists must "respect two fundamental rights: 1) scientists have the right to speak freely about any topic (including agency policy) if they clarify that they are speaking as private citizens, not as agency representatives; and 2) scientists should have 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."

SEJ recommends that NOAA adopt the language contained in the Union of Concerned Scientists' model media policy ([http://www.ucsusa.org/assets/documents/scientific\\_integrity/Model-Media-Policy-1.pdf](http://www.ucsusa.org/assets/documents/scientific_integrity/Model-Media-Policy-1.pdf)).

*Response:* NOAA is guided by the U.S. Department of Commerce Public Communication Policy (DAO 219-1) and only the Department is able to make changes to this Administrative Order. Given the over 16,000 comments we received specifically regarding the communications policy, NOAA will consult with its sister bureaus and representatives from the Department of Commerce General Counsel and Policy offices to determine whether changes to the DAO are necessary. We have modified the NAO to explicitly state that scientists should have 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.

*Comment: Section 7:* Determination that a product is scientifically meritorious should be based on internal peer review of Fundamental Research Communication documents prepared for publication by the agency or by outside publishers by two scientists with directly relevant expertise, not by managers lacking that expertise. No approval process should be invoked for expression of personal views about his/her official research so long as the scientist declares that his/her commentary is made as a private individual, and prepares and delivers such commentary on his/her own time.

The U.S. Geological Survey has a good policy for Review, Approval, and Release of Information Products that can serve as a model for NOAA: <http://www.usgs.gov/usgs-manual/500/502-4.html>

*Response:* We agree with the comment and appreciate the reference to the USGS policy model. The NOAA Policy currently states that approval or disapproval of a scientific communication can only be based on scientific merit (see policy line 440). In addition, the NOAA Research Council is developing internal communications review guidance which will address this issue. The Research Council will consider the proposed USGS approach in developing its final internal review guidance.

*Comment:* Sections 7.02 and 7.03 prohibit science supervisors and managers from hindering or blocking release of information on inappropriate grounds. However, there may be situations where people who are not supervisors/managers are in the position of approving publications. For instance, DWH-related presentations go through additional review by multiple NOAA staff offices (e.g., policy, communications). The same restrictions listed in 7.02 and 7.03 should also apply to all people, not just supervisors and managers, who are in the position of approving releases of information.

*Response:* We agree and have revised the text in sections 7.02 and 7.03 to apply to all employees identified in Section 2.01 (see policy lines 429, 433).

*Comment:* In Section 5.02 d, NOAA POLICY ON INTEGRITY OF SCIENTIFIC ACTIVITIES says "Ensure that NOAA and Department of Commerce public communications guidance provides procedures by which

scientists may speak to the media and public about scientific and technical matters based on their official work and areas of expertise....” We need to know what these procedures are. They are left undefined.

*Response:* We agree, and the NOAA Research Council has been tasked with revising communications guidance for NOAA staff. As stated earlier, NOAA communications policy is guided by our parent agency, the U.S. Department of Commerce. We have not explicitly incorporated language from the Department’s policy, as it is already publicly available in DAO 219-1. When NOAA has completed its revised communications guidance, we will post this information on our scientific integrity website to maintain transparency.

*Comment:* We have some concerns with Section 4, Principle .04, which directs NOAA scientists to freely “present viewpoints within their area of professional expertise that extend beyond science.” The intent of this principle needs further clarification. Specifically, what is meant by “professional expertise that extend beyond science?” This statement could be broadly interpreted and, if used in a more liberal sense, could go against the other principles in Section 4. Therefore, we recommend either removing Principle .04 or adding specific definitions/examples within the text to clarify its meaning.

*Response:* We believe Section 4.04 is critical to the policy, so we do not think it should be removed. We have instead clarified the statement based on the comment to better describe what might constitute “viewpoints within their area of professional expertise that extend beyond science.”

*Comment:* The agency is commended for allowing scientists to speak freely with the media and the public, however, the draft policy’s guidelines for such communications do not provide sufficient detail to inform employees of their rights and limitations under the policy.

