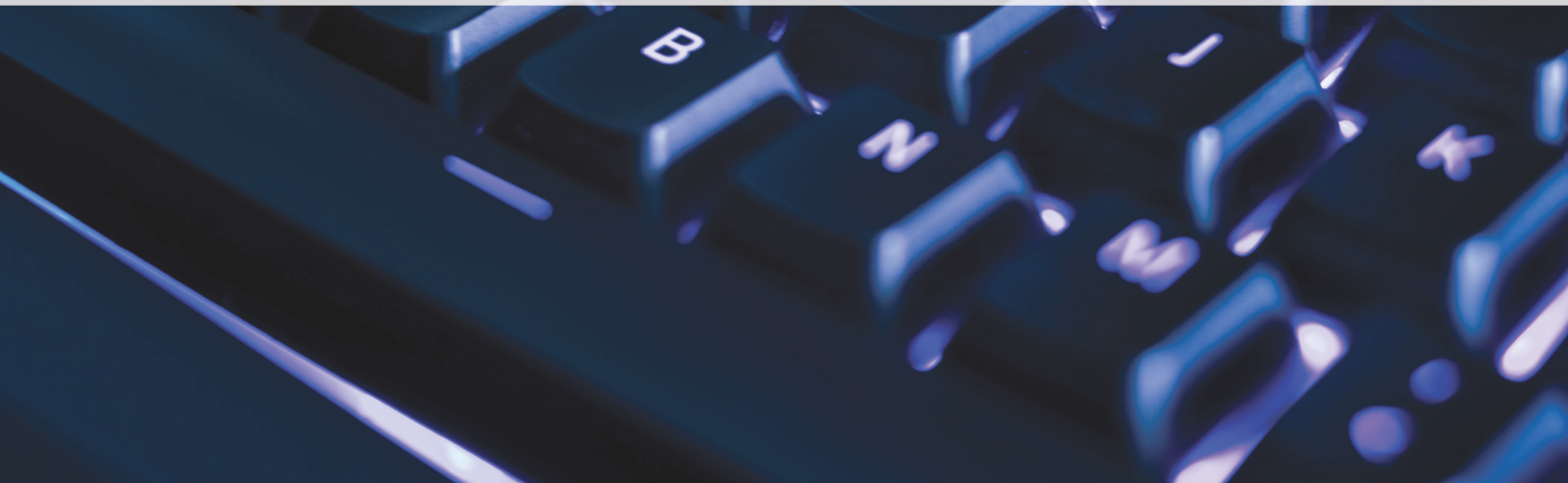




Work in Progress

Governance of Digital Environmental Information
In the Biden Administration's First Year



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Governance of Digital Environmental Information In the Biden Administration's First Year

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Environmental Data & Governance Initiative (EDGI) Website Monitoring Team

January 2022



The [Environmental Data & Governance Initiative](#) (EDGI) is a North American network with members from numerous academic institutions and nonprofit or grassroots organizations, as well as caring and committed volunteers and employees who come from a broad spectrum of work and life backgrounds. EDGI promotes open and accessible government data and information along with evidence-based policymaking.



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Executive Summary

Throughout its first year, the Biden administration has conveyed the importance it places on public information. One week into office, President Biden issued the Executive Order [“Tackling the Climate Crisis at Home and Abroad”](#) requiring agency leaders to develop a report on how to expand and improve public informational resources on climate change. Websites are the [primary medium](#) of communication from federal agencies to the public, and in the past year, many federal agencies have demonstrated attention to their websites. We on the Environmental Data and Governance Initiative (EDGI) [Website Monitoring Team](#) have been tracking changes to federal climate, energy, and environmental webpages for the last five years and have documented the restorations and revisions made by the Biden administration. In this report, we present key changes to the federal presentation of and access to environmental information through agency websites at the one year mark under President Biden. We assess the extent to which those changes address acute harms to public information inflicted by the Trump administration and make forward progress with respect to federal website communications.

The Biden administration has made significant progress in addressing the harms to public information inflicted by the Trump administration. For example, in March 2021 the Environmental Protection Agency (EPA) [re-launched its “Climate Change” website](#), which had been blocked from public access four years earlier, in April 2017. The EPA also updated its “Climate Change Indicators in the United States” and “Climate Change Impacts Risk Analysis” websites, among others. However, restorations and updates to information that had been deleted or neglected by the Trump administration have not been comprehensive. The Trump administration’s extensive alterations of federal webpages and its pattern of removing information related to regulations targeted in its deregulatory agenda created substantial work for the Biden administration to undo, and several resources have yet to be restored. The piecemeal restoration of resources we’ve observed thus far by the Biden administration is not unexpected due to the breadth of resource removal and the substantial burden placed on agencies to identify, update, and restore information. Still, more comprehensive attention is required to remedy the severe impacts of the Trump administration on public environmental information.

