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Protecting Science at Federal Agencies

HOW CONGRESS CAN HELP

Independent scientific analysis and advice are essential for effective policies that serve the public interest. This report describes new and ongoing threats to the communication of science and its use in public health and environmental decisions, and it recommends steps Congress can take in response.

The findings and recommendations in this report have been endorsed by the following organizations. Contributors to the report are identified with an asterisk.

Climate Science Legal Defense Fund*
Defenders of Wildlife
Democracy Forward*
Environmental Integrity Project*
Environmental Protection Network*
Government Accountability Project*
Greenpeace*
Jacobs Institute of Women's Health*
National Center for Health Research
National Federation of Federal Employees*
National LGBTQ Task Force
National Partnership for Women & Families*
National Women's Health Network
Power to Decide*
Project on Government Oversight*
Union of Concerned Scientists*

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Introduction

Federally sponsored scientific research and technology development have brought us the ability to explore outer space, convert sunlight into electricity, build supercomputers, predict weather patterns, manufacture self-driving vehicles, and use assisted reproductive technologies to give birth. Taxpayer-funded science and scientists also improve our quality of life by finding cures to cancer and other deadly diseases, developing technologies that protect public health and safety, and inventing means for enhancing national security. When conducted appropriately, government science programs yield enormous benefits.

However, when political interference occurs—such as politically motivated censorship, misrepresentation of scientific findings, or the suppression of the free flow of information from the government to the public—public health and well-being suffer. Political interference in the way the government communicates science and uses it to inform policy is a long-term challenge to protecting public health, safety, and the environment. All modern presidential administrations have politicized science in some way. However, scientific integrity at federal agencies has eroded recently, with serious consequences for public trust and our government's ability to respond to problems.

Agency leaders have ignored and mischaracterized scientific evidence on climate change, worker compensation, and reproductive health. They have cut themselves off from expert advice that could lead to cleaner air and safer workplaces. They have suppressed information that could help families, national parks, and communities better protect themselves from environmental threats, while weakening enforcement of environmental laws.

To fulfill their Congressionally established missions, agencies must have well-qualified leaders who respect the laws they are tasked with implementing—but many political appointees lack basic relevant credentials or exhibit outright hostility to the missions of their agencies, and several have resigned over conflicts of interest or improper use of agency resources. To use taxpayer dollars efficiently, agencies must attract and retain skilled civil servants—but as scientists face abuses of scientific integrity and limits on their communication with the public and scientific peers, morale suffers and employees depart. Finally, when employees blow the whistle on abuses, they often face retaliation, which discourages others from speaking out.

To fulfill their Congressionally mandated missions, agencies must have well-qualified leaders who respect the laws they are tasked with implementing.

This report describes new and ongoing threats to the use of science in public health and environmental decisions and recommends steps Congress can take in response. Each chapter investigates one kind of problem and suggests solutions. Several of the recommendations apply to multiple chapters:

- ***Reveal abuses of scientific integrity:*** Holding hearings, seeking information from agency heads, and requesting investigations

by Inspectors General and the Government Accountability Office, as well as Congressional investigations (using subpoena authority if necessary), can reveal when agencies have suppressed, ignored, or failed to appropriately use scientific evidence—and help to discourage such actions in the future.

- ***Hold appointees accountable:*** All members of Congress can hold appointees to high standards through hearings, investigations, and subpoenas. When nominees are subject to confirmation, senators should carefully vet them and vote against any who are unqualified, conflicted, or demonstrate disrespect for science or agency missions.
- ***Pass protective laws:*** Legislation such as the Scientific Integrity Act and the Executive Branch Comprehensive Ethics Enforcement Act can create stronger enforcement mechanisms and better protect whistleblowers, encouraging employees who witness problems to speak up.

The organizations that contributed to this report work to ensure that U.S. policy decision-making is fully informed by scientific evidence and the best available data, and that the public has reliable access to independent scientific information and analysis produced and acquired by the federal government without political interference.

CHAPTER 1

Politicization of Science within Agencies

Scientific evidence plays a critical role in public health decision-making. In recent regulatory actions, however, several federal agencies have sidelined scientific evidence and the best available data. This section discusses several examples of this alarming trend and demonstrates why undermining science in federal decision-making imperils the integrity of the rulemaking process, erodes public trust, and interferes with people's ability to make decisions about their health and lives with the best available information.

MULTIPLE AGENCIES DISREGARD SCIENCE IN RULEMAKING

The rulemaking process is designed to provide sufficient information and analysis to allow the public to adequately evaluate federal agency proposals. In several recent proposed rules, agencies have failed to uphold their responsibilities to consider relevant evidence and provide the public with necessary information. In some cases, these rules have misrepresented the state of scientific knowledge or practice, denying stakeholders the opportunity to make well-informed comments that could improve regulations and risking erosion of public trust in the federal government.

Rule on Contraceptive Coverage Exemption Mischaracterizes Health Research

Under the Affordable Care Act, most health insurance plans must cover methods of contraception approved by the Food and Drug Administration (FDA) without cost-sharing. In an October 2017 Interim Final Rule expanding exemptions for employers and universities not wishing to cover some or all forms of contraception (IRS, EBSA, and HHS 2017), the U.S. Department of Health and Human Services (HHS) and other agencies misrepresented the extensive body of research on contraception and health (NPWF, JIWH, and UCS 2017).

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The agencies claimed that there is "complexity and uncertainty in the relationship between contraceptive access, contraceptive use, and unintended pregnancy" (IRS, EBSA, and HHS 2017) when, in fact, evidence demonstrates that access to and use of contraception is associated with a reduction in unintended pregnancies, and manufacturers of all FDA-approved methods have had to demonstrate that their products are safe and effective through randomized controlled trials (NPWF, JIWH, and UCS 2017). In the interim rule, the agencies asserted lack of benefits, even though the Centers for Disease Control and Prevention (CDC) deemed family planning one of the 10 great public health achievements of the 20th century (CDC 1999). The agencies also claimed greater risks than actually exist, especially when considering that carrying a pregnancy to term poses far greater risks to women's health than using contraception (CDC 2018; CDC 2017). Many of the studies cited were of poor quality and/or out of date, and the rule did not reference several high-quality sources of evidence that

CDC experts likely would have recommended if the rule's authors had sought their expertise.

Federal agencies have long been trusted sources of information on public health, but issuing rules that misrepresent the science on an important public health topic threatens to erode public trust in our health agencies. Weakening the credibility of public health agencies can undermine their ability to promote healthy behaviors in the face of diseases and other health threats.

The Centers for Disease Control and Prevention deemed family planning one of the 10 great public health achievements of the 20th century.

Tip Rule Omits Quantitative Analysis

In December 2017, a notice of proposed rulemaking (NPRM) from the U.S. Department of Labor (DOL) proposed to rescind a portion of tip regulations that prohibit tip pooling. Under this proposal, DOL would allow certain employers to withhold workers' tips in order to share a portion with non-tipped employees (DOL 2017). The proposal did not include a quantitative estimate of how much money would be shifted away from tipped workers under the proposal.

Days before the comment period closed, *Bloomberg News* reported that DOL had in fact undertaken a quantitative analysis of the rule's impacts, but leadership reportedly requested revisions after seeing the unfavorable findings and then ultimately omitted the data from the NPRM altogether (Penn 2018a). DOL's Office of Inspector General is in the midst of an audit of the rulemaking process (Penn 2018b). The exclusion of this analysis from the NPRM jeopardizes the integrity of the rulemaking process and public trust that government-funded analysis will be accessible to the public.

Census Adds Untested Question on Citizenship

U.S. Secretary of Commerce Wilbur Ross decided to include a citizenship question on the 2020 Census (Ross 2018), despite the fact that the question has not been asked on the full Census since 1950 and has not undergone the multiyear process for suggesting and testing new questions that the U.S. Census Bureau uses in the current era (Pritzker and Gutierrez 2018). The U.S. Department of Justice (DOJ) initiated the request for including a citizenship question under the guise of protecting the Voting Rights Act (VRA). However, in a Congressional hearing on May 18, 2018, the acting head of DOJ's Civil Rights Division, John M. Gore, acknowledged that enforcement of the VRA, passed in 1965, has never depended on the use of Census citizenship enumeration data directly (Latner 2018). Moreover, the administration's previous collaboration with anti-science perpetrators of "voter fraud" myths raises concerns that citizenship data would be used to enact strict voter suppression laws (Parks 2018; Huseman 2017).

While evidence of benefits from adding a citizenship question to the Census is scant, evidence of likely harms is compelling. Indeed, we know from Census analysis that Latino populations are already undercounted (Mule 2008), such that the addition of a question that would further reduce response rates among legal immigrant residents will create artificially low population estimates of VRA-protected groups, making it more difficult to identify and remedy VRA violations. The addition of a citizenship question is far more likely to inhibit the successful trial of VRA cases by increasing the inaccuracy of the Census than to improve the assessment of VRA claims due to greater precision. Even Thomas Brunell, once a candidate to direct the 2020 Census, recently acknowledged that the administration is not making a scientific move, but "a political decision" (Mervis 2018). Recently, the U.S. Court of Appeals for the Second Circuit agreed that Commerce Secretary Ross can be deposed in a suit filed by several states and advocacy groups

seeking to block the inclusion of the question, given evidence that Secretary Ross was not accurate in his Congressional testimony claiming that the question request came from DOJ (Thrush and Liptak 2018).

EPA Proposes Rule that Would Restrict Use of Science in Rulemaking

In April 2018, the Environmental Protection Agency (EPA) announced a proposed rule titled "Strengthening Transparency in Regulatory Science" (EPA 2018a). This proposal is the agency iteration of the failed 2017 Honest and Open New EPA Science Treatment Act (HONEST Act), a problematic bill previously introduced as the Secret Science Reform Act. These bills were long championed by Representative Lamar Smith, chairman of the House Committee on Science, Space, and Technology, whose office then worked with political appointees at EPA to "internally implement" the legislation (Eilperin and Dennis 2018).

