

**U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON NATURAL RESOURCES
Response from Dr. Andrew Rosenberg**

“When Science Gets Trumped: Scientific Integrity at the Department of the Interior”

QUESTIONS FOR THE RECORD SUBMITTED BY

1. In his opening statement, Ranking Member Rob Bishop referred to the decreasing number of scientific integrity complaints at the Department of the Interior during the Trump administration. Is the number of scientific integrity complaints an adequate measure of a scientific integrity problem in an organization?

Response: No, the number of complaints is dependent on many factors, importantly including whether agency scientists feel secure and trust the process. Our survey of DOI scientists shows a marked decline in trust of agency leadership. That is a significant factor in changes in formal scientific integrity (SI) complaints. In addition to a lack of confidence in the process by the aggrieved party, scientists concerns over retaliation by colleagues or supervisors for speaking out, and incidents which may have been reported by the aggrieved party but not properly documented, many complaints are dealt with informally and through consultation that is not documented.

Specifically, at the Department of Interior, we note that the Agency only lists two scientific integrity complaints in 2018. However, UCS has documented eight instances of political pressure on science and scientists from publicly disclosed information.

- Deputy Secretary David Bernhardt issues Order No. 3369 that will restrict scientific studies from being used to inform decisions at DOI.
- Senior officials at DOI dismissed evidence showing the value of national monuments via increased tourism and archaeological discovery in a review of monuments conducted by the agency.
- The Trump administration rescinded Director’s Order #100, which established that management of national parks would be made using the best available science.
- The US Geological Survey (USGS) began requiring scientists to get permission to speak to reporters in July 2018, representing a dramatic change from decades of past media practices.
- In 2018, the DOI restricted its scientists from attending two national prominent scientific meetings, the annual meeting of the American Geophysical Union (AGU) and the annual meeting of the Society for American Archaeology.
- In January 2018, the Trump administration instructed political appointees to review grants to ensure they aligned with 10 priorities set by the administration. Typically, scientific grant proposals are reviewed and awarded based on their intellectual merit, not political priorities.
- Officials from the Department of Interior (DOI) stripped language that was written by federal scientists on a key environmental impacts letter to the US Customs and Border Protection (USCBP) about the US-Mexico border wall during December, 2018. The deleted sections, written by federal biologists and wildlife managers from

the US Fish and Wildlife Service (FWS), brought up scientifically-valid concerns about the potential impact of the border wall on endangered species whose populations are located along the border.

- In September 2018, two university scientists ended a contract with the Fish and Wildlife Service saying that the administration was pressuring them to use inaccurate methodologies in their work.

Finally, scientific integrity policies do not address many of the ways that science is sidelined from policymaking, including by politicizing or disbanding science advisory committees; weakening the department's interpretation of laws such as the Endangered Species Act; reassigning staff in a retaliatory manner; and allowing for political review of scientific grants, all of which has been well-documented.

- a. The Union of Concerned Scientists has conducted surveys of scientists in several federal agencies, including those within the Department of the Interior. Is this a more accurate way to measure the extent of a scientific integrity problem at an agency?

Response: There is both anecdotal and quantifiable evidence that illustrates the challenges of Agency self-reporting scientific integrity violations. Relative to that process, the scientist survey conducted by UCS is a more accurate way to capture more data about allegations of scientific integrity violations. The data from the surveys paint a bleak picture of how this Administration is censoring scientists, both directly and indirectly, subjecting critical workforce capacity to harmful atrophy, and directly interfering with the work conducted by scientists. Yet even our data only scratches the surface of what scientific integrity challenges may exist. Our survey results are limited by the number of responses we receive, and without an Agency mandating participation in the study, we can only analyze and report on what we hear back.

It is also of concern that reporting by the agency is limited. Even for complaints that are reported, the resolution of those cases is unclear. Overall, more transparency by the agency would help improve the trust scientists have in the process.

- b. Can you briefly describe some of the key findings of those surveys?

