

Science under Siege at the Department of the Interior

America's Health, Parks, and Wildlife at Risk



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Once part of Bears Ears National Monument, the Valley of the Gods is no longer protected land. The Trump administration's massive reduction of Bears Ears National Monument leaves this beautiful and culturally significant landscape vulnerable to fossil fuel extraction.

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Introduction

The US Department of the Interior (DOI) manages a huge swath of the nation's public lands—the mountains, oceans, forests, and countless natural and cultural treasures that belong to all of us. As steward of America's natural resources, the department is responsible for preserving our parks, wildlife, and public lands. DOI decisions affect the future of all these treasured resources, as well as public health, public safety, and the country's response to climate change.

During the first two years of the Trump administration, Secretary of the Interior Ryan Zinke has undermined that responsibility, overseeing relentless attacks on science ranging from suppressing and sidelining the work of the department's scientists to systematically refusing to act on climate change. In doing so, Secretary Zinke has made it easier for industries, especially the fossil fuel industry, to advance their operations at the expense of public health and the environment. He has allowed drilling and mining interests to take priority over science-based protections, in the process damaging publicly owned land and resources—including our world-class national parks, monuments, and wildlife refuges.

The Union of Concerned Scientists (UCS) has identified the most damaging and egregious examples of anti-science policy and practice at the DOI under Secretary Zinke. *Science Under Siege at the Department of the Interior* documents four broad categories of abuse: systematically suppressing science; failing to acknowledge or act on climate science; silencing and intimidating agency scientists and staff; and attacking the science-based laws that help protect America's wildlife and habitats today and for future generations.

To monitor and respond to these attacks on science—and hold Secretary Zinke and the Trump administration accountable—everyone who cherishes our public lands and

Secretary Zinke has overseen relentless attacks on science, from sidelining and suppressing the work of scientists to refusing to act on climate change.

natural heritage can take action. By raising our voices, calling for action, and holding officials accountable, policymakers, scientists, journalists, and the general public all have roles to play to ensure that the Department of the Interior fulfills its science-based mission.

What Is the Department of the Interior?

Congress created the US Department of the Interior in 1849, entrusting it with wide-ranging responsibilities, including a few that now seem archaic, such as the exploration of Western wilderness and the regulation of territorial governments. Today, the DOI, a cabinet-level agency, protects and manages our natural resources on behalf of the public and, through its stewardship of parks and historic sites, our cultural heritage. It also provides scientific information about those resources and fulfills commitments made by the US government to Native Americans and Alaska Natives. Its actions are inextricably linked to Americans' health, safety, and well-being.

The DOI oversees around 500 million acres of public land and more than 1.5 billion acres of submerged land

offshore (Vincent, Hanson, and Argueta 2017). It manages these lands and waters for the benefit and enjoyment of everyone, making them available for recreation activities such as camping and fishing, for wildlife conservation efforts, and for scientific study, among other uses. While many would say the nation's public lands are priceless, the federal government estimates that outdoor recreation alone accounted for \$412 billion (2.2 percent) of the 2016 US gross domestic product (Bureau of Economic Analysis 2018).

As part of its responsibilities, the DOI sets policies that affect a wide range of resources and values. These cover areas such as maintaining our national parks and monuments, ensuring the survival of endangered species, and improving the lives and livelihoods of Native Americans and Alaska Natives. The public feels the effects of DOI operations in many other ways as well: the department's actions can affect drinking water sources, the safety of oil and gas drilling both offshore and on public lands, and the health of people living near mining operations and other toxic industrial sites. And the DOI plays a crucial role in how and whether the federal government works to address climate change.

Department scientists conduct research and public education across many disciplines. For example, they might study the health of pollinators, inform safety practices for siting offshore energy development, monitor the frequency and severity of earthquakes, or disseminate guidance on preventing invasive species from threatening native plants and animals.

The department employs about 70,000 people across nine bureaus, including expert scientists and resource-management professionals (DOI n.d.a). The largest bureau, the National Park Service, employs nearly a third of DOI

The DOI oversees around 500 million acres of public land and more than 1.5 billion acres of submerged land offshore.

staff (NPS 2018a). The Bureau of Safety and Environmental Enforcement, the US Fish and Wildlife Service, and the US Geological Survey also feature in this report. Rounding out the department are the Bureau of Indian Affairs, the Bureau of Land Management, the Bureau of Ocean Energy Management, the Bureau of Reclamation, and the Office of Surface Mining Reclamation and Enforcement.

Meet Ryan Zinke and His Oil and Gas Connections

When appointed Interior Secretary, Ryan Zinke compared himself to Theodore Roosevelt (Siler 2017). Nothing could be further from reality. Today, Zinke's policies and actions directly threaten the legacy of "the conservation president" who created the US Forest Service and established or enlarged a half-dozen national parks.

Secretary Zinke, a fifth-generation Montanan and a 23-year Navy Seal veteran, was elected to Congress in 2014 after serving six years in the Montana Senate (Drew and Naylor 2017). He campaigned for Congress on issues of national security and energy independence and as an

BOX 1.

The Department of the Interior Mission Statement

"The Department of the Interior (DOI) conserves and manages the Nation's natural resources and cultural heritage for the benefit and enjoyment of the American people, provides scientific and other information about natural resources and natural hazards to address societal challenges and create opportunities for the American people, and honors the Nation's trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities to help them prosper" (DOI n.d.b).



Secretary Zinke swears in Deputy Secretary David Bernhardt, a former oil and mining company lobbyist with a history of pushing for fossil fuel interests at the expense of public lands and health.

SPOTLIGHT 1.

National Parks and Monuments at Risk

The Department of the Interior oversees approximately 500 million acres of public land—about one-fifth of the United States—including more than 100 national parks and monuments. From Yellowstone to Yosemite, the desert Southwest to the Maine woods, these world-class destinations are national treasures, beloved by millions. They also safeguard some of our country's most historic and culturally important places, from Native American sites thousands of years old to historic locations from the civil rights movement.

Today, America's national parks and monuments face a major threat: climate change and its profound and growing impacts. Low-lying coastal sites are increasingly at risk from sea level rise and coastal erosion. Public lands in Alaska, the Rocky Mountains, and the Southwest face hotter, drier conditions. What's more, a September 2018 study found that climate change disproportionately affects national parks, primarily because most are located in places where the impacts of climate change are especially severe—Alaska, the Southwest, and mountain areas (Gonzales et al. 2018).

At the same time, the failure of Secretary Zinke's DOI to acknowledge or act on the science around climate change has made it much more difficult for parks to plan or prepare for the future. Meanwhile, the department has paved the way for oil and gas companies to operate on public lands, increasing global warming emissions.

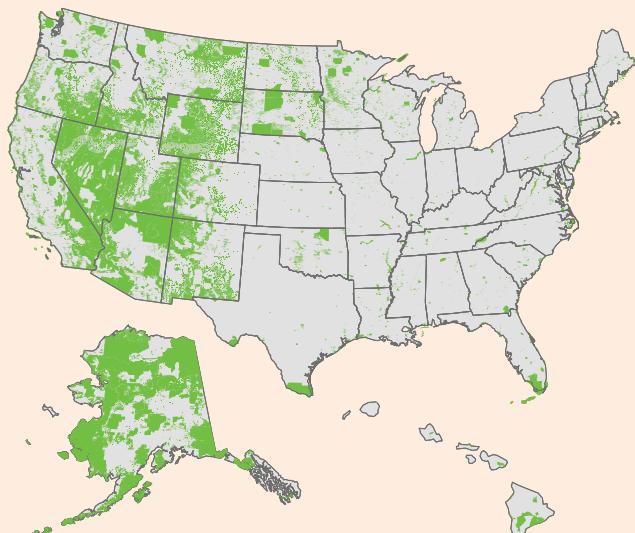
Four spotlights in *Science Under Siege at the Department of the Interior* showcase parks and monuments where the DOI is causing demonstrable harm by sidelining science and putting the interests of oil and gas companies ahead of the public good: Isle Royale National Park (p. 7), Grand Staircase-Escalante National Monument (p. 12), Bears Ears National Monument (p. 18), and Yellowstone National Park (p. 22).

advocate for developing coal, oil, and gas on public lands. He also accepted tens of thousands of dollars in campaign contributions from oil and coal companies, including Halliburton, ConocoPhillips, and Cloud Peak Energy (Center for Responsive Politics n.d.).