The policy states that “NOAA scientists may freely speak to the media and the public about scientific and technical matters based on their official work” (Section 4.03). As currently written, this section does not make clear that NOAA researchers must submit “all written and audiovisual materials that are, or are prepared in connection with, a Fundamental Research Communication” to the head of their operating unit for approval before the information can be publically released (Department of Commerce Administrative Order 219-1 Section 7.01). NOAA should revise Section 4.03 of the policy to make this distinction clear.

*Response:* The NOAA Research Council guidance (see earlier responses) will address this concern directly. However, only the Department of Commerce is able to update the Administrative Order. Given the large volume of comments we received regarding the communications policy, NOAA will consult with its sister bureaus and representatives from the Department to determine whether changes to the DAO are necessary. Nonetheless, the draft policy already clearly states that NOAA scientists are free to speak about their findings and to offer personal opinions, so long as they identify the latter as their own opinions and not agency policy (see Policy Section 4.04).

*Comment:* NOAA is encouraged to provide information to its employees regarding the use of email to communicate science to the media. Per the June 15, 2011 memorandum from Mr. Cameron F. Kerry, General Counsel for the Department of Commerce: "Electronic communications with the media related to fundamental research that are the equivalent of dialogue are considered to be oral communications; thus, prior approval is not required for a scientist to engage in online discussions or email with the media about fundamental research."

*Response:* The NOAA Research Council is in the process of developing guidance to help NOAA employees implement DAO 219-1, which will seek to clarify this point. Updates will be posted on the Scientific Integrity Commons website.

*Comment:* The Commission also supports NOAA's "culture of openness" and the ability of its scientists to "freely speak to the media and the public about scientific matters based on their official work" (section 4.03). The policy notes that those matters may include "scientific and technical ideas, approaches, findings, and conclusions." In the subsequent section (4.04) the policy also states that "NOAA scientists are free to present viewpoints within their area of professional expertise that extend beyond science to incorporate personal opinion but must make clear that they are presenting their individual opinions when doing so - not the views of the Department of Commerce or NOAA."

The Marine Mammal Commission does not agree with the characterization of any "viewpoint" that extends beyond the conclusions of the scientific work as "personal opinion." A wide range of possible viewpoints may extend beyond one's scientific work, but only one end of that spectrum would be appropriately characterized as personal opinion. Some extensions would clearly fall into the realm of personal opinion. For instance, a viewpoint on the value of conserving or exploiting a resource, even though the viewpoint might be informed by a deep understanding of the factors affecting the resource, should be treated as personal opinion. However, the other end of the scale may include expert viewpoints that involve the interpretation of a larger body of science. For example, the response of a scientist who is working on echolocation in dolphins and is asked to interpret that work in light of data showing an increase in anthropogenic noise in the ocean should be considered "expert opinion." Similarly, if a NOAA scientist was asked about the implications of her or his scientific work with respect to a particular management option under consideration, then it is entirely reasonable that she or he would be able, and possibly expected, to give her or his expert interpretation. Here, too, the response should be treated as expert opinion. To restrict the scientific communications of NOAA scientists strictly to their own work, and to label any other statements as personal opinion and divorced from the agency, would be to significantly restrict the effectiveness of the agency's scientists, and, therefore, its science. Science produced by an agency with regulatory responsibilities is most useful to decision makers when it is interpreted in light of other science or policy / management options or viewpoints. The Marine Mammal Commission recommends that NOAA revise section 4.03 of the policy to



characterize its scientists' viewpoints on matters consistent with their expertise as "expert opinion" rather than "personal opinion."

*Response:* We believe this is a good argument and have modified the NAO to state: "NOAA scientists are free to present viewpoints that extend beyond science to incorporate their expert or personal opinions but must make clear that they are presenting their individual opinions when doing so – not the views of the Department of Commerce or NOAA".

*Comment:* Bypass the Department of Commerce's more-restrictive communications policy (DAO-219-1). OMB Watch would urge that this be accomplished by revising the Commerce policy, as the Union of Concerned Scientists recommends, as this would fix the troubling communication policy for all components of the Department. Barring that, Commerce could exempt NOAA from the department-wide policy, as recommended by Public Employees for Environmental Responsibility.