As the bills would have done, this proposed rule would effectively prevent EPA from using the best available science to protect public health and the environment by requiring that all raw data, models, code, and other materials used in crafting a regulation be available to the public. Although making data publicly available may sound beneficial, allowing regulators to only consider studies whose data are public would sharply reduce the number of high-quality studies the agency could consider when setting standards. EPA rules significantly rely on research involving public health data, which are often confidential due to privacy concerns, as well as on confidential business information. The draft rule does not explain whether or how the agency would continue to rely on public studies that use individuals' confidential data to examine the impacts of air pollution and toxic chemicals on health. If, under the rule, EPA refused to consider such studies in rulemaking, it would effectively hamstring its ability to carry out its mission to protect human health. Both the failed bills and the proposed rule have received significant pushback from the scientific community (Meyer 2018).

While the substance of this rule is in itself troubling, the process used to promulgate the rule was equally problematic. The agency failed to request input beforehand from the public, its own science advisor's office, or its own Science Advisory Board, and proposed a rule that lacks detail on crucial matters (Tollefson 2018) and misrepresents trends in peer-reviewed publishing (Berg et al. 2018). The rule did not undergo the standard review process at the Office of Information and Regulatory Affairs, and perhaps as a result does not include the kind of detailed analysis of impacts that would allow stakeholders to evaluate the rule (Hassan et al. 2018).

EPA's rule does not explain whether or how the agency would continue to rely on public studies that use individuals' confidential data to examine the impacts of air pollution and toxic chemicals on health.

Because this proposal was based on the HONEST Act rather than an internal agency process, the Department of the Interior (DOI) has already developed and implemented similar guidance. Agencies might also adopt other failed legislation, such as the Better Evaluation of Science and Technology Act (BEST Act), which proposed applying scientific standards language from the recently updated Toxic Substances Control Act to all federal rulemaking. The BEST Act would have frozen scientific standards and hindered agencies' ability to utilize the best and most up-to-date scientific information (Kothari 2017).

POLITICAL INTERFERENCE IN GRANTS

The federal grantmaking process should operate transparently and in accordance with the goals of each grant program, not the personally held beliefs and goals of political appointees. However, recent events have raised concerns about funding decisions based on political considerations rather than established program goals and criteria. In

some cases, grant funding was abruptly terminated before a research project could be finished. Halting a study before data collection or analysis can be completed essentially wastes the money already expended, and denies the agency and the public the knowledge that a completed project would have yielded (Abraham et al. 2017). It is also at odds with the approach recommended by the bipartisan Commission on Evidence-Based Policymaking (Abraham et al. 2017).

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Early Termination of Teen Pregnancy Prevention Grants

The Teen Pregnancy Prevention Program (TPP Program), administered by the HHS Office of Adolescent Health (OAH), has been lauded by independent experts as a strong example of evidence-based policymaking. Established by Congress in fiscal year (FY) 2010, it uses a two-tiered approach, with 75% of funding designated to replicate evidence-based program models that have proven under rigorous evaluation to change behavior (Tier 1), and 25% to support the development, implementation, and rigorous evaluation of innovative approaches or significant adaptations of existing models (Tier 2). The September 2017 unanimously agreed–to report from the bipartisan Commission on Evidence-Based Policymaking established by House Speaker Paul Ryan and Senator Patty Murray highlighted the TPP Program as an example of a federal program developing increasingly rigorous portfolios of evidence (Abraham et al. 2017).

In the summer of 2017, OAH notified more than 80 TPP Program grantees that their five-year projects would end two years early (Kay 2017). Grantees across the country faced the loss of approximately $200 million in total funding to replicate a wide variety of evidence-based programs or conduct rigorous evaluation of promising approaches to continue building knowledge. HHS gave no explanation for these actions and in recent months, four federal judges have found HHS's termination of the TPP Program grants to be unlawful (Hellman 2018). In the midst of these court decisions, in April 2018, OAH released two new Tier 1 and Tier 2 funding opportunity announcements (FOAs) that represent a troubling departure from the rigorous standards of evidence and evaluation that the TPP Program has used in the past. For example, the current FOAs fail to reference the HHS Teen Pregnancy Prevention Evidence Review, an independent, systematic, and rigorous review of evaluation studies managed by the HHS Assistant Secretary for Planning and Evaluation (HHS 2018). In addition, the FOAs prioritize a single approach that emphasizes abstinence or returning to abstinence rather than funding for a variety of programs that are grounded in evidence. Several lawsuits have been filed against the FOAs (Uzzell and Troiano 2018). Federal judges in Oregon and New York have ruled that the administration's Tier 1 FOA violated Congressional intent, and blocked HHS from proceeding to award funds under that FOA (Democracy Forward 2018).

Political Review of EPA Grants

In a sharp departure from practices under past Republican and Democratic administrations, EPA Deputy Associate Administrator for the Office of Public Affairs John Konkus began personally reviewing all grant solicitations and awards. Konkus reportedly told staff he was looking out for mentions of "climate change," and canceled nearly $2 million in grants that had been competitively awarded to universities and nonprofit organizations. Around the time that U.S. Senator Lisa Murkowski, a Republican from Alaska, voted against a healthcare bill that most of her Republican colleagues supported, EPA

staffers were instructed without explanation to halt grants to Alaska. In explaining how unusual such a practice was, former EPA administrator Christine Todd Whitman (who served in the administration of President George W. Bush) told the *Washington Post*, "We didn't do a political screening on every grant, because many of them were based on science, and political appointees don't have that kind of background" (Eilperin 2017a).

Halting of National Academies Studies

DOI abruptly instructed the National Academies of Sciences, Engineering, and Medicine to cease work on two studies that were under way on impacts of fossil fuel activities: a study into the health impacts of a mining technique known as "mountaintop removal" on people living near central Appalachia mine sites (Fears 2018) and an investigation into how DOI's Bureau of Safety and Environmental Enforcement could improve its inspections of offshore oil and gas development to avoid another catastrophic incident like the fatal 2010 Deepwater Horizon explosion (Fears 2017). Such research has the potential to improve health and stability in areas where mining and marine oil drilling operations occur. In June 2018, DOI's Inspector General found that DOI officials failed to provide sufficient documents justifying the decision to stop the mountaintop removal study (Fears 2018).

Cancellation of Office of Population Affairs Research Grants

In 2017, two Title X research grants funded by the Office of Population Affairs (OPA) were abruptly cancelled. The first was a five-year grant to the Guttmacher Institute, a leading research and policy organization focusing on domestic and global reproductive and sexual health. This grantee was notified at the start of year four that the grant was being cut short "due to changes in program priorities" (Manning 2017); Guttmacher had long had a grant agreement with OPA to assess the need for provision and impact of publicly funded family planning services in the United States. A second grant, for three years to the University of California–San Francisco, was shortened to one year, also under the auspices of the federal government's changing programmatic priorities. This grant supported research to validate a patient-reported outcome performance measure of contraceptive counseling.

> OPA's FY 2018 grant opportunities make no mention of the word "contraception" and invite applications for abstinence-only education and natural family planning, as opposed to providers offering comprehensive family planning care for those most in need.

Undermining the Title X Program's Ability to Support Quality, Evidence-Based Care

Title X grants are typically three years in length. In 2017, all Title X grantees were notified their projects had been shortened so that they would end in 2018. Several grantees were only in the first year of what were originally three-year grants. Similar to the shortening of the TPP Program grants, no specific reason was given to grantees. Subsequently, OPA released an FY 2018 FOA that makes no mention of the word "contraception" and invites applications for abstinence-only education and natural family planning, as opposed to providers offering comprehensive family planning care for those most in need (*National Family Planning and Reproductive Health Association v. Azar* 2018). It also fails to mention nationally recognized clinical standards for quality family planning (Coleman et al. 2018). In August 2018, OPA awarded service grants to several organizations that responded to the FOA, but the grants last only seven months, rather than the three years that have been standard (NFPRHA 2018).

PROPOSED SOLUTIONS

Federal agencies must consider scientific information when making health and environmental policy decisions, and the use of scientific information must be protected from undue influence. Congress has an important oversight role, which can minimize the politicization of science, promote transparency, and bolster the use of the best available science in agency decision-making. Specific recommendations include:

Federal agencies must make health and environmental policy decisions based on scientific information, and the information must be protected from undue influence.

- Congress should conduct hearings on issues of political interference in science and seek information from agencies through letters and subpoenas. Congress should also encourage Government Accountability Office and Inspector General investigations where appropriate.
- Congress should use the appropriations process to protect the scientific enterprise by ensuring that funds are spent as Congress intended and rejecting attempts to politicize science through cuts or policy riders that harm the scientific process or impede the use of science in decision-making.
- Congress should pass legislation that codifies protections for science and reject legislation that would harm agencies' use of science in policymaking. Especially when unsuccessful and harmful legislative ideas are being promulgated as agency policy (e.g., the Secret Science Reform Act), proactive protections for science are crucial.
- When considering confirmation of an administration's nominees, senators should consider nominees' records of either supporting or undermining science. It is imperative that Congress use its imbued powers to safeguard our nation's health and well-being by making sure that federal agency leaders are committed to using the best available information, including independent, peer-reviewed science.

CONCLUSION

When science is politicized, agencies and the public are denied access to independent information and unable to make fully informed decisions. We as a nation need to ensure that we are addressing the pressing issues facing communities by using and disseminating accurate, high-quality scientific information.

CHAPTER 2

Threats to Science Advisory Committees and Science Advice

The federal government has traditionally relied upon scientific advice from the president's science advisor, the White House Office of Science and Technology Policy, the President's Council on Science and Technology, and advisory committees across federal agencies. Many federal agencies and even the White House have failed to take advantage of this science advice infrastructure, and the current administration has even issued sweeping directives that undercut many such advisory bodies (Reed et al. 2018). This section examines several of the most egregious cases of sidelining science advice under this administration and explains why these changes erode public trust and interfere with people's ability to make decisions about their health and lives with the best available information.

ENVIRONMENTAL PROTECTION AGENCY

The Environmental Protection Agency (EPA) has 22 advisory committees operating under the Federal Advisory Committee Act (FACA), six of which are dedicated to providing scientific advice to the agency (EPA 2018b). On October 31, 2017, then-EPA Administrator Scott Pruitt issued a directive that banned academic scientists who receive grants from EPA from serving on EPA federal advisory committees (Pruitt 2017a). He gave them a choice: either give up their grants and remain on the committees, or keep their grants and resign. The stated reason for then-Administrator Pruitt's policy shift was to obtain independent advice and avoid conflicts of interest associated with the receipt of research funding from EPA. However, no parallel prohibition was made for industry scientists or academic scientists who receive industry funding, so the result has been to increase the number of industry-affiliated committee members while decreasing the number of academics (Reed et al. 2018). Committees affected by the directive include the Science Advisory Board (SAB), which provides advice on scientific issues and assessments that cut across the agency; the Board of Scientific Counselors (BOSC), which provides an independent review of EPA's research program; and the Clean Air Scientific Advisory Committee (CASAC), which stems from a Clean Air Act requirement that an independent scientific advisory committee review EPA's scientific criteria for setting national ambient air quality standards and recommend to the administrator any new standards and revisions of existing standards.