Before being elected to Congress, Zinke served on the board of a financially troubled oil services company, Save the World Air. The firm had financial links to TransCanada Keystone Pipeline, L.P. Once in Congress, he cosponsored the bill to build the Keystone XL Pipeline (Natter 2017).

While this background does not disqualify Zinke for his current position, the DOI is entrusted to serve the public good, including fulfilling its responsibilities to Native American

FIGURE 1. Land Overseen by the Department of the Interior



Comprising the National Park Service, the US Fish and Wildlife Service, the Bureau of Land Management and more, the Department of the Interior oversees approximately 500 million acres of public land, including more than 100 national parks and monuments.

SOURCE: USGS N.D.A.

communities, and protecting endangered species. His deep ties to the oil and gas industry are significant given how many of his decisions have favored those industries over his responsibilities to the DOI's other constituents.

The League of Conservation Voters gave Zinke a dismal 4 percent rating for his environmental voting record while in Congress (LCV 2017a). In 2016, the National Parks Action Fund, affiliated with the National Parks Conservation Association, gave him an F for his record on legislation affecting national parks, including his vote against protecting waters in national parks from toxic mining run-off (LCV 2017b).

During his tenure at the DOI, Secretary Zinke has gone out of his way to cater to oil, gas, and mining industry

lobbyists. His current Deputy Secretary, David Bernhardt, worked as a lobbyist for oil and chemical companies in the 1990s before moving to high-level positions in the DOI during the George W. Bush administration. In 2009, he resumed work as a Washington lobbyist for the oil and mining industries. He advocated for overturning a moratorium on offshore drilling in the Gulf of Mexico, developing potash and copper mining on public and indigenous lands, and delaying air pollution regulations for coal-fired power stations (Department of Influence 2018a). The Senate confirmed him as deputy secretary in July 2017.

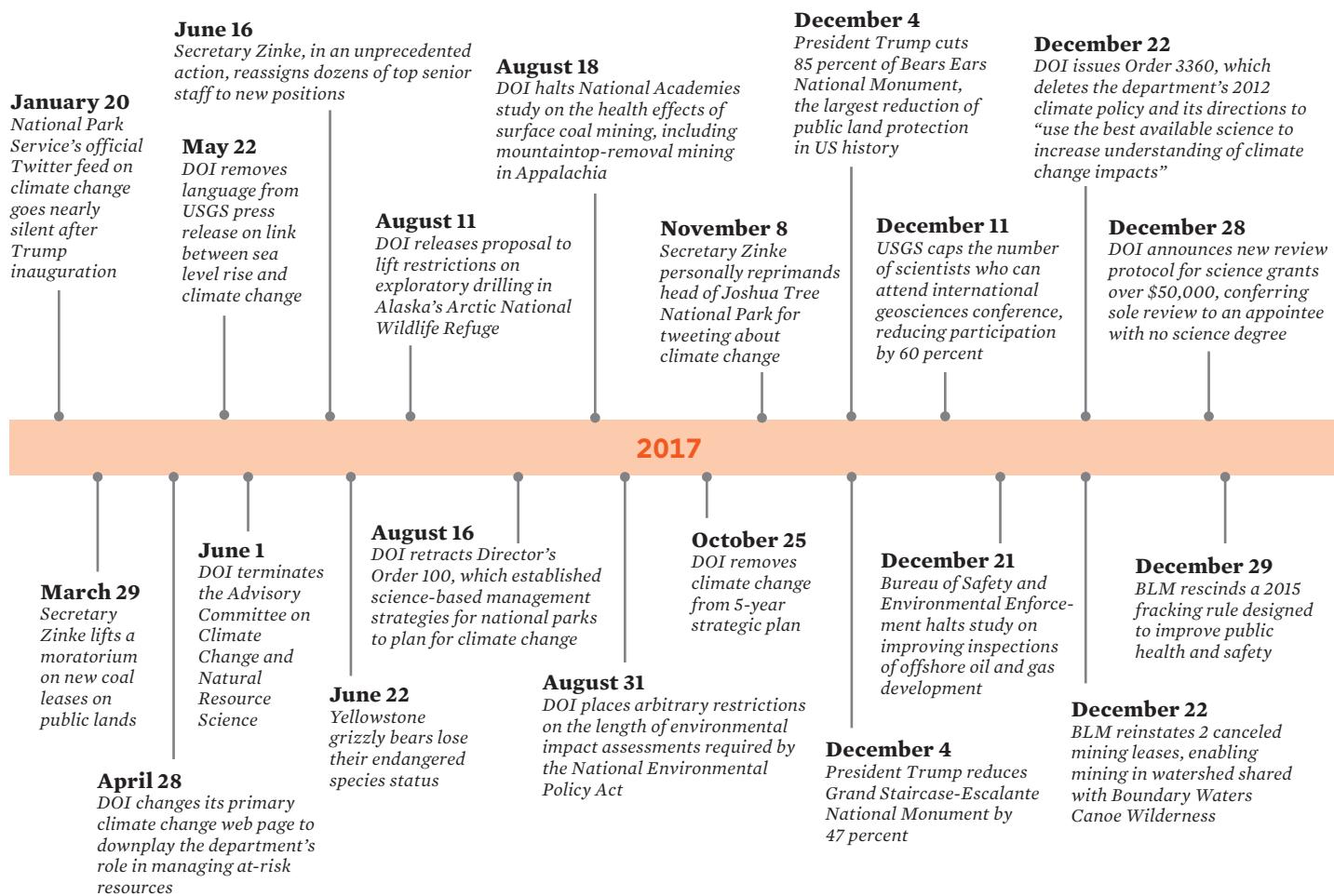
That same month, Jon Hrobsky—a lobbyist at the firm that previously employed Bernhardt (Department

“Our government should work for you, the oil and gas industry.”

—Secretary Zinke at Louisiana Oil and Gas Association luncheon, September 2018

of Influence 2018b)—was in attendance at a lobbyist-packed DOI Independence Day party. Hrobsky now lobbies the DOI on behalf of former clients of Bernhardt, including Taylor Energy Company, Statoil (now Equinor), and Cobalt International Energy (Department of Influence 2018b).

FIGURE 2. Attacks on Science at the Department of the Interior, 2017–2018



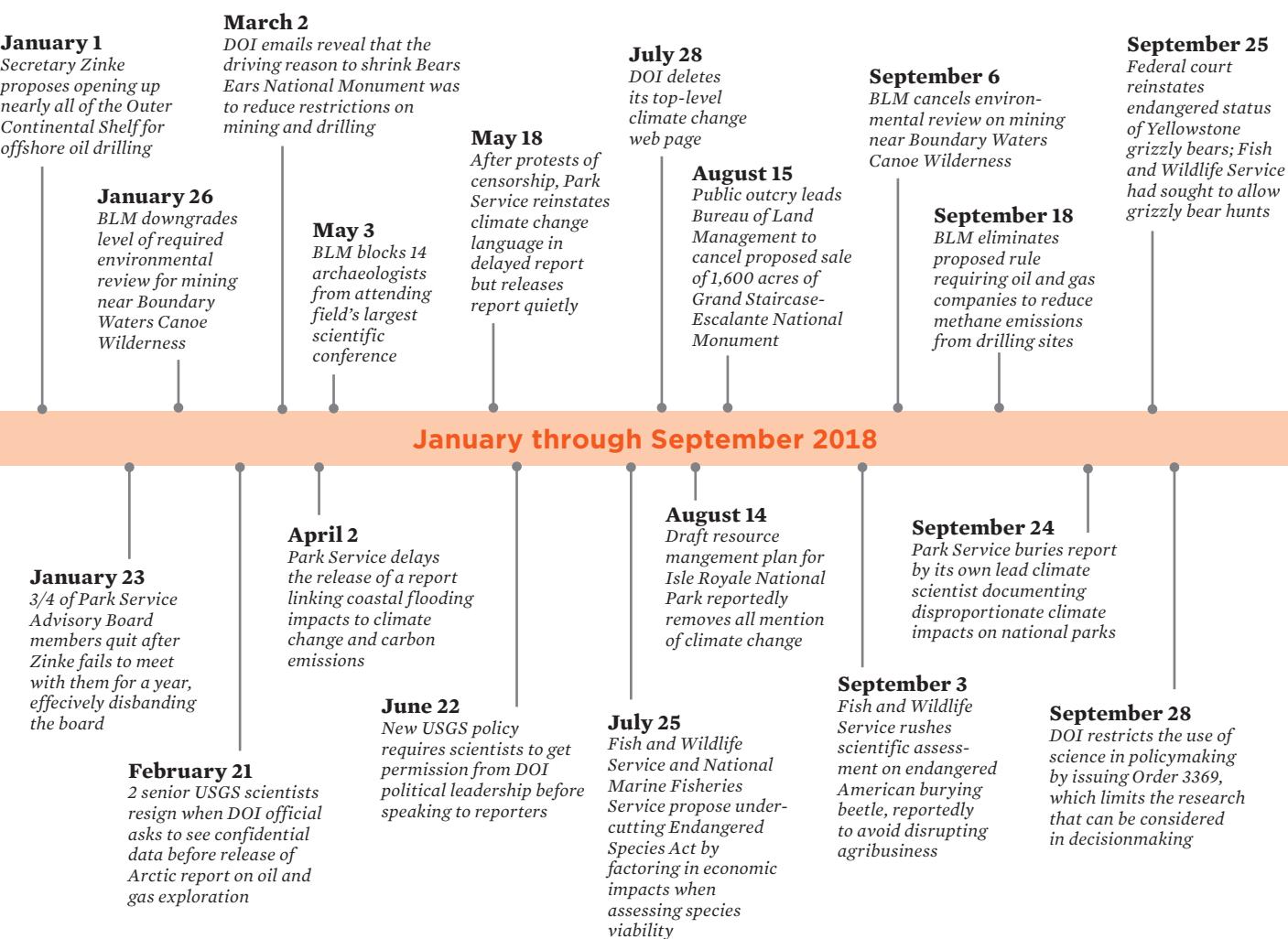
Secretary Zinke has filled other top DOI positions with individuals who have either lobbied for the coal and oil industries or worked for Zinke's campaigns or political action committees. For example, DOI Press Secretary Heather Swift worked at Mercury and the DCI Group, both of which lobbied on behalf of Peabody Coal and Exxon Mobil (Department of Influence 2018c).