*Response:* NOAA, as a bureau of the Department of Commerce, is subject to all Departmental Orders, including DAO 219-1. As indicated earlier, we will approach the Department with the comments we have received during this review and discuss what, if any, implications they would have on DAO 219-1.

*Comment:* Public communications whereby the federal scientists are allowed to speak with the media and the public with the "appropriate coordination" of their supervisors. What does 'appropriate coordination' mean? You say what we want you to say?

*Response:* The NOAA Policy does not contain the phrase 'appropriate coordination', nor does it appear in DAO 219-1. It is a phrase from the OSTP guidance, so that may have been a source of confusion. We haven't made any changes to the policy based on this comment, but will keep the comment in mind as we develop our internal communications guidelines.

## **Social Media**

*Comment:* Social media questions

- What are the policy expectations for scientists engaged in using social media?
- What are the expectations regarding the quality of information generated from social media?
- What type of institutional accountability is there across agencies for engagement via social media?
- Need for standards, practices, and guidelines. See USGS and NAS policies.
- Draw parallels to existing categories, where appropriate (e.g., blog like an op-ed?), and if no existing categories, clearly identify distinctions.

*Response:* The same Department of Commerce policies for Public Communications also apply to communication through social media, as explained in the Department of Commerce Policy on the

Approval and Use of Social Media and Web 2.0

<http://www.osec.doc.gov/webresources/socialmedia>). We will, however, modify our internal NOAA communications guidance to more explicitly reference social media as an included type of communication and to explain how NOAA staff might use such media appropriately.

### **Culture of Integrity & Transparency**

*Comment:* NOAA's working draft "Procedural Handbook for NOAA Administrative Order (NAO) 202-735D" lays out in detail the procedures for responding to allegations of scientific misconduct. Similar specificity is needed to ensure that the policies elucidated in section 5.02 (the steps needed to preserve scientific integrity) become part of NOAA's procedural fabric and culture. The Marine Mammal Commission recommends that NOAA expand its handbook to include descriptions of the structural changes that will be made, procedures that will be put in place, resources that will be allocated, and performance-assessment processes that will be used to ensure that its scientific integrity policies become integral to its culture and operations.

*Response:* We agree that the structural changes, procedures, and resources will need to be stated. We will not be including these details in the current Policy or Procedural Handbook. We will, however, work to implement these critical pieces as quickly as possible and make them available through our Scientific Integrity Commons web pages.

*Comment:* Develop a way for the agency to be publicly accountable. Under the draft policy, the public has no way to know if allegations of political interference in science are being thoroughly and appropriately investigated and resolved. Without this public accountability, it will be easy for future administrations who are not well-intentioned to sweep allegations under the rug, and difficult for outside stakeholders to hold NOAA leadership to a high standard. NOAA should explore publicly releasing records of the number of misconduct allegations and disclosing information about instances where misconduct was confirmed to the public.

*Response:* We will put in place a public reporting capability that will allow us to report on the aggregate number of misconduct cases, the areas of concern (e.g., climate science, fisheries management, financial, contracting, etc.), the affiliation of the individuals involved (i.e., federal employees, contractors, partners, grantees), how many accusations were investigated, and the number of findings of misconduct. This reporting will provide public accountability and will allow NOAA to regularly evaluate the effectiveness of the Policy.

*Comment:* Give the public more information about who is meeting with NOAA officials to influence agency policies. The public release of visitor logs would shed light on which people and special interests have access to NOAA leadership, helping watchdog groups and the public understand where inappropriate influence may have occurred.

*Response:* We received many comments on this issue, and while we feel this may be important for operational and policy transparency, we do not believe this is an issue specific to scientific integrity. As a result, we have not modified the draft policy based on this comment. We have, however, forwarded this concern to NOAA leadership for their consideration with regard to overall agency operations.

*Comment:* Creating a culture of transparency for scientific practices is only possible by adopting specific policies that enhance NOAA's transparency. For example, NOAA should publicly identify and provide the qualifications for the members on NOAA's scientific advisory panels.

