Testimony for Dr. Andrew A. Rosenberg
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Union of Concerned Scientists
House Committee on Natural Resources
"Scientific Integrity"

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Chairman Grijalva, and Ranking Member Bishop, thank you for the opportunity to testify today on scientific integrity and attacks on science in the Trump Administration and beyond, along with solutions to restore scientific integrity to federal policymaking. My name is Andrew Rosenberg. I am the Director of the Center for Science and Democracy at the Union of Concerned Scientists. The Center works to advance the role of science in the public policy process and in the nation's democratic dialogue. We have many years of experience examining and documenting political interference in science in the federal government and advancing policies that protect science and scientists.

I am a marine scientist with over thirty years of experience in research, providing scientific advice for governments and in implementing science-based policies. Among my previous positions, before joining the Union of Concerned Scientists in 2012, I was a scientist for NOAA, a NOAA Regional Administrator for Fisheries and Deputy Director of NOAA Fisheries, the senior career position in the agency overseeing all regulatory matters. I also served as the Dean of Life Sciences and Agriculture and Professor of Natural Resources at the University of New Hampshire.

Science must play a central role in the Department of Interior, NOAA and in fact across the government. Science provides the "sideboards" if you will, for public policy decisions. By that I mean that science doesn't mandate nor is it the only input to decisions, but it guides the process. Scientific evidence identifies issues and concerns that may merit policy action and elucidates some of the consequences of different possible action options. Without scientific evidence, and other evidence such as local knowledge of threats and concerns, decision making becomes wholly political. That is, policy decisions will become solely guided by political influence rather than evidence and facts. We know from many examples that this approach harms public health and the environment.

Since 2004, the Union of Concerned Scientists has regularly monitored agencies for actions that compromise the use of science in policymaking. We have learned about such issues through the media, through congressional oversight, and from scientists themselves. We conducted surveys of federal scientists about the level of political interference in their work during this and the two previous presidential administrations. We have pushed for and participated in congressional oversight related to scientific integrity, and regularly work with reporters to bring abuses of science to light. We developed model good government policies for federal scientific agencies and analyzed and made recommendations about both the content and implementation of federal agency scientific integrity policies since they were developed nearly a decade ago. We have worked with DOI and other agencies

to improve peer review policies and other polices to strengthen the role of science in policymaking. And we constantly monitor and bring to light challenges with regard to science-based policymaking.

Strong Scientific Integrity Standards Are Essential for Government Accountability

The United States government has long worked to ensure the integrity of the science that is maintained within executive branch agencies. Originally, this meant ensuring that a scientist's research was conducted ethically and in accordance with high scientific standards. Policies were put in place to protect human research subjects, ensure that confidential data is protected against disclosure, promote effective peer review, address scientific misconduct, and more.

In recent years, the definition of scientific integrity has been focused on ensuring that science produced and considered by the federal government is not censored or politically influenced, that this science fully informs public policy decisions, and that the public is more fully aware of the knowledge and data that are produced by federal scientists that pertains to policymaking.

The importance of safeguarding scientific integrity within our federal government cannot be overstated.[1] Science-informed decisions made by executive agencies have direct impacts on all of our lives. Whether those decisions are determining how safe or clean our waters are to drink, or our air to breathe, or whether certain species are deserving greater protections under law, four fundamental principles should be embraced:

1. Decisions should be fully informed by (but not dictated by) science;
2. Scientists working for and advising the government should be unobstructed in providing scientific evidence to inform the decision-making process;
3. The public should have reasonable access to scientific information to be able to understand the evidentiary basis of public policy decisions; and
4. The public and Congress should be able to evaluate whether the above principles are being adhered to.

