

2021 and Beyond: Scientific Priorities Moving Forward

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Union of
Concerned Scientists



POLICY FORUM

SCIENTIFIC INTEGRITY

Ensuring scientific integrity in the Age of Trump

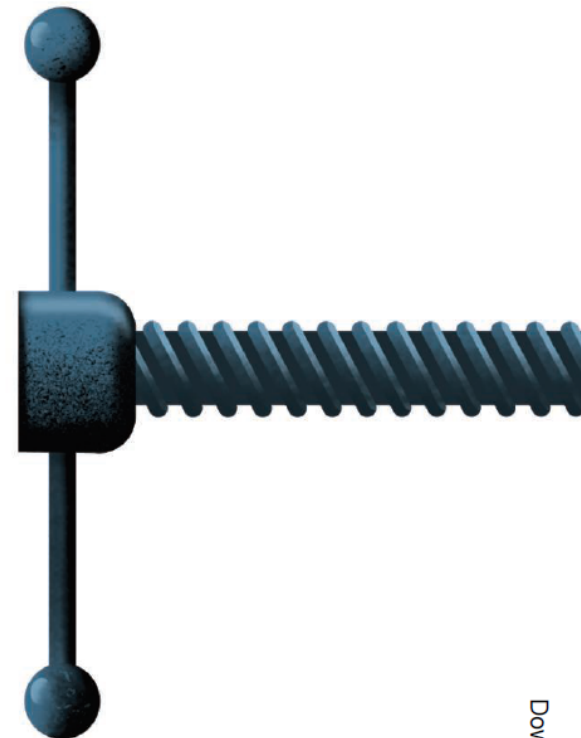
Policies to protect government scientists must be defended

By Gretchen T. Goldman, Emily Berman, Michael Halpern, Charise Johnson, Yogin Kothari, Genna Reed, Andrew A. Rosenberg

With the new Donald J. Trump Administration comes uncertainty in the role that science will play in the U.S. federal government. Early indications that the Administration plans to distort or disregard science and evidence, coupled with the chaos and confusion occurring within federal agencies, now imperil the

weapons to ensuring the safety of food and household products.

Americans still hold science in high regard, which makes it vulnerable to political interference. All modern presidents—both Republicans and Democrats—have politicized science in some way (3). President Barack Obama, for example, clashed with scientists on ozone pollution and emergency contraception—both decisions statutorily mandated to be based on science. But government experts in the George W. Bush Administration found their work suppressed and distorted at all steps in the



UCS worked with anonymous whistleblowers to reveal political interference in science, resulting in the resignation of high-ranking administration appointees and