There are signs of substantial forward progress with respect to informational resources under the Biden administration that go beyond restoration. One improvement is that many agencies are more clearly making connections among related issues. For example, the Bureau of Land Management (BLM) re-launched its [“Climate Change”](#) webpage and for the first time acknowledged its responsibility in addressing climate change as oil and gas

operations on land managed by the BLM account for 25% of U.S. greenhouse gas emissions. The U.S. Fish and Wildlife Service (FWS) updated its [“Climate Change”](#) website for the first time in at least five years and drew connections between conservation and climate change. Agencies are also frequently providing more detailed regulatory history of issues to help the public understand the status and evolution of a policy. The Biden administration has also been updating language across federal agencies, including using the term “climate crisis.” Each of these trends for public information contributes to a promising trajectory for public information under the Biden administration.

The key area in which there has not yet been progress is in information policy. Our research during the Trump administration [demonstrated the gaps](#) in policies protecting public information, as the Trump administration censored climate change language and repeatedly stripped public information in advance of public comment periods. We [have recommended](#) the development of web governance policies that address website content, structure, and access. Policies should promote the incorporation of resources that advance environmental and scientific literacy and civic engagement, and should keep these resources publicly available through active websites and accessible archives. The Biden administration has stated its intention to rebuild public trust in the government in multiple executive orders, and we urge the administration to strengthen information policies, not just information itself, to ensure its integrity and usher in greater public trust.

Introduction

The first year of the Biden administration included marked changes from the Trump administration in federal practices, policies, and priorities. The Environmental Data and Governance Initiative (EDGI) [Website Monitoring Team](#) monitored, cataloged, and analyzed changes to federal climate, energy, and environmental webpages throughout the Trump administration and has continued to do so during the Biden administration. In this report, we present key changes to the federal presentation of and access to environmental information through agency websites thus far under President Biden. We also assess the extent to which those changes address acute harms to public information inflicted by the Trump administration and make forward progress with respect to federal website communications.

When first taking office, the Biden administration listed [seven priorities](#) that would guide its work, including Climate and Racial Equity. It has made demonstrable progress in these priorities, such as [re-entering the Paris Agreement](#), [developing the White House](#)

[Environmental Justice Advisory Council](#), [launching the Justice40 initiative](#), and [implementing the American Rescue Plan](#). It has also reversed multiple damaging Trump administration policies, such as by making a successful [request](#) that a court vacate a Trump EPA rule restricting the agency from regulating greenhouse gas emissions in the vast majority of industries. The University of California - Berkeley's Center for Law, Energy, and the Environment (CLEE) has tracked the Biden administration's progress in rolling back or otherwise reversing environmental deregulatory actions by the Trump administration and [found](#) that in its first 100 days, "President Biden and his administration initiated the reversal of at least 57 percent of the rollbacks that were implemented over four years of the Trump administration." These encouraging environmental policies and policy changes are the backdrop to the public information shifts that we analyze here.

The Biden administration has also made statements and taken actions that demonstrate the importance it places on public information. Even before the election of Joe Biden and Kamala Harris, Harris referenced the Trump administration's removal of climate change websites and other scientific information from agency websites as deeply problematic, both in the [Vice Presidential Debate](#) and in the [Senate Judiciary Committee hearing for Amy Coney Barrett](#). One week into office, President Biden issued the Executive Order "[Tackling the Climate Crisis at Home and Abroad](#)" requiring agency leaders develop a report on how to expand and improve public informational resources on climate change and also issued the "[Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking](#)" underscoring the importance of proper science communication in building or rebuilding public trust. In June 2021, the White House Office of Science and Technology Policy (OSTP) issued a [request for information](#) to "improve the effectiveness of Federal scientific integrity policies to enhance public trust in science" and held three public oral comment sessions, one of which focused entirely on science communication. [EDGI's comments](#) to this request concentrated on the critical role of federal agency website communication in scientific integrity and building or breaking public trust.

Websites are the [primary medium](#) of communication from federal agencies to the public and serve as essential informational resources regarding federal environmental actions and the issues those actions address. In the past year, many federal agencies have demonstrated attention to their websites. Several agencies, such as the Environmental Protection Agency (EPA), are improving web infrastructure, making webpage redirect pathways more efficient and updating path directories. Critically, agencies are also paying attention to the content of their websites even though, as the Trump administration's web

actions demonstrated, there are exceptionally [few requirements](#) regarding federal agency website content. In one instance, the EPA outlined its own [goals and objectives for its new Climate Change website](#), which invites public feedback and oversight, though without a medium for enforcement. One year into the Biden administration, there have been restorations of several key informational resources dismantled during the Trump administration, notable updates and language changes across agencies, and removal of some overtly inaccurate or no longer applicable webpages. There remains, however, substantial work to restore and improve public information on agency websites. There also remains a need to create more resources that build environmental and scientific literacy and promote civic engagement as well as to ensure those resources are protected and remain accessible to the public. Through better information policies and practices, this administration has the opportunity to distinguish itself, not just from the previous administration, but from all those before it.