The organizations and processes for selecting advisory committee members and managing the advisory committees are completely separate from those involved in the grant award process.

This disingenuous definition of "conflict of interest" is both unnecessary and harmful. EPA already has policies and processes in place to prevent advisors with conflicts of interest from serving on committees (EPA 2018c). The organizations and processes for selecting advisory committee members and managing the advisory committees are completely separate from those involved in the grant award process. The SAB staff is located in the Office of the Administrator and is responsible for the management of both

SAB and CASAC. Potential committee members are screened by staff for expertise and potential conflicts of interest before they are allowed to participate in any new advisory activities. They are hired as special government employees and are paid for their service to the agency. Grants, meanwhile, are awarded by EPA's Office of Research and Development to applicants in a highly competitive process in which proposals are judged first for their scientific merit and second for their relevance to EPA's mission, EPA's research objectives, and the needs of its program offices. Ana Diez Roux, former chair of CASAC, said, "The top scientists, the ones most qualified to provide objective and transparent scientific advice to EPA, are of course the scientists who will likely be the most successful at obtaining highly competitive federal grants. . . . It would be a disservice to the American public to exclude those most qualified from serving on these panels" (Thulin 2017).

Acting Administrator Andrew Wheeler allowed EPA to eliminate scientific review panels for ozone and particulate matter, almost ensuring that future air pollution decisions will not be fully informed by the best available science, which violates the Clean Air Act.

Former Administrator Pruitt followed through on his policy shift by not renewing the committee membership of academic scientists whose terms expired in 2017, even though past practice was to renew members for a second term if they had provided sustained public service in their first three-year terms. In all, then-Administrator Pruitt replaced 21 of 42 members of the SAB. The BOSC has not fared any better. It has been so depleted by terminations and resignations that it was forced to cancel five subcommittee hearings for lack of membership (Whitehouse 2017). As of October 2018, the BOSC page of the EPA website lists no scheduled meetings (EPA 2018d).

When Administrator Pruitt resigned and was replaced by Andrew Wheeler as acting administrator, it was not clear whether Wheeler would follow his predecessor's footsteps by continuing to erode science advice at EPA. While Acting Administrator Wheeler publicly stated his intention to "seek the facts" from EPA staff, he also told the *Washington Post* that he understood "the desire to make sure that the people serving on the board weren't also benefiting from science grants from the agency" (Dennis and Eilperin 2018). Further, he allowed EPA to eliminate scientific review panels for ozone and particulate matter, almost ensuring that future air pollution decisions will not be fully informed by the best available science, which violates the Clean Air Act (Goldman 2018).

DEPARTMENT OF THE INTERIOR

At DOI, Secretary Ryan Zinke announced in May 2017 that the department would be formally reviewing the "charter and charge" of its 200-plus advisory committees and would postpone all scheduled meetings through the fall (Streater 2017). At the end of the review period, DOI disbanded its Advisory Committee on Climate Change and Natural Resource Science. This committee had been charged with helping advise the Secretary on managing natural resources in the face of climate change (Doyle and Patterson 2017).

Additionally, when the freeze was finally lifted on some DOI advisory committees, a new charter for at least one committee had shifted its membership breakdown to favor industry interests. DOI's Royalty Policy Committee (RPC) was established in 2004 to make decisions about the revenues collected from resource extraction leases on federal and tribal lands (GSA 2017). Secretary Zinke changed the charter of the committee and recommissioned it, shifting the committee's balance by including one fewer member representing the public and one more representing the energy industry (Peterson 2017). Further, all of the "public interest" RPC members come from academia or even industry; none of them represent NGOs or advocacy organizations. In other words, the committee effectively has no

members representing the public interest (Peterson 2017). The Committee has also operated largely in secret and with the participation of members who appear to violate DOI regulations governing conflicts of interest. This incarnation of the RPC seems to have supplanted the Extractive Industries Transparency Initiative (EITI) Multi-Stakeholder Group advisory committee, a committee with a chartered interest in transparency and a balanced roster of stakeholders that historically included at least four members representing the public. The EITI met 21 times from 2013 through 2017, but has been effectively suspended since early 2017 (POGO 2017). A lawsuit challenging DOI's formation and maintenance of the RPC is pending in the District of Montana.

Relatedly, in January 2018, 10 of 12 members of the National Park System Advisory Board resigned before their positions were set to expire because the department had failed to schedule meetings, and they felt their requests to engage had been ignored (Eilperin 2018). This committee is usually composed of social and natural science academics and in the past has advised DOI on issues ranging from how to better encourage children to visit national parks to how the National Park System can mitigate impacts of climate change.

DEPARTMENT OF LABOR

Similar inactivity was experienced by committee members at DOL, specifically at the Occupational Safety and Health Administration (OSHA). Four out of five of OSHA's advisory committees failed to meet in 2017, including the National Advisory Committee on Occupational Safety and Health and the Whistleblower Protection Advisory Committee. Though these committees are not designated as "science advisory committees," the work that they do affects scientists and science policy at the agency. At DOL, these committees are critical because, among other responsibilities, they make recommendations that advance strong science-based workplace protections for construction workers, help sick nuclear plant facility workers obtain health benefits, and assist in guiding the implementation of science-based safeguards that protect workers from exposure to harmful substances like beryllium. Additionally, some of these committees help answer emerging questions and provide guidance to strengthen compliance with the 22 whistleblower statutes administered by OSHA (Jones 2018).

PROPOSED SOLUTIONS

As independent and informed science in the government remains as crucial as ever, all voices must continue to raise the political price of sidelining science. Members of Congress have made some strong inquiries throughout the year about changes to advisory committees, but could do more to protect the science advice structure at the federal agencies and to continue to improve the transparency and objectivity of these bodies. By enacting the following recommendations, Congress can protect against political interference, rampant conflicts of interest, and public mistrust. Specific recommendations include:

As independent and informed science in the government remains as crucial as ever, all voices must continue to raise the political price of sidelining science.

- Congress should hold hearings on the status of science advisory committees throughout the government to investigate whether they are serving the public interest.
- Congress should hold hearings on the Government Accountability Office investigation under way into whether agencies are effectively utilizing advisory committees and complying with FACA, and initiate further investigations as needed.
- Congress should enact legislation to close loopholes in FACA that may diminish the objectivity of science advisory committees. For example,

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the legislation should extend FACA rules to advisory committees organized by federal contractors, not just committees convened directly by an agency. In addition, representatives and nonvoting members who regularly attend meetings should be asked to provide information on affiliation and conflicts of interest.

CONCLUSION

The science advice apparatus is crucial for the federal government's ability to make informed decisions on policies that affect our public health and safety. The advisors who serve on committees lend an objective eye that functions as assurance to the public that the government will be held accountable for making evidence-based decisions and protecting the public interest. A review of meeting and membership data from 73 science advisory committees across several agencies found that science advisory committees at the Department of Energy (DOE), DOI, and EPA have met less often in 2017 than at any time since 1997. Additionally, fewer experts serve on science advisory committees at DOE, EPA, and the Department of Commerce than at any time since 1997 (Reed et al. 2018). While politicization of advisory committees has occurred in previous administrations, what sets recent incidents apart are the dramatic process alterations that will have significant impacts on membership, the dissolution of committees whose work was not in line with the administration's regulatory agenda, and appointments of conflicted individuals to advisory committees that compromise the objectivity of these bodies.

CHAPTER 3

Installing Unqualified and Conflicted Government Leaders

Congress created federal agencies to carry out important functions, and strong leadership is essential to efficient and effective agency performance. Appointees should have the necessary qualifications to lead their agencies or programs, and should be free from conflicts of interest that would prevent them from carrying out the agencies' missions. Some nominees are subject to Senate confirmation, but many others are appointed without input from Congress. Both chambers have a responsibility for overseeing appointees' activities. This section gives examples of unqualified and conflicted appointees and discusses the possibility of appointees transitioning to civil service positions and outlasting an administration. We recommend steps Congress can take to encourage administrations to select qualified appointees who will advance their agencies' missions.

UNQUALIFIED APPOINTEES

The current administration has filled several key cabinet positions with individuals who lack the bare minimum of relevant and appropriate qualifications. Elected officials of different political backgrounds may have different preferences for appointees, but should agree that a certain minimum level of qualification is essential: Appointees should possess the subject-matter knowledge and management expertise necessary to fulfill their designated roles, and should not have demonstrated through words or action that they oppose the statutory missions of the agencies they are appointed to lead. Several recent political appointees do not meet these minimal standards.

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Environmental Protections

Before he was nominated and confirmed as EPA administrator, a position from which he has now resigned, Scott Pruitt's LinkedIn page described him as "a leading advocate against the EPA's activist agenda" (Davenport and Lipton 2017). As Oklahoma's attorney general, Pruitt sued the agency repeatedly to overturn rules to limit air pollution from power plants and protect wetlands (Mosbergen 2017); as EPA administrator, he rolled back regulatory and enforcement activities designed to protect public health (Popovich, Albeck-Ripka, and Pierre-Louis 2018; Lipton and Ivory 2017). Contrary to overwhelming evidence, he has stated that he is not convinced that carbon dioxide from human activity is the main driver of climate change (Chiacu and Volcovici 2017). Past EPA administrators have held different positions about the extent to which the agency should regulate pollutants, but former administrator Pruitt was unique in his apparent opposition to the agency's very mission of assuring a healthy environment and his unwillingness to accept the

consensus of the scientific community on one of the most pressing environmental issues of our time.

Agricultural Science

President Trump nominated Sam Clovis to the U.S. Department of Agriculture's top science post despite his lack of academic credentials in hard science, and despite the Congressional requirement to have a qualified scientist fill the position (Green 2017). His withdrawal from consideration for head of the agency's Research, Education and Economics division came amidst revelations about his links to Russian officials during the presidential campaign, rather than in acknowledgment of his lack of appropriate qualifications (Eilperin 2017b).