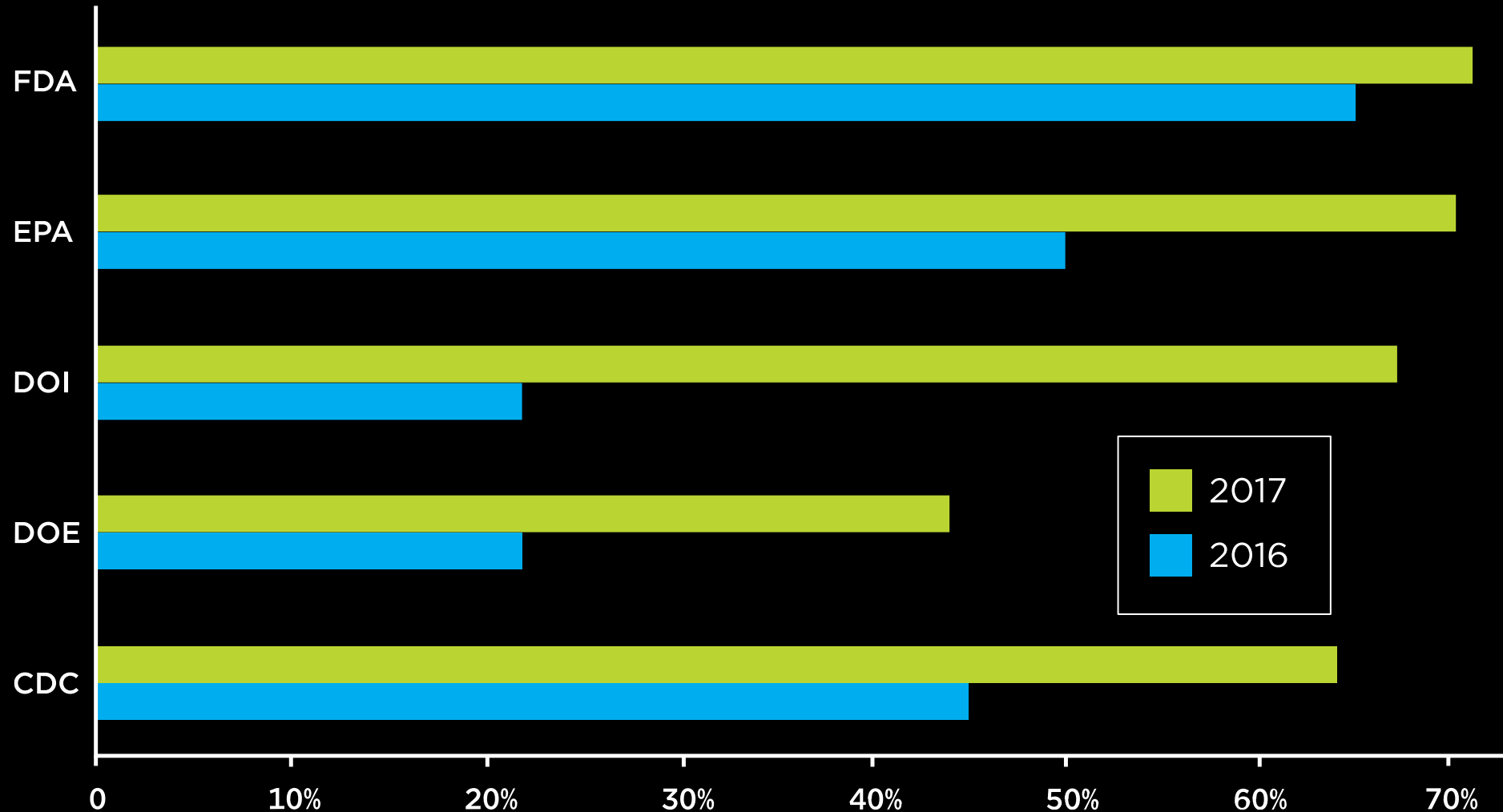
Downloaded from <http://www.sciencemag.org>

Goldman, G.T., E. Berman, M. Halpern, C. Johnson, Y. Kothari, G. Reed, and A.A. Rosenberg. 2017. Ensuring Scientific Integrity in the Age of Trump. *Science*. February 17. 355 (6326). DOI: 10.1126/science.aam5733