Scientific Integrity at the Department of Interior

Political interference in science during the George W. Bush administration penetrated deeply into the culture and practices at the Department of the Interior. Endangered Species Act (ESA) decisions in particular were a flash point for politics and science even though the statute clearly mandates the primacy of science in many ESA decisions. Political appointees falsified, fabricated, hidden, suppressed, disregarded, and tampered with science and intimidated, coerced, censored and suppressed scientists all behind closed doors. The results of a survey of Fish and Wildlife Service scientists showed high

[1] Preserving Scientific Integrity in Federal Policymaking, Goldman, Reed, Halpern, Johnson, Berman, Kothari, Rosenberg, Jan 2017 - https://www.ucsusa.org/sites/default/files/attach/2017/01/preserving-scientific-integrity-in-federal-policymaking-ucs-2017.pdf

numbers of scientists knew of cases of political interference, felt that agency decision making was not sufficiently protective of species and habitats, feared retaliation, and suffered from poor morale.

For example, during the George W. Bush Administration, a senior political appointee named Julie MacDonald personally rewrote endangered species determinations to preclude their protection under the Endangered Species Act. The Interior Inspector General eventually found that MacDonald had heavily edited the report and shared non-public information with special interests: [2]

> *Through interviewing various sources, including FWS employees and senior officials, and reviewing pertinent documents and e-mails, we confirmed that MacDonald has been heavily involved with editing, commenting on, and reshaping the Endangered Species Program's scientific reports from the field. MacDonald admitted that her degree is in civil engineering and that she has no formal educational background in natural sciences, such as biology.*
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> *While we discovered no illegal activity on her part, we did determine that MacDonald disclosed nonpublic information to private sector sources, including the California Farm Bureau Federation and the Pacific Legal Foundation. In fact, MacDonald admitted that she has released nonpublic information to public sources on several occasions during her tenure as Deputy Assistant Secretary for FWS.*

As the Inspector General noted, it was not illegal for a senior political appointee to manipulate the work of federal government experts. No protections existed for federal government scientists to defend the integrity of their work. And while scientific integrity policies have since been developed within Interior that address this kind of malfeasance, they lack the authority of law and could be rescinded at any moment.

Abuses of science at Interior, of course, were not simply done by one bad apple. UCS documented more than two dozen examples of political interreference in science during the George W. Bush administration. For example:

- Bureau of Land Management (BLM) officials compromised the integrity of a BLM study by removing scientific concerns about the effects newly relaxed grazing regulations would have on public lands.
- The southwest regional director of the U.S. Fish and Wildlife Service (FWS) pressured veteran wildlife refuge manager Ken Merritt to approve plans routing a planned border wall through the Lower Rio Grande Valley national wildlife refuge. Merritt stated that regional director Benjamin Tuggle asked him in 2007 to approve the initial survey for the wall and that when Merritt refused, Tuggle called that choice a "career-ending decision." Merritt retired from FWS shortly thereafter and the Department of Homeland Security (DHS) eventually used its authority to waive numerous environmental laws in order to go ahead with the border wall project.

[2] Office of the Inspector General, U.S. Department of the Interior, Dec 1, 2006 - https://www.doioig.gov/sites/doioig.gov/files/Macdonald.pdf

- In several cases, the Minerals Management Service excluded or directed its scientists to exclude analyses that found harm to wildlife from oil exploration activities. In a June 2006 email, former MMS biologist Jeff Childs warned his chain-of-command that “bringing vessels, rigs, platforms, etc. to Alaska from Outside are likely to” introduce invasive species that “may very well yield much greater significant adverse impacts than a large oil spill.” MMS then removed Childs from working on the issue of invasive species because he “refused to implement DOI [Interior] and MMS policy vis-à-vis invasive species,” which was that these findings were to be excluded from reports. A March 2010 report by the Government Accountability Office (GAO) confirmed that Childs’ analysis of invasive species impacts was deleted by management from a 2006 environmental assessment.
- Political interference by J. Stephen Griles, then deputy secretary of the Department of the Interior and a former lobbyist for the National Mining Association, derailed an Environmental Impact Statement related to a rule to protect Appalachian streams and communities from a coal-mining technique known as mountaintop removal mining. Internal documents reveal Griles violated a signed statement to the Senate, in which he recused himself from issues affecting his former clients, and met no fewer than 12 times with top Bush administration officials and coal industry representatives to discuss the EIS. Griles also issued a memo stating that the EIS should "focus on centralizing and streamlining coal-mining permitting" instead of minimizing adverse environmental effects.
- Six leading ecologists who were appointed to a scientific advisory panel by the National Oceanic and Atmospheric Administration’s (NOAA) National Marine Fisheries Service (NMFS) claim that they were asked to remove science-based recommendations from an official report.
- A U.S. Fish and Wildlife Service (FWS) email directive instructed its Alaskan employees who request travel not to discuss polar bears, sea ice, or climate change unless they are explicitly authorized to do so.
- High ranking officials from the Fish and Wildlife Service (FWS) and the other federal land agencies intervened in the recovery plan for the northern spotted owl, compromising the science-based protections in order to reduce barriers to increased logging in old-growth forests.
- Agency officials knowingly used flawed science in the agency's assessment of the endangered Florida panther’s habitat and viability in order to facilitate proposed real estate development in southwest Florida.
- Bureau of Land Management (BLM) suspended an Oregon State University (OSU) grant after university researchers published a study in the prestigious journal *Science* which concluded that logging in the wake of an Oregon fire retarded the forest's recovery.
- The U.S. Fish and Wildlife Service (FWS) had on multiple occasions manipulated economic analyses of its plans for protecting endangered species by counting only the costs of protection while ignoring the benefits. In 2004, for example, the FWS artificially inflated the estimated cost of protecting the threatened bull trout. Two years later, the agency downplayed the benefits of protecting the California red-legged frog.