Response: Our 2018 survey results show that scientists are concerned about workforce reductions. Seventy-nine percent of respondents reported workforce reductions occurring during the 2017-2018 frame, and 87 percent of those respondents reported that such reductions made it more difficult for agencies to fulfill their missions. Our results also show concern about political interference. 20 percent of all respondents named "influence of political appointees in your agency or department" or "influence of the White House" as one of the greatest barriers to science-based decision-making. Fifty percent of all respondents either agreed or strongly agreed that consideration of political interests hindered their agencies' ability to make science-based decisions. Respondents from the EPA showed particular concern about political influence, with 81 percent agreeing or strongly agreeing

that it was a hindrance, and nearly a third naming it as a top barrier, to science-based decisions.

Censorship has also been a persistent problem, especially at the National Park Service where scientists struggle to be accurate in their work without the ability to mention climate change and its impacts. Our Survey results show that 18 percent of respondents (including 47 percent at NPS and 35 percent at EPA) had been asked to omit the phrase "climate change" from their work. And 20 percent of respondents reported engaging in self-censorship regarding climate change.

These issues of course manifest in low morale and low confidence in any existing scientific integrity policies. Many respondents reported decreased job effectiveness and satisfaction in addition to low morale. Across all agencies, 39 percent of responding scientists reported that the effectiveness of their divisions or office had decreased over the past year, while only 15 percent reported an increase. Forty-two percent of respondents said that they would be willing to report a scientific integrity violation and trust that they would be treated fairly.

Please refer to the attached summaries of our survey at the end of my responses.

2. In his testimony, Mr. Daren Bakst drew attention to the fact that scientific integrity violations have occurred under previous administrations at the Department of the Interior. Are the attacks on science under the Trump administration at Interior a reflection of the status quo or is this administration unique?

Response: Mr. Bakst conflated a wide range of issues of scientific misconduct, genuine policy differences, the interpretation of legal mandates and scientific integrity as defined in our work and agency policies. That makes his statements rather confused and unclear. It is important to note, that issues such as scientific misconduct, which certainly occurs though it has been shown to be rare, have a mechanism in place to resolve issues – peer review, expert panels, and consideration of weight of evidence rather than any one study for example. So too do issues of legal mandates (adjudication) and even policy differences (Congressional oversight, adjudication). But the system for political suppression or manipulation of science has no formal system for resolving problems that includes real accountability.

Scientific integrity violations have been documented as far back as the Eisenhower Administration. However, the degree to which science has been politicized, and the ferocity with which this Administration and its allies attack science they find too inconvenient for their goals, is both alarming and unprecedented. As I noted at the hearing, we have documented over 100 attacks against science by the Administration to date. To put this into historical context, the Trump Administration has attacked science more often in less than 3 years compared to 8 years of the President George W. Bush Administration. The number is certainly shocking, but what is most important to guard against is not simply the next attack, but the consequences of those attacks for the American people – less public health protection, poorer environmental quality with impacts on our quality of life, less safety and resilience of our communities. And these are often impacts that will be with us for years if not decades. Further, we are concerned about the potential shift in political culture that would make

attacks on science commonplace, and censoring of scientists acceptable. Neither are precedents for a successful democracy.

3. In his testimony, Mr. Daren Bakst highlighted EPA's "secret science" rule. The Department of the Interior issued the nearly identical Secretarial Order 3369 "Promoting Open Science." Can you explain how these initiatives will affect science and scientists at federal agencies like the Department of the Interior?

Response: To be clear, while scientists at federal agencies will certainly be impacted, the clear losers of allowing such policies to be enacted at EPA and DOI are the American people. There is a thorough record of the "secret science" rule, first considered by the House Science Committee under the leadership of then Chairman Lamar Smith, where the intention of this policy was laid bare. At its core, policy proposals like EPA's "secret science" rule and Secretarial Order 3369, serve to restrict the science that can be considered by agency's when developing responses to critical public health challenges posed by climate change.

As my colleague Michael Halpern once said about the EPA rule, "This is a fundamentally flawed concept wholly conceived and promoted by industry lobbyists to limit the types of science that EPA can use in making decisions. Not even the EPA Office of the Science Advisor had any clue what was going on until the proposal was published. When legislation that tried to accomplish the same goal repeatedly died on the vine in Congress, they tried to ram it through the agency. The proposed rule should be framed in the National Archives as a notable example of how a government agency can be co-opted by extremists and failed tobacco lobbyists."