As a former lobbyist at Alcade and Fay, Deputy Chief of Staff for Policy Kate MacGregor pushed for the development of pipelines in national parks and other priorities of the oil and gas industry (Department of Influence 2018d).

Fossil fuel proponent Todd Wynn, a steadfast denier of climate change, is now director of intergovernmental

and external affairs (Department of Influence 2018e; DeSmog.org n.d.). He previously worked for the Koch-backed State Policy Network at the Cascade Policy Institute and the American Legislative Exchange Council. The council has a long and damaging history of promoting uncertainty about climate science (Center for Media and Democracy et al. n.d.).

In September 2018, Secretary Zinke keynoted a Louisiana Oil and Gas Association luncheon, where he declared, "Our government should work for you, the oil and gas industry" (LOGA 2018). From the way he has stacked his leadership team with former lobbyists and employees from the fossil fuel and other extractive industries, it's clear he means what he says.



Suppressed Science

Government leaders should draw on the best available science for decisionmaking, especially leaders of federal agencies whose policies affect millions of people and vast swaths of the nation's landscape. Secretary Zinke's DOI has instead stifled politically inconvenient research, put industry interests ahead of public health, and undermined science-based rules and regulations. The department has established a clear pattern of suppressing science and scientific evidence, particularly when they run counter to the interests and priorities of the coal, gas, and oil industries.

Blocking Research

Secretary Zinke and other political appointees at the DOI have taken repeated steps to block research from proceeding

or even being conducted in the first place. These actions endanger lives and set a troubling precedent for other critical public health studies. Moreover, it is difficult to avoid concluding that the DOI has shut down work with the interests of the fossil fuel industry in mind.

In a glaring example, on August 18, 2017, the department halted a study entitled "Potential Human Health Effects of Surface Coal Mining Operations in Central Appalachia," conducted under the auspices of the National Academies of Sciences, Engineering, and Medicine (NASEM) (Owens 2017). Government agencies and others commission NASEM to review and evaluate scientific evidence on critical issues, some of which may be politically contentious. Policymakers often use its reports to craft better science-based public health and safety policies.



A West Virginian surveys the dust and destruction of the mountaintop removal project at Kayford Mountain in 2010. In 2017, the DOI suspended a study assessing the health effects of the toxic dust released by mountaintop removal mining, which is already known to contribute to cardiovascular and respiratory diseases, as well as birth defects and cancer.

Kate Wellington/Creative Commons (Flickr)

Secretary Zinke's DOI has stifled politically inconvenient research and prioritized industry over public health.

The NASEM study was assessing the toxic dust emanating from surface coal mining methods like mountaintop removal in the Appalachians (Wallace, Marsh, and LaMotte 2017). People's lives and quality of life are literally at risk from the toxins produced by these mining operations, which is why Appalachian states concerned about the health of their residents had requested the research (Estep 2017). Exposure to the toxic dust can lead to serious health problems, including significantly higher rates of birth defects, cancer, and cardiovascular and respiratory diseases (Ahern et al. 2011; Esch and Hendryx 2011; Hendryx 2008; Hendryx et al. 2011).

The cancelation of the NASEM study was a striking attack on science and clearly prioritized the interests of fossil fuel companies over the public's health. Stopping the study after lifting a ban on new coal leasing on public lands only added insult to injury (American Public Health Association 2017; DOI 2017a).

The DOI soon halted other critical research. Four months after ending the surface coal mining study, the DOI's Bureau of Safety and Environmental Enforcement shut down a planned 21-month NASEM investigation into ways the bureau could improve its inspections of offshore oil and gas development (NASEM 2017). Experts and the DOI itself had asked NASEM for the study following the catastrophic 2010 BP Deepwater Horizon oil spill in the Gulf of Mexico, the largest oil spill in the history of marine oil drilling (Rothman 2015). The study was part of broader efforts to reduce the chances of a similar catastrophe.

Minnesota provides another example of stopping research inconvenient for extractive industries. The Forest Service was preparing an environmental impact statement to determine if sulfide-ore mining would harm nearby Boundary Waters Canoe Wilderness, one of the state's most iconic natural

SPOTLIGHT 2.

Wolves, Moose, and Climate Isle Royale National Park

Isle Royale, Lake Michigan's largest island, is experiencing major impacts from climate change, including warmer winters (Peterson, Vucetich, and Hoy 2018). The site of the world's longest-running predator-prey study, this remote island is also vital for studying how climate change affects native wolves, moose, and other large mammals.

With a decline in the island's wolf population in recent decades, the moose population has boomed, tripling to 1,600 in the last decade. As of early 2018, only two wolves were left, too few for viable breeding. In the past, new wolves would arrive over ice bridges from the Ontario coast, but such bridges hardly ever form in today's warmer climate. A recent study concluded that moose on the island are getting smaller and dying earlier as their growing population increases competition for food (Hoy, Peterson, and Vucetich 2017).

Secretary Zinke's DOI appears to be ignoring clear climate connections in managing Isle Royale. According to a DOI employee who responded to a UCS 2018 survey of federal scientists, the department has removed all mention of climate from its latest draft resource management plan for the island (UCS 2018b). If this holds true in the final plan, it could spell disaster for managing the park's ecosystem.



Rolf Peterson/NPS

In the past, new wolves would come to Isle Royale over ice bridges from the Ontario coast, but such bridges hardly ever form in today's warmer climate.

The future of Isle Royale's wildlife depends on clearly understanding climate change and its impact. It would be foolhardy and negligent to downplay and sideline climate science when discussing management strategies.

places. The wilderness is home to hundreds of migratory bird species, renowned for its paddling and other recreational opportunities, and central to the region's economy and environment (Forest Service n.d.; Kraker 2018).

Local communities had serious concerns that sulfide-ore mining could pollute the wilderness and hurt the region's economy by driving away people who came to enjoy the area's abundant recreational activities (DOI 2016). In response, the DOI under President Obama had issued a two-year "time out" to conduct a thorough environmental review on the adjoining DOI lands and determine if mining permits would cause environmental harm to an extent that the department should prohibit all mining there for 20 years.

Under the Trump administration, the Forest Service cut the environmental assessment short, ending it after only 15 months. This shift to a less stringent review came only a month after the DOI had renewed expired mining leases near the wilderness area (Grandoni and Eilperin 2018).

A single political appointee with no science degree now must review all science grants over \$50,000 from every DOI bureau.

Political Review of Research Grants

The DOI's political leaders are delaying and applying direct pressure on research, including whether some studies can go forward in the first place. A single political appointee with no science degree, Senior Advisor Steve Howke, now must review all science grants over \$50,000 from every DOI bureau.

