



To: Scientific Integrity Task Force

White House Office of Science and Technology Policy

From: Public Employees for Environmental Responsibility (PEER)

Subject: Examples of Scientific Integrity Policy Failures –Lessons Unlearned

Date: May 27, 2021

Summary: These are examples where agency Scientific Integrity Policies have been used to mask misconduct by declining to investigate formal complaints or by ratifying improper agency actions. More detailed discussions of these cases begin on page 4.

The six cases involve –

1. Refusal by the **Bureau of Land Management** (BLM) to include impacts from livestock grazing in compiling eco-assessments of change agents affecting the Sagebrush West. The largest BLM scientific study in its history excluded necessary grazing data, rendering the entire study useless.

Lesson Unlearned: Scientific Integrity Officer should not be a collateral duty for a mid-level official. Asking a line official to make decisions to investigate his/her own chain-of-command is both an unfair and untenable arrangement.

Recommendation: Allow an appeal of initial decisions to dismiss Scientific Integrity Complaints without investigation to an independent body outside of the agency. Similarly, that independent body should be able to review other actions by an agency not to pursue a Scientific Integrity Complaint.

2. Dismissal of a Scientific Integrity Complaint about political directions given to the scientific recovery team for the endangered Mexican wolf. This dismissal defended the actions of a political appointee, the Director of the **U.S. Fish & Wildlife Service**, who allowed the alteration of scientific findings.

Lesson Unlearned: Agency staff should not be put into a position to judge the actions of the political appointees to whom they report. In addition, these policies should make it clear that attempts to suppress or skew scientific findings is covered by these policies even if those attempts are ultimately unsuccessful.

Recommendation: Scientific Integrity Policies should clearly forbid political appointees from manipulating or distorting scientific findings for reasons having nothing to do with their technical merit.

3. A decision by the **National Oceanic & Atmospheric Administration** to not investigate a Scientific Integrity Complaint on how public statements reflected less than half the true flow rate of oil leaking from the BP Deepwater Horizon. The complaint contained documents indicating White House pressure to present low-range estimates as best estimates.

Lessons Unlearned: 1) One goal of the Scientific Integrity Policies is to increase public confidence in the quality and accuracy of agency science. That goal is undermined, if not negated entirely, by shrouding the agency's scientific integrity reviews in confidentiality. 2) Agencies should consistently follow their own policies and not deviate in cases that have high-political profiles.

Recommendations: 1) The threshold for determining whether a Complaint should be investigated should be resemble a probable cause standard, and that standard should be consistently followed; 2) There should be an opportunity for appeal to an outside body any decision to not even investigate Complaints.

4. Approval by the **Department of Interior** of its press officers rewriting scientific documents in ways that the Bureau of Reclamation's own Scientific Integrity Officer found to be incomplete, inaccurate, and misleading. The Department also 1) issued no reprimands or clarifications to the Secretary's press staff; 2) moved to terminate the Scientific Integrity Officer; and 3) dismissed his formal complaint of misconduct.

Lessons Unlearned: Scientific Integrity Officers (SIOs) have no professional tenure or protection against dismissal or reassignment. SIOs who conscientiously seek to do their jobs often must cast profiles in courage. Alternatively, SIOs who pull their punches or avoid rigorous actions to implement the spirit or letter of their Scientific Integrity Policies do a disservice to the scientist in their agencies and ultimately make conditions worse for both themselves and those they mean to serve.

Recommendations: None of terminated SIO's recommendations for improving SI policies have been adopted. Yet they are just as worthy of consideration today as when they were made in 2012.

5. Failure by the **U.S. Environmental Protection Agency** to investigate a 2020 Scientific Integrity Complaint summarizing accounts of current EPA employees and co-signed by 44 former and current federal employees, including three former regional administrators, as well as experts from the Army Corps of Engineers and U.S. Fish & Wildlife Service. The Complaint details how senior EPA officials excluded both key scientific information and its own experts from contributing to the formulation of a new, sweeping redefinition of Waters of the U.S. (WOTUS). In the succeeding months none of the co-signers have been contacted, let alone interviewed, by EPA.

Lessons Unlearned: EPA's Scientific Integrity Policy lacks any protocols for how complaints of misconduct are to be investigated or by whom.¹ This continuing and appalling gap underlines the need for EPA to immediately develop a cogent policy.