It is important to note that some of these abuses are direct (censorship and manipulation) and some are systemic (changes in how scientific assessments are done related to endangered species).

Development of Scientific Integrity Policies

Under President Obama, the Department of Interior recognized the need for changes. Indeed, Secretary Salazar didn't even wait for White House guidance on scientific integrity, issuing a secretarial order on September 29, 2010 establishing scientific integrity principles and directing departmental staff to develop a Departmental Manual to help protect science in the department.[3]

The DOI scientific integrity policy and manual that was subsequently developed was one of the best in government. Notably, DOI was only department to report out results of investigations into losses of scientific integrity.

In 2016, responding to concerns expressed by external scientists, the USFWS revised its peer review policy for endangered seis ac listing decision. The new policy improved transparency, strengthened the guidelines for dealing with conflicts of interest and made a clear separation of the Scientific advice and policy recommendations. In fact overall the new policy was clearer and responsive to scientist concerns.

One of the major problems was how peer reviewers were chosen and how their advice was subsequently treated by the agency. When decisions are controversial it is important to carry forward the nuance of concerns, not just a thumbs up or down approach. To be sure, more improvements are still needed, including most importantly ensuring there is accountability for adhering to strong peer review guidelines. Most endangered species decisions are controversial, but it must be borne in mind that the Act is the last opportunity to halt species extinctions. Losing a species from this earth is never trivial and conservation efforts deserve our best science.

Attacks on Science under President Trump

The erosion of scientific integrity in government has hit a fever pitch in the last two years. Barely a week goes by without hearing of scientists who are prevented from sharing their expertise with the public, or analytic work that is censored, or experts who are prevented from communicating with Congress, or data is made less accessible through websites, or science that is misrepresented.[4] Since January 2017, the Union of Concerned Scientists has documented more than one hundred and ten attacks on science under the Trump administration, a mark that George W. Bush did not meet in his two terms.[5] Other organizations, such as the Sabin Center for Climate Change Law, are also tracking attacks on science during the current administration.[6]

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[3] Secretary Ken Salazar, U.S. Department of the Interior, Order No. 3305, Sep 29, 2010 - http://www.riversimulator.org/Resources/USBR/SecOrderNo3305ScientificIntegrity.pdf

[4] Attacks on Science tracker, UCS Staff - https://www.ucsusa.org/center-science-and-democracy/attacks-on-science

[5] Abuses of Science: Case Studies, UCS Staff, 2009 - https://www.ucsusa.org/our-work/center-science-and-democracy/promoting-scientific-integrity/abuses-science-case-studies

[6] Silencing Science Tracker - http://columbiaclimatelaw.com/resources/silencing-science-tracker/