Howke is a close friend of Secretary Zinke's from Montana, where they played together on the Whitefish High School football team. He spent his career working for credit unions and according to the Western Values Project, which closely follows DOI activities and appointees, "appears to have no previous experience working on any issues that fall within the purview of the Interior Department" (Department of Influence 2018f).

This new review practice represents, in the words of former DOI Deputy Secretary David Hayes, "unprecedented and pernicious" political interference (Pickett 2018). Many scientists, primarily those working on climate change, have

reported that it has delayed their grant funding, and researchers are delaying or canceling plans to hire PhD students and interns (Pickett 2018). Moreover, some researchers are reportedly removing language about climate change from their proposals and research plans, believing the department is unlikely to approve projects related to climate research (UCS 2018c).

Attacking Science-Based Rules and Regulations

Many of Secretary Zinke's attacks on science are overt; others are less direct but no less hazardous. In particular, several DOI actions undercut the implementation of environmental laws and regulations that depend on or reflect scientific input. In October 2018, Deputy Secretary Bernhardt issued an order, "Promoting Open Science," purportedly to increase transparency and public accessibility of the research the department uses to make science-based decisions (Bernhardt 2018b). The order, which went into effect immediately, is not unlike the Environmental Protection Agency's proposed "Strengthening Transparency in Regulatory Science" rule (Goldman 2018a). Despite their titles, both would inhibit the use of science in making important decisions affecting the public and our environment.

The DOI order will restrict the use of science primarily by requiring the agency to make publicly available all data used in science-based decisions. While this requirement may seem sensible on its face, sensitive data—as opposed to the results of the research itself—often cannot be released to the public. This is especially true of confidential medical information related to individual study participants.

Making other data public—such as the locations of endangered and rare plants and animals or sacred and culturally important sites—could pose a risk to individuals, species, and culturally or religiously important sites. For example, the requirement would mean revealing location data, landholder information, and other information that must remain confidential to protect endangered plants and animals.

Overall, restricting the scientific information eligible for use in policymaking would render many DOI bureaus less able to fulfill their missions and statutory obligations.

Attacks on Landmark Environmental Laws

The National Environmental Policy Act (NEPA) requires the DOI (and all federal agencies) to rely on scientific evidence and assessments when evaluating the potential environmental effects of proposed projects. Under NEPA, the assessment must examine a project's impacts comprehensively, including



Hillebrand/USFWS

The Arctic National Wildlife Refuge, one of the last great US wildernesses, has been targeted as a potential oil and gas drilling site. Under Secretary Zinke, the DOI is rushing required environmental assessments, instead prioritizing the processing of land leases to drilling companies.

the “environmental and related social and economic effects of their proposed actions” (EPA n.d.a).

The DOI and other agencies use these environmental assessments extensively as part of their decisionmaking processes. For the DOI, this includes evaluating requests to allow oil and gas drilling and extraction and other forms of development on public lands, as well as the construction of publicly owned facilities.

Undercutting NEPA and its scientific foundation, Zinke’s DOI has been reducing the time allowed for staff to conduct environmental assessments, while also limiting the scope of the studies by setting and enforcing arbitrary page limits of 150 pages, or 300 pages for an assessment considered “complex.” Assessments conducted under previous administrations often required years to complete, especially for complicated or controversial projects. While the efficiency of the process could be improved, the arbitrary timeframe the Trump administration has proposed—limiting reviews to a maximum of two years—likely would curtail scientific assessments of major policymaking decisions (Doyle 2017).

Secretary Zinke has deployed this tactic in seeking to accelerate potential oil drilling in the Arctic National Wildlife Refuge, one of America’s last great wildernesses.

Many of Secretary Zinke’s attacks on science are overt; others are less direct but no less hazardous.

Congress opened the door to drilling in the refuge as a provision in 2017 tax legislation, and the agency’s political leadership immediately began searching for ways to circumvent the level of process and study that a controversial new development plan deserves. In February 2018, Zinke implemented a new policy that gave the Bureau of Land Management an unrealistic deadline for processing proposed lease sales (Cama 2018a). He also hired a private firm to conduct an accelerated environmental assessment of proposed leases in the refuge, signaling his intent to shortcut the assessment process (Friedman and Mufson 2018).

A Failure to Acknowledge or Act on Climate Change

Secretary Zinke has systematically ignored, sidelined, and blocked efforts to research, communicate about, or respond to climate change. At the same time, he has actively promoted policies that run counter to what science shows is the most important step the nation must take to address global warming and prevent its most catastrophic impacts: a massive and rapid reduction in our use of fossil fuels (IPCC 2018).

Changes in strategic direction and policy choices are to be expected with any new administration, but Secretary Zinke's refusal to place a high priority on climate action—or even to acknowledge the need to protect public lands from this rapidly growing problem—undermines the very mission of the agency. His deliberate sidelining of climate science has taken several forms:

- **refusing to acknowledge reality** by striking climate change from the agency's strategic vision and rescinding policies that factor climate change into future planning;
- **covering up bad news** by delaying and burying reports dealing with climate impacts and censoring established science in press releases; and
- **moving backwards** by taking actions that are almost certain to increase global warming emissions.

Refusing to Acknowledge Reality

Secretary Zinke indicated early in his tenure that the department would no longer consider climate change a priority.

In August 2017, the DOI retracted Director's Order 100, a policy adopted eight months earlier in response to calls from the National Park System (NPS) Advisory Board for

[Secretary Zinke indicated early in his tenure that the department would no longer consider climate change a priority.]

better science-based management strategies (Shogren 2018). Order 100 had directed NPS managers to adopt the “precautionary principle” and act to prevent pollution or damage in the event of probable or plausible threats (UCS 2018d; DOI 2017b). It also required managers to plan for climate change and address the need to manage parks and their resources in the context of “continuous change”—as dynamic systems responding to environmental and climatic changes. With these strategies no longer officially required, the rescission of Order 100 now makes it more difficult for federal scientists to work with park managers to plan and implement adaptation and resilience strategies in response to climate change.

Soon thereafter, in October 2017, the department's new five-year strategic vision was leaked to the press. The draft completely removed an explicit priority of the agency since 2011: addressing climate change impacts, preparedness, and resilience on lands and waters under the DOI's stewardship (Federman 2017). Instead, the vision shifted toward developing energy and natural resources. This change occurred despite the vital role of DOI bureaus and scientists in climate research, monitoring, and adaptation.



Noah Berger/AP

The sun sinks into smoke-filled Yosemite Valley during the devastating 2018 wildfire season in California. Under Secretary Zinke, the DOI has made it much more difficult for park managers to plan and prepare for the impacts of climate change.

Two months later, Deputy Secretary Bernhardt signed Secretarial Order 3360 rescinding several important climate, mitigation, and conservation policies (Doyle 2018). Order 3360 completely deleted the department's 2012 climate policy and its directions to "use the best available science to increase understanding of climate change impacts [and] inform decision-making" and "integrate climate change adaptation strategies into its policies, planning, programs and operations" (Doyle 2018).

Covering Up Bad News

Further controversy embroiled the NPS when it delayed publication of its report *Sea Level Rise and Storm Surge Projections for the National Park Service* (NPS 2018b). The NPS delayed the release of the report, which linked coastal flooding impacts to climate change and carbon emissions, because of an "author dispute" about removing language on climate change. Eventually climate language that had been cut was replaced, but the NPS issued the report on a Friday evening with no press release or fanfare and buried it deep in the NPS website (Markham 2018; Shogren 2018).

Another study, published in September 2018, received no official publicity from the NPS, even though the lead author was the agency's principle climate scientist, Patrick Gonzalez. The report documented the disproportionate effects of climate change on national parks compared with other areas of the

nation (Gonzales et al. 2018). Gonzalez also holds a position at the University of California Berkeley and spoke to the *Washington Post* in that capacity about the study's findings (Horton 2018). Today the NPS website does not even house the report; NPS links instead take users to an external website for the complete document.

An NPS spokesperson has downplayed the study, saying that it dealt with impacts "outside the climate change conversation," such as wildfires (NPS 2018). Secretary Zinke has forcefully pushed back against overwhelming scientific evidence to deny that climate change is contributing to worsening fires in the West (Zinke 2018a; Logan 2018).