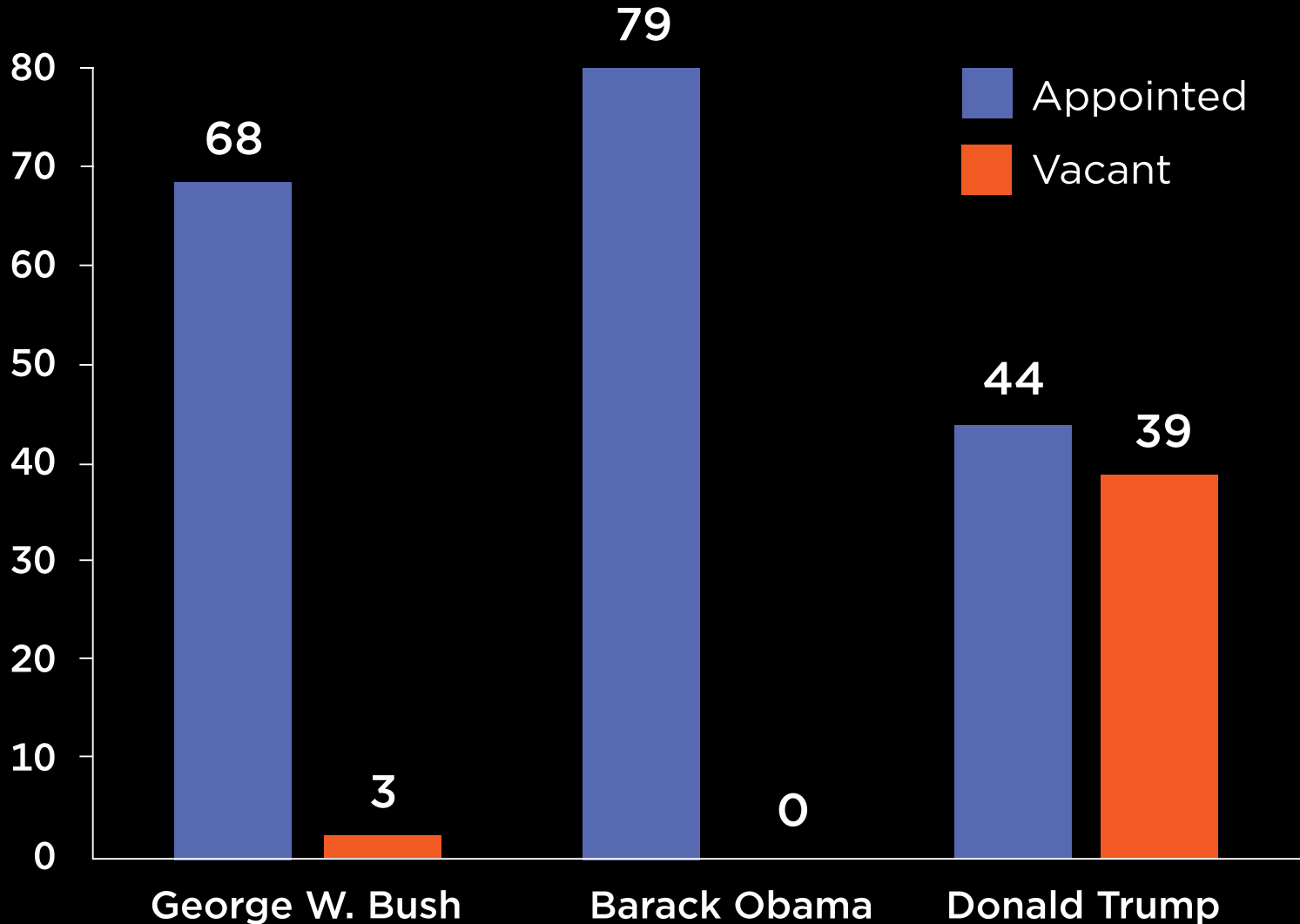


Characterizing Science's Challenges

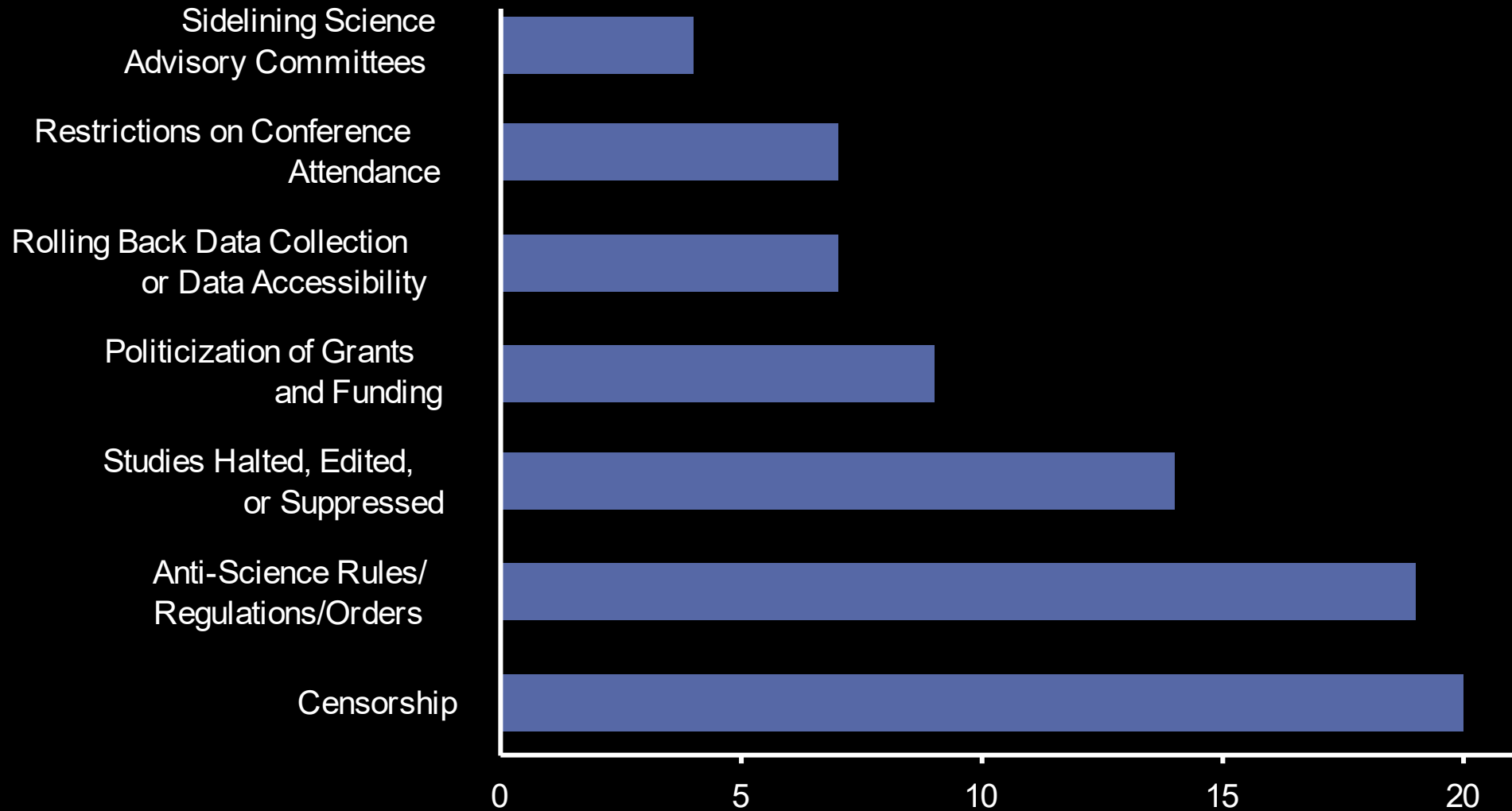
Percent of Science Advisory Committees That Failed to Meet as Often as Their Charters Directed