¹ <https://www.peer.org/epa-scientific-integrity-policy-stuck-in-utero/>

Recommendations: EPA's Scientific Integrity Policy should be thoroughly rewritten to adopt best practices from other agencies, especially a detailed protocol for how all scientific misconduct complaints will be handled. In addition, EPA needs a transparent system so that the status of these complaint investigations can be monitored.

6. Dismissal of a Scientific Integrity Complaint by a **U.S. Geological Survey** microbiologist about the releases of viruses and other fish pathogens from a high-level bio-secure laboratory. The Review Team found that the microbiologist's concerns about ecological danger, damage to research subjects, and loss of scientific integrity were valid but dismissed the complaint because it found that it was not the result of "intentional action." The Review Team recommended no action to prevent future bio-security breaches, and, over her protests, the agency left the microbiologist under the same supervisor named in the Complaint. That supervisor then proposed the microbiologist's termination.

Lessons Unlearned: 1) Scientific Integrity Policies should have jurisdiction to address lapses in scientific integrity even if no intentional misconduct is involved. 2) Negligent management should also be subject to review and correction in these reviews. 3) Retaliation against scientists after they file complaints or raise issues is often ignored.

Recommendations: 1) There should be clear investigative protocols and records detailing investigations; 2) Scientific Integrity Officers should ensure that underlying losses of scientific integrity are corrected even if they determine those lapses did not result from deliberate misconduct; and 3) Steps should be taken to protect employees who file Complaints from retaliation, especially from the managers named in those Complaints.

Six Case summaries

PEER believes these cases are representative of the experiences within these agencies and reflect a posture in which Scientific Integrity Policies are administered in a fashion that undermines their purposes and, at times, are utterly counterproductive.

PEER is submitting these cases to the Task Force because we believe they illustrate revelatory factors that have made these policies far less than effective. In each case, PEER draws lessons that should have been learned but remain unacknowledged and recommends reforms that should be incorporated into agency scientific integrity practice.

1. BLM's Mystery Cows

Funded with up to \$40 million of stimulus funds, the U.S. Bureau of Land Management undertook one of the biggest scientific studies in its history – an ambitious plan to map ecological trends throughout the Western U.S. These Rapid Ecoregional Assessments would cover each of the six main regions (such as the Colorado Plateau and the Northern Great Plains) covering the vast sagebrush West. A key task was choosing the “change agents” (such as fire or invasive species) which would be studied.

However, when the scientific teams were assembled at an August 2010 workshop, BLM managers informed them that grazing would not be studied due to anxiety from “stakeholders,” fear of litigation and, most perplexing of all, lack of available data on grazing impacts.²

Exclusion of grazing was met with protests from the scientists. Livestock grazing is permitted on two-thirds of all BLM lands, with 21,000 grazing allotments covering 157 million acres across the West. As quoted in the workshop minutes, one participating scientist said:

“We will be laughed out of the room if we don’t use grazing. If you have the other range of disturbances, you have to include grazing.”

In the face of this reaction, BLM initially deferred a decision but ultimately opted to remove livestock grazing from all Ecoregional assessments. Instead, the agency limited consideration of grazing-related information only when combined in an undifferentiated lump with other native and introduced ungulates (such as deer, elk, wild horses and feral donkeys), citing insufficient data. As a result, the assessments do not consider massive grazing impacts even though trivial disturbance factors such as rock hounding are included.³

In November 2011, PEER filed a Scientific Integrity Complaint charging that this blatantly political decision to exclude consideration of livestock grazing as a possible factor in changing landscapes compromised the utility and validity of the ecoregional assessments for reasons that lacked any technical merit and violated Interior’s newly adopted Scientific Integrity Policy.⁴ In fact, this was the first

² https://www.peer.org/wp-content/uploads/attachments/11_30_11_Workshop_Meeting_Notes.pdf

³ https://www.peer.org/wp-content/uploads/attachments/11_30_11_Summary_Factsheet.pdf

⁴ https://www.peer.org/wp-content/uploads/attachments/11_30_11_Scientific_Misconduct_Complaint.pdf

scientific misconduct complaint filed under the Interior policy purporting to prevent political manipulation of science

To review the PEER complaint, BLM tagged Louis Brueggeman, its Fire Management Liaison, to act as “Scientific Integrity Officer.” In a letter dated January 2, 2013, Mr. Brueggeman, rejected the PEER scientific misconduct complaint filed more than a year earlier. In his letter dismissing the Complaint, he concluded that the complaint had “no merit” since the decision to exclude grazing was reached independently by study team leaders (all BLM managers) solely for “technical reasons” relating to the “lack of sufficient existing data” about livestock impacts.⁵

In reaching this conclusion, Mr. Brueggeman did not interview a single witness proffered by PEER. Nor did he reference the meeting minutes produced by PEER in which BLM managers are quoted saying that study of grazing impacts would concern “stakeholders” and the Washington Office due to “fear of litigation.”