In this report we assess our observations of federal environmental websites through two primary questions:

1. Is the Biden administration undoing acute harms the Trump administration made to public information?
2. Is the Biden administration moving forward from what had been in place under the Obama administration?

The federal agency website changes we have observed thus far under the Biden administration, both with respect to undoing acute harms of the Trump administration and to moving forward, are hopeful. Consistent with the administration's environmental policies, we have seen a breadth and a depth of improvements in federal environmental information practices by the Biden administration. However, there is still substantial work to be done over the next three years in terms of specific web resources, and the most critical work of all may be in the need to develop web governance policies that will protect federal public information from any future assaults akin to those of the Trump administration.

Methods

EDGI's Website Monitoring Team has been tracking changes to more than 25,000 federal URLs since January 2017. Our partners at the Internet Archive Wayback Machine download each webpage daily and each week [our open source software "Scanner"](#) compares the HTML code of each webpage as it existed at the start and end of the week. The software identifies changes in overall page length, text length, keywords, and links; generates a list

of webpage changes that occurred that week; and provides a user interface for analysts to visually review the changes.

Since the start of the Biden administration, our Website Monitoring Team has focused our review on approximately 6,000 webpages of the EPA website along with approximately 1,000 webpages across the BLM, Department of the Interior (DOI), and FWS websites. Analysts document and catalog webpage changes in which content related to the subject matter of the page has been added, removed, or substantively changed; language has been altered in a way that affects the focus, tone, or emphasis of the page itself or issues discussed on the page; and/or if links have been added or removed. They also note if the status of a webpage has changed.

This report draws examples from the hundreds of website changes our team has documented in the last year. It does not present a quantitative analysis, but rather identifies and describes particularly noteworthy changes or changes that exemplify larger trends observed.

Is the Biden Administration Undoing Acute Harms to Information?

The Biden administration has made significant strides toward building back public environmental information that had been harmed by the Trump administration. We use the term “harm” to encompass Trump administration website changes that reduced or removed public access to information; eroded the integrity of information; obscured issues, programs, or policies; or promoted messages antithetical to agencies’ missions.

The magnitude of the Trump administration’s negative impacts on federal environmental public information was considerable. Under President Trump, there was widespread [censorship of climate information](#), both through [climate-related language changes](#) and through wholesale removals of information, such as [the removal of EPA’s entire climate change website](#) on the eve of President Trump’s 100th day in office and the 2017 People’s Climate March. The most frequent type of [website information change related to environmental regulations during the Trump administration](#) was the removal of relevant environmental subject matter information before or during active regulatory processes. For example, the Trump EPA redirected its Clean Water Rule website, which had been replete with the scientific underpinnings and practical implications of the rule, to a new Waters of the United States (WOTUS) Rule website that solely communicated information about the

rulemaking process. This move [stripped relevant scientific information from the public](#) more than two months before the EPA officially proposed to repeal the Clean Water Rule and opened the requisite public comment period. Similar [actions were taken with respect to the Clean Power Plan \(CPP\)](#) within the EPA. Several EPA rules, including these two, [didn't adhere to the agency's Action Development Process](#) (ADP), which was put in place in large part to ensure agency rules were based on science. It may not be a coincidence that the EPA excluded scientific information from public-facing materials about rules that violated the ADP. Agencies do have a responsibility to at least communicate acute risks to public health. The Office of Inspector General (OIG) for the EPA has cited risk communication, which is inherently tied to environmental justice, as a key challenge, stating that, "The EPA needs to provide individuals and communities with sufficient information to make informed decisions to protect their health and the environment." As of March 2021, there were [10 open and 1 unresolved OIG recommendations on this issue](#).

One year into the Biden administration, the federal government has made many strides responding to and addressing specific harms to public information done by the Trump administration. Agencies have restored and revamped information, updated data and information, and improved language describing issues. However, these strides are isolated and incomplete. Several resources have yet to be restored, especially pertaining to regulations that were targeted as part of the Trump administration's deregulatory agenda. More comprehensive work needs to be done to remedy the severe impacts of the Trump administration on public environmental information.

The burden of identifying, updating, and restoring deleted information is substantial and requires an ongoing commitment of agency resources. For this reason, the piecemeal restoration of resources we've observed thus far is not unexpected. It is of critical importance, however, that the Biden administration implement policies that will transparently manage the removal of web resources in order to protect public information and alleviate this burden for future administrations.

Restorations

The Biden administration has started to restore myriad informational resources harmed by the Trump administration. These restorations range in subject, size, and scope but are not comprehensive.