Vacancies in Scientific Leadership Positions in Three Administrations



160+ Attacks on Federal Science Since 2017

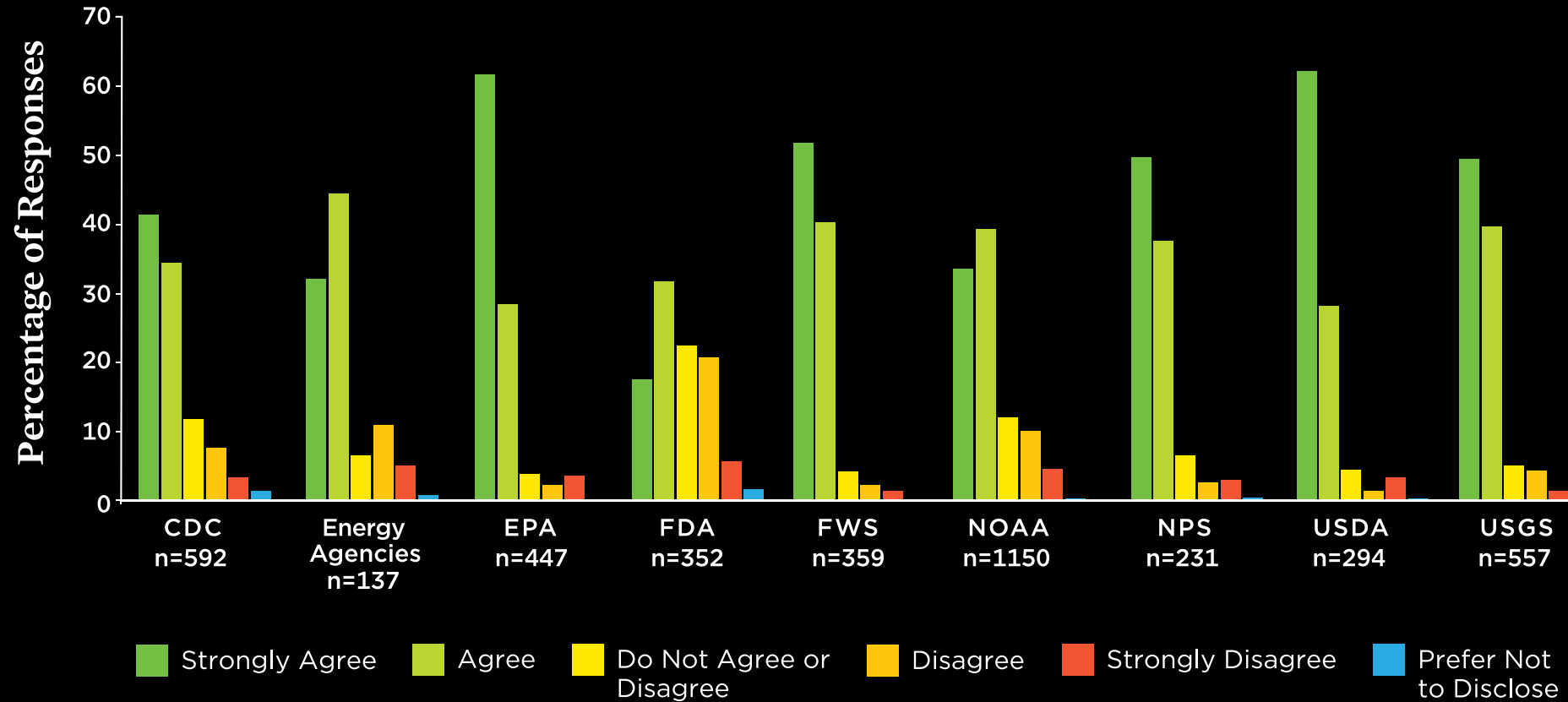


[Unprecedented Losses of Scientific Integrity

- *“the Trump administration’s violations of scientific integrity are largely **a continuation and escalation of patterns** built up over the past seven decades...*
- *While many of the Trump administration’s actions have origins in the work of prior administrations, others **fit with the ‘unprecedented’ narrative**, including the uniquely open disregard for the conclusions of its own scientists.”*

Berman, E., J. Carter. 2018. Scientific Integrity in Federal Policymaking Under Past and Present Administrations. *J Science Policy and Governance*. Vol 13. Issue 1. September.

“In the past year, I have noticed workforce reductions at my agency, due to staff departures, retirements and/or hiring freezes”