Any initiative that makes it harder for scientists at federal agencies to have access to the science they need to conduct their work is problematic. When such initiatives also leave open the opportunity for third-parties to challenge the underlying data, the work of the agency slows and the role of the federal scientist transforms from analyzing to defending. Much like a trojan horse, these initiatives are specifically designed to put scientists on the defensive thereby slowing the work of the agency.

Rather than promote transparency, the Secretarial Order further politicizes the process of science informing policy choices, because it gives the Secretary or his designee the authority to pick and choose which science can be used despite so-called transparency concerns. And, the order is specifically designed to circumvent the process by which scientists determine the weight of evidence and place that into political hands. That inherently means that the decisions that are made will be more political, less defensible, and the policies will be less effective for a whole host of reasons.

When the rule was announced at EPA, then-Administrator Pruitt said that the order was consistent with guidelines from specific scientific organizations, all of which subsequently disavowed and distanced themselves from the rule. Dozens of scientific organizations urged that the rule be scrapped; not a single mainstream scientific organization supported it.

Please refer to the attached comments submitted by UCS to the EPA rule at the end of my responses.

4. Last month, President Trump issued an Executive Order, titled “Evaluating and Improving the Utility of Federal Advisory Committees.” This order gives federal agencies until September 30, 2019 to terminate at least one third of all of their federal advisory committees.

- a. Can you please explain the role of these federal advisory committees?

Response: Federal advisory committees are formal bodies comprised of experts that can provide advice to policymakers on highly technical matters, particularly on issues relating to science. The EO is a purely cosmetic act to cut advisory committees without rhyme or reason. It is the very definition of arbitrary and capricious. This extends the administration’s attacks on receiving independent science advice as we have seen at both EPA and Interior – appointing poorly qualified advisors with major conflicts of interest, excluding highly qualified advisors on contrived grounds, failing to hold advisory committee meetings on major science based actions. Now, committees will be eliminated wholesale with no stated rationale. It can’t be to save money since most advisors serve pro bono (as I have on numerous committees). And it won’t allow agencies to access the best talent.

- b. How does this executive order affect scientific integrity at federal agencies?

Response: First, the order is arbitrary in setting what number of committees to eliminate. Second, the justification for seeking to eliminate committees (cost), is not supported by any evidence provided to date. What it means is that agencies will not have the independent advice of external scientists to guide their work. That means, once again, that the role of science will likely be weakened in the decision process and policy choices will be made on a wholly political basis.

- c. Based on what we have seen so far in the Trump administration, how do you think agencies will decide which advisory committees to terminate?

Response: At this point it is unclear. There is no consistency in approach or rationale. Agencies must just report which committees will be cancelled to meet an arbitrary and capricious standard.

5. Dr. Rosenberg, please describe the difference between scientific integrity violations and research misconduct that might occur among agency scientists.

Response: Research misconduct describes the behavior of the scientist, scientific integrity violations describe the behavior of *others* towards the scientist. The former is referring to relatively rare cases where a scientist intentionally circumventing or corrupting the scientific process rendering their results suspect. The latter is others misconstruing, suppressing or

manipulating scientific results or attacking scientists personally in order to corrupt the evidence and misrepresent the science.

- a. What mechanisms are in place to address research misconduct? Are such mechanisms sufficient?

Response: There are a host of mechanisms, from peer review by knowledgeable experts, to science advisory panels, institutional review boards and other checks and balances that prevent, or in some cases bring to light, research misconduct. But in addition, when used in a policy context, adhering to a standard of relying on the weight of evidence rather than any one study generally reveals aberrant results. These mechanisms can always be strengthened, better funded and more rigorously applied, but research misconduct is relatively rare, and rarer still is an inappropriate study given significant weight in policy making.

- b. What mechanisms are in place to address scientific integrity violations? Are such mechanisms sufficient?