Other key climate-related DOI webpages have been similarly buried, removed or languish without updates. For example, www.doi.gov/climate was once a clearinghouse of information related to climate change, its effects on public waters and lands, and the DOI's responsibility to plan and prepare for a changing climate. Today, it does not exist. A 2017 rewrite of this top-level landing page had already lessened the agency's role in managing at-risk resources (Dietrich et al. 2017); the web page disappeared completely from the DOI web site in late July 2018 (Internet Archive 2018).

Official Twitter feeds from national parks have also fallen silent on climate change. The NPS Twitter account dedicated to climate change (@ClimateNPS) has issued fewer than 20 tweets since President Trump's inauguration compared with more than 250 in the prior two years. Only four of the 20

SPOTLIGHT 3.

Shrinking the “Science Monument”

Grand Staircase-Escalante

Established in 1996, Utah’s Grand Staircase-Escalante National Monument has been nicknamed the “Science Monument” due to its extraordinary geological, biological, archaeological, and paleontological resources. One of the last areas to be mapped in the continental United States, the rugged and remote Grand Staircase holds 1,400-year-old trees in its piñon-juniper forests (Nordhaus 2018). It is rich with ancient fossils and contains extensive archaeological remains from centuries of use by Ancestral Puebloans and Fremont peoples, and many sites remain sacred to today’s tribes. The original 1.9-million-acre monument covered an area larger than Grand Canyon National Park.

Today, the scientific and paleontological research that was at the core of the monument’s creation is in jeopardy. In December 2017, President Trump, acting on Secretary Zinke’s recommendation, reduced the size of Grand Staircase-Escalante by nearly a million acres, or 47 percent, and broke it into three separate management areas, fragmenting the protected landscape and complicating its management. This reduction removed hundreds of scientifically important fossil sites from the monument, especially in the coal and oil-rich Kaiparowits Plateau.

David Polly, a paleontologist at Indiana University and president of the Society for Vertebrate Paleontology, has

written that the monument’s reduction flies in the face of scientific ethics impacts: “That permanent protection has been rescinded from more than 700 sites in active research areas is almost inconceivable to paleontologists” (Polly 2018).

As part of the reduction, the BLM drafted new management plans for the three units, as well as for the areas removed from its boundaries (BLM 2018). The likely result will be weakened or lifted restrictions on mining and drilling in and around the monument.

According to *High Country News*, shrinking the monument allows for the potential extraction of 11 billion tons of coal, 10.5 billion cubic feet of coalbed methane, and 550 million barrels of oil from tar sands, likely further damaging the monument’s surrounding landscape and increasing air and water pollution (Schulz 2018; Thompson 2018).

In August 2018, the DOI attempted to sell off more than 1,600 acres of federal land that had previously been inside the monument (Green 2018). After a public outcry, Deputy Secretary David Bernhardt back-pedaled and stated in a memo that the proposed sale was contrary to DOI policy (Bernhardt 2018a). Even with this threat neutralized, the fear remains that public lands—even those in national monuments—are not safe from Trump administration efforts to sell them.



Utah’s Grand Staircase-Escalante is a vast monument, rich in paleontological and archeological resources. Reducing the size of the monument puts innumerable natural artifacts and Native American antiquities at risk.



Photos: BLM

tweets included the word “climate.” Also, NPS scientists have asked others not to tag them in tweets about climate change, which might draw attention within the DOI to their climate work.

DOI press releases under Secretary Zinke have censored established facts about climate science. In a notable example, a May 2017 press release announcing a peer-reviewed publication was altered, reportedly at the request of DOI leadership (Grandoni 2017). A deleted line read, “Global climate change drives sea level rise, increasing the frequency of coastal flooding.” This change removed the well-established link between rates of sea level rise and climate change, a key fact in a report whose co-authors included US Geological Survey (USGS) scientists.

Moving Backwards

Amid these retreats in research and priorities, the department has made several moves that are almost certain to increase global warming emissions. In particular, the DOI has made it easier for oil and gas companies to release more heat-trapping gases into the atmosphere. These gases include methane, the primary component of natural gas and a potent greenhouse gas that has more than 80 times the warming potential of carbon dioxide over a 20-year period (EPA n.d.b.). Methane leaks in varying amounts from conventional and unconventional oil and gas drilling sites, pipelines, and other sources.

In late September 2018, the Bureau of Land Management (BLM) released a final rule eliminating proposed requirements that oil and gas companies capture the methane they release as part of their drilling operations. Had those proposed requirements gone into effect, they would have reduced methane loss from venting and leaks by the oil and gas sector by as much as 35 percent (Friedman 2018; Webb 2018). According to estimates from federal officials, the new, weaker rule will allow 1.78 million tons of new emissions over a decade from DOI-managed lands (Cama 2018b).

In another move promoting oil and gas extraction, in January 2018, the department rescinded a 2015 BLM fracking rule that was designed to improve public health and safety (Goldman 2018b). This change makes it easier for oil and gas companies to hide the chemicals they use, pollute groundwater sources, increase risks to public health, and expand their footprint—and the global warming emissions that come with it—on public lands.

The now-defunct 2015 rule had set standards for well construction, wastewater management, and chemical disclosure. It had provided greater access to information for the public, scientists, landowners, medical personnel, workers,

and first responders about the chemicals involved in fracking and their risks to health. And it had restricted where drilling could happen and required companies to avoid the habitats of endangered species (Goldman 2018b).

The department has made several moves that are almost certain to increase global warming emissions.

Drilling operations have grown dramatically under Secretary Zinke’s watch. Since October 2017, more than 12 million acres have been put up for lease for potential drilling—triple the annual average between 2013 and 2016 (Lipton and Tabuchi 2018).

The DOI has also taken steps to expand coal leasing and offshore oil and gas drilling. In March 2017, Secretary Zinke lifted a moratorium on new coal leases on public lands (DOI 2017a), opening up untouched areas for potential coal mining operations—this despite the fact that coal has significant and damaging effects on the climate (IPCC 2018).

In January 2018, Secretary Zinke announced that he was reversing a long-standing policy on offshore drilling and proposing to open up nearly all of the Outer Continental Shelf for exploration and development (DOI 2018a). The proposal also included the largest-ever number of new offshore oil and gas leases (BOEM 2018).

Just days after the announcement, and following a brief meeting with Florida Governor Rick Scott, Secretary Zinke tweeted that he was taking Florida’s waters off the table for drilling (Zinke 2018b). By April 2018, Secretary Zinke admitted that nearly all coastal state governors “strongly opposed” the plan (Cama 2018c). The Bureau of Ocean Energy Management is expected to finalize its five-year strategy in the first half of 2019 (King 2018).

While the DOI has aggressively pushed for fossil fuel development, the department has also taken positive steps for developing offshore wind energy, which produces no global warming emissions. In particular, the department has acted to increase the number of offshore areas available for wind development leases. It has held or scheduled lease auctions for several new large areas off the New England and North Carolina coasts, and it has engaged stakeholders for other potential offshore leases, including in New York and California (DOI 2017c; DOI 2018b). Due to these and other factors, the nation is now poised to significantly ramp up offshore wind power over the coming decade (Deign 2018).

Silencing Scientists and Other Agency Staff

Under Secretary Zinke, not only is science a target but so too are the scientists and staff who carry out the department's crucial work. Many recent policies restrict the ability of DOI scientists and other staffers to fulfill the department's mission, while other actions contribute to a hostile work environment.

The ability of federal scientists to perform and communicate about their work freely connects directly to the ability of the public and policymakers to access and use unvarnished scientific information to advance the public interest. When the DOI circumvents scientific experts and their research, the resulting policies can be ill-guided and less effective at protecting public health and the environment.

UCS has been monitoring Secretary Zinke's tactics, which include freezing out advice from science advisory committees; restricting DOI scientists from communicating about their work; removing, reassigning, or intimidating scientists; and creating a climate of fear and intimidation.

Freezing Out Scientific Input

To help department leaders and decisionmakers craft and guide government actions and policies, science advisory committees keep them informed about the best available science. The Trump administration, however, has sidelined, hindered, and ignored many of these committees by postponing meetings, freezing their charters, and engaging in other tactics (Streater 2017). A broad pattern has played out across multiple federal agencies—and the DOI is a prime example (Reed et al. 2018).

In May 2017, the DOI announced a formal review of the "charters and charges" of all advisory committees. At the end

The DOI has restricted the ability of scientists to communicate with journalists about their scientific work.

of this review, the DOI terminated the Advisory Committee on Climate Change and Natural Resource Science and dismissed its members. Since its founding in 2013, the committee had provided critical guidance to the Secretary of the Interior on matters related to managing natural resources under a changing climate (USGS n.d.b.).