In a rebuttal document filed with both BLM and the Department of Interior’s Scientific Integrity Officer, PEER explained that Mr. Brueggeman’s claim that the real reason was lack of data did not hold water because, among other reasons:

- Attempts to exclude grazing began at the earliest stages of the study well before data availability was even examined. Further, BLM assertions of data gaps were never examined, let alone verified;
- Other factors being studied, such as invasive species, also have data gaps but these issues did not prevent invasive species from being selected as a study focus. In fact, BLM has far more data on grazing than it does on other change agents, such as climate change or urban sprawl, that it chose to follow.; and
- BLM managers hid the existence of a major livestock database which had been given to researchers at the U.S. Geological Survey.⁶

The decision to exclude livestock grazing, arguably the biggest change agent, renders the \$40 million BLM study largely useless. This is because livestock operations occupy two-thirds of all BLM lands.

Significantly, the agency’s own records show that the primary cause (nearly 80%) for BLM lands not meeting range health standards is damage from livestock, far eclipsing drought, fire, invasion by non-native plants or urban sprawl – the factors BLM now calls “overarching.” In fact almost 40% of all BLM allotments surveyed since 1998 fail to meet the agency’s own required land health standards due to livestock grazing – more than 33 million acres, an area bigger than the entire State of Alabama.⁷

⁵ https://www.peer.org/wp-content/uploads/attachments/1_24_13_BLM_integ_response.pdf

⁶ https://www.peer.org/wp-content/uploads/attachments/1_24_13_PEER%20Rebuttal.pdf

⁷ <https://www.peer.org/livestock-s-heavy-hooves-impair-one-third-of-blm-rangelands/>

Moreover, livestock is directly linked to aggravating drought conditions and spreading invasive species – two factors BLM chose to study.⁸

In January 2013, PEER filed a formal request with Dr. Suzette Kimball, the Scientific Integrity Officer for the entire Interior Department, asking her to reject BLM’s findings and institute an independent review.⁹ We never received a reply from Dr. Kimball.

The net result of this episode is that today, a decade later, BLM still has no scientific understanding of the landscape impacts of its largest program in land area – commercial livestock grazing.

Lesson Unlearned: Scientific Integrity Officer should not be a collateral duty for a mid-level official. Asking a line official to make decisions to investigate his/her own chain-of-command is both an unfair and untenable arrangement.

Recommendation: Allow an appeal of initial decisions to dismiss Scientific Integrity Complaints without investigation to an independent body outside of the agency. Similarly, that independent body should be able to review other actions by an agency not to pursue a Scientific Integrity Complaint.

2. Mexican Wolves Allergic to Scientific Integrity

The Mexican wolf is one of the most endangered mammals in North America. The sole wild population of Mexican wolves grew from 4 individuals in 1998 to 55 in 2003, at which time more aggressive removal was instituted. In the intervening years, the population, remained below 60 wolves through 2011.¹⁰

In 2010, the U.S. Fish and Wildlife Service (FWS) concluded that the Mexican wolf “is not thriving” due to lack of an up-to-date management plan, illegal shooting; and genetic inbreeding. The cumulative impacts of these factors “threaten the population with failure.” The agency then convened eight experts to serve on a special Science and Planning Subgroup of the Mexican Wolf Recovery Team.¹¹

Through the next two years, this scientific subgroup unanimously concluded that Mexican wolf recovery required three populations of 200-350 wolves connected by corridors. They also found the best suitable habitat for reintroduction included southern Colorado and southern Utah.

The political pressure within the FWS to lower the number of wolves needed or to jettison a numeric threshold altogether was intense, as indicated in this FWS email to the scientists (“he” refers to the Southwest Regional Director):

“You should not feel undo [sic] pressure at this point to accommodate, per se, but you should recognize that this is his way of telling you (at least at this point) what information he would like to see.”