EPA's Climate Change Website

Perhaps the most anticipated restoration has been that of EPA's "Climate Change" website. The EPA had hosted a climate change or global warming website since the Clinton administration, providing information about climate change causes and impacts. The website [remained publicly available](#) through the [George W. Bush administration's concerted inaction and doubt-seeding on climate change](#) and was a growing presence under the Obama administration. However, on the eve of former President Trump's 100th day in office, on April 28, 2017, EPA's entire Climate Change website was blocked from public access, [redirecting to a sign post](#) indicating that the Trump administration was "updating" the website to align with its priorities. Eighteen months later, [the website was removed entirely](#). For the next two and a half years, the EPA did not have a Climate Change website, although it did continue to host some domains related to climate change, such as its [Climate Change Indicators](#) and [Climate Change Impacts and Risk Analysis](#) websites which were not updated with new information throughout the Trump administration.

On March 18, 2021, one week after President Biden's nominee Michael Regan was confirmed as Administrator of the EPA, the EPA [launched a new Climate Change website](#) (at a slightly different URL, www.epa.gov/climate-change). For many, this was a symbol of the Biden administration's [commitment to](#) acknowledging, understanding, and ultimately addressing the climate crisis. The new Climate Change website remained a single homepage until August 12, 2021, at which point [the website was expanded](#).

The new website is much smaller than its older counterpart, containing 34 pages compared to the old website's more than 92 pages. Some content from the old Climate Change website may have migrated to different domains, but our comparison here focuses only on the old www.epa.gov/climatechange and the new www.epa.gov/climate-change. The new website prominently highlights connections to related topics, such as environmental justice, water, and transportation. Within the new domain itself, however, the majority of pages (25 of 34) are related to regulations relevant to climate change, including several linking to documents about the "[endangerment finding](#)," whereby the EPA established its authority to regulate greenhouse gasses under the Clean Air Act. Several pages of the old climate change website (43 of 92) were related to regulations as well, and it appears that the information from the old website was retained and condensed onto fewer pages in the new website. The old website did include broader information than the new one, however. For example, the old website included 13 kids' pages whereas the new one does not include such pages (although it does have a page that links to external resources for teachers and students). The old website was notably sparse on information related to

climate change adaptation and mitigation, but it appears that the new website does not contain any adaptation resources and includes only three pages relating to climate change mitigation. These are important issues the website should describe, particularly as each issue intersects with so many other topics EPA researches and regulates.

A companion website, EPA's "Climate Change Science" site, which had also been removed under the Trump administration, was also revamped with a slightly altered URL in August 2021. The old and new websites are the same size (five webpages) and cover similar subject matter, but the new website incorporates some notable improvements, most importantly on the "[Causes of Climate Change](#)" webpage (see Figure 1). On the old website's "[Causes of Climate Change](#)" page published under the Obama administration, natural causes of climate change were centered. Human causes were also described, but were not mentioned until the fifth paragraph and were not described with any specificity until the eighth paragraph. In comparison, the new webpage delivers information about both human and natural causes of climate change, but from the first sentence, it explains that only greenhouse gas emissions from human activities explain the rate and severity of change. It also includes more visual aids that convey the aberration of the current climate crisis from pre-anthropogenic climate variations and includes eight times as many fact citations as the old webpage. This new website promotes scientific and climate literacy in an improved manner, which [we've recommended be a goal](#) for federal websites.

Improvements could still be made, particularly with regard to the accessibility of the new websites from their prior versions. The URLs of the old Climate Change Science website register as "Page Not Found" errors. Currently, all of the URLs of the former EPA Climate Change website (www.epa.gov/climatechange/*) redirect to the new website's homepage (www.epa.gov/climate-change). While it is important that the old URLs are redirecting to the new website rather than returning 404 "Page Not Found" errors, an improvement would be to redirect each of the old URLs to the URL where the content had been migrated.