Overall during 2017, 67 percent of DOI science advisory committees failed to meet as frequently as their charters dictate (Reed et al. 2018). On a positive note, 2018 has brought an uptick in the frequency of advisory committee meetings: in the first 10 months of the year, only 25 percent of such DOI committees failed to meet as frequently as their charters dictate.

Restricting Scientists

Scientific conferences provide important and effective opportunities for federal scientists to share their work with other scientists, learn from their peers, and communicate with other experts, decisionmakers, and concerned citizens about scientific findings relevant to addressing pressing issues. All this is constrained when scientists cannot attend professional

conferences. Restrictions on their attendance hinder research and the ability of federal agencies to fulfill their science-based missions. Senior DOI leadership has sidelined the department's own scientists by restricting both their attendance at scientific conferences and what they can present at the gatherings.

In December 2017, the DOI capped the number of USGS scientists who could attend the annual meeting of the American Geophysical Union. This landmark conference brings together thousands of earth scientists from around the world to share and discuss cutting-edge research in the geosciences. The new DOI policy resulted in a 60 percent drop in USGS scientist attendance compared with the previous year (Kaplan 2017).

In June 2018, the USGS began requiring scientists who do attend conferences to submit their presentation titles in advance for political review (Kaplan 2018). They must explain how their research relates to Secretary Zinke's priorities before being cleared to attend professional meetings (*Washington Post* 2018). "Travel to scientific conferences has been

restricted and scrutinized," one USGS scientist noted in a UCS survey (see Box 2). "Travel to research sites has also been restricted. Red tape has increased dramatically" (UCS 2018b).

The USGS is not the only affected DOI bureau. In May 2018, the BLM prevented 14 archaeologists from attending the largest scientific conference in their field, the annual meeting of the Society for American Archaeology (Grandoni 2018a). This forced the DOI scientists to cancel a conference symposium, "Tough Issues in Land Management Archaeology." The session would have touched on several contentious issues facing public land managers, including the implementation of the 1906 Antiquities Act. President Obama had used that law to designate multiple new national monuments, many of which are under review by Secretary Zinke.

Further, the DOI has restricted the ability of scientists to communicate with journalists about their scientific work. The media is a crucial link between the public and taxpayer-funded research, but a USGS communications policy put into effect in June 2018 instructs scientists to obtain permission



Bob Wick/BLM

Secretary Zinke on his "listening tour" of Bears Ears with Utah Governor Gary Herbert in May 2017. Secretary Zinke ultimately persuaded President Trump to shrink Bears Ears National Monument by 85 percent, from 1.3 million acres to more than 200,000 acres, and to split the remaining area into two unconnected units. It was the largest reduction of public land protection in US history. Internal DOI documents show that the reduction came largely at the behest of mining and drilling companies.

{ “Travel to scientific conferences has been restricted and scrutinized. Travel to research sites has also been restricted. Red tape has increased dramatically” }
 — anonymous USGS scientist responding to UCS survey, 2018

BOX 2.

Voices from Inside UCS Survey Shows DOI Science Under Fire

Many survey respondents from the National Park Service, a group that falls under the Department of the Interior, reported that political considerations are hampering their ability to make science-based decisions.

In February and March 2018, the Union of Concerned Scientists and the Center for Survey Statistics and Methodology at Iowa State University surveyed more than 63,000 federal scientists in 16 government agencies and received 4,211 completed surveys; DOI staff completed 1,247 surveys. The goal was to gain insight one year into the Trump administration about the state of scientific integrity in the federal government, as well as agency effectiveness and the working environment for its scientists (UCS 2018b).

DOI survey respondents included scientists at the US Geological Survey, the National Park Service, the US Fish and Wildlife Service, the Bureau of Ocean and Energy Management, and the Bureau of Safety and Environmental Enforcement. The results shed light on the department's level of politicization, as well as the impact of politicization on the DOI's effectiveness and its workforce.

Despite the DOI's strong scientific integrity policy (DOI 2014), the survey results clearly suggest high levels of censorship and self-censorship of scientific issues viewed as politically contentious. The survey also suggests resource constraints on scientific work and inappropriate political influence on science-based decisions.

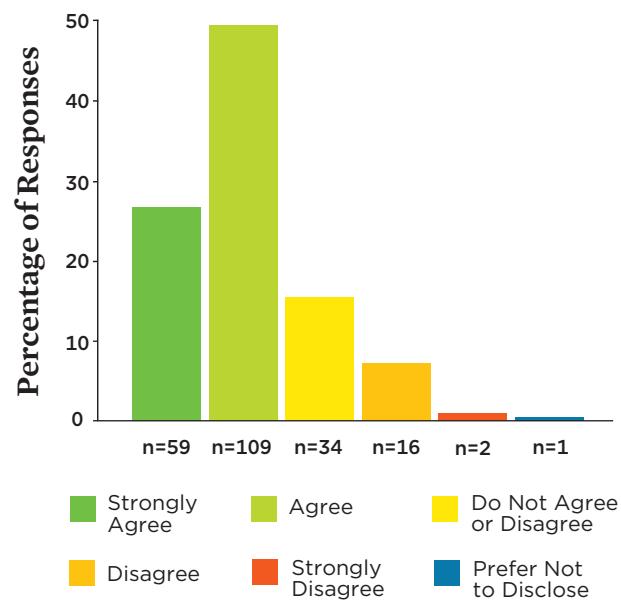
Many DOI scientists reported direct and self-censorship of scientific work, particularly related to climate change. This was particularly problematic at the National Park Service, where 26 percent respondents (55) reported that they avoided working on climate change or using the phrase “climate change” even when not explicitly told to do so.

“There has definitely been a chill on climate research and climate change awareness,” said an NPS scientist. “Although there have been few published prohibitions to point to, there is uncertainty about what forms of retaliation might take place if the powers-that-be are unhappy with you.”

The findings were similar at the USGS: 32 percent (169 respondents) reported that they avoided working on climate

FIGURE 3. Voices from the National Park Service

The level of consideration of political interest hinders the ability of my agency to make science-based decisions.



Many survey respondents from the National Park Service reported that political considerations are hampering their ability to make science-based decisions.

change or using the phrase “climate change” even without explicit orders to do so.

A number of respondents noted resource limitations, including fewer staff to perform work tasks, reduced funding, and lower budgets for work-related travel. For example, 88 percent of DOI respondents agreed or strongly agreed when asked if they had noticed workforce reductions in 2017 due to staff departures, retirements, and/or hiring freezes.

from DOI leadership before speaking to reporters (Lin II 2018). As of October 2018, the designated leader for this review is DOI Press Secretary Swift. The previous policy had required scientists to notify the department about contacts with the press but not to obtain advance permission (DOI 2012). After reporters noted the policy on the DOI website, it was buried more deeply on the site (Halpern 2018).

Creating a Hostile Work Environment

Whether by design or incompetence, the DOI has diminished the ability of its scientists and staff to carry out the agency's mission. In June 2017, five months into the Trump administration, Secretary Zinke took the highly unusual action of reassigning 27 of the agency's highest-ranking career staff to new positions—in many cases, to duties that were in stark contrast with their expertise or qualifications.

One week later, Secretary Zinke, then the only Senate-confirmed DOI employee, told Congress that he intended to use reassignments, among other means, to trim the department's workforce by 4,000 people (Rein 2017). Unsaid was that reassignments do not trim workforces; they only have that effect if employees subsequently resign.

Members of the federal workforce expect changes under new leadership, yet the DOI's flurry of reassignments was atypical in many ways (DOI 2018c). In particular, the team implementing the reassignments ignored the official guidance for doing so. For example, DOI leadership failed to document the reasons behind the reassignments or to notify the affected staff in advance.

One of the reassigned senior staffers was Joel Clement, now a senior fellow with the Union of Concerned Scientists. As a top climate policy advisor at the DOI and director of its policy office, he had played an essential role in connecting Alaska Natives with the federal assistance they need to relocate villages threatened by rising seas and coastal erosion. The DOI moved Clement to an accounting management job for which he had no training or expertise. Believing the move was political, he filed a whistleblower complaint with the Office of Special Counsel and published an account of his reassignment in the *Washington Post* (Clement 2017).