⁸See https://www.peer.org/wp-content/uploads/attachments/4_7_16_BLM_Grazing_Climate_NEPA_Complaint.pdf

⁹ https://www.peer.org/wp-content/uploads/attachments/1_24_13_PEER_Kimball_reexam_ltr.pdf

¹⁰ Following litigation against FWS [Mexican wolf population up by 32 in 2020 wolf count | WildEarth Guardians](https://www.wildearthguardians.org/mexican-wolf-population-up-by-32-in-2020-wolf-count/), the population has rebounded in recent years [See <https://www.fws.gov/southwest/es/mexicanwolf/>]

¹¹ See Mexican Wolf Subgroup charge.

Emails from FWS officials to the scientists also demanded that they exclude Utah and other states from suitable habitat. In addition, senior FWS officials attempted to prevent the science subgroup from issuing final Mexican wolf recovery criteria. Citing these materials, in June 2012 PEER filed a Scientific Integrity Complaint, against the FWS Southwest Regional Director, seeking to allow the Subgroup to finish its work unmolested.¹²

Instead of bringing in outside reviewers, Interior asked FWS to review itself. The investigation was tasked to a FWS career official, Richard Coleman. In his five-page “reply letter” dated September 25, 2012,¹³ Mr. Coleman dismissed all the complaint specifications on the basis of two highly questionable contentions:

First, Mr. Coleman found “it is not reckless for the [FWS Southwest] Regional Director to request [scientific changes], since the Regional Director is ultimately responsible for the recovery of the Mexican wolf.” Simply because the Regional Director has final authority does not legitimize ignoring the best available science. The whole point of the scientific integrity rules is to stop officials with final authority from pressuring scientists to alter or suppress results, as was done here.

Second, Mr. Coleman repeatedly stated that because no final FWS decision has been made on the recovery plan, a violation of the integrity policy is not possible (e.g., “Speculation about the conclusion of this upcoming...finding is not a valid basis for scientific misconduct”). This is another fundamental misreading of the Interior scientific integrity policy which explicitly forbids political interference at any stage of the decision-making process. Among other things, Mr. Coleman’s rationale would absolve even the most blatant scientific integrity violations if they were not ultimately successful – a perverse sort of “no harm-no foul” rule.

FWS took the position that its political appointees could order scientists to change findings for political reasons. In other words, rules against political manipulation of science do not apply to political appointees inside FWS.

In this case, FWS admitted (tacitly, at least) to all the facts in the PEER Scientific Integrity Complaint. It did not contest that the specially convened Science and Planning Subgroup of the Mexican Wolf Recovery Team had reached conclusions based on best available scientific information. Nonetheless, FWS political appointees were entitled to both dismiss these findings and cancel the recovery team meeting.

As a result, one of the nation’s highest profile Endangered Species Act recovery efforts was severely compromised and moved forward only through the force of litigation.

¹² https://www.peer.org/wp-content/uploads/attachments/6_7_12_Mex-wolf_Scientific_Integrity_Complaint.pdf

¹³ https://www.peer.org/wp-content/uploads/attachments/9_27_12_FWS_Mex_wolf_reply.pdf

Lesson Unlearned: Agency staff should not be put into a position to judge the actions of the political appointees to whom they report. In addition, these policies should make it clear that attempts to suppress or skew scientific findings is covered by these policies even if those attempts are ultimately unsuccessful.

Recommendation: Scientific Integrity Policies should clearly forbid political appointees from manipulating or distorting scientific findings for reasons having nothing to do with their technical merit.

3. Gulf Spill Lowball

On May 19, 2010, one month after the Deepwater Horizon catastrophe, the White House announced creation of a group of experts from academia, industry, and government to generate an accurate and independent estimate of the oil leak rate. This group was called the Flow Rate Technical Group (FRTG).

Documents obtained by PEER through a Freedom of Information Act lawsuit indicate White House pressure to present low-range estimates as best estimates. In fact, numbers presented to the public were less than half the true flow rate.

In January 2012, PEER filed a Scientific Integrity Complaint charging that the leader of one of the FRTG Teams, Dr. William Lehr of the National Oceanic & Atmospheric Administration (NOAA), manipulated the scientific results of the FRTG experts throughout the entire crisis to significantly understate the spill rate.¹⁴ Lehr is also the author of the now infamous “Oil Budget Calculator” and a report concluding 75% of the oil was gone from the Gulf by August 2010.

Dr. Lehr was leader of one of the most important FRTG teams, the “Plume Team” which analyzed videos of the oil leaks to produce the first estimates. Three of the 13 Plume Team experts used a technique called Particle Image Velocimetry (PIV) to estimate a leak rate in the range of 25,000 bpd. But three other experts on the Plume Team reported that PIV was underestimating the size of the leak by more than 50%. Those three experts used a different technology to correctly peg the leak rate at 50,000 to 60,000 bpd.