*Response:* NOAA will comply with the recommendations provided in Dr. Holdren's memorandum of Dec. 17, 2010 and has included language to this effect in Section 7 of the policy, lines 393-410. While not previously a requirement for NOAA, a number of our Federal Advisory Committees already post this information, and we will take the necessary steps to ensure that all do so following approval of this policy.

*Comment:* NOAA should also incubate a culture of transparency by providing line item budget listings and notifications when funds are transferred internally to support other various programs.

*Response:* While we understand the intent of the comment, NOAA is not permitted to implement this suggestion. The structure of the public NOAA budget (NOAA Blue Book) is defined by Congress and would require Congressional approval to modify as suggested. However, NOAA must currently request Congressional approval for any transfer greater than \$500,000, which we believe ensures the desired level of public accountability.

## Peer Review and Data Management

### **Peer Review**

*Comment:* One question that occurs to me is in regard to peer review for publication...My second concern about pier [sic] review involves publication in outside disciplinary journals, for which pier [sic] review requires knowledgeable scientists not associated with the reviewers or the sponsoring agency, NOAA in this case...A concomitant problem...is the potential need for responses to opponents, particularly when such opposition is politically motivated and identifiable as "denial" of scientific principles.

*Response:* We believe in the integrity of the peer review process and feel it is up to the individual Journal to identify and select competent reviewers. Opposing views of a scientific nature, including alternative interpretations of data, would be dealt with through the normal peer review process. However, as explained previously, NOAA will implement a consistent, internal review process for our manuscripts to be submitted for publication. This review will not replace the external peer review process, but will guarantee a minimum level of scientific quality for all NOAA fundamental

research papers. Once final, we will notify staff and post the process guidance to the Scientific Integrity Commons website.

*Comment:* NOAA should require the use of peer-reviewed science from reputable scientific journals. To have transparent scientific practices, NOAA must establish internal standards that prohibit the use of grey literature, data, or information.

*Response:* The Data Quality Act and the NOAA Administrative Order on the Management of Environmental Data (NAO 212-15) guide NOAA's internal review of scientific data and information. We have noted the concern and it will be used to inform discussions in the NOAA Research Council on the internal document review framework.

*Comment:* Section 5.02e of the policy states that NOAA will "ensure that data and research used to support policy decisions undergo independent peer review by qualified experts, where feasible, appropriate, and consistent with law" (emphasis added). The Commission wonders under what circumstances NOAA believes that peer review is not feasible or appropriate, especially when policy decisions are being made. There may be situations in which standard peer review is not feasible, such as during emergencies. Nonetheless, since peer review is such an integral part of ensuring scientific integrity, it should be undertaken if at all possible. To that end, the Marine Mammal Commission recommends that NOAA revise the policy to require the use or development of streamlined, rapid, or otherwise customized, peer-review processes in those situations in which the standard peer-review procedures would not be effective or timely and, furthermore, specify within the policy the criteria to be used to delineate those situations in which modified peer review is to be used. These changes also should be reflected in the code of ethics.

*Comment:* Clearly state that NOAA will indicate when scientific information has or has not been peer reviewed. The peer review process is an important aspect of quality control. However, there can be situations when it is appropriate to disseminate information that has not been peer reviewed. For example, in response to emergencies, such as the BP oil spill, the importance of releasing timely information may demand that NOAA disseminate initial data that has not yet received full peer review. In such situations, however, NOAA should explicitly state that the information has not been peer reviewed.

*Response:* In response to the two comments above, we agree that we should explicitly state when information has not been peer reviewed. We have updated the Policy, and we will provide employees specific guidance for implementation. We do not believe a generic rapid peer-review process would be practical, as situations and timelines will likely differ substantially. We have modified the language in Section 5.02 to allow employees to utilize modified peer-review processes in circumstances where standard peer-review procedures would not be effective or timely. In such

emergency situations, NOAA will clearly state what type, if any, peer review was conducted prior to decision-making

### ***Data Management and Release***

*Comment:* The policy encourages NOAA scientists "... to publish data and findings in ways that contribute to the most effective dissemination of NOAA science" (section 4.02). Although the Commission commends NOAA for encouraging the free and open dissemination of its science, it believes that adding two important elements would strengthen the policy.