Family Planning

At HHS, the deputy assistant secretary for population affairs oversees the Title X family planning program—yet the most recent appointees have histories of promoting abstinence over comprehensive contraceptive care and advancing claims not supported by scientific evidence. Former Deputy Assistant Secretary Teresa Manning, who held the position from May 2017 to January 2018, previously claimed "contraception doesn't work" (Lanktree 2017), despite extensive evidence to the contrary. Her replacement, Deputy Assistant Secretary Diane Foley, previously served as executive director of Education for a Lifetime, which promotes abstinence to middle and high school students with claims such as "[b]ecoming sexually active before marriage makes it harder to have a good marriage later" (Lane 2010), despite a lack of credible evidence of such a causal relationship. Foley has also suggested that abortion is unsafe (Browne 2016) because this form of care is insufficiently regulated, despite extensive evidence of abortion's safety and the fact that it is already more heavily regulated than other healthcare services that carry similar risks (CRHS 2018; Jones, Daniel, and Cloud 2018).

When an administration selects unqualified appointees to lead agencies or programs, it hobbles agencies' ability to carry out their Congressionally mandated missions and use government resources efficiently.

When an administration selects unqualified appointees to lead agencies or programs, it hobbles agencies' ability to carry out their Congressionally mandated missions and use government resources efficiently. These programs safeguard our air and water quality and help low-income individuals access contraception allow more people to enjoy good health and participate fully in their families, workplaces, and communities. Appointees who lack understanding or appreciation for how these programs work can undo years of public health accomplishments, such as the recent decline in the teen pregnancy rate.

APPOINTEES WITH CONFLICTS OF INTEREST

Numerous political appointees across the federal government, both those who received Senate confirmation and those who did not require confirmation, have brought with them a variety of conflicts of interest, including ties to particular companies or industry groups. In many cases, these officials have either been appointed using a special hiring authority that exempts them from the Trump Ethics Pledge, or they have simply been given a waiver to do work directly related to the interests of their former employers or clients. Some appointees also have personal financial relationships with lobbyists or companies that pose or appear to pose a direct conflict with their government duties.

Various EPA Employees

In March 2018, the Associated Press reported that, of 59 EPA appointees they tracked over the previous year, approximately one-third had worked as lobbyists or lawyers for industries regulated by EPA, including chemical manufacturers

and fossil fuel producers (Biesecker, Linderman, and Lardner 2018). Although a presidential executive order barred appointees who worked as registered lobbyists in the two years prior to their appointments from participating in matters related to their previous work, many of these appointees received ethics waivers to work on topics involving their former employers. Others appeared to violate the policy and did not receive waivers (Biesecker, Linderman, and Lardner 2018).

Nancy Beck worked as an executive for the chemical industry's main trade association until assuming the position of deputy assistant administrator of EPA's Office of Chemical Safety. In her current role, she exercises substantial influence over regulations; staff members told the *New York Times* that Deputy Assistant Administrator Beck instructed them to rewrite standards to reflect the chemical industry's preferred changes (Lipton 2017). Beck's position was "administratively determined"—a category that is neither a political appointee nor competitively hired civil servant, and is typically reserved for technical experts rather than managers—and so she was not covered by the ethics requirement. A provision to the Safe Drinking Water Act allows EPA to hire up to 30 people without Senate or White House approval so that experts can be brought on board quickly; instead, former EPA Administrator Scott Pruitt hired ex-lobbyists and several other aides, Beck among them, through this provision (Grandoni 2018a).

Before his confirmation as EPA deputy administrator in April 2018, now-Acting Administrator Wheeler spent nine years working as a consultant and lobbyist for fossil fuel companies (Hirsher 2018). His client list included coal mining firm Murray Energy, which sued EPA over multiple regulations, including the Clean Power Plan (Restuccia, Guillén, and Adragna 2017). Although an agency spokesperson has stated that Wheeler consults with EPA ethics officials and will recuse himself when potential conflicts arise, it is difficult to imagine how he can perform his duties fully while avoiding matters that affect his former clients.

Secretary of the Interior Ryan Zinke

When nominated to serve as Secretary of the Interior, Ryan Zinke failed to disclose that he held 1,000 shares in a private company that manufactures firearms and advanced weapons materials (Vardi 2018). Secretary Zinke and his top aides met with company executives in April 2017, his official calendar shows, and Secretary Zinke has signed secretarial orders and proposed a rule to allow more hunting and gun-carrying on public lands (Vardi 2018).

Before his confirmation as EPA deputy administrator in April 2018, now-Acting Administrator Andrew Wheeler spent nine years working as a consultant and lobbyist for fossil fuel companies.

Like other senior political appointees, Secretary Zinke has also come under scrutiny for his use of costly flights. DOI's Office of Inspector General determined that Secretary Zinke followed the policies for most of the chartered and military flights he took in FY 2017, but that a $12,357 charter flight from Las Vegas to Kalispell, Montana, likely would not have been approved if ethics officials had received complete information about it—namely, that the speech Secretary Zinke gave did not mention DOI. Another pertinent detail ethics staff lacked was that the speech was delivered to a hockey team owned by a donor to Zinke's Congressional campaign (OIG 2018).

In July 2018, DOI's inspector general announced an investigation of a real estate deal involving a foundation Zinke established and a development team that includes the chair of oil services company Halliburton. The deal could raise the land value of properties Secretary Zinke owns in Whitefish, Montana, and one of its major players could benefit substantially from decisions Secretary Zinke makes about oil and gas development on federal lands (Lefebvre 2018).

Former CDC Director Brenda Fitzgerald

Following her appointment as director of CDC, Brenda Fitzgerald had to recuse herself from multiple matters related to her investments. Seven months after assuming her role, she was still unable to testify before Congress on issues such as the opioid crisis and cancer detection (Haberkorn and Ehley 2018). She resigned after reporters discovered that she had purchased tobacco stocks while working at CDC (Kaplan 2018; Karlin-Smith and Ehley 2018). Having a director unable to participate on key public health issues and then facing an abrupt leadership change is challenging for any agency; it is especially worrisome when the agency in question is charged with responding to public health threats such as foodborne illness outbreaks and Ebola.

UNQUALIFIED AND CONFLICTED APPOINTEES CAN OUTLAST AN ADMINISTRATION

Political appointees can continue to influence an agency beyond the term of the president who appointed them if they obtain a civil service position. Appointees can convert to a merit-based civil service position—a process known as "burrowing"—only if the Office of Personnel Management determines that the agency's hiring process follows merit system requirements. In March 2018, the House of Representatives passed H.R. 1132, the Political Appointee Burrowing Prevention Act (H.R. 1132 2017), which would prohibit appointees from obtaining career civil service positions for two years after separation from the political position; a related bill (S. 2581 2018) has been introduced in the Senate and referred to the Committee on Homeland Security and Governmental Affairs.

Political appointees can continue to influence an agency beyond the term of the president who appointed them if they obtain a civil service position.

PROPOSED SOLUTIONS

Congress has a responsibility to ensure that federal agencies are led and staffed by appropriate, qualified, and unconflicted nominees. Both senators and representatives should make full use of the tools at their disposal to ensure that this happens. Specific recommendations include:

- The U.S. Senate, through its confirmation powers, is responsible for ensuring that federal agencies are led by qualified, unconflicted individuals. When nominees are subject to Senate confirmation, senators should use their advise and consent powers to vet the backgrounds of appointees, and vote against those with conflicts of interest or who demonstrate a clear lack of competence. Some nominees have withdrawn their names from consideration after concerns came to light. For example, Michael Dourson, who was nominated to oversee EPA's chemical safety division despite a long history of helping companies that use toxic compounds fight EPA regulatory efforts (Kaplan and Lipton 2017a), withdrew from consideration after facing bipartisan opposition from senators (Kaplan and Lipton 2017b).
- Many appointees do not require Senate confirmation, and representatives do not vote on any nominees, but this does not mean Congress lacks influence. Members of Congress can raise concerns about unqualified and conflicted appointees through oversight hearings, requests for information from agency heads, and requests for Inspector General investigations. Representatives can also use subpoena power to investigate conflicts. For instance, Representatives Donald Beyer and Gerald Connolly requested that EPA's Inspector General investigate the process by which then-Administrator Pruitt appointed former banker Albert Kelly—who had no relevant qualifications and had recently been fined by the Federal Deposit Insurance Corporation—to lead a Superfund task force (Beyer and Connolly 2018). Days later, Kelly resigned (Lerner 2018).

- Congress should pass legislation such as the Executive Branch Comprehensive Ethics Enforcement Act (H.R. 5902 2018; S. 2919 2018) to give the Office of Government Ethics (OGE) enforcement power. Currently, OGE can identify violations of ethics laws and regulations but cannot compel compliance. The Executive Branch Comprehensive Ethics Enforcement Act would empower OGE to enforce federal ethics laws and regulations and allow it to compile all the relevant ethics records. It would grant OGE's director the ability to request subpoenas from a federal court to gather necessary information, and report OGE findings directly to Congress; authorize the agency to order corrective actions, such as divestiture or recusal; and establish OGE as the central repository for ethics records deemed public information by law or by the director, and make these records available online in a searchable format.
- Congress should ensure that hiring authority under the Safe Drinking Water Act discourages the hiring of staff without approval and without the same ethics requirements that apply to other appointees.
- Congress should pass legislation such as the Political Appointee Burrowing Prevention Act that limits the conversion of political appointees to career civil servants.

Members of Congress can raise concerns about unqualified and conflicted appointees through hearings, letters to agency heads, and requests for Inspector General investigations.

CONCLUSION

For agencies to fulfill their statutory mandates, they must have leaders who agree with the agency's mission and are free from conflicts of interest that could compromise confidence in their decisions. When administrations install appointees who lack these basic qualifications, agency performance and public trust suffer—with potentially grave consequences for public health and the environment. Congress should use its oversight power to raise concerns about unqualified and conflicted nominees; develop stronger mechanisms for monitoring recusals and ethics waivers; and close the loopholes that make it easier for unqualified and conflicted appointees to gain and keep influential positions at federal agencies.