Yet, Dr. Lehr did not tell the public or key decision makers that there was a deep split on the Plume Team. In the Plume Team’s Final Report, the body of which Lehr wrote, he reported that “most of the Plume Team used PIV” which produced “consistent and accurate” estimates. These underestimates were repeated to the public and media. When experts on the FRTG complained to Dr. Marcia McNutt, Director of the U.S. Geologic Survey, she cited pressure from the White House, saying in a May 29 email that:

“I cannot tell you what a nightmare the past two days have been dealing with the communications people at the White House, DOI, and the NIC who seem incapable of understanding the concept of a lower bound. The press release that went out on our results was misleading and was not reviewed by a scientist for accuracy.”¹⁵

¹⁴ https://www.peer.org/wp-content/uploads/attachments/1_23_12_BP_Plume_Scientific_misconduct_complaint.pdf

¹⁵ https://www.peer.org/wp-content/uploads/attachments/1_23_12_Email_WH_pressure.pdf

Throughout the Plume Team’s work, it was widely thought that physical measurement of the leak was not possible and therefore it was assumed that Plume Team estimates of the leak rate would be used to assess damages in future litigation. Thus, manipulating spill rate estimates down to 25,000 bpd instead of 60,000 bpd could have reduced damages paid by BP and/or other responsible parties by tens of billions of dollars. Even more significantly, the President’s National Commission concluded that underestimates of the size of the spill hampered clean-up efforts and caused numerous attempts to cap the well to fail.

In fact, the leak rate was physically measured by an Energy Department team as the well was capped. This final official estimate set the leak rate at 62,000 bpd (decreasing to 53,000 bpd when finally closed), proving correct the suppressed estimates from dissenting Plume Team members.

Notably, the key facts underling this Complaint were obtained only after PEER waged an 18-month court battle. That lawsuit resulted in the release of approximately 100 highly redacted emails while several hundred more emails were still being withheld.¹⁶

In response to PEER’s Complaint, NOAA appointed a three-member review panel to determine if the matter needed to be investigated. In an initial decision dated November 8, 2012, a three-member NOAA panel declined to investigate. The majority of them believed that inadvertent “cut and paste” errors accounted for the deletion of the correct flow rates from key reports and top officials charged with responding to the spill.¹⁷

In the initial decision, two NOAA administrators overruled the lone practicing NOAA scientist on the panel who found –

- The official explanation was “difficult to believe”;
- There appeared to be a deliberate attempt “to hamper the communication of higher flow rate estimates to key decision makers and to the public”; and
- “Further investigation would be necessary” to sort out the discrepancies.

Less than one week later, PEER filed a detailed rebuttal to the initial decision pointing out several factual errors, unsupported assumptions and conclusions which required an actual investigation (such as interviewing witnesses) beyond a surface reading of submittals.¹⁸

Rather than address those issues, the panel chair simply forwarded the unaltered initial decision and the PEER rebuttal on November 27 to the designated “deciding official.”¹⁹ In a decision dated December 20th, that official, Robert S. Detrick, NOAA Assistant Administrator for the Office of Oceanic and Atmospheric Research, issued a final decision that no investigation would occur. Detrick concluded that any errors could be excused because they were “produced in the middle of a national emergency, under intense pressure and with very short deadlines.”²⁰

¹⁶ <https://www.peer.org/lawsuit-to-unravel-varying-bp-spill-estimates/>

¹⁷ https://www.peer.org/wp-content/uploads/attachments/1_3_13_Initial_decision.pdf

¹⁸ https://www.peer.org/wp-content/uploads/attachments/1_3_13_PEER_rebuttal.pdf

¹⁹ https://www.peer.org/wp-content/uploads/attachments/1_3_13_NOAA_punt.pdf

²⁰ https://www.peer.org/wp-content/uploads/attachments/1_3_13_Final_Decision.pdf

Although there is no national emergency exemption to NOAA's Scientific Integrity Policy, it should be noted that the Final Presentation by the NOAA leader of the Plume Team was more than two weeks after members of the Plume Team submitted their estimates.