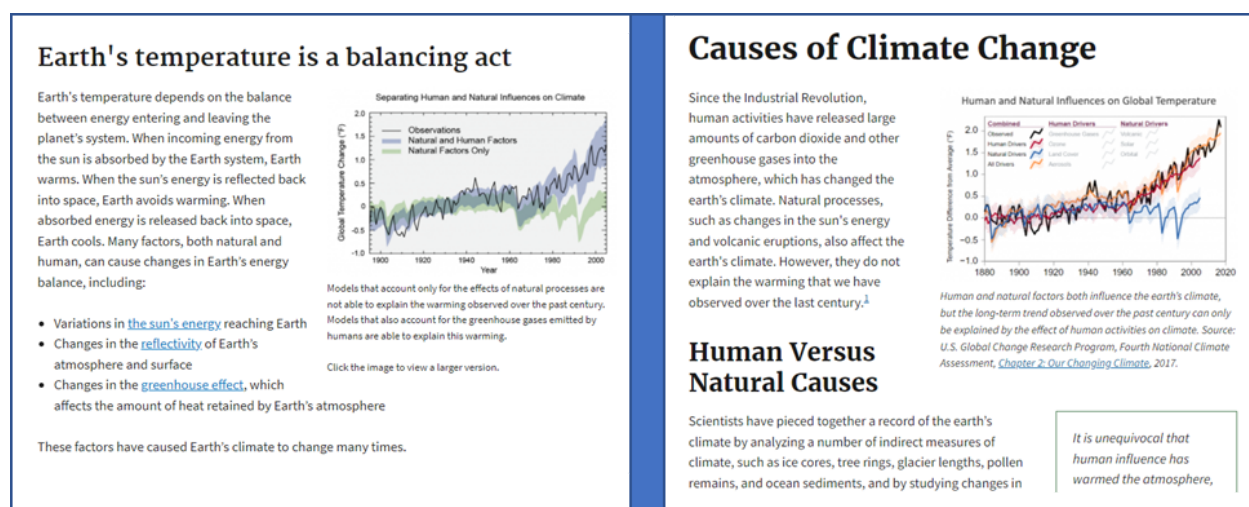


Figure 1. The first paragraphs of EPA's "Causes of Climate Change" webpage in April 2017 (left) and in August 2021 (right). The 2021 version identifies the human influence on climate change in the first sentence.

Additional restoration examples

Some other restorations have been complete, returning to public access pages identical to those that had been blocked or removed by the Trump administration. For example, archived pesticide assessments from the Integrated Risk Information System (IRIS) program in 2016 had been [blocked since June 2018](#). In April 2021, public access to the assessments was restored without alteration (see [before](#) and [after](#)). Similarly, in February 2021, several webpages related to the National Advisory Council for Environmental Policy and Technology (NACEPT)—including [its homepage](#) and its [2016 report](#) about how the EPA can and should incorporate citizen science into its programs—were restored.

Regulatory resources in need of restoration

Many resources still need to be restored. These resources cover a breadth of topics and serve a variety of purposes, from [K-12 educational resources](#) to stakeholder information related to landmark policies (as described below). Some of these resources were removed as part of glaring information-stripping events and some were removed in more subtle ways that may not have been known to the Biden administration. This underscores the need for policies to transparently manage information, including its removal from public access. In this section, we provide examples of informational resources directly related to regulatory issues that have not yet been restored. The continued absence of these resources further illustrates the need for informational management policies that specifically address regulatory-related resources.

It is well known that the Trump administration attempted to reverse the longstanding interpretation that the Migratory Bird Treaty Act (MBTA) prohibited intentional and unintentional killing (called “incidental take”) of migratory birds. As part of this effort, the DOI Solicitor under Trump wrote a Solicitor Opinion ([M-37050](#)) which concluded that the MBTA did not prohibit incidental take and suspended a previous Solicitor Opinion that had concluded the opposite. In an unprecedented move, the DOI removed the previous Solicitor Opinion ([M-37041](#)) from its Solicitor Opinion webpage (though the original URL still exists), replacing the 30-page document with a [brief memo](#) stating its suspension. The FWS, an agency within the DOI, then removed its webpage and an entire satellite website ([www.birdregs.org](#)) about incidental take of migratory birds (see [our report](#)) and later [proposed a rule](#) to codify Opinion M-37050 stating that incidental take of migratory birds was not illegal. In 2020, an appellate court vacated the Trump administration DOI Solicitor Opinion M-37050 (but in January 2021 the Trump administration still [finalized the rule](#) based upon it). A few weeks after President Biden took office, the new Solicitor issued memo [M-37065](#) to permanently withdraw M-37050. In an improvement in web governance, the DOI kept opinion M-37050 live on the Solicitor Opinion webpage (though we would recommend adding an indication on the M-37050 link that it has since been withdrawn) but has not put M-37041 back on its website. Thus, the only Solicitor Opinions available on the website regarding the Migratory Bird Treaty Act are notifications of withdrawals of former opinions. The [Director’s Order #225](#) and the [MBTA regulations webpage](#), which can be found by searching the FWS website for “incidental take,” do provide summaries of the regulatory history of the issue and clearly state the agency’s current policy, but the FWS has not restored its migratory birds “Incidental Take” webpage or its “public involvement initiative” website about incidental take of migratory birds, [birdregs.org](#), even though there is an active regulatory development process ongoing.