Recently, several former EPA administrators expressed concern about political interference in science at the EPA at a hearing in the House Energy and Commerce Committee. Former New Jersey Governor Christine Todd Whitman, who served as EPA administrator under George W. Bush, went on to write an op-ed in The Hill with UCS President Ken Kimmell supporting the Scientific Integrity Act.[7] Whitman and Kimmell wrote:

> *We all rely on federal scientists — and we need to be able to trust that we're getting the best available science.*
>
> *But there's a problem here: Federal scientists often face political pressure that undermines their research and their ability to share it with the public. Political leaders have buried critical reports, keeping the public in the dark about real threats. They have prevented scientists from publishing their research or attending scientific conferences. They have disciplined scientists for talking about their findings to journalists.*

Scientific integrity can be compromised by political censorship, manipulation, and/or intimidation. Here are some examples from the 20 attacks at the Department of Interior selected from our research[8]:

- In October 2017, the US Fish and Wildlife Service (FWS) reversed their long-standing requirement that a proposed city-sized development in southeastern Arizona needed a comprehensive biological assessment to evaluate the potential impacts to endangered species in the area. The FWS official in charge of this process recently said that the only reason he reversed his decision was because he was pressured by a high-level political appointee at the Department of the Interior (DOI). The result of the FWS reversal led to the development, Villages at Vigneto, to receive a permit to build by the US Army Corps of Engineers.
- The Department of Interior (DOI) failed to consider and excluded from public view 18 memos from staff scientists who had raised scientific and environmental concerns about proposed oil and gas operations in the Arctic National Wildlife Refuge in Alaska. These documents were excluded from the DOI's draft environmental assessment, and were not released during Freedom of Information Act (FOIA) requests filed by advocacy groups.
- In an effort to censor science around adaptation to climate change, and in direct contrast to instructions from Congress, the Trump administration has defunded Landscape Conservation Cooperatives (LCCs), causing 16 of the 22 LCCs to be eliminated or placed on indefinite hiatus. LCCs are governmental research centers located across the US that integrate science-based information on climate change and other stressors to better conserve and protect natural and cultural resources.
- A proposal from the U.S. Fish and Wildlife Service to remove the gray wolf from the Endangered Species Act (ESA) was found to be full of errors regarding wolf conservation and taxonomy. One

[7] Scientific integrity is crumbling under Trump, Ken Kimmell, Christie Todd Whitman, Jul 9, 2019 - https://thehill.com/opinion/energy-environment/452222-scientific-integrity-is-crumbing-under-trump

[8] Science Under Siege at the Department of the Interior, Carter, Markham, Clement, Heid, Worth, Dec 2018 - https://www.ucsusa.org/our-work/center-science-and-democracy/science-under-siege-department-interior-2018

member of the scientific panel asked to review the proposal said it seemed as if the proposal was written by cherry-picking evidence that would support de-listing.[9]

- In 2017, scientists at the Fish and Wildlife Service (FWS) completed a comprehensive analysis of the potential dangers three widely used pesticides may present to hundreds of endangered species. Two of the pesticides, chlorpyrifos and malathion, were deemed by the scientists to "jeopardize the continued existence" of more than 1,200 endangered birds, fish, and other animals and plants. However, before the scientists could publish their report in November 2017, top officials from the Department of Interior (DOI), including then deputy administrator of the DOI, David Bernhardt, intervened. The DOI officials blocked the release of the report.
- In a two-year period, the Department of Interior's (DOI) Bureau of Safety and Environmental Enforcement (BSEE) had given offshore oil drillers 1,679 waivers to regulations that tested the safety of equipment, rather than collect critical data that could demonstrate the need for safety improvements. More than a third of the waivers were for engineering testing procedures for blowout preventors, the device that failed to seal off BP's well when it erupted in 2010 and killed 11 workers during the Deepwater Horizon oil spill.
- Two National Academies of Sciences, Engineering, and Medicine (NASEM) studies were halted in mid-course for the first time in NASEM's 150 year history. One was requested by Appalachian states to better understand the impact on drinking water of mountaintop removal mining. The other was investigating how to improve safety of offshore oil and gas development as recommended by a National Commission after the Gulf oil spill.
- DOI officials removed climate change references from the press release of a USGS study on California coastline infrastructure and sea level rise.
- DOI blocked Bureau of Land Management archeologists and USGS scientists from attending prominent research conferences in their fields.
- Fish and Wildlife Services rushed a scientific assessment of the American burying beetle reportedly to avoid disrupting agribusiness. Two biologists left the project, feeling like they were being forced to do shoddy science.
- The superintendent of Joshua Tree National Park was summoned to Washington to be personally reprimanded by Secretary Zinke after the Park's official Twitter account posted about climate change.
- Government scientists from the US Fish and Wildlife Service (FWS) warned that the use of seismic surveys in Alaska's Arctic National Wildlife Refuge (ANWR) could further threaten the polar bear population. Officials of the Trump administration appear to ignore or censor This information from consideration as the process of opening up the refuge to oil exploration continues.