In addition, through the course of reviewing the Complaint, NOAA officials insisted that all communications were confidential and threatened to summarily dismiss the complaint if any information about the review was revealed.²¹

Ironically, in the same time frame that NOAA was finalizing its decision not to investigate the issue, several non-NOAA officials published a paper in Proceedings of the National Academy of Sciences that largely confirmed the facts outlined in the PEER Complaint.²²

Despite this academic validation, the issue of the flow rate had more than academic implications. The President's National Commission found that the inaccurate low-ball numbers hampered numerous attempts to cap the run-away well and slowed clean-up efforts.²³ Thus, precisely because it was a national emergency is a major reason why the federal players should have strived to get the science right and take immediate steps to determine if it was wrong – and why.

In this instance, unfortunately, the opposite occurred.

Lessons Unlearned: 1) One goal of the Scientific Integrity Policies is to increase public confidence in the quality and accuracy of agency science. That goal is undermined, if not negated entirely, by shrouding the agency's scientific integrity reviews in confidentiality. 2) Agencies should consistently follow their own policies and not deviate in cases that have high-political profiles.

Recommendations: 1) The threshold for determining whether a Complaint should be investigated should be resemble a probable cause standard, and that standard should be consistently followed; 2) There should be an opportunity for appeal to an outside body any decision to not even investigate Complaints.

4. Scientific Integrity Officer is a High-Risk Occupation

In 2011, Dr. Paul Houser, a hydro-meteorologist, took leave from his university position to become a Science Advisor to the U.S. Bureau of Reclamation and to serve as the Bureau's Scientific Integrity Officer. He was one of the Interior Department's first Scientific Integrity Officers.

That September, he was asked to look over a draft press release summarizing environmental analyses on expected effects of removing of removing four dams from Klamath River. Dr. Houser noticed the release described only the positive aspects, omitting a number of major contingencies and possible negative effects. He elevated his concerns ultimately to the Interior Secretary's Press Secretary, Adam Fetcher.

²¹ https://www.peer.org/wp-content/uploads/attachments/1_3_13_Confidentiality_warnings.pdf

²² .Review of flow rate estimates of the Deepwater Horizon oil spill PNAS December 11, 2012 109 (50) 20260-20267; <https://www.pnas.org/content/109/50/20260?with-ds=yes>

²³ https://cybercemetery.unt.edu/archive/oilspill/20121211005728/http://www.oilspillcommission.gov/sites/default/files/documents/DEEPWATER_ReporttothePresident_FINAL.pdf at 146

Although Reclamation's technical staff seconded Dr. Houser's objections, the release was ultimately changed. Two weeks later he was put on probationary status. In February 2012, his position was abolished with the non-explanation that he was "not a good fit."

Dr. Houser filed a complaint that the actions against him violated the core tenets of the Interior Scientific Integrity Policy that he was formerly administering.²⁴ He also contacted PEER which agreed to represent him in a separate complaint to the U.S. Office of Special Counsel charging that the termination was illegal retaliation in violation of the Whistleblower Protection Act.

For several weeks, his Scientific Integrity Complaint sat untouched. Ultimately, Interior engaged a consultant firm which convened a three-member panel and produced a report in August 2012 that was finally released in March 2013.²⁵

The panel concluded that the complaint was factually correct but did not amount to misconduct for some very curious reasons. For example –

- Instances of "false precision" (where a summary has a finding that does not exist in the studies it purports to summarize) are dismissed because they are "not inconsistent" with the underlying studies;
- Repeated inaccuracies – all slanted in one direction – in these short documents are excused by a panel finding that it is "normal practice" for press releases to exhibit hyperbole or falsities; and
- Explicit efforts to prevent these concerns from being put into writing were discounted because the panel found them "not sufficiently unusual" to be "automatically alarmed" by them.

Although the panel interviewed no witnesses, did not question Dr. Houser nor did any kind of actual investigation, it made findings about motives and intent of several of the actors inside Interior. Within the week, Dr. Houser filed a detailed rebuttal to the findings in the consultant report.²⁶ Dr. Houser commented that –

"By blessing abuse as 'standard practice' this review stood Interior's scientific integrity policy on its head. I feel like I fell through the looking glass into a world propelled by circular reasoning."