CHAPTER 4

Reduced Communications from Scientific Agencies

One of the most important functions of scientific agencies[1] is to communicate the results of scientific research to the public and Congress in an accurate and timely manner. In some cases, reports to Congress and the public are required by law. However, political appointees are increasingly censoring and suppressing scientific information, as well as deterring federal scientists from communicating openly with the public and the press. Such ideologically motivated constraints leave the public without important information regarding threats to public health and safety. Moreover, suppression of science can lead to poor policymaking when policymakers are unable to access the best available scientific information. This section discusses instances in which federal departments and agencies have deliberately censored or suppressed the normal flow of communications associated with scientific research. We recommend remedies to ensure our nation continues to benefit from dissemination of taxpayer-supported research.

Political appointees are increasingly censoring and suppressing scientific information, as well as deterring federal scientists from communicating openly with the public and the press.

The following examples highlight some of the most concerning developments that have limited the ability of legislators, regulators, the media, and the public to access to scientific information.

CENSORSHIP OF SCIENTIFIC RESEARCH

Censoring scientific research results in decision-makers and the public having less information about hazards that could affect their health and well-being. Some particularly troubling examples of such censorship that have come to light involve chemical hazards and climate change.

The White House Blocks ATSDR Study Addressing the Toxicity of Common Pollutants

In May 2018, emails uncovered through the Freedom of Information Act revealed that Trump administration officials sought to block publication of a draft toxicological profile examining the health risks associated with exposure to per- and polyfluoroalkyl substances (PFAS) because the report would be a "public relations nightmare" (Snider 2018). PFAS are synthetic chemicals found in everything from nonstick cookware to firefighting foam and are highly persistent in the environment and human body (EPA 2018e). According to the emails, the profile, created by the Agency for Toxic Substances and Disease Registry (ATSDR), found that these chemicals pose health risks at levels far lower than those EPA had previously deemed safe (Snider 2018). Significant bipartisan Congressional pressure followed public exposure of this suppression, and the report was released in June 2018. This study indeed found that the risk levels for PFAS are 7 to 10 times lower than EPA's current standards

1 "Scientific agencies" refers to agencies that engage in generating and/or using scientific research.

(ATSDR 2018). Shortly before ATSDR released the report, EPA held a summit to discuss PFAS, but excluded most journalists and community groups (Wallace 2018).

NPS Attempts to Remove References to Human-Caused Climate Change

A study commissioned by the National Park Service (NPS) to assess the potential effects of sea level rise on national parks located in coastal areas drew the attention of NPS employees who attempted to remove references in the report to human-caused climate change (Shogren 2018a). The author, Maria Caffrey, a paleoclimatologist at the University of Colorado, fought to retain the language (Shogren 2018b). Following a *Reveal* news story about the issue and requests from members of Congress for an Inspector General investigation (Shogren 2018a; Shogren 2018c), the final report was issued with references to human-caused climate change included (Shogren 2018a).

REMOVAL OF PUBLICLY AVAILABLE SCIENTIFIC INFORMATION ON CLIMATE CHANGE

In multiple instances, agencies have removed previously available climate-change content from the public domain. These deletions deprive the public of access to taxpayer-supported scientific information and represent a failure on the part of these agencies to fulfill their duty to keep the public informed about threats to our health.

FEMA Removes Climate Change from Its Strategic plan

The Federal Emergency Management Agency (FEMA), the federal government entity responsible for responding to natural disasters such as floods and hurricanes, eliminated mentions of climate change from its strategic planning document for 2018–2022 (Flavelle 2018a). The new strategic planning document acknowledges that there is a "rising natural hazard risk," but does not mention that climate change is expected to exacerbate that risk (FEMA 2018). This contrasts sharply with FEMA's last strategic plan, which not only made explicit mention of climate change but required any state seeking funding for disaster preparedness to assess the threat posed by climate change (Gustin 2018).

> On December 20, 2017, NPS removed 92 documents describing climate action plans for various national parks from its website.

NPS Deletes Documents Relating to Climate Change from Its Website

On December 20, 2017, NPS removed 92 documents describing climate action plans for various national parks from its website (Bergman, Gehrke, and Rinberg 2017a). Those documents contained information about how certain national parks are responding to climate change. NPS said at the time that the documents with information about climate change had been removed for compliance reasons, and would be put back up by January 18, 2018 (Rinberg et al. 2017). As of this writing, however, several of the links to the climate action plans for member parks either still did not work or came up with old versions. As a result, regional park managers do not have access to current resources that would help them address the effects of climate change on their parks and ensure sustainable operations, and the public no longer has access to valuable information about the environmental changes affecting their communities.

EPA Website Relaunches without Scientific Materials

In April 2017, EPA removed the "Climate and Energy Resources for State, Local, and Tribal Governments" section from its website. Three months later, EPA relaunched the website as "Energy Resources for State, Local, and Tribal Governments," without the reference to climate. The new site deleted references to climate change

and removed multiple links to materials aimed at helping local officials prepare for climate change impacts (Bergman, Gehrke, and Rinberg 2017b). This action directly harms the ability of state, local, and tribal governments to access science-based information about climate change and to respond to it in an effective and timely way in order to protect their citizens.

In October 2017 EPA barred three EPA researchers from giving planned presentations on climate change at a conference in Rhode Island about the health of Narragansett Bay.

PREVENTING SCIENTISTS FROM ATTENDING AND PRESENTING AT SCIENTIFIC CONFERENCES

Restricting scientists' ability to communicate with their scientific peers and members of the press limits the flow of knowledge and can damage agencies' ability to attract and retain staff with valuable expertise.

Blocking Scientists from Attending and Presenting at Scientific Conferences

Several federal agency scientists have seen their speaking engagements cancelled, particularly at professional scientific conferences. For example, in October 2017 EPA at the last minute barred three EPA researchers from giving planned presentations on climate change at a conference in Rhode Island about the health of Narragansett Bay. The scientists who were prevented from speaking, one of whom was slated to give the keynote address, made substantial contributions to a 400-page report on the subject (Friedman 2017). A few months later, EPA did something similar when it prevented 17 agency staffers from attending the Alaska Forum on the Environment, a conference that focuses on climate-related issues (Flavelle and Dloughy 2017).

This problem is not limited to EPA. In April 2017, at least 27 DOE scientists who were scheduled to attend the International Atomic Energy Agency Conference were told they could no longer do so (Negin 2017). In October 2017, *Scientific American* reported that William Jolly, a research ecologist with the Forest Service, was denied approval to attend a conference where he was scheduled to give a presentation about the role of climate change in wildfire conditions (Patterson 2017). A few months later, DOI more than halved the number of U.S. Geological Survey (USGS) scientists allowed to attend the annual meeting of the American Geophysical Union (Kaplan 2017). Then on May 3, 2018, the *Washington Post* reported that the Bureau of Land Management (BLM) blocked at least 14 employees, including archaeologists, from attending the annual meeting of the Society for American Archaeology, a major scientific conference. The BLM archaeologists were scheduled to give a presentation at a symposium on "Tough Issues in Land Management Archaeology," but that symposium had to be cancelled because the BLM scientists could not participate (Grandoni 2018b).

Cancelling federal scientists' speaking engagements at the last minute or preventing scientists from attending conferences entirely is deeply concerning for several reasons. First, these examples seem to be politically motivated attempts to silence scientific discussion around climate change or other issues agency leadership considers contentious. More broadly, attending and presenting at professional conferences is fundamental to the development of scientists' careers and to the furtherance of their research. Such gatherings provide crucial opportunities to share ideas and learn about the latest developments in the field, as well as to network and develop relationships. If government scientists are deprived of these opportunities, not only will government research suffer, but talented researchers will see this as a reason not to pursue a career in government.

New Restrictions on Scientist Communications through Public Affairs Policies

In order for decision-makers to have the best scientific information available, federal agencies

must allow their scientists to speak freely to the media about their research. Increasingly, however, agencies are attempting to use restrictive public affairs or public relations policies to control the information their scientists can communicate.

On May 3, 2017, Lance Leggitt, then-chief of staff for HHS, sent a memorandum to employees mandating that communications with members of Congress and staff could not occur without prior consultation with the Office of the Assistant Secretary for Legislation (Leggitt 2017). CDC took similar action on August 31, 2017, when a public affairs officer sent an email to CDC employees informing them that they were no longer allowed to correspond in any way with the news media without prior approval from CDC's Atlanta Communications Office (Baker 2017). At the USGS, a new policy required scientists to get permission before speaking to reporters about science (Lin 2018). After reporters linked to the policy, it was removed from its previous location and buried deep in the website of DOI, USGS's parent agency (Halpern 2018).

Prompted by a complaint from the Government Accountability Project, the Office of Special Counsel (OSC) conducted an investigation into whether the incidents at HHS and CDC violated 5 U.S.C. § 2302(b)(13) of the Whistleblower Protection Act, which prohibits the implementation or enforcement of a non-disclosure policy that would gag employees from exercising their rights to raise concern about agency operations (Giaccio 2018a). OSC found that there was no violation because HHS later took "full corrective action" by informing agency employees of their rights to communicate with Congress and to make disclosures without agency clearance (Giaccio 2018a). However, this kind of post-hoc remedy—informing employees of their rights after senior management has issued repeated directives to employees not to exercise those rights—is hardly adequate to undo the chilling effect on employee communication.[2]

Agency scientific integrity policies generally emphasize the importance of scientists being able to communicate with the press and with the public about their work in order to maintain scientific integrity.

For political appointees to attempt to control what agency scientists share about their scientific research and knowledge is extremely troubling. Agency scientific integrity policies generally emphasize the importance of scientists being able to communicate with the press and with the public about their work. These new restrictions on communications at agencies represent a flagrant violation of both the letter and the spirit of those scientific integrity policies. Agency public affairs officials are increasingly acting as gatekeepers and campaigners, not as facilitators of information flow. This pattern reduces government accountability and robs states, journalists, and the public of access to scientific expertise.

IMPACTS

Breakdowns in federal agency communication of scientific information have myriad negative consequences. First, state, local, and tribal governments—as well as federal agencies charged with protecting public health and safety and managing shared resources or hazards—require access to scientific data and information they can use to develop policies and plan for the future. When agencies like CDC remove information from their websites or prevent their scientists from communicating with the public, it becomes harder for

2 Similar directives aimed at barring employees from speaking with Congress or the press have been issued recently, including from the Department of Agriculture, DOI, EPA, the Department of Transportation, and DOJ. Even if the directives have been subsequently "remedied" by informing employees that gag orders do not supersede their whistleblower rights or rights to communicate with Congress, the initial message is clear: senior agency management will be hostile to employees who communicate without prior approval. See Shelbourne 2017; Lartey 2017; Giaccio 2018b.

government at every level to understand, plan for, and mitigate public health risks, environmental dangers, and safety threats.