Another cornerstone of the Trump administration’s deregulatory agenda was repealing and replacing the 2015 Clean Water Rule. In what would become [a pattern of website information removal](#), in May 2017—two months before proposing to repeal the Clean Water Rule—the EPA removed its [Clean Water Rule website](#) replete with information about hydrology and water quality and replaced it with a meager website ([www.epa.gov/wotus-rule](#)) about the rulemaking process (see [our public comment](#) describing this) to redefine Waters of the United States (WOTUS). In January 2020, [this website began redirecting](#) to the “[Navigable Waters Protection Rule](#)” (NWPR) website, which also focused exclusively on procedural information rather than scientific and contextual information. In June 2021, as the EPA and Army Corps of Engineers initiated the next rulemaking process to repeal the Navigable Waters Protection rule, [the NWPR website](#)

[began redirecting](#) to a [new WOTUS rule website \(www.epa.gov/wotus\)](http://www.epa.gov/wotus). This website includes a well-curated regulatory history of the definition of WOTUS, but like its Trump-era predecessor, fails to include or even link to scientific information underlying the evolving definition of WOTUS. The absence of the scientific basis for any definition of WOTUS is an acute failure in public information provision by the Biden administration as there is currently (December 7, 2021 - February 7, 2022) a [public comment period open](#) for a proposed definition of WOTUS. There is a wealth of information that could and should be restored from the old Clean Water Rule website to support the public in understanding the water quality implications of the proposed rule.

In a similar strike, in April 2017, the Trump EPA [removed its entire Clean Power Plan \(CPP\) website](#) five months before it sought to repeal the hallmark Obama-era rule regulating carbon dioxide emissions from power plants and redirected users to a short webpage regarding then-President Trump's executive order on energy independence. In February 2021, the old [CPP URLs began to redirect](#) visitors to the "[Stationary Sources of Air Pollution](#)" homepage. This landing page does link to various current emissions standards and regulations but makes no mention of the CPP or carbon dioxide emissions from power plants. The Biden administration does not intend to restore the CPP, largely because power plants have mostly hit the target emissions detailed in the plan, but it would be better practice to retain some information about this rule for the public to understand the regulatory history of power plant emissions regulations. Curiously, there is a page linking to [materials for the Affordable Clean Energy \(ACE\) rule](#), which replaced the CPP in 2019 but [was vacated](#) in January 2021. What is also largely missing from the Stationary Sources website are resources relating EPA's standards and regulations to their underlying purpose. There are no air quality or climate change resources included in the website or linked from the homepage and nothing like the in-depth resources geared toward a variety of audiences found on the EPA's CPP website.

Another major climate change related resource that has not been restored is the EPA's "Climate and Energy Resources for State, Local, and Tribal Governments" website. This website was removed in April 2017, along with EPA's Climate Change website and Clean Power Plan website. In July 2017, [a new website was launched](#) in its place, "[Energy Resources for State, Local, and Tribal Governments](#)." All of the approximately 200 webpages of explicit climate change resources were excluded from the new website, which is only about half the size of the previous website. Over the course of the Biden administration's first year, none of those deleted webpages, such as the "[Climate Change](#)

[Risks and State Adaptation](#)” webpage or the [“Local Climate Action Framework”](#) webpage, have been restored.

Other anticipated restorations are on a smaller scale, such as the return of certain sentences or paragraphs that were altered or removed. One such example is on the [“Health Effects of Ozone Pollution”](#) webpage. Shortly after the EPA finalized the controversial [decision to maintain](#) (as opposed to strengthen) the preexisting national ambient air quality standards (NAAQS) for ozone, in early January 2021, the EPA removed sentences from its “Health Effects of Ozone Pollution” webpage regarding health consequences of ozone exposure, including “Long-term exposures to higher concentrations of ozone may also be linked to permanent lung damage, such as abnormal lung development in children” (see [before](#) and [after](#)). While a few edits to the page have been made during the Biden administration (apparently to improve readability), this long-term health consequence information has not been restored. Without explanation for this change, and without citations or other references for the information that was removed, it is unclear if this sentence removal reflected an updated scientific understanding or a political purpose. More transparent management of information decisions, such as a database of explanations for website changes (as [we’ve previously recommended](#)), would help the Biden administration not only identify information that should be restored, but also rebuild public trust.

Updates

The Biden administration has made many critical updates to information on federal websites, including updating data, scientific understanding, and language to support public understanding of environmental issues. For example, after being stagnant since 2016, in May 2021, the EPA updated its [“Climate Change Indicators in the United States”](#) website to include new data for all of its indicators for the first time in five years, as well as twelve new indicators, such as coastal flooding and Great Lakes ice cover (see in [January 2021](#), and [before](#) and [after](#) the updates in May). This website is an excellent example of a resource that helps foster scientific and environmental literacy. The EPA also updated its [“Climate Change Impacts and Risk Analysis”](#) website in April 2021 (see [before](#) and [after](#)), and in September [released a new report](#), [“Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts.”](#) This report is a major step toward fulfilling an [agency priority of incorporating justice into all of its work](#), here by focusing on the disproportionate burdens of climate change on more vulnerable populations.