Rather than conduct her own inquiry, or respond in any way to Dr. Houser's rebuttal, Interior's Scientific Integrity Officer, Dr. Suzette Kimball, accepted the panel's conclusions as "definitive" and formally declared the complaint to be "Not Warranted." Her ruling came in a January 29, 2013 letter which, characteristically, did not include a copy of the report on which it was based.²⁷

There were three ensuing developments:

²⁴ https://www.peer.org/wp-content/uploads/attachments/8_8_12_Houser_sci_integ_complaint.pdf

²⁵ https://www.peer.org/wp-content/uploads/attachments/3_25_13_Consultant_report.pdf

²⁶ https://www.peer.org/wp-content/uploads/attachments/3_25_13_Houser_rebuttal.pdf

²⁷ https://www.peer.org/wp-content/uploads/attachments/3_25_13_Interior_adoption.pdf

1. PEER and the Bureau of Reclamation reached a settlement which resolved Dr. Houser's whistleblower complaint under undisclosed terms.²⁸
2. Interior issued "Public Communication" rules which, among other things, forbid public affairs staff from altering "the substance of scientific, scholarly and technical information." The rules promise "Scientists, scholars, engineers and other subject matter experts will be provided the opportunity to conduct a factual review of news releases concerning their work prior to publication to the extent practicable." These rules could have averted the Houser situation.
3. In August 2012, Dr. Houser's transmitted, through PEER, a six-page critique of the gaps and contradictions in Interior's Scientific Integrity Policy to Interior Secretary Ken Salazar.²⁹ Among the key problems he highlighted were –
 - Lack of independence for the Scientific Integrity Officer and confusion about whether serving the "Departmental mission" trumps all other concerns;
 - Lack of transparency or consistency in handling of cases. Complaints are handled on an ad hoc basis; and
 - Lack of whistleblower protection for both those who filed complaints as well as scientists whose work is perceived as undercutting an agency's policy agenda.

While there were a few positive outcomes from Dr. Houser's experience, it unquestionably had a chilling effect on other officials serving as Scientific Integrity Officers. The unmistakable message was that they too could be removed if they sought to do their jobs.

Lessons Unlearned: Scientific Integrity Officers (SIOs) have no professional tenure or protection against dismissal or reassignment. SIOs who conscientiously seek to do their jobs often must cast profiles in courage. Alternatively, SIOs who pull their punches or avoid rigorous actions to implement the spirit or letter of their Scientific Integrity Policies do a disservice to the scientist in their agencies and ultimately make conditions worse for both themselves and those they mean to serve.

Recommendations: None of terminated SIO's recommendations for improving SI policies have been adopted. Yet they are just as worthy of consideration today as when they were made in 2012.

5. Defiling Clean Water Inside EPA

In January 2020, PEER filed a detailed Scientific Integrity Complaint describing how in preparing one of the U.S. Environmental Protection Agency's most consequential actions in decades its political appointees excluded both key scientific information and contributions from its own experts. The complaint summarized the accounts of current EPA employees and was co-signed by 44 former and

²⁸ <https://www.peer.org/scientific-whistleblower-complaint-resolved/>

²⁹ https://www.peer.org/wp-content/uploads/attachments/8_8_12_Houser_Critique_DOI_Scientific_Integrity_Policy.pdf

current federal employees, including three former regional administrators, as well as experts from the Army Corps of Engineers, and the U.S. Fish & Wildlife Service.³⁰

It charged that Administrator Andrew Wheeler, Assistant Administrator David Ross, General Counsel Matt Leopold, Principal Deputy General Counsel David Fotoui, Senior Science Advisor Owen McDonough, and other top officials in EPA's Office of Water, took direct action to prevent the agency's best scientific research and its experts from contributing to the new definition of waters of the U.S. (WOTUS) in blatant violation of EPA's Scientific Integrity Policy by –

- Directing expert staff to refrain from submitting comments that could be part of the formal administrative record;
- Blocking use of scientific information to inform policy; and
- Publicly mischaracterizing scientific content.

The PEER complaint echoed recent criticism from EPA's Science Advisory Board, including several Trump appointees, that the rewrite of the WOTUS policy departs –

“from EPA recognized science [and] threatens to weaken protection of the nation's waters by disregarding the established connectivity of ground waters and by failing to protect ephemeral streams and wetlands which connect to navigable waters below the surface. These changes are proposed without a fully supportable scientific basis, while potentially introducing substantial new risks to human and environmental health...”³¹

To date EPA has undertaken no investigation of this Complaint. No witnesses have been contacted, let alone interviewed. Repeated inquiries to determine the status of this matter have gone unanswered.

It should be underlined that the subject matter of this Complaint has profound impact on an estimated 60% of the waterbodies in the U.S. which provide the source of drinking water for at least one-third of all Americans.³² To the extent that this Complaint does not merit serious consideration by the agency, the usefulness of its Scientific Integrity Policy and program should also be questioned.