Response: Scientific integrity policy at federal agencies provide some, but a rather inconsistent mechanisms to raise issues of political interference in science within the agency. But there is no full accountability to meet the policies. Inspector General Offices have not taken on these challenges in most cases. Accountability, reporting and follow through have all been difficult to varying degrees at different agencies.

- c. Is it necessary to have separate policies that address scientific integrity violations and research misconduct?

Response: Yes, these are entirely separate issues and should not be conflated.

6. Dr. Rosenberg, many believe that transparency in research is important to public accountability. Can you describe what methods scientists currently use to share data and research methods? In addition, can you address efforts to exploit the idea of transparency in science to undermine science-based policymaking?

Response: Transparency in research is important. But being clear on what steps lead to greater transparency is essential. Sharing information on what studies were considered and how important an agency believed each to be in the decision it made is a major step. Also, agency decision records should clearly state why a specific policy choice was made and not try to contort the science to support a decision. Scientific evidence does not mandate any particular policy choice, but it should inform policy-makers and the public about the efficacy of that choice. If a decision is being made for other reasons (e.g. to allow businesses time to adjust) then say that rather than pretend that decision is based on science.

Unfortunately, some interest groups have falsely claimed that transparency depends upon the sharing of raw data and other underpinning of a particular study. But from a scientists perspective, I want to understand the methods used to collect the data, the basic patterns in the data and how the results were then derived. I don't want to look at each data point unless

one is given undue influence, which should be revealed in the data methods and patterns. Requiring release of raw data immediately precluded a wide range of information that must be kept confidential for privacy reasons. That in turn means that certain kinds of studies such as epidemiological analyses can not be considered, but they provide critical public health information. So, chasing after raw data really is a trick to preclude epidemiological information.

7. Dr. Rosenberg, please describe the results of your survey of scientists at the Department of Interior and how these measure up to previous administrations.

Response: As noted above, we have seen marked increases since the previous administration of concerns over political interference and special interest influence on science and policy making. There are also major increased concern over the capacity of the agencies in Interior to meet their mission because of staff losses and political micromanagement. Morale is very low and job satisfaction is declining.

8. Dr. Rosenberg, please describe other ways that Department of Interior officials have sidelined science from the policy process or otherwise politicized science in ways previously unseen. Are there methods other than scientific integrity policies that would help prevent these kinds of practices?

Response: We have catalogued attacks on science in the department as detailed in my written testimony. Not all are issues of scientific integrity. Some attacks are the result of political appointees ignoring input from professional staff, including scientists, others are political micromanagement of grant programs, or mandating unscientific standards such as a time limit for projecting future impacts, or page limits on analyses. Overall, the ethos of the department has turned to a focus on political rather than evidence-based decisions.

9. Dr. Rosenberg, why do you think that formal scientific integrity complaints at the Department of Interior are down? Does this demonstrate that the Trump administration is more science-friendly than the Obama administration?

Response: As I stated in my answer above – there may be a number of reasons why the number of formal scientific integrity complaints at the Department of Interior do not match up with the number of scientific integrity violations we have documented in our work. Censorship, intimidation, lack of confidence in the process, low morale, or a combination of factors could all be involved. Whether by this metric or another, the Trump Administration has demonstrated a unique hostility towards science that has not been seen in other Administrations.

10. Dr. Rosenberg, please describe how violations of scientific integrity within Agencies can impact the lives of people around the country.

Response: Inherently, scientific integrity violations mean that the American public has less information and it is of poorer quality. It also means that decision-makers at other levels of

government have less high quality information. That puts public health, safety and environmental quality at risk.

11. Dr. Rosenberg, how do strong scientific integrity policies operate to protect against attacks on science that we have seen in this Administration and others?

Response: Strong policies set a presumption that scientific information will be available to the public and decision-makers without political interference. While the policies are not fully enforceable, at least these protections become part of the agency's mandate.

12. Dr. Rosenberg, why are strong scientific integrity policies needed to protect the federal workforce from stagnation and attrition?

Response: Scientists want to do their work and have their efforts be fairly considered in the policy process. They want the results of their efforts to be meaningful and impactful. When the results are manipulated or suppressed, that really undermines the reason that people do the work they do. These are highly trained professionals with years or decades of training and experience. They have chosen public service and are committed to working in the public interest. If their work is suppressed or manipulated it goes against the core of their motivation for doing the hard work of science in the public interest.