When agencies fail to communicate about science it also means that the public itself has less direct access to science and evidence-based information. This, too, negatively affects public health. For example, if agency scientists conduct research that determines that air or water pollutants pose health risks in certain communities, but the agency fails to communicate that information to the public, citizens in those communities may experience preventable harm.

Censorship and chilled communication undermine accountability by weakening Congress's ability to engage in oversight of the executive branch and to ensure that federal agencies are fulfilling their public missions.

In addition to these direct negative impacts on public health and good governance, agencies' failure to communicate freely about science creates a culture in which scientists self-censor. Scientists may not pursue research projects on topics that are important but disfavored by political appointees, because there is an explicit or implicit message that they are not welcome. The result is that science becomes politicized, the entire scientific endeavor suffers, and both the public and governmental entities are deprived of important new scientific data and information that could be used in policymaking.

Finally, censorship and chilled communication undermine accountability by weakening Congress's ability to engage in oversight of the executive branch and to ensure that federal agencies are fulfilling their public missions. Censorship can occur both through suppression or removal and by creating a culture where employees are afraid to exercise their rights to report information they reasonably believe evidences a violation of law or regulation, gross mismanagement, gross waste of funds, abuse of authority, dangers to public health and safety, or scientific censorship that would result in these forms of misconduct. Such practices foster opacity rather than the transparency that is essential to an accountable, responsive democracy.

PROPOSED SOLUTIONS

Despite the importance of open and informative agency communications, current practices and legal structures often leave agency employees who become aware of censorship or suppression of scientific information few effective mechanisms for correcting such situations. Congress should take several actions to ensure that agencies both communicate scientific information and developments appropriately and allow their scientists to do so as well.

Encourage Agencies to Strengthen Scientific Integrity Policies

In response to a presidential memorandum issued by President Obama in 2009, many scientific agencies have developed scientific integrity policies explicitly stating that open communication of the results of scientific studies, freedom from censorship, the ability to communicate with the press, and the ability to freely participate in professional activities such as presenting at conferences are all integral parts of scientific integrity (Goldman et al. 2017).

While the scientific integrity policies are sound in concept, they are generally difficult to use or enforce to correct the kinds of communication failures described above because they typically provide few specific procedural requirements (e.g., failing to specify whether complainants are entitled to a hearing or an appeal). Likewise, existing scientific integrity policies are largely silent with respect to specific enforcement mechanisms and do not obligate agencies to take any particular action if they do find a violation.

Members of Congress should put public pressure on agencies, by way of letters, hearings, and other oversight

measures, to expand and strengthen their scientific integrity policies to incorporate specific procedural protections and enforcement mechanisms. This would make these policies a more effective means of addressing and correcting violations in a timely manner.

Strengthen and Pass the Scientific Integrity Act

In addition to using its oversight authority to encourage agencies to strengthen the scientific integrity policies described in the 2009 presidential memorandum, Congress could address these issues legislatively. Indeed, in early 2017 members of both the House and Senate introduced a Scientific Integrity Act that would codify the requirement that scientific agencies develop scientific integrity policies. Passing the Scientific Integrity Act would help to ensure that all scientific agencies have strong scientific integrity policies that protect both research and researchers. In passing the Scientific Integrity Act, Congress should go even further than the initial bill did. Congress should strengthen it by adding requirements that agencies develop scientific integrity policies that explicitly make attempts at censoring scientists a violation of scientific integrity. Furthermore, Congress should require agencies to develop more specific enforcement procedures and other procedural protections for scientists who allege a scientific integrity violation, such as the right to a hearing and an explicit right to appeal to a federal court.

These kinds of statutory protections would go a long way toward preventing the deeply problematic censorship of communication from agency scientists about their work discussed in this chapter. **Congress should strengthen and pass the Scientific Integrity Act.**

Strengthen Whistleblower Statutes

A patchwork of laws provides protections to federal employees who blow the whistle on certain kinds of unethical or illegal behavior within the federal government. However, existing whistleblower laws do not currently provide much, if any, explicit protection for federal employees blowing the whistle on the kinds of reduced communications about science discussed in this chapter.

Congress should strengthen and expand whistleblower statutes to provide explicit protections for federal employees blowing the whistle on censorship and suppression of science—regardless of whether it constitutes waste, fraud, or abuse. The next chapter will cover whistleblower laws, including proposed solutions to loopholes in the whistleblower laws, in detail.

Passing the Scientific Integrity Act would help to ensure that all scientific agencies have strong scientific integrity policies that protect both research and researchers.

CONCLUSION

It is crucial for public health, the environment, good governance, and the health of the scientific endeavor in the United States that our federal agencies foster and conduct complete, accurate, and timely communication of scientific information. However, as the examples in this chapter illustrate, multiple agencies are failing to carry out this responsibility in deeply troubling ways. With the actions described above, members of Congress can help ensure that federal agencies communicate effectively with the public about science.

CHAPTER 5

Whistleblowing and Scientific Integrity

Whistleblowers—employees who report information they reasonably believe evidences illegality; gross mismanagement or waste of funds; abuse of authority; substantial dangers to public health, safety, or the environment; or scientific censorship that would result in such harm—have repeatedly been one of the most powerful vehicles for ensuring adherence not only to law and policy, but to the mission of our federal agencies. Congressional representatives should ensure that science, and science-based policy, are safeguarded by protecting the rights of federal employees to speak out about serious abuses of public trust. This section highlights the importance of whistleblowing in federal scientific agencies[3] and offers prescriptive policy goals that Congress should consider enacting to strengthen and expand whistleblower protection rights for employees.

Most employees stay silent in the face of witnessing misconduct because they fear reprisal or believe that speaking up will not make a difference. In a survey of corporate employees who do speak up, 97% report concerns internally first, variously to supervisors, higher management, ethics officers, and hotlines.

WHISTLEBLOWING: RIGHTS AND RISKS FOR EMPLOYEES

Under the Whistleblower Protection Act of 1989 (WPA 1989), amended by the Whistleblower Protection Enhancement Act of 2012 (WPEA 2012), most federal employees who work in the science agencies have the right to disclose information, free from reprisal, that they reasonably believe evidences a violation of law, rule, or regulation; gross mismanagement; a gross waste of funds; abuse of authority; a substantial and specific danger to public health or safety; or censorship of their research. These and other laws provide federal employees with well-established, though imperfect, rights to disclose serious abuses of public trust either internally (e.g., to managers, agency Inspectors General, co-workers) or externally (e.g., to OSC, members of Congress). If the information is not classified or its release specifically barred by statute, they have public freedom of expression with audiences like the media, watchdog organizations, and citizen groups. Under the WPA, whistleblowers can also "walk the talk" by refusing to violate the law.

Legal rights for U.S. private employees, including many contractors who perform scientific work for the federal government, are more complicated. More than 50 corporate whistleblower protection laws exist at the federal level, along with many state and local laws (Devine and Maassarani 2011). Each law protects, in certain cases, the legal rights of employees to report wrongdoing free from reprisal and has different procedural steps and different paths for enforcement.

3 "Scientific agencies" refers to agencies that engage in generating and/or using scientific research.

Assessing the content of the whistleblowing disclosure, to whom the disclosure was made, and what kind of reprisal was suffered by the whistleblower are all moving variables (Gold 2013).[4]

Most employees remain silent after witnessing misconduct because they fear reprisal or believe that speaking up will not make a difference. In a survey of corporate employees who do speak up, 97% report concerns internally first, variously to supervisors, higher management, ethics officers, and hotlines (ERC 2012). Only when employees are ignored or face reprisal do they consider reporting problems externally to Congress, journalists, or non-profit watchdog organizations.

Reprisal for whistleblowing unfortunately is real, despite the fact that whistleblowers are often the best, and sometimes the only, pathway toward holding government institutions accountable, ensuring regulatory compliance, and protecting the public's interest. Because it is so important to encourage employees to report wrongdoing, even in the most partisan periods of Congressional history, whistleblower protection has consistently garnered unanimous, bipartisan support. Whistleblowers can be unique resources for government accountability, transparency, and democracy. In essence, whistleblowing is when dedicated public employees with insider knowledge exercise the freedom to warn of illegality or corruption within their workplaces. With their expert knowledge, whistleblowers often catalyze Congressional oversight hearings or serve as valuable advisors in creating effective policy.

EXAMPLES OF SCIENCE-RELATED WHISTLEBLOWING

From revealing gross waste of government funds to reporting on deadly construction flaws in American nuclear plants, federal employees at scientific agencies have a long tradition of whistleblowing. Multiple administrations have retaliated against these whistleblowers, which can chill employees from communicating with Congress and the public and thereby hamper accountability. The case studies below not only exemplify the wide variety of issues that whistleblowers might address, but illustrate the importance of whistleblowers in revealing serious threats to the public interest.

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Miguel Del Toral

In June 2015, Del Toral, a manager for EPA's Midwest water division, wrote to EPA leadership detailing months of study by EPA on Flint, Michigan's water quality. Specifically, his memo rebuked the Michigan Department of Environmental Quality's (MDEQ) decision to change the city of Flint's water source to the Flint River without subsequent corrosion control of the piping, and noted the high lead levels in Flint resident LeeAnne Walters' drinking water (Del Toral 2015).

Del Toral's warning was ignored for weeks at the highest levels of EPA's leadership. In July

2 Perhaps the most common misperception about whistleblowing is that it means leaking "classified" information. Disclosing classified information to those without the sufficient security clearance is unprotected, because it is a federal crime and is therefore not protected whistleblowing. Unfortunately, the aggressive prosecution of intelligence community (IC) employees who release classified information has fueled the misbelief that all whistleblowing is criminal. This creates a dangerous "chilling effect" on federal employees' legal right to expose wrongdoing. There are lawful mechanisms for IC employees to report wrongdoing through internal channels, but they are weak and ineffectual. Because employees fear their whistleblowing will be ignored by protected channels, some choose to risk criminal prosecution by releasing classified information externally. The overwhelming majority of whistleblowers are outside the intelligence community and classification is no issue. But many intelligence and security agencies do rely heavily on science for their missions. Although this chapter focuses primarily on non-IC employees in the science agencies, Congress should work to strengthen channels through which IC employees may legally blow the whistle. That would strengthen national security by limiting classified "leaks" while allowing the IC Inspector General to properly investigate whistleblower concerns.