Even worse are policies and practices that structurally sideline science from policymaking, from limiting the types of science that can inform decisions to political review of scientific grants to the elimination or compromising of science advisory committees. These include:

[9] Scientists Find Serious Flaws in Proposal to Delist Endangered Gray Wolf, Jacob Carter, Jun 24, 2019 - https://blog.ucsusa.org/jacob-carter/flaws-in-proposal-to-delist-gray-wolf

- Restricting the science that agencies can consider to only those studies where all raw data and computer code is publicly available, precluding using information that appropriately should be kept confidential (e.g. health records, endangered species location information). This restriction on science is supposedly to improve transparency but that is a false justification. Making information publicly available is laudable but rarely is it necessary to make raw data available for a study to be understandable and carefully scrutinized. I review dozens of papers for academic journals and do not review the raw data. But requiring raw data disclosure really restricts the ability of agencies to use the best information. And in particular it prevents the use of population level studies that can be vitally important to address public health, safety and environmental threats across the Department's bureaus Indian Affairs, Land Management to Fish and Wildlife. A similar proposal at EPA received universal condemnation from scientific organizations.[10]
- Reducing by fiat the number of expert advisory panels agencies rely on, and favoring regulated industry interests over independent experts on those panels.
- President Trump recently issued an Executive Order cutting the number of agency advisory panels by 1/3. This would not save much money since most committees are pro bono, and it would remove a critical avenue for peer review and scientific advice for absolutely no benefit other than to sideline science.
- Altering the consideration of costs and benefits to downweight public benefits, thereby calling into question the appropriateness of certain regulations, and misusing the very concept of cost/benefit analysis.
- Arbitrarily restricting the length and timeframe for NEPA analyses regardless of the amount of scientific information needed, as well as circumventing the NEPA process depriving the public of the consideration of options and the information that supports different policy alternatives.
- DOI directed political appointees to begin reviewing discretionary grants to make sure that they align with Trump administration priorities. The discretionary grants include any grants worth $50,000 or more that are intended to be distributed to "a non-profit organization that can legally advance advocacy" or "an institution of higher education." Discretionary grants are normally reviewed by independent experts who assess grant proposals using a uniform rating or scoring system established by the awarding agency. The proposals are evaluated based on criteria specific to the grant—for some programmatic grants these criteria are dictated by statutory authority (e.g., grants in the brownfields program at the EPA). Therefore, as former Secretary of Interior David J. Hayes noted, "Subjugating Congress's priorities to 10 of the Secretary's own priorities is arrogant, impractical and, in some cases, likely illegal."[11]

[10] A List of Scientific Organizations That Have Supported and Opposed Limiting What Research EPA Can Use to Make Decisions, Michael Halpern, Apr 24, 2018 - https://blog.ucsusa.org/michael-halpern/a-list-of-scientific-organizations-that-have-supported-and-opposed-limiting-what-research-epa-can-use-to-make-decisions

[11] Trump Political Appointees Interfere in Scientific Grants Process Take Two: The Department of Interior, Jacob Carter, Jan 10, 2018 - https://blog.ucsusa.org/jacob-carter/trump-political-appointees-interfere-in-scientific-grants-process-take-two-the-department-of-interior

I want to be clear. We don't highlight attacks on science to "protect" scientists. I am not concerned that my feelings will be hurt or that controversy is not appropriate and real. I worked with fishermen for many years – and they can be, you might say, direct. I can take the heat and so can many of my colleagues. But censorship and manipulation of results is inappropriate use of our work, and most importantly, in bad policies.