13. What are the impacts to the country of a federal workforce that lacks scientists to do research?

Response: Decisions become more wholly political, and are made on the basis of influence, not evidence. Scientists need to be on the front lines. Their research is of the highest quality, but is directed by the needs of the agency and the country. Without them, why would we expect our policy decisions to be as good as they should be?

Questions from Rep. TJ Cox for Dr. Andrew Rosenberg, Director, Center for Science and Democracy, Union of Concerned Scientists

1. There have been recent reports of Federal agencies looking to hide or keep from the public studies that show the negative impacts climate change will have on farmers across the country. As someone who represents a district that relies heavily on natural resources and is the number one agriculture producing district in California, how should the Department of the Interior be coordinating with other federal agencies to collectively determine what effects climate change is going to have on districts like mine?

Response: While I agree that there should be some degree of inter-Agency coordination on this issue, and many others, that relate to climate change, any specific recommendation I might give to the Department would begin with ensuring that all agency scientists are able to communicate their findings to each other, other agencies, Administration officials, and the public, without fear of censorship or retribution. My training is in fisheries and marine resources and fishermen share many of the same challenges as farmers. I know from my

own experience that business and families that depend directly on natural resources need as much information as they can get about what is coming at them. Climate change is having a definite, major impact on farming. This is a matter of evidence not belief. Farmers need the best information they can get to plan for their businesses in a changing world. Always have, always will.

2. Other recent reports have described how the effects of climate change threaten our National Parks. My district in California's Central Valley is adjacent to some of our nation's most-renowned national parks. My constituents enjoy our proximity to these natural treasures. Fresno, part of which I represent, benefits from the travel and tourism activity generated by nearby parks and public lands. It's clear that climate change is happening and will continue to impact our parks.
 - How should Interior be ensuring that the National Parks Service has the information to plan accordingly for climate change?
 - If we don't have the science, what are we going to miss?

Response: Any specific recommendation I might give to the Department would begin with ensuring that all agency scientists are able to communicate their findings to each other, other agencies, Administration officials, and the public, without fear of censorship or retribution. Certainly, without having access to science, we would lack any information to make informed policy choices on how best to preserve our public lands and otherwise respond effectively to a changing, rapidly warming, climate. Every national park needs to have a plan for the changing climate. And every park needs to play a key role in educating the public about climate change. These are living laboratories where Americans can see with their own eyes how nature works and how it is changing. The parks should be part of a great effort for citizen science and science education, not a political tool. Without an understanding of the science of climate change we will be less educated, aware, prepared and engaged.

Questions from Rep. Horsford for Dr. Andrew Rosenberg, Director, Center for Science and Democracy, Union of Concerned Scientists

1. Where I come from, state and local governments face serious land management and resource challenges. With limited access to water, high threat of wildfires, and the spread of invasive species, Nevada land managers face significant challenges.
 - a. Dr. Rosenberg, should city and state officials in Nevada have the ability to consult directly with Department of Interior experts about how they expect water resources of fuel loads to change in the future, or should people in Washington decide whether those conversations should happen?

Response: The information produced by experts at the Department of Interior ought to be clear, complete, and free from political influence so that city and state decisionmakers can rely on such information without concern over the authenticity of the science. To that end, it is important that scientists at the Department are able to communicate their findings to each other, other agencies, Administration officials, and the public, without fear of censorship or retribution. Local officials

need to be able to have access to the expertise that they need to do their critical jobs. But no local agency has the scientific expertise of the federal government. Therefore it is incumbent upon the federal government to make that expertise as available as possible to all levels of government and the public.

- b. In follow up to issue of transparency, should reporters who work for local newspapers, including those in Nevada, be able to speak directly with taxpayer-funded federal government experts about their research and expertise? Is it right that they should be limited to consult press releases from D.C. political appointees?

Response: Similar to my response above, it is important that scientists at the Department are able to communicate their findings to each other, other agencies, Administration officials, and the public (which includes members of the press), without fear of censorship or retribution.