First, the policy states that the "development and dissemination of scientific and technical products must be consistent" with a number of NOAA policies, procedures, guidelines, and mandates. However, those policies, procedures, guidelines, and mandates are not clearly identified or referenced. Given concern over the suppression of scientific information by the federal government, and NOAA's identification of transparency as a core principle of scientific integrity, NOAA should make its policy as transparent as possible. Therefore, the Marine Mammal Commission recommends that NOAA, in its policy, fully describe the policies, procedures, guidelines, and mandates related to the development and dissemination of scientific and technical products, especially for those cases where the policies, procedures, guidelines, and mandates restrict or prohibit the development and dissemination of scientific and technical products.

*Response:* We do not believe a complete listing of all the relevant policies, procedures, guidelines, and mandates is possible or practical in this policy document, as it would be difficult to keep updated. Instead, we propose to place complete references to these specific policies on the Scientific Integrity Commons website where updates will be much easier to make.

*Comment:* NOAA should act to the greatest extent of its authority to preserve the free flow of scientific information in interagency processes. Where interagency review may lead to lengthy delays in releasing information, NOAA should consider publishing a draft. Furthermore, we encourage NOAA to consider the Union of Concerned Scientists' recommendation to publish drafts of all information submitted to other agencies for review recommendation as a way to deter political manipulation in interagency processes.

*Response:* We respectfully do not believe either recommendation would be practicable. Publishing draft material could promulgate inaccuracies and erode public confidence in NOAA science. Likewise, submitting drafts ahead of interagency review could erode trust between the agencies. We believe the intent of the comment is important and believe this policy establishes the mechanisms needed to report violations, including situations where data release is being held up internally or externally.

*Comment:* Provide more specifics of how and when data, records and research will be made public. To protect science as it moves through the regulatory process, NOAA should establish clear practices for releasing scientific information and analysis once it goes through peer review. This would prevent other agencies and the White House from interfering in the science conducted by NOAA.

*Response:* The NOAA Administrative Order on the Management of Environmental Data (NAO 212-15) guides the release of NOAA data and findings (available here: [http://www.corporateservices.noaa.gov/ames/administrative\\_orders/chapter\\_212/212-15.html](http://www.corporateservices.noaa.gov/ames/administrative_orders/chapter_212/212-15.html)). The Scientific Integrity Policy will not supersede 212-15. In addition, the NOAA Environmental Data Management Committee is now updating the NOAA Data Management Planning Procedural Directive, which provides specific guidelines for public release. We anticipate the updated guidance will be available in 2012.

*Comment:* Need to have a clear (and defensible) process for ensuring the high quality of scientific products (i.e., framework for review and approval being developed for by the Research Council).

*Response:* We agree and believe the framework for an internal qualitative review that the NOAA Research Council is developing will provide the necessary process. This framework will be communicated to staff and posted to the Scientific Integrity Commons website when final.

*Comment:* "Except for information that is properly restricted from disclosure under procedures established in accordance with statute, regulation, patent/trademark, Executive Order, Presidential Memorandum, or other legal authority, the scientific or technological findings or conclusions considered or relied on in policy decisions shall be made available to the public in a timely fashion." This permits political interference and the censoring of scientific information for ideological [sic] reasons.

*Response:* We believe the statutes cited are specific regarding the type of information that cannot be released. We do not, therefore, believe these provisions can be broadly used to restrict the dissemination of science data or findings. We will continue to monitor this issue as we assess the policy each year.

*Comment:* Encourage or require NOAA employees, contractors, and grantees to make their peer-reviewed manuscripts publicly available in a manner similar to the National Institutes of Health's Public Access Policy. Such transparency will strengthen public trust in NOAA science and "contribute to the most effective dissemination of NOAA science" (Section 4.02, draft Policy).