As a decision maker in government in my previous positions at NOAA fisheries I know that lots of considerations must be weighed in any given decision. I believed then, as I do now, that the science is always important but only prescriptive if required by statute. But I also believe that the reasons a decision is made should be as clear as possible for the public. It is never appropriate to censor or manipulate evidence to support a decision being made for other reasons.

Surveys of Scientists Demonstrate Sustained Challenges

Since 2005, the Union of Concerned Scientists has conducted surveys of federal government scientists to measure the level of political, corporate, and other pressures on the conduct and communication of their work. A survey in 2018 was conducted in partnership with the Center for Survey Statistics and Methodology at Iowa State University. Responses were received from 4,211 federal government scientists across 16 agencies and departments.

The results of the survey[12] provided evidence of political interference in the science policy process at many federal agencies. At some agencies, the situation for scientists is worse than it was during the Bush or Obama administrations.

Scientists reported high levels of censorship and self-censorship:

- 631 respondents (18 percent) at agencies that work on climate change agreed or strongly agreed that they had been asked to omit the phrase "climate change" from their work.
- 798 respondents (20 percent) reported that they had been asked or told to avoid work on specific scientific topics because they are politically contentious.
- 1040 respondents (26 percent) reported that they had avoided working on certain scientific topics or using certain scientific terms because they are politically contentious, though they were not told explicitly to avoid them.

[12] The Good, the Bad, and the Ugly: The Results of Our 2018 Federal Scientists Survey, Jacob Carter, Aug 14, 2018 - https://blog.ucsusa.org/jacob-carter/the-good-the-bad-and-the-ugly-the-results-of-our-2018-federal-scientists-survey?_ga=2.185252906.241573531.1563190776-1087000439.1563190776

From the 2018 federal scientists' survey[13]:

- NPS: 168 respondents (76 percent) felt that consideration of political interests is a burden to scientific decision making.
- NOAA: 416 respondents (38 percent) said that a focus on business interests inappropriately influences science-based decisions; 311 respondents (29 percent) said that senior decision-makers from industry or who have a financial stake in regulatory outcomes inappropriately influences decision-making
    - "I've been told to avoid scientific work that might link environmental problems with the actions of U.S. industry."
    - "Industry is given power to direct policy involving regulations or scientific conclusions (and opinions based on the science) that would affect them, thus providing outcomes that benefit them. This comes at the cost of our agencies ability to accomplish our mission for the American public and natural resources we are entrusted to manage and conserve."
- FWS: 235 respondents (69 percent) noted the level of consideration of political interests as a burden to science-based decision-making.
- USGS: 328 respondents (59 percent) reported resources such as funding and staff time distributed away from work considered politically contentious.
- FWS: 213 respondents (59 percent) felt that the effectiveness of the office decreased compared with one year ago, and 210 respondents (58 percent) said personal job satisfaction decreased.
- NPS: 55 respondents (26 percent) reported avoiding working on climate change or using the phrase "climate change" even when not explicitly told to do so.
    - "There has definitely been a chill on climate research and climate change awareness," said an NPS scientist. "Although there have been few published prohibitions to point to, there is uncertainty about what forms of retaliation might take place if the powers-that-be are unhappy with you."
    - "Consistent removal of references to climate change have hindered our ability to have honest discussions about the potential threats associated with climate change to the National Park System."
    - "Management refused permission to publish a (successfully) peer-reviewed report for fear of political repercussions."
- FWS: 101 respondents (30 percent) reported being asked to omit certain politically contentious words from their scientific work products.
- USGS: 119 respondents (22 percent) reported they have been asked or told not to work on topics viewed as politically contentious; 169 respondents (32 percent) reported they avoid working on climate change or using the phrase "climate change" even without explicit orders to do so.