Progress On Federal Scientific Integrity

[Conditions that lead to a loss of scientific integrity

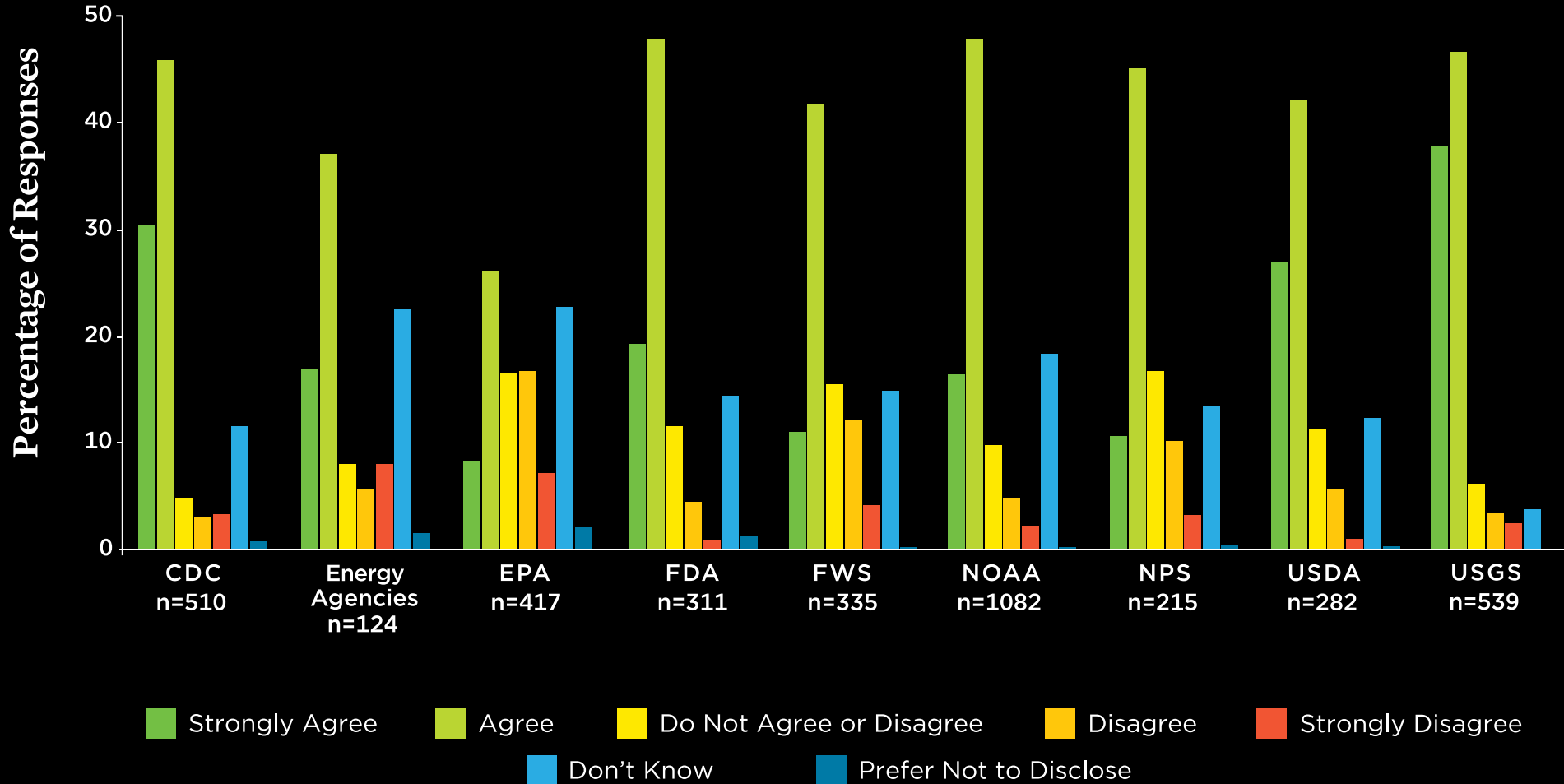
- Lack of clear and consistent policies
- Unsupportive or hostile work environment
- Ineffective or absent leadership
- Lack of transparency
- Lack of accountability
- Undue influence of political, financial, or ideological forces