2015 Del Toral shared his memo with Walters, who subsequently passed it to ACLU leaders, prompting the whirlwind of public inquiry into Flint's water quality.

Flint's nearly 100,000 residents were exposed to unsafe levels of lead contamination, a state of emergency was declared, and a Legionnaires' disease outbreak linked to the water supply changes killed 10 people.

In retaliation, Del Toral, despite not personally sharing the document with the ACLU, was initially labeled as a "rogue employee" by MDEQ and alleged that he was barred from participating in outside meetings in reprisal for raising warnings about Flint's water quality (Delaney 2016).

During this long period, Flint's nearly 100,000 residents were exposed to unsafe levels of lead contamination, a state of emergency was declared, and a Legionnaires' disease outbreak linked to the water supply changes killed 10 people (Difazio 2018; Zahran et al. 2018; Southall 2016). Furthermore, 15 state officials received criminal indictments (Ganim 2017). Today, scientists do not believe the water is safe for Flint residents to drink (Baptiste 2018). With greater whistleblower protections that would have required further investigation of Del Toral's legitimate concerns, it is likely that the impact of the Flint water crisis could have been lessened (Smith 2016).

Joel Clement

Clement is a biologist who served as director of the Office of Policy Analysis at DOI and worked as a top-level policy advisor for multiple presidential administrations. While at DOI, Clement—who spent nearly seven years at the Department—led a team studying the impacts of climate change upon Alaska Native communities. Yet, after speaking publicly about the dangers climate change poses for these remote communities, Clement was reassigned from his senior executive post to an accounting job collecting mineral royalty checks (Clement 2017). Clement was one of dozens of senior DOI officials reassigned in mid-2017 with little explanation (Eilperin and Rein 2017). One-third of those reassigned were Native American, despite Native Americans making up less than 10% of DOI's workforce (Ollstein 2018). Secretary of the Interior Ryan Zinke had previously testified about his intent to use reassignments to eliminate employees (Clement 2017).

In July 2017, Clement filed a whistleblower retaliation complaint with OSC. The Inspector General's Office determined that DOI leadership did not consistently apply the reasons it stated for reassignments, nor did it gather adequate information to make informed reassignment decisions (Barry 2018). Clement since has left the federal government and become a public advocate for governmental accountability and scientific integrity (Barry 2018).

Lawrence Criscione

Criscione, a highly credentialed engineer and risk analyst with the Nuclear Regulatory Commission (NRC), experienced retaliation for raising serious concerns regarding the possibility of major accidents at a quarter of the nation's aging nuclear power plants if upstream dams fail and cause severe flooding. As the world's climate changes and parts of the United States experience severe storms and record-breaking rainfall, nuclear facilities face a growing risk of cascading failures leading to core meltdown, explosions, and the release of highly radioactive material (Polansky 2018).

Duke Energy's Oconee Nuclear Station in South Carolina has been of particular concern to Criscione, who became increasingly frustrated as his superiors ignored his repeated warnings. He alerted the NRC Chair and sent a detailed email (Criscione 2012) marked confidential to Congressional staff. This email was later leaked to the press (Zeller 2012). Instead of addressing Criscione's risk assessment warnings, the NRC's Office of Inspector General opened an investigation into Criscione for distributing sensitive information, even though it was his right to

communicate with Congress under the Lloyd-La Follette Act of 1912 and civil service law (Lochbaum 2017). The IG sought federal prosecution by referring the case to a U.S. Attorney, who rejected it for lack of merit. Although Criscione has been able to keep his job at the NRC and is no longer under investigation, his concerns have not been fully addressed (OSC 2017). He reports ongoing barriers such as being prohibited from attending meetings regarding nuclear plants' flood risk and being denied access to relevant documents. Meanwhile, severe hurricanes and storms are flooding areas where these aging nuclear power plants are located, raising the risk of a U.S. nuclear accident worse than Fukushima. Criscione has filed formal whistleblower retaliation complaints with OSC (GAP 2015; *Lawrence Criscione v. US Nuclear Regulatory Commission* 2011) and DOL. As of late 2018, his cases are still pending.

Kevin Chmielewski

Chmielewski was the most prominent whistleblower who revealed alleged grossly wasteful spending and unethical abuses of power by then-EPA Administrator Scott Pruitt, demonstrating that employees can help protect scientific integrity even if their direct involvement with science is limited. Chmielewski, a former campaign aide to President Trump who served as Deputy Chief of Staff of Operations at EPA, revealed excessive and often illegal spending on security and travel, as well as serious ethics conflicts. Chmielewski's disclosures catalyzed Congressional investigations into then-Administrator Pruitt's unjustified misuse of public funds (Carper et al. 2018). Administrator Pruitt ultimately had to resign in July 2018 (Davenport, Friedman, and Haberman 2018). However, Chmielewski and several others who questioned then-Administrator Pruitt's management practices were reassigned, demoted, put on administrative leave without pay, or fired (Lipton, Vogel, and Friedman 2018).

PROPOSED SOLUTIONS

Employees who blow the whistle often suffer a real professional cost. Stronger whistleblower protection laws would encourage future employees to report serious issues of public concern as well as deter reprisals. Below are four recommendations to strengthen protections for federal employee whistleblowers, thus encouraging civil servants to report scientific censorship and other serious abuses while discouraging retaliation.

Access to Court with Jury Trials

Access to jury trials would give government whistleblowers the same legitimate speech rights available to corporate employees through the right to seek justice from the citizens whom they aim to defend. Federal whistleblowers are the only significant portion of the U.S. labor force without that access to justice. Their due process rights currently are limited to administrative hearings at the Merit Systems Protection Board (MSPB). The MSPB does not have independence from political pressure or the resources to address abuses of power connected with national policy issues, but those disputes are the most significant reason we need whistleblowers. The MSPB was designed to resolve office conflicts, not analyze and reach decisions on highly technical, scientific disputes of national significance with expert testimony. Providing federal employee whistleblowers with access to federal court and trial by jury, like all state and local government workers and nearly all corporate employee whistleblowers, would overcome these weaknesses. Court access also would bypass the retaliation whistleblowers often face from administrative judges and hearing officers in the merit system, who traditionally have been exceedingly hostile to those challenging the executive branch power structure.

The Merit Systems Protection Board was designed to resolve office conflicts, not analyze and reach decisions on highly technical, scientific disputes of national significance with expert testimony.

Protection from Retaliatory Investigations that Can Become Criminal Prosecutions

Congress should eliminate loopholes that allow managers to conduct some of the most egregious forms of reprisal levied against whistleblowers—retaliatory criminal investigations, prosecutorial referrals, and prosecutions. Currently, there is no need for those wishing to retaliate against whistleblowers to propose official personnel actions that trigger draining, time-consuming due process hearings and appellate review. Instead, federal scientific agencies increasingly use "whistleblower witch hunts" to bully whistleblowers with the threat of criminal prosecution. Furthermore, instead of facing a loss in a case where they cannot find compromising information about the whistleblower, they simply close the first case and start a new one. Deeming these particularly nefarious forms of retaliation to be prohibited personnel practices when taken against whistleblowers would allow them to defend themselves, significantly reducing the intended chilling effect on employees who witness serious problems in the workplace.

Federal scientific agencies increasingly use "whistleblower witch hunts" to bully whistleblowers with the threat of criminal prosecution.

Realistic Opportunities for Whistleblower Interim Relief

Whistleblower cases brought under the Whistleblower Protection Act often take anywhere from 2 to 12 years for OSC, the MSPB, and relevant appellate courts to reach a decision (GAP 2018). During these lengthy delays, whistleblowers generally are unemployed, pay exorbitant fees for legal representation, and have difficulty finding a new job. All the while, they must also worry about their personal lives, which may include supporting a family and raising children. By the time they win their cases, their lives may have been irreparably harmed. The current law is set up so that OSC can apply interim relief for whistleblowers quite easily, yet the agency seldom does except in the most extreme of cases. The legal burdens of proof are unrealistically high for employees seeking interim relief on their own. Congress should amend the WPA to provide realistic legal tests for whistleblowers to freeze retaliation until their cases are resolved. This not only would be humane; it would also make a tremendous difference in the willingness of whistleblowers to work with the court and investigators.

CONCLUSION

Employees who speak out about violations of law, gross waste, mismanagement, abuse of authority, and substantial risks to health, safety, and the environment are our best resource to hold federal agencies accountable and protect the public interest. Expanded protections are essential to ensure that employees are encouraged to blow the whistle rather than remain silent observers of abuse. Federal scientists in particular work on issues that have major impacts to public health and safety, from nuclear waste storage to clean drinking water. The work of these individuals is invaluable—as is their continued vigilance. It is therefore imperative that Congress act swiftly and decisively to implement robust protections for scientist whistleblowers.

CHAPTER 6

A Low-Information Approach to Enforcement

Congress relies on federal agencies to enforce the laws it passes, and consistent enforcement can benefit public health and the economy. To enforce laws fairly, regulatory agencies must have accurate, up-to-date information, and levy appropriate penalties when evidence shows a company has violated federal law. Yet some agencies appear to be taking a low-information approach to enforcement: They are both weakening measures that would allow them to collect appropriate information about compliance and ignoring information they have, adopting seemingly willful blindness to violations.

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EPA DECLINES TO LOOK CRITICALLY AT POLLUTION LEVELS RELATIVE TO STANDARDS

Under the Clean Air Act, the New Source Review (NSR) program requires power plants and refineries to install modern pollution control equipment when they are undergoing modifications that will lead to a significant increase in emissions—e.g., if a power plant is undertaking upgrades that will increase its output and, consequently, the pollution it emits. EPA has the opportunity to review draft NSR construction permits for facilities undertaking upgrades, and in the past has examined the appropriateness of analyses performed by plant owners and operators to determine whether plant upgrades will increase emissions and trigger pollution-control requirements or whether additional emissions controls are needed (GAO 2012; *United States v. DTE Energy Co.* 2017). In December 2017, then-EPA Administrator Scott Pruitt issued a guidance memo stating that the agency "does not intend to substitute its judgment for that of the owner or operator by 'second guessing' the owner or operator's emissions projections" (Pruitt 2017b).