[13] 2018 Federal Scientists Survey FAQ - https://www.ucsusa.org/our-work/center-science-and-democracy/promoting-scientific-integrity/2018-federal-scientists-survey

    - "We are being told not to use the words 'climate change' in any memos that require clearance, and press releases are not being approved. This really hinders our ability to communicate with the public and lowers morale."
- NPS scientist: "The constant attacks on science and facts by the current administration has negatively impacted scientists in the agency. Effects range from anger and frustration to depression and even opting to retire early. Twenty-five years of experience with 3 federal agencies and I've never seen anything like this—it is appalling."
- From the U.S. Geological Survey: "Senior USGS management has censored scientists on multiple occasions. For example, video of a research talk on earthquake early warning was removed from the USGS website because there was concern that congressional staffers might see it (the research pointed out difficulties with earthquake early warning, which had yet to be funded fully by congress). Often politically contentious scientific results are watered down in the internal review process. If scientists do not accept edits that water down the language, they are not allowed to submit the manuscript to a journal."
- From the National Park Service: "Consistent removal of references to climate change have hindered our ability to have honest discussions about the potential threats associated with climate change to the National Park System."

(Note that percentages vary because not every respondent answered every question)

Science has been the engine which has driven prosperity in this country since its founding. There is no model of an effective democracy in which the best and brightest scientific minds either elect to keep their work to themselves for fear of reprisal, or, are muzzled by a frightened government unwilling to accept their findings.

The Scientific Integrity Act

The Scientific Integrity Act introduced by Rep. Paul Tonko (NY), and co-sponsored by over 200 members of the House, is good government legislation. It is agnostic on matters of policy; rather, it aims to ensure that policies are fully informed by science. The legislation contains many of the best practices that have been identified for the development and maintenance of a thriving federal scientific enterprise.

Putting such legislation in place is vital because current policies, including the Department of Interior's Scientific Integrity Policy do not have the force and effect of law. They can and are being ignored all too often as the examples above show.

The legislation prohibits any employee from manipulating or misrepresenting scientific findings.[14] On issues from endangered species to toxic chemical contamination to worker safety, political appointees

[14] Attacks on Public Health and Safety that the Scientific Integrity Act Could Have Prevented, Dr. Jacob Carter, Jul 15, 2019 - https://blog.ucsusa.org/jacob-carter/attacks-on-public-health-and-safety-that-the-scientific-integrity-act-could-have-prevented?_ga=2.243047298.1690950967.1563366482-1532896556.1535565435

have personally made changes to scientific documents (or ordered that changes be made) in order to justify action or lack of action on public health and environmental threats.

The legislation helps ensure that government communication of science is accurate by giving scientists the right of last review over materials that rely primarily on their research. It also gives scientists the right to correct official materials that misrepresent their work. This provision makes it less likely that federal agencies will put out inaccurate information, either intentionally or inadvertently.
The legislation ensures that scientists can carry out their research—and share it with the public—without fear of political pressure or retaliation. It enables scientists to talk about their research in public, with reporters, in scientific journals, and at scientific conferences. The bill empowers federal scientists to share their personal opinions as informed experts, but only in an individual capacity, not as government representatives. This is essential due to the amount of censorship and self-censorship that has been documented on issues from climate change to food safety.

The legislation requires agencies to devote resources to designate scientific integrity officers and provide federal employees with appropriate training to help prevent misconduct. Some agencies have developed policies that have no enforcement mechanisms, rendering them virtually meaningless.

The legislation would *not* empower scientists to speak for their agency on policy matters. It would not enable scientists to circumvent the agency leadership with regard to policy decisions. It would be clearly applied to expressing views with regard to their scientific expertise.

Concluding Remarks

Not all attacks on science are matters of scientific integrity. Policy decisions that fail to consider scientific evidence are just that and harm our nation. But allowing scientists to be free from censorship, manipulation of their results or intimidation would go a long way toward improving the decision process. And pushing back on other attempts to sideline science from policymaking is also important for accountability, public trust, and the overall strength of environmental and public health decisions.

The United States has a strong and vibrant science community. That community is part of the strength of our democracy. But when science is sidelined from public policy or scientific integrity is compromised public health, safety and our environment is undermined. Simply put, we can not make good policy in the public interest unless we fairly consider the weight of scientific information fully.

Thank you Mr. Chairman and Ranking Member, I would be happy to respond to questions.