Agency	SI Policy	Procedure for SI Allegations	Public Reporting of SI Cases	SI Official	Peer Review Policy	Clearance Policy	Media Policy	Social Media Policy	Differing Scientific Opinions	Whistle-blower Protection
Executive Agencies and Sub-agencies										
DOC	Some Progress	Nonexistent or Poor	Some Progress	Nonexistent or Poor	Nonexistent or Poor	Some Progress	Some Progress	Strong	Nonexistent or Poor	Strong
NIST	Some Progress	Nonexistent or Poor	Some Progress	Some Progress	Some Progress	Some Progress	Some Progress	Strong	Nonexistent or Poor	Nonexistent or Poor
NOAA	Strong	Strong	Strong	Strong	Some Progress	Strong	Strong	Strong	Some Progress	Nonexistent or Poor
Census Bureau	Some Progress	Nonexistent or Poor	Some Progress	Nonexistent or Poor	Nonexistent or Poor	Some Progress	Some Progress	Strong	Nonexistent or Poor	Nonexistent or Poor
DOE	Strong	Nonexistent or Poor	Some Progress	Some Progress	Some Progress	Nonexistent or Poor	Strong	Some Progress	Strong	Some Progress
DOI	Strong	Strong	Strong	Strong	Some Progress	Nonexistent or Poor	Some Progress	Strong	Some Progress	Strong
FWS	Strong	Strong	Strong	Strong	Strong	Strong	Some Progress	Strong	Some Progress	Nonexistent or Poor
USGS	Strong	Strong	Strong	Strong	Strong	Some Progress	Some Progress	Strong	Some Progress	Nonexistent or Poor
HHS	Some Progress	Some Progress	Some Progress	Nonexistent or Poor	Nonexistent or Poor	Some Progress	Some Progress	Nonexistent or Poor	Some Progress	Strong
CDC	Strong	Some Progress	Some Progress	Strong	Strong	Some Progress	Some Progress	Some Progress	Some Progress	Nonexistent or Poor
FDA	Some Progress	Some Progress	Some Progress	Strong	Nonexistent or Poor	Strong	Some Progress	Strong	Strong	Nonexistent or Poor
NIH	Some Progress	Some Progress	Some Progress	Some Progress	Strong	Some Progress	Some Progress	Nonexistent or Poor	Some Progress	Nonexistent or Poor
DOL	Nonexistent or Poor	Some Progress	Some Progress	Some Progress	Some Progress	Nonexistent or Poor	Nonexistent or Poor	Nonexistent or Poor	Nonexistent or Poor	Some Progress
DOT	Nonexistent or Poor	Nonexistent or Poor	Some Progress	Some Progress	Some Progress	Nonexistent or Poor	Nonexistent or Poor	Nonexistent or Poor	Nonexistent or Poor	Some Progress
USDA	Strong	Strong	Some Progress	Strong	Strong	Some Progress	Some Progress	Some Progress	Nonexistent or Poor	Nonexistent or Poor
EPA	Strong	Some Progress	Strong	Strong	Strong	Some Progress	Strong	Some Progress	Strong	Strong
NASA	Strong	Some Progress	Some Progress	Some Progress	Strong	Strong	Some Progress	Nonexistent or Poor	Some Progress	Strong
NRC	Nonexistent or Poor	Nonexistent or Poor	Some Progress	Nonexistent or Poor	Strong	Nonexistent or Poor	Some Progress	Nonexistent or Poor	Nonexistent or Poor	Some Progress
NSF	Strong	Some Progress	Some Progress	Some Progress	Some Progress	Some Progress	Nonexistent or Poor	Nonexistent or Poor	Nonexistent or Poor	Strong

Strong
Some Progress
Nonexistent or Poor

ucsusa.org/resources/roadmap-science-decisionmaking

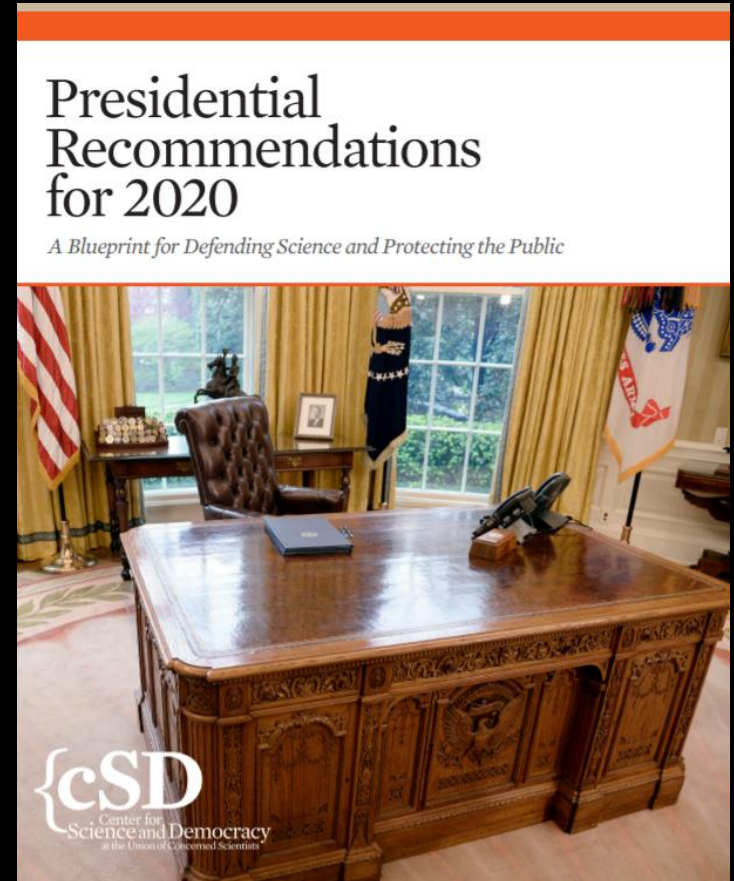
“My agency adheres to its scientific integrity policy.”