When Clement's story went public, several senators asked the DOI's Inspector General to investigate the reassignments, a process culminating in a report (Subbaraman 2018). The investigation found that beyond simply ignoring the government rulebook for managing executives, Secretary Zinke had also stacked the team responsible for reassignments with political appointees, ignored the cost of relocating people to different offices, and reassigned a disproportionate number of employees of Native American descent. The report also found

that 17 of the 27 reassigned senior executives questioned whether the motives for the moves were political or punitive (DOI 2018d).

Secretary Zinke has threatened and intimidated at least one other DOI employee whose office spoke up on the issue of climate change. In late 2017, the Twitter account for Joshua Tree National Park in southern California posted a thread on the scientific consensus that human actions cause climate change (Joshua Tree NPS 2017). Soon after, Secretary Zinke summoned Park Superintendent David Smith to fly from California to Washington, DC, and then proceeded to reprimand him in person (Cama 2017).

“Many key positions remain unfulfilled, divisions are understaffed, and process has slowed to a crawl.”

— anonymous US Fish and Wildlife Service scientist responding to UCS survey, 2018

Some senior DOI officials have resigned in response to what they see as breaches of established policy and process within the agency (Ruskin 2018). When Deputy Secretary Bernhardt reportedly asked the USGS to share confidential and valuable data from a study on Arctic oil and gas resources before its official publication, two senior USGS officials submitted their resignations, considering this a clear violation of scientific integrity policies (Eilperin 2018a).

Restrictive and punitive actions are not limited to career staff. The National Park Service, like many federal agencies, relies on a bipartisan volunteer advisory board to help set policy and guidelines. In January 2018, ten of the board's 12 members resigned in frustration that Secretary Zinke had not convened a single meeting nor sought their input. Without the board, the DOI cannot designate new historical or cultural sites—yet it still awaits nominees as of October 2018 (Eilperin 2018b; NPS 2018c).

While this particular board sits empty, so too do many staff positions under Secretary Zinke. The DOI lost nearly 1,400 workers between January 2017 and March 2018, a slow drain that represents a loss of accumulated expertise and guidance, while creating a climate of uncertainty for remaining DOI staff (Dennis, Eilperin, and Tran 2018). One UCS survey respondent at the US Fish and Wildlife Service described the bureau's atmosphere in dismal terms: “Many key positions remain unfulfilled, divisions are understaffed, and process has slowed to a crawl” (UCS 2018b).

SPOTLIGHT 4.

Sacred Sites, No Longer Protected

Bears Ears National Monument

As designated by President Obama in 2016, Utah's Bears Ears National Monument protected some of the nation's most important cultural resources. The monument contained more than 8,000 recorded archaeological sites, and an estimated 100,000 or more total sites. The areas designated by President Obama included hunting and seasonal camps, cliff dwellings, great houses, ancient Chacoan roads and trails, graves, and myriad examples of rock art (Doelle 2017). The oldest artifact found thus far is a 13,000-year-old Clovis spear point.

From 2010 until the monument's designation in 2016, five Native American tribes—the Navajo, Hopi, Uintah and Ouray Ute, Ute Mountain Ute, and Zuni—had led the initiative to make this rich cultural landscape a national monument. The region provides vital links to their ancestors. The designation of Bears Ears as a national monument raised the potential for an unprecedented level of cooperative management among tribes, archaeologists, and other stakeholders that value the area and who have not always been allies with one another.

The DOI dashed this opportunity for collaboration and cultural and scientific inquiry in December 2017—against the pleas of Native American tribes and archaeologists and other scientists (Bullinger 2018). Secretary Zinke persuaded President Trump to shrink Bears Ears National Monument by 85 percent, from 1.3 million acres to just over 200,000 acres, and to split the remaining area into two unconnected units. It was the largest reduction of public land protection in US history.

The action to shrink Bears Ears appears to have come largely at the behest of mining and drilling companies and their allies, within and outside the Trump administration, and it frees up land they have sought (Miller 2017). Although Secretary Zinke and his team deny it, internal DOI documents released under a FOIA request show that the driving purpose behind the decision to review and scale down Bears Ears was to reduce restrictions on mining and drilling (Lipton and Friedman 2018).

Bob Wick/BLM



Jonathan Thompson/High Country News

After a years-long effort led by five Native American tribes, the rich cultural landscape of Bears Ears was designated a national monument in 2016, protecting countless Native artifacts and antiquities. The next year, in December 2017, Secretary Zinke persuaded President Trump to slash the monument by 85 percent. Left: Bears Ears National Monument; Right: Mark Maryboy, Utah's first Native American country commissioner, helped form the coalition that initially proposed the Bears Ears National Monument. He now finds himself continuing the fight to protect his ancestral land.

[*Internal DOI documents show that the driving purpose behind the decision to review and scale down Bears Ears was to reduce restrictions on mining and drilling.*]

Endangering Wildlife and Habitats

Ignoring science sets Secretary Zinke free to ignore decades of practice and convention—and it puts America’s treasured wildlife at risk, both today and for future generations. A core DOI responsibility is to protect and safeguard wildlife, especially animals at risk of extinction. Integral to that effort is the Endangered Species Act (ESA), science-based legislation that protects endangered species and the critical habitats on which they depend.

The public has long cared and fought for the protection of species, especially those emblematic of our country. Enacted in 1973 with overwhelming bipartisan support—and supported today by 90 percent of Americans—the ESA is critical to protecting species of cultural or historical importance, including the grey wolf, grizzly bear, and bald eagle (Tulchin, Krompak, and Brunner 2015). The ESA is also crucial for preserving the many concrete benefits species provide, from nutrient recycling to soil formation, pollination to genetic resources, carbon sequestration to pest and disease control.

Once a species is gone, we cannot bring it back. Yet just months after taking office, the Trump administration began to attack and undermine this landmark law. Under Secretary Zinke, the Fish and Wildlife Service, working jointly with the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service, proposed changes that would undercut the ESA’s scientific basis, make the act less effective, and increase the chances that more species will become extinct (Johnson 2018a).

The proposed rule—“Endangered and Threatened Species: Listing Species and Designating Critical Habitat”—would undercut decades of science-driven practice by suggesting that the economic impacts of listing a species should factor in the scientific assessments of the species’ viability.

The Endangered Species Act is critical to protecting species of cultural or historical importance, including the grey wolf, grizzly bear, and bald eagle.

The rule also would limit the important examination of “foreseeable” impacts on a species population—for example, any predicted effects of climate change (FWS 2018; Johnson 2018b).

Several specific examples illustrate how the Trump administration has politicized the process of listing an endangered or threatened species. In one striking example, Secretary Zinke has sought to weaken current activities designed to protect the greater sage-grouse as part of an effort to open up millions of acres of sage-grouse habitat to oil and gas leasing (Camacho and Kelly 2018). Known as an “umbrella species,” the greater sage-grouse plays an integral role in protecting more than 350 types of plants and wildlife in sagebrush environments (FWS 2015).

In 2013, multiple stakeholders—including scientists, federal agencies, states, industry, private landowners, and environmental groups—had finalized a long-term conservation plan for the greater sage-grouse. According to that plan, “Declines of sage-grouse near oil and gas fields in this area



Alan Krakauer/Creative Commons (Flickr)

The charismatic greater sage-grouse plays an integral role in protecting more than 350 types of plants and wildlife. In August 2018, the BLM approved a massive natural gas project in the heart of greater sage-grouse territory, despite pleas from both Republican and Democratic governors whose states were affected.

have been well documented” (FWS 2013). Significantly, the DOI and several western states put in place these conservation efforts as an alternative to the more drastic step of listing the greater sage-grouse as endangered under the ESA.

Evidence suggests that the resulting conservation efforts produced results. In a 2015 press release, the FWS stated, “An unprecedented, landscape-scale conservation effort across the western United States has significantly reduced threats to the greater sage-grouse across 90 percent of the species’ breeding habitat and enabled the USFWS to conclude that the charismatic rangeland bird does not warrant protection under the Endangered Species Act.”

However, in August 2018, the BLM approved a massive natural gas project in the heart of greater sage-grouse territory (Streater 2018), despite the fact that Matthew Mead, the Republican governor of Wyoming, and John Hickenlooper, the Democratic governor of Colorado, had written to Secretary Zinke that attempts to roll back conservation and pave the way for more oil and gas development in this species’ habitat would be undesirable. His actions, they agreed, could soon lead to an “endangered” listing for the bird, constraining Western economies with far more stringent restrictions than

those in the agreed-upon conservation plan (Mead and Hickenlooper 2017).