The "second guessing" language refers to a court decision in which the majority opinion cautioned EPA against "second guessing" an owner's projection, though the judges did not agree on the extent to which skepticism is allowed, and a later federal appeals court decision found that "the focus on so-called 'second-guessing' is misplaced" (*United States v. DTE Energy* 2017). The memo takes avoidance of second-guessing to extreme, stating that when "a source owner or operator performs a pre-project NSR applicability analysis in accordance with the calculation procedures in the regulations, and follows the applicable recordkeeping and notification requirements in the regulations, that owner or operator has met the pre-project source obligations of the regulations, unless there is a clear error (e.g., the sources applies the wrong significance threshold)" (Pruitt 2017b). By suggesting

that EPA will remove itself from the determination except in cases with the most obvious of errors, the agency is practically inviting unscrupulous operators preparing analyses to make the kinds of assumptions that are least likely to show the need for them to invest in additional pollution-control equipment.

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Some recent major settlements announced by EPA also suggest the agency is failing to take an appropriately critical look at what companies can and should do to remedy violations:

- ***ExxonMobil:*** EPA touted an October 31, 2017, Clean Air Act settlement with ExxonMobil's eight chemical plants in Texas and Louisiana as an example of EPA's "commitment to enforce the law." EPA claimed the settlement required ExxonMobil to spend $300 million to install pollution controls and eliminate hundreds of tons of pollutants per year, but that estimate included emissions reduced since the beginning of 2013, or nearly five years before the consent decree took effect. In addition, the consent decree's performance standards for several of the company's flares are already required under pre-existing permits, and in several cases actually authorize emissions of smog-forming chemicals that are higher than these permits allow (Schaeffer and Pelton 2018).

- ***Carbon Black:*** EPA advertised another series of settlements that required four companies to reduce emissions from ten plants that manufacture carbon black, which is used to make tires and other rubber products. But its announcement did not mention its simultaneous decision to postpone, for up to three years or more, the deadlines for cleaning up six other carbon black plants under consent decrees with Cabot Corporation and Continental Resources that had been entered years earlier. The agency made no serious effort to justify this extension, which allowed Cabot and Continental to back out of enforceable commitments to comply with the Clean Air that it had made years earlier (Schaeffer and Pelton 2018).

- ***Devon Energy:*** In February 2018, EPA entered into an agreement with Oklahoma-based Devon Energy that includes a vague one-and-a-half-page commitment to audit and clean up emissions from its drilling sites that will be difficult to enforce, and which requires no penalties or expenditures to mitigate the damage caused (EIP 2018).

FEWER INSPECTORS AND LOWER PENALTIES AT EPA

Since January 2017, EPA's Office of Enforcement and Compliance Assurance (OECA) has seen its staffing levels shrink dramatically (Dennis, Eilperin, and Ba Tran 2018). At EPA headquarters, at least 73 OECA staff members had left the office and only four new ones were hired by late July 2018 (Rosenberg 2018). As of April 2018, EPA had only 140 criminal investigators on staff, a drop of one-fifth from 2012 levels and below the 200 agents required under the 1999 U.S. Pollution Prosecution Act (Clark 2018).

Perhaps as a result of EPA having fewer inspectors and looking less critically at pollution levels relative to standards, major polluters are now less likely to face enforcement actions, pay appropriate penalties, or be required to make significant investments in pollution control or cleanup. During the first year after its inauguration, the Trump administration resolved 44% fewer cases in federal court and recovered less than half as much in the way of penalties from polluters, when compared to the first year of the previous three administrations. When comparing inflation-adjusted totals for civil cases and penalties for violations of major environmental laws such

as the Clean Air Act and Clean Water Act (but excluding Superfund), the Trump administration lodged 48 cases for a total of $30 million in penalties, compared to 71 cases for $81 million in President Barack Obama's first year and 112 cases for $70 million in President George W. Bush's first year (Schaeffer and Pelton 2018).

The defendants in those judicial actions settled in Trump's first year were expected to spend $966 million on pollution controls needed to remedy those violations. By contrast, EPA anticipated that polluters would spend up to $3.8 billion (in inflation-adjusted dollars) in cleanup under settlements lodged within President Obama's first year, and $2 billion for those in the first year of President Bush (Schaeffer and Pelton 2018).

EPA typically pursues cases against very large polluters, some of which involve violations at many different facilities spread across the United States. States frequently lack the resources or the political will to sustain enforcement actions against corporations that spend millions on legal representation and lobbyists (McKelvey 2018). That is why Congress gave EPA full authority to enforce the Clean Air Act, Clean Water Act, and other federal laws, even when states are authorized to implement those requirements within their borders. Without such enforcement, the many responsible companies who make the right decisions to clean up emissions or eliminate the discharge of toxic pollutants will be at the mercy of unscrupulous competitors who are willing to cut corners. Communities downwind or downstream will have to live with unhealthy air and water that is not fit for public use.

LESS INFORMATION AND ENFORCEMENT FROM OSHA

By enforcing workplace health and safety rules, OSHA assures that employers mitigate and eliminate hazards that could otherwise lead to disability and death for workers. To carry out its mission and target its limited resources, OSHA needs timely, reliable information about conditions at workplaces. It receives information through its own inspections and from employers filing mandatory reports of occupational injuries and illnesses. Both sources of information have been significantly weakened.

As of January 2018, the number of federal OSHA inspectors had dropped to 764 from 815 in FY 2017 (AFL-CIO 2018). The decline was due in part to the federal hiring freeze, and in late 2017 Secretary of Labor Alexander Acosta indicated that the agency had hired additional inspectors and was recruiting more (Khimm 2018). In the meantime, the reduced inspection workforce has been accompanied by a drop in units of enforcement, which fell from 42,900 units in FY 2016 to 41,829 in FY 2017—a drop of 1,071 units. In the first five months of FY 2018 alone, they fell by a further 1,163 (Berkowitz 2018).

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Enforcement units reflect the complexity of inspections; because some inspections require more time and effort, they count for more units. While the Labor Department noted that the number of inspections has increased (Khimm 2018), the drop in enforcement units suggests that this increase has come by increasing the number of relatively simple, less-resource-intensive inspections. OSHA began tracking enforcement units rather than simply the number of inspections completed starting in FY 2016 in order to make enforcement activity more strategic and remove potential disincentives for undertaking complex investigations into workplace hazards such as heat, chemical exposures, ergonomics, and workplace violence (Michaels 2015).

To obtain a more complete picture of occupational injuries and illnesses that occur across the country, OSHA relies on employers to report fatalities, injuries, and illnesses. Employers have long been required to keep injury and illness logs,

but only under the previous administration were they required to submit them to OSHA periodically. In 2016, OSHA issued a final rule instructing employers to submit these logs electronically (with some exceptions based on employer size and industry); the agency would then remove identifying information and make the data publicly available online (OSHA 2016). With agency and public access to information, OSHA explained, "employers, employees, employee representatives, the government, and researchers may be better able to identify and mitigate workplace hazards and thereby prevent worker injuries and illnesses" (OSHA 2016). OSHA would use this information to improve the effectiveness of its enforcement and compliance assistance activities in preventing injuries and fatalities. In July 2018, however, OSHA proposed a rule that would rescind part of the new requirements for electronic injury and illness reporting. Specifically, OSHA has proposed repealing the reporting of more detailed injury information for establishments with over 250 employees (OSHA 2018). Given that employers are already required to maintain these records, the primary result of this rollback is reduced transparency and less agency and public access to information that could help reduce occupational injuries, illnesses, and deaths.

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PROPOSED SOLUTIONS

To ensure that regulatory agencies are carrying out their statutory responsibilities to enforce laws that protect public health, Congress should hold oversight hearings and initiate inquiries when a regulatory agency rolls back reporting requirements that advance transparency or displays a substantial drop in penalties or enforcement units.

CONCLUSION

Fair and consistent enforcement of environmental and workplace health and safety laws averts injuries and illnesses that strain families and communities and lead to early departures from the workforce. Such enforcement can also improve public confidence in government. Regulatory agencies should have accurate, up-to-date information about the power plants, workplaces, and other entities under their purview, and they should use that information when making decisions about penalties and settlements.

Conclusion

If the sidelining of science described in this report persists, federal agencies' reputations as respected sources of information will suffer long-term damage. Worse, though, will be the consequences of reversing decades of progress that has improved air and water quality, restored and safeguarded biodiversity, reduced unintended pregnancy, made workplaces safer, and otherwise advanced public health and environmental protection.

In the 2018 survey of federal scientists by the Union of Concerned Scientists and Iowa State University, 39% of respondents reported that the effectiveness of their divisions or offices had decreased over the past year, and 46% reported a decrease in personal job satisfaction (Carter, Goldman, and Johnson 2018). Morale is lower at agencies where respondents reported concerns about leadership, including EPA and the U.S. Fish and Wildlife Service. Low morale can lead to the departure of skilled federal employees with valuable knowledge, experience, and institutional memory. Such departures can both be caused by, and exacerbate problems related to, political interference with science, and leave agencies less equipped to address epidemics, natural disasters, and other threats.

Congress has the power to halt and repair damage from federal agencies' current disregard for scientific evidence. Its oversight role is crucial in revealing instances in which agencies have ignored or distorted scientific findings, and increased oversight can deter future problems. Congress has passed legislation, such as whistleblower protections and sunshine statutes, that contribute to a stronger culture of scientific integrity at federal agencies. In order to create a lasting legacy, through adequate oversight and vetting, and by passing laws that codify strong scientific integrity standards and create adequate enforcement mechanisms for those standards, Congress can help ensure that agencies base decisions on the best available science, and secure a healthier and more prosperous future for the United States.

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CONCLUSION

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Protecting Science at Federal Agencies

HOW CONGRESS CAN HELP

Independent scientific analysis and advice are essential for effective policies that serve the public interest. This report describes new and ongoing threats to the communication of science and its use in public health and environmental decisions, and it recommends steps Congress can take in response.

The organizations that contributed to this report work to ensure that U.S. policy decision-making is fully informed by scientific evidence and the best available data and that the public has reliable access to independent scientific information and analysis produced and acquired by the federal government.

Union of Concerned Scientists

Climate Science Legal Defense Fund for the Protection of the Scientific Endeavor

POGO Project on Government Oversight

Environmental Protection Network

Power to Decide

Greenpeace

GAP Government Accountability Project

Democracy Forward

Jacobs Institute of Women's Health, The George Washington University

NFFE National Federation of Federal Employees

EIP

national partnership for women & families

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