Lessons Unlearned: EPA's Scientific Integrity Policy lacks any protocols for how complaints of misconduct are to be investigated or by whom.³³ This continuing and appalling gap underlines the need for EPA to immediately develop a cogent policy.

Recommendations: EPA's Scientific Integrity Policy should be thoroughly rewritten to adopt best practices from other agencies, especially a detailed protocol for how all scientific misconduct complaints will be handled. In addition, EPA needs a transparent system so that the status of these complaint investigations can be monitored.

³⁰ https://www.peer.org/wp-content/uploads/2020/01/1_19_20_WOTUS_scientific_Integrity_Complaint_IG.pdf

³¹ <https://aboutblaw.com/NRJ>

³² <https://www.peer.org/trumps-clean-water-debacle/>

³³ <https://www.peer.org/epa-scientific-integrity-policy-stuck-in-utero/>

6. Biosecurity Breakdowns

In September 2017, Ms. Eveline Emmenegger, a 28-year microbiologist with the U.S. Geological Survey, submitted a scientific integrity complaint with USGS Office of Science, Quality. The complaint detailed how repeated breakdowns in the Seattle-based Western Fisheries Research Center (WFRC), where USGS operates two animal containment biosafety labs, resulted in environmental release of contaminated wastewater containing viruses and other pathogens. Besides the environmental consequences, these lab breakdowns threatened the health of both researchers and research subjects, as well as compromised experimental results.

One particularly egregious incident she cited involved the failure to address problems that led to a six-month period where that lab had been releasing pathogen-contaminated wastewater into the wetland adjoining one of Seattle's most popular parks around Lake Washington.

For nearly two years, a small group of Scientific Officers from both USGS and the Interior Department, as well as a retired annuitant, conducted interviews. Meanwhile system failures continued to occur at the research center during 2018 in both the animal biosafety level 2 (BSL-2) and BSL-3 labs, leading to the closure of the BSL-3 lab that uses high-risk regulated pathogens.

At the end of this informal inquiry, in July 2019, an announcement was made to all WFRC staff that the inquiry had ended, and the Complaint had been dismissed.

The report of this review (obtained under FOIA) was that "science produced at WFRC may have been adversely affected" and the biosecurity breaches she identified needed to be remedied but that no "intentional" misconduct had occurred.

Their report also stated that "Unfortunately, closer, more frequent monitoring is revealing that treatment system is not functioning optimally, and we have concerns about its long-term stability" and it recommended a "complete overhaul" of the BSL-2 wastewater treatment system. However, the Scientific Integrity Officers took no actions to ensure that corrective measures would be taken. Nor was the animal BSL-2 lab ever been shut down.

The two senior managers named in Ms. Emmenegger's Complaint were promoted. Despite Ms. Emmenegger's repeated attempts to be assigned to another supervisor, the supervisor named in the Complaint remained her direct report. That supervisor then began taking steps that led to the proposed termination of Ms. Emmenegger in late January 2020.³⁴

USGS did not act on that proposal for more than one year; during this entire period Ms. Emmenegger remained on administrative leave under orders to cease any research or work, and was then fired in March 2021.³⁵ Three weeks later, as PEER prepared to pursue a legal challenge to this action, USGS abruptly changed course and rescinded her removal.³⁶

³⁴ <https://www.peer.org/federal-lab-biosafety-whistleblower-targeted/>

³⁵ <https://www.peer.org/usgs-fires-lab-biosafety-whistleblower/>

³⁶ <https://www.peer.org/usgs-restores-fired-lab-biosafety-whistleblower/>

The entire episode sends the unmistakable message that USGS scientists who file Scientific Integrity Complaints will end their careers.

Lessons Unlearned: 1) Scientific Integrity Policies should have jurisdiction to address lapses in scientific integrity even if no intentional misconduct is involved. 2) Negligent management should also be subject to review and correction in these reviews. 3) Retaliation against scientists after they file complaints or raise issues is often ignored.

Recommendations: 1) There should be clear investigative protocols and records detailing investigations; 2) Scientific Integrity Officers should ensure that underlying losses of scientific integrity are corrected even if they determine those lapses did not result from deliberate misconduct; and 3) Steps should be taken to protect employees who file Complaints from retaliation, especially from the managers named in those Complaints.

Conclusion. These cases are examples of broad patterns of dysfunction that will be discussed in future PEER submissions to the Task Force. In addition, PEER is preparing a model policy containing both the best practices found in current policies as well as features that should be incorpor