The greater sage-grouse is far from the only example. The Fish and Wildlife Service rushed a scientific assessment on the endangered American burying beetle in Nebraska, reportedly to avoid disrupting agribusiness. Two biologists working on the assessment, Wyatt Hoback and Douglas Leasure, told the *Washington Post* that the FWS had pushed them to conduct shoddy science on an extremely constrained timeline (FWS 1997; Grandoni 2018b).

Hoback and Leasure left the project due to what they considered unreasonable and unscientific pressure on their work. They also asked the FWS to keep their names off any resulting reports or publications and that their data not be used. However, after leaving the project, Leasure received a draft of the assessment and saw that it “copied word-for-word” a paragraph from a publication by Hoback and himself. Aside from plagiarism, which would violate the agency’s scientific integrity policy, the DOI’s use of Hoback and Leasure’s work implied that the scientists supported findings they did not believe were justified (FWS 2011).

Recommendations

Congress has charged the Department of the Interior with implementing critical federal laws and managing the nation's treasured public lands and resources. For decades, it has pursued its mission to serve the interests of the American public, Native American communities, and endangered wildlife—and it has conducted science that serves those constituencies.

Assisting or working with industry can be compatible with fulfilling the department's mission, but such activity should not come at the expense of America's public lands, wildlife, and the health and protection of people and communities. By repeatedly and brazenly sidelining science to better serve the oil, gas, and mining industries, Secretary Zinke and his team are selling out our shared natural and cultural heritage, putting people and wildlife at risk, and failing to safeguard our future from the ravages of climate change.

The damage from Secretary Zinke's policies is mounting. They have caused harm to public lands, public health and safety, and the country's wildlife and habitats. Left unchecked, the effects will take decades to repair, and yet the consequences of climate change are already upon us. We have no time to lose.

To ensure that DOI policies and actions benefit from the best available scientific knowledge and research, free from political and industry interference, UCS presents recommendations for Congress, the media, and the many groups and individuals who are affected by or care deeply about the department's actions.

Recommendations for Congress

Increase congressional oversight of the DOI. Congress, particularly the House Committee on Natural Resources and the Senate Energy and Natural Resources Committee, should

Secretary Zinke's policies have caused harm to public lands, public health and safety, and the country's wildlife and habitats.

thoroughly investigate all alleged violations of scientific integrity and all reports of suppressed or censored scientific studies. Further, Congress should investigate all alleged political interference with the DOI's scientific staff and processes, including blocking communications with the media or public; delay or denial of scientific grants by unqualified political appointees; and instances where the DOI sidelines science at the expense of public health, public lands, and wildlife.

Require the DOI to include climate change in its planning and policies. Congress should demand that the department's efforts to protect America's public lands and wildlife include and factor in climate change, both now and in the future. This means considering the effects of climate change when assessing the status of endangered species and planning for the long-term management of national parks, monuments, and other public lands and historic sites. Priorities should include investing in essential climate research, data, and tools; and working together with local community stakeholders, especially tribal communities, to prepare for climate change impacts and build resilience to future risks.

Protect whistleblowers and prevent retaliation. Congress should enhance official protections for federal employees who face retaliatory investigations when they make allegations related to scientific integrity.

Recommendations for Scientists, Science Supporters, and the Media

Report abuses of scientific practices and procedures.

Federal scientists and employees should speak up when they witness abuses of science. Federal agencies have the tools to help scientists report such instances through their scientific integrity policies and inspector general offices. In addition, UCS resources can help scientists securely share information outside the department: www.ucsusa.org/secureshare.

Bring attention to DOI activities that sideline science and threaten public lands or health. Any scientist—indeed,

anyone—can raise their voice and raise awareness when DOI activities threaten public lands or health. Call your representative, visit their local offices, or write a letter to your local newspaper's editor. The more personalized and locally relevant, the more effective the letter will be and the more likely a newspaper will publish it. UCS has tips and resources to help guide your efforts: www.ucsusa.org/actiontips.

Promote communication with DOI scientists. The media should seek out federal scientists directly whenever possible and call out DOI agencies that place unnecessary barriers on communication between the media and government scientists.

Connect locally. Join organizations that support science and its use in policymaking. UCS has tools and guidance on ways you can join a movement to organize in your area: www.ucsusa.org/watchdogtoolkit.

SPOTLIGHT 5.

Grizzlies Beware Yellowstone National Park

Research has documented the climate-related harm affecting Yellowstone National Park and its surrounding region, including damage to wetlands, rivers, and populations of amphibians, birds, fish, mammals, and invertebrates (NPS 2017). Snowpack builds later and melts earlier than in the past, with year-round consequences for stream flow and water temperatures (NPS 2017). Throughout the Rocky Mountain West, the wildfire season is getting longer, and millions of acres of forest have been lost to beetles that now thrive due to warmer conditions and shorter winters, and often, drought-stressed trees that are more vulnerable to pest infestations (Funk and Saunders 2014; UCS 2018a).

The changes reverberate up and down the food chain, from the park's native plants and fish to its iconic grizzly bears. Yellowstone's geographically isolated population of grizzlies had shrunk to barely 100 bears by 1975, which led to the species being listed as endangered under the Endangered Species Act (Al-Chokhachy et al. 2013). One of the biggest threats to Yellowstone grizzlies is the loss of high-elevation whitebark pine forests, crucial to their diet (Hopkins III et al. 2017). Unprecedented mountain pine beetle attacks have devastated these forests in recent years, and the decline of whitebark pine nuts as a food source could further the damage (Buotte et al. 2016).

Under Secretary Zinke, the Yellowstone-area grizzlies lost their Endangered Species Act protections in June 2017. Even though most scientists deem the regional bear population to be



Frank van Manen/USGS

Yellowstone's grizzly bears face growing threats from climate change, including the loss of high-elevation whitebark pine forests, a crucial food source.

well below a healthy and sustainable level—especially given the impact of climate change on the region—the FWS has advocated in favor of hunts for bears that wander outside the park. In September 2018, a district court canceled a planned first hunt, but the threat remains, especially if the FWS's political leadership continues to issue recommendations that ignore climate change and the genetic isolation of Yellowstone grizzlies (Kaufman 2018; Robbins 2018).



Bob Wick/BLM

As regular users of public lands, local residents, partners, and other stakeholders are uniquely positioned to see—and share—any changes occurring on the ground.

Scientists can join the UCS Science Network to connect with more than 25,000 colleagues throughout the country who are putting their skills to work for public good: www.ucsusa.org/sciencenetwork. Scientists interested specifically in the Endangered Species Act can learn more with the UCS toolkit: www.ucsusa.org/esatoolkit.

Activists and community members can join the UCS Action Network to advocate for science: www.ucsusa.org/action.

Congress should investigate all alleged political interference with the DOI's scientific staff and processes.

Recommendations for Local Stakeholders, Partners of Public Lands, and the Outdoor Industry

Engage with the DOI. Participate in public comment periods and other DOI rule-making processes, especially ones that affect public lands in your region, state, and community. Encourage your members, customers, and other constituencies to do the same.

Monitor changes on the ground and report back when you see them. As regular users of public lands, local partners and stakeholders are uniquely positioned to see

any changes occurring on the ground as a result of DOI actions. Share what you see with your community, other local stakeholders, and the media.

Share the findings of this report. Many people are not familiar with the DOI, its political leadership, or how the department's actions—especially those that sideline science and scientists—are affecting public lands and health. Let them know about the DOI's record over the past two years. Everyone affected by the DOI's activities can push back on Secretary Zinke's abuses of science, wildlife and nature, and people. We must demand responsible stewardship.

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Science Under Siege at the Department of the Interior

America's Health, Parks, and Wildlife at Risk

[A clear pattern of sidelining science has emerged at the US Department of the Interior, with serious implications for the nation's public lands, wildlife, health, and safety.]

Stifled research. Silenced scientists. A failure to acknowledge or act on climate change. A clear pattern of sidelining science at the US Department of the Interior has emerged over the first two years of the Trump administration, with serious implications for the nation's public lands, wildlife, health, and safety.

Science Under Siege at the Department of the Interior identifies the most damaging and egregious examples of anti-science

policies and practices under Secretary Ryan Zinke, particularly with respect to climate change. It also recommends actions that Congress, scientists, science supporters, the media, and the outdoor industry can take—anyone who cherishes our parks, wildlife, and public lands and wants to ensure that the department fulfills its science-based mission to protect these irreplaceable resources.



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