*Comment:* The Scientific Integrity Policy provides, "the scientific or technological findings or conclusions considered or relied on in policy decisions shall be made available to the public in a timely fashion." NOAA needs to provide further guidance on what constitutes "timely fashion."

*Comment:* Section 6, paragraph 01 states that NOAA must disclose, “all research methods used, available data, and final reports and publications consistent with applicable scientific standards, laws, and policy.” As stated above, this section should instead read “NOAA must disclose all research methods used, available data, and final reports and publications to the public and made available on NOAA’s website.”

*Comment:* the Scientific Integrity Policy states that NOAA must disclose “all research methods used, available data, and final reports and publications.” This section is encouraging and seems to uphold President Obama’s memorandum. Nonetheless, it should be clarified that all research methods, data, and final reports must be released to the public by posting the information on NOAA’s website. Notably, NOAA should also be certain to disclose its “criteria for decision making” on NOAA’s website. This will allow stakeholders and the public to understand what expectations they have for data acquisition, data quality control, and interpretation. This will ensure that NOAA’s scientific practices are fully transparent.

*Comment:* Although NOAA identifies the "timely" dissemination of "scientific or technological findings or conclusions considered or relied on in policy decisions" to the public as an element of its Code of Ethics (section 7.01 e), it does not describe what constitutes 'timely' or include in section 5 the timely dissemination of scientific information as a principle of scientific integrity. Given the increasing pace at which human activities are affecting the marine environment, the utility of NOAA's science depends heavily on its timely dissemination. This is not a trivial matter, as some marine datasets lie dormant for years without analysis and publication. With such concerns in mind, the Marine Mammal Commission recommends that NOAA, in its policy, identify the 'timely dissemination' of science as one of the principles of scientific integrity, and include explicit guidelines for the timely dissemination of scientific findings, and the data and analyses upon which the findings are based.

*Comment:* With respect to the free flow of scientific information, section 5.02a of the policy states that "where appropriate, this information will include data and models underlying regulatory proposals and other policy decisions." The Commission concurs that, as a matter of routine, such data and models should be made available. Although the Commission also recognizes the possibility of exceptions, it believes that those exceptions should be described in advance, to the extent possible. Therefore, the Marine Mammal Commission recommends that, in the interest of transparency, NOAA specify in the policy those special circumstances wherein NOAA anticipates the data and models underlying regulatory proposals or policy decisions might not be made available.

*Response:* The NOAA Administrative Order on the Management of Environmental Data (NAO 212-15) guides the release of NOAA data and findings. The Scientific Integrity Policy will not supersede NAO 212-15. However, we will post NAO 212-15 on our Scientific Integrity Commons website for reference. In addition, there are some cases where NOAA cannot legally release data, such as when the data may contain business proprietary information, the release of which may cause harm

to a private company. The policy cannot capture all possible scenarios. We have, therefore, chosen to not address these specifics in the policy. We understand this does provide a possible loophole, but we believe the establishment of effective procedures for reporting and handling misconduct will allow us to close that loophole.

*Comment:* The public should be provided with the scientific information supporting the policy decision before the policy decision is implemented. Once the policy is implemented, it is very difficult to overturn the policy even if it's based on faulty science.

*Response:* As with this draft Policy, it is NOAA policy to provide an opportunity for public comment by engaging in a notice-and-comment process, which may involve releasing drafts of policy decisions for public comment through the Federal Register prior to approval. Often, providing for public notice and comment is required by federal law, but NOAA frequently seeks public comment even when it is under no legal obligation to do so.

*Comment:* The DQA requires that agencies must ensure and maximize “the quality, objectivity, utility and integrity of information (including statistical information) disseminated by the agency.” Both OMB and NOAA mandate that information disseminated be objective which is defined as “accurate, clear, complete and unbiased [information].” It shall be developed “using sound statistical and research methods,” and shall be useful for its intended purpose. As such, NOAA must ensure that the Scientific Integrity Policy is consistent with NOAA’s DQA guidelines.