Priorities for 2021: Strengthening Science in Decisionmaking

2021 Priorities: Recommendations for a Presidential Administration

- Promoting science-based decisionmaking
- Strengthening scientific integrity
- Ensuring transparency
- Addressing conflicts of interest
- Safeguarding government scientists
- Fostering public participation



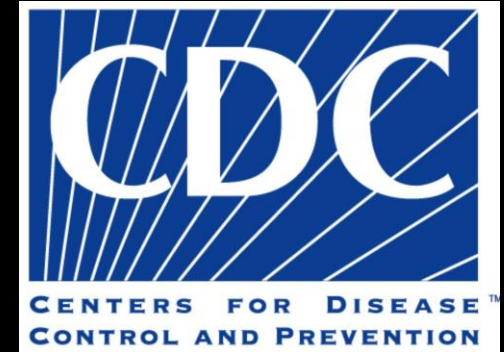
2021 Priorities: Recommendations for Key Topics at Agencies



- Advancing Science in Decisionmaking
- Strengthening Scientific Integrity
- Promoting Public Participation
- Addressing Conflicts of Interest
- Prioritizing Justice and Equity

ucsusa.org/resources/roadmap-science-decisionmaking

2021 Priorities: Recommendations for Select Federal Science Agencies



2021 Priorities: Strengthening Scientific Integrity Policies



FACT SHEET

ROADMAP FOR SCIENCE IN DECISIONMAKING

HIGHLIGHTS

Independent, impartial science is critical to ensuring that federal policies best protect the nation's health, safety, and environment.

The Union of Concerned Scientists has compiled actions that federal agencies should take to ensure a robust scientific integrity infrastructure throughout government, including:

- *Establishing and empowering scientific integrity officials.*
- *Educating federal workers on their rights and responsibilities.*

The Scientific Integrity Roadmap

Recommendations for 2021 and Beyond for Building Up Science across the Federal Government

Every day, the US government uses science to shape decisions affecting people across the nation. The best of these science-informed policies rely on a basic principle: that science is independent and impartial. However, actors on both sides of the aisle have long attempted to politicize science (Berman and Carter 2018). Such actions threaten the nation's health, safety, and environment, with the most detrimental impacts often being felt by the most vulnerable and marginalized people in our nation (Desikan et al. 2019; Carter et al. 2019).

Until Congress passes and the president signs legislation codifying scientific integrity, federal agencies bear twin responsibilities:

- Creating policies that strengthen protections for federal science and scientists; and
- Ensuring that all federal employees fully implement and adhere to scientific integrity policies (US Congress 2019; Carter, Goldman, and Johnson 2018).

To ensure a robust scientific integrity infrastructure throughout the federal government, the leaders and scientific integrity officials of federal science agen-

[2021 Priorities: Strengthening Scientific Integrity Policies

- Establish and empower scientific integrity officials
- Train all workers on rights and responsibilities
- Ensure open and accurate communication through media and social media
- Enforce clearance policies that promote scientific independence
- Prevent interference in data collection and research funding
- Provide safe procedures to report and investigation violations

Rebuilding Agency Capacity



H. R. 1709

To amend the America COMPETES Act to establish certain scientific integrity policies for Federal agencies that fund, conduct, or oversee scientific research, and for other purposes.

Mr. TONKO (for himself, Ms. JOHNSON of Texas, Ms. STEVENS, and Mr. L...

To amend the America COMPETES Act to establish certain scientific integrity policies for Federal agencies that fund, conduct, or oversee scientific research, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,
SECTION 1. SHORT TITLE.

This Act may be cited as the “Scientific Integrity Act”.

SEC. 2. SENSE OF CONGRESS.

It is the sense of Congress that—

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BLOGS

AGU'S CENTENNIAL

Hearing Garneres Bipartisan Support for Scientific Integrity

Democrats hope Republicans will decide to cosponsor legislation to codify scientific integrity procedures at federal agencies.



Scientists Are Stepping Up





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