Removals

In addition to restoring pages and updating information, another important element to undoing the public information harms by the Trump administration is removing webpages that are misleading or otherwise at odds with the federal government's role and responsibilities. However, we [recommend archiving their content in publicly accessible ways](#) to preserve the record of information generated and disseminated by the agency. For example, in January 2021, soon after President Biden took office, the [EPA restricted access](#) to its "[Deregulatory Actions](#)" webpage that had launched in 2017 and which compiled all of the Trump administration EPA actions that narrowed, impeded, or otherwise undermined regulations and the regulatory authority of the EPA. With the new priorities of the Biden administration replacing the deregulatory premium of the Trump administration, this webpage no longer conveyed information about the EPA's work toward its priorities. It was, however, a useful aggregation of the deregulatory actions taken under the Trump administration and should be archived for the public record. Similarly, in February 2021, the Trump EPA "[Energy Independence](#)" webpage about the 2017 executive order "[Promoting Energy Independence and Economic Growth](#)" was [removed and redirected](#) to the "Stationary Sources of Air Pollution" homepage, as President Biden's executive order "[Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis](#)" revoked the 2017 order and set new priorities. The Biden EPA also restricted access to webpages for proposed rules that were not finalized. For example, the EPA [restricted access](#) to its "[Increasing Consistency and Transparency in Considering Costs and Benefits in the Rulemaking Process](#)" webpage, which was proposed in 2018 but never finalized.

These examples of page removals and restrictions are understandable and even necessary to provide the public with accurate, up-to-date information about agency priorities and actions. However, the removal of public access to these webpages without explanation is poor web governance because it diminishes public understanding of past administrative actions. Rather than simply deleting the information from the public eye, each of these pages should be accessibly archived, and updates about the policies in question should be provided on the live website.

Is the Biden Administration Making Forward Progress?

The Biden administration is making forward progress with regard to public information beyond what existed under the Obama and Trump administrations. Improvements have been observed in the connection of topics, including language updates and more detailed regulatory history of issues. However, these improvements could easily be undone by the

next administration because there have not yet been concrete movements toward better federal information policies. There are multiple executive orders and laws under which information policy improvements could be made, and we urge the Biden administration to prioritize protecting public information.

Making connections among related issues

One area that the Biden administration has demonstrated effort is in making connections between foundational and other environmental issues that agencies address. Two of the Biden administration's top priorities are climate change and racial equity, and agencies are drawing connections among these and other interrelated topics through language and linking. The EPA's [draft strategic plan for fiscal years 2022-2026](#) states that "tackling climate change and advancing environmental justice and civil rights are integral to all we do in carrying out EPA's mission," and the EPA has made strides in integrating climate change and environmental justice with its programmatic work in air quality, water quality, environmental law enforcement, and more. For example, in February 2021, the EPA added "Climate Change" to its "[Air Topics](#)" webpage (see [before](#) and [after](#)) and in June 2021, added "Environmental Justice" to its "[Enforcement](#)" homepage (see [before](#) and [after](#)). As described in a previous section of this report, the EPA also released its first justice-oriented climate report, the "[Social Vulnerability Report](#)," and on its "[Climate Change](#)" homepage stated intentions to develop web resources connecting climate change and environmental justice. The FWS is making more explicit connections between conservation and climate change than ever before and in May 2021, revamped its "[Conservation in a Changing Climate](#)" website to assert that "climate change is real" on its homepage, describe basic information about impacts of climate change on species, and state the FWS commitments to adaptation and mitigation to help protect ecosystems (see [before](#) and [after](#); Figure 2). In April 2021, the [BLM re-launched](#) its "[Climate Change](#)" webpage (which had registered as a 404 error "Page Not Found" [since summer 2017](#)), and for the first time identified the responsibility the BLM has in addressing climate change, especially since oil and gas operations on public lands (which the BLM leases) account for 25% of the total U.S. greenhouse gas emissions.