Specifically, NOAA’s Procedural Handbook “provides the procedures to be followed in responding to allegations of Scientific and Research Misconduct by NOAA employees. It also addresses procedures to be followed in responding to allegations of Scientific and Research Misconduct” by NOAA contractors and external organizations that receives funding to conduct scientific research.” In cases where instances of Scientific and Research Misconduct do occur, which inevitably will result in DQA violations, NOAA should incorporate DQA guidelines to ensure that the scientific information is corrected in a manner consistent with NOAA’s DQA administrative correction mechanisms. Likewise, when an affected person files a request to correct information under the DQA, this should prompt NOAA’s Integrity Review Panel to initiate an investigation to determine if there was scientific and research misconduct. It is vital that the DQA and the Scientific Integrity Policy complement each other, rather operate independently.

*Response:* The Scientific Integrity Policy is, and must be, consistent with the Data Quality Act (DQA). However, we do not believe all cases of misconduct will constitute a violation of the DQA. Likewise, not all DQA requests for correction will indicate a violation of the Scientific Integrity Policy. NOAA will take steps to investigate potential misconduct where a complaint is filed. We believe the current draft Policy, Section 6.01d provides sufficient guidance for ensuring the two policies are implemented in concert.



*Comment:* We believe NOAA's scientific findings and information should be more accessible and widely available. We recommend that Section 5, Principle 2 calls for dedicated website portals that are organized and that disseminate suites of data. Furthermore, we encourage NOAA to develop formal mechanisms for announcing the availability of new scientific data and information to stakeholders and collaborators.

*Response:* NOAA already has dedicated data centers for storage and distribution of large portions of its environmental data, in addition to long-standing web locations dedicated to specific data products. We have noted the desire for a single web portal to consolidate these disparate data and the desire for a formal mechanism to announce availability of new data information to stakeholders. We will communicate this request to NOAA management to better inform our corporate planning for future budget cycles.

Section 5.02g of the policy states that NOAA will "communicate scientific and technological findings by including, when necessary and appropriate, a clear explication of underlying assumptions; accurate contextualization of uncertainties; and a description of the probabilities associated with both optimistic and pessimistic projections, including best-case and worst-case scenarios." Again, the Commission is puzzled by the lack of information regarding when such communication would not be necessary and/ or appropriate. The Commission believes that the default position should be that the inclusion of information on uncertainty, projections and/or best-/worst-case scenarios should always be part of the communication of scientific or technological findings, except in extraordinary circumstances. Those circumstances can be described through the identification of particular situations, the use of representative examples, or the specification of principles that can be used to define the exceptional circumstances. Therefore, the Marine Mammal Commission recommends that NOAA revise its policy to require communication of information on scientific uncertainty, projections and/or expected best-/worse-case scenarios, and standard operating procedure, and that it describe clearly the circumstances when this practice would not be necessary and/ or appropriate.

*Response:* We have deleted the phrase "when necessary and appropriate" and have added the phrase "except in extraordinary or emergency situations" to the paragraph. We do not believe it is practical to include a comprehensive list of scenarios in a policy document.

*Comment:* Clearly state that NOAA should not release scientific conclusions without concurrently releasing the underlying methodology. If NOAA is confident enough in a study's conclusions to release them publicly, then it should be confident enough to release the methodology at the same time.

*Response:* We have updated the Policy to reflect this comment.

*Comment:* Revise the "Professional courtesy and fairness" component of the draft Code of Scientific Conduct (Section 6.01(c)) to include the responsibility to appropriately share data with other researchers, including public access to the greatest extent possible.

*Response:* We feel this concept is already stated in Section 6.01b Accountability.

*Comment:* Revise Section 5.02(b) on public access to scientific findings to state that NOAA will, to the greatest extent possible, present scientific findings with significant impacts on public health and the environment to the public in easy-to-understand, plain language.

*Response:* Communicating in plain language is important, especially when public health or environmental impacts are involved. This mandate has already been covered by the Plain Writing Act of 2010 (<http://www.plainlanguage.gov/plLaw/index.cfm>), so we have not addressed the issue specifically in this policy. NOAA employs public affairs and communications staff across the organization that are available to assist our scientists with plain language writing and we have begun internal training in accordance with the Act.

*Comment:* Inappropriately delaying the release of scientific information is itself a violation of scientific integrity. NOAA should consider mechanisms to expedite its procedures to address allegations of inappropriate delays to the release of scientific information. An expedited process should also be used for allegations of misconduct that occur during or in the aftermath of an emergency.

*Response:* Allegations of misconduct because an employee doesn't adhere to Section 6.01b would be handled through the same procedures as any other allegation of misconduct. We do not believe there is a need to modify the policy based on this comment. Regarding the second comment, we do not believe an expedited process is necessary for allegations of misconduct that occur during or in the aftermath of an emergency. NOAA supervisors have the authority to suspend an employee for misconduct or poor performance, especially where lives and property are at risk. A formal allegation and investigation of scientific misconduct, if applicable to the situation, would take place following the incident and would not need to be expedited.

*Comment:* We encourage NOAA to explore a range of venues where stakeholders can present informed analyses to NOAA on a 24/7 basis. Recognizing that since much of the information is generated subsequent to the close of the public comment period, NOAA has no legal obligation to utilize such information although they may use it at their own discretion.

It is for this reason that CRE has developed the concept of an Interactive Public Docket maintained by watchdog and/or stakeholder groups. Any effort that NOAA would take to provide an opportunity for the public to use the IPD would be in keeping with its transparency objective.

A case in point is the Scientific Integrity Policy statement that "[NOAA will] facilitate 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. Where appropriate, this information will include data and models underlying regulatory proposals and policy decisions." "Where appropriate" should instead be replaced with "When it's available, this

information will include data and models underlying regulatory proposals and policy decisions.” CRE would post these items on the IPD for public comment.

*Response:* We appreciate the comment and have noted the availability of the CRE Public Docket. Regarding the requested text modification, we will not adopt the proposed change, as it does not allow for cases where information cannot be released for security reasons or because it contains business proprietary information.

### ***Bias***

*Comment:* I sincerely believe that even if everyone in climate science had acted with the utmost integrity, it was likely that some form of groupthink - some self-reinforcing consensus - would develop: based not on what the data actually showed (as it changes so little), but on what the "consensus" was as to what it did show. Once the consensus starts, those with power tend to be those who accept the consensus, which again tends to reinforce the consensus and ostracize those who are not part of the consensus. Individual integrity is important, but collective integrity is far [more] important. Suggest:

1. Accept dissent. Allow a public hearing and even provide government money to minority groups to ensure that there is equity in the forum of public debate.
2. Create a division of labor:

Scientific measurement - those involved in this area should be set specific targets for accuracy and reliability of their measurements AND SHOULD BE PROHIBITED FROM ENGAGING IN ANY SPECULATION AS TO THE MEANING OF THAT DATA. Bodies should be set up whose sole aim is to provide measurement and no scientific interpretation.

Those who intent is to engage in scientific testing of hypotheses and model building should be prohibited from collecting the data.

3. None of the above should be allowed to make any political statements or make comments on policy. Instead, there should be another group (if necessary at public expense) whose job it is to advise on policy, to make interpretations on the models etc.

*Response:* We believe this draft policy supports different points of view through the scientific and peer review process. Likewise, many of NOAA’s policies and procedures go through public notice and rulemaking procedures before being adopted. Additional measures, such as roundtable discussions, listening sessions, and public meetings, are also a regular part of the decision-making process for NOAA. Finally, we believe comment 3 would be a violation of the right to free speech. In fact, NOAA scientists are often asked to testify in Congress and to make media statements. NOAA has a number of policies in place to address these situations, specifically Administrative Orders in the 218 (Legal and Legislative category available at <http://www.osec.doc.gov/opog/dmp/daos.html> ). Lastly, NOAA employees are free to express

their personal views, so long as they make clear they are expressing an opinion and not NOAA policy.

*Comment:* NOAA should clearly delineate the methods used to avoid scientific bias in its research, studies, and findings.

*Response:* Individual scientists have the responsibility for identifying and addressing bias within their investigations. These methods should be explained and evaluated during the publication and peer review process, not at the level of a NOAA policy.