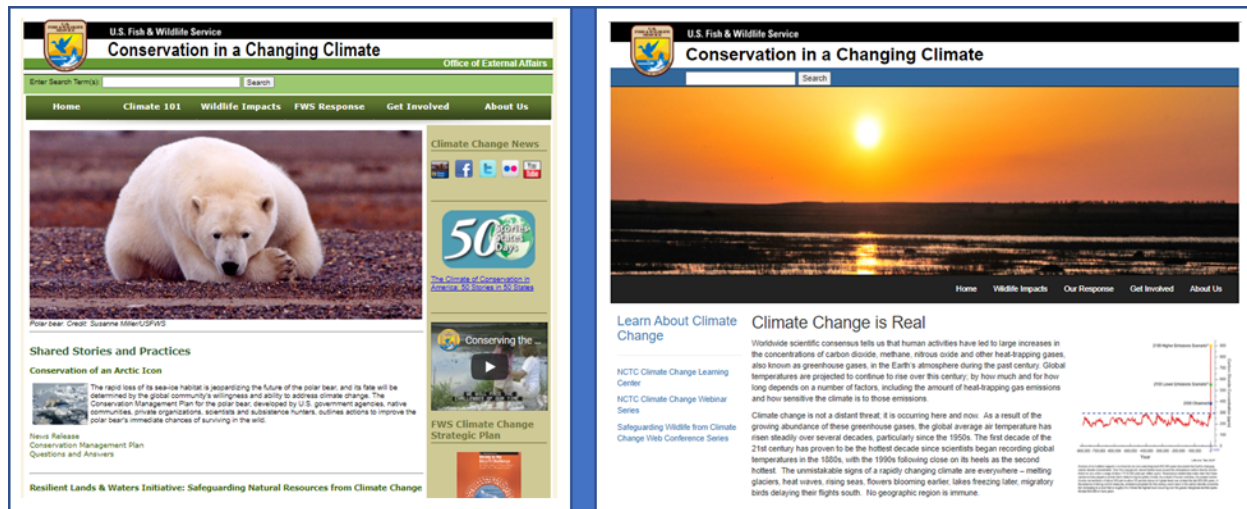


Figure 2. The FWS “Conservation in a Changing Climate” homepage before (left) and after (right) it was revamped in May 2021. The new version synthesizes information from multiple pages and makes clearer links between climate change and ecosystems.

Another kind of connection that agencies are more often making for the public is the regulatory history of an issue. With so much litigation and revision of environmental rules, it can be challenging for people to know the status of various policies and regulations. For example, the jurisdiction of various waterways (the definition of the “waters of the United States”) has often been litigated over the past 50 years, with four cases rising to the U.S. Supreme Court. As described in the previous section, the [newest EPA website about WOTUS](#) provides a regulatory history explaining how court rulings have influenced WOTUS regulations. While the website lacks information about the scientific underpinnings of WOTUS definitions, it does facilitate understanding of what regulations are currently in place and why.

The EPA has also provided more detailed regulatory history for some local issues as well. For example, for more than a decade there has been debate about whether or not to permit mining activities in the watershed of Bristol Bay, Alaska. The EPA and Army Corps of Engineers have gone back and forth on this issue, and the status of the decision has been unclear. In September 2021, the [EPA added a thorough explanation](#) to its “Bristol Bay” webpage about the most recent steps in the process of a permit decision, the court decision, and EPA actions that prompted the Trump-era decision’s reversal (see [before](#) and [after](#)).

Agencies have also provided more transparent and detailed histories where court decisions have reversed Biden administration policies. For example, in April 2021, the BLM [decided to](#)

[pause all oil and gas lease sales](#) while it conducted a review of the impacts, especially climate impacts, of oil and gas operations on public lands in accordance with President Biden's executive order "[Tackling the Climate Crisis at Home and Abroad](#)." However, [as was detailed](#) on the BLM's main "[Leasing](#)" webpage, in June 2021, a court directed the agency to continue the leasing determination process for parcels that had already been under consideration when the agency decided to pause leasing in April. The "Leasing" webpage has continued to be updated with this sort of critical information for people seeking to understand the current status of oil and gas leasing.

Language changes

The language agencies use influences public perception and understanding. For example, the Trump administration substantially altered federal communication about climate change in part by [federal agencies dramatically reducing federal agencies' use of the term "climate change"](#) and other related terms. One of the most noticeable ways in which the Biden administration is making forward progress is in the language it uses. Some of these language choices signal policy changes and some appear to be strictly to enhance public understanding.

On President Biden's first day in office, [the BLM removed the phrase "all of the above energy approach"](#) from at least two of its primary website landing pages. This phrase had been embraced by the Obama administration to indicate its continued support of fossil fuel energy alongside support for renewable energy development, and the Trump administration continued to use it. The immediate language changes—including replacing a page header "All of the Above Energy Approach" with "Sustainable Development," deleting sentences about America's energy security, and making oil and gas sales easier—heralded a pro-environment priority shift in the Biden administration across federal agency websites. This shift is evident in the footer of BLM press releases as well. In April 2021, the BLM removed emphasis on the economy by deleting the following sentences: "Diverse activities authorized on these lands generated \$111 billion in economic output across the country in fiscal year 2019—more than any other agency in the Department of the Interior. These activities supported more than 498,000 jobs." Now the footer focuses on land stewardship:

This year, we invite everyone to reimagine your public lands as we celebrate 75 years of the BLM's stewardship and service to the American people. The BLM manages approximately 245 million acres of public land located primarily in 12 Western states, including Alaska. The BLM also administers 700 million acres of sub-surface mineral estate throughout the nation. The agency's mission is to sustain

the health, diversity, and productivity of America's public lands for the use and enjoyment of present and future generations.

This footer is present on all BLM press releases, past and present (see this press release [before](#) and [after](#)).

There has also been a substantial shift in language related to climate change across federal agencies. In addition to returning climate change language that had been removed by the Trump administration (discussed previously in this report), the Biden administration is using explicit climate change language even more consistently than was being used before the Trump administration. For example, for programs to improve water utilities' ability to withstand and adapt to climate change, in February and March 2021, respectively, the EPA changed the description of the "[Creating Resilient Water Utilities](#)" program (see [before](#) and [after](#)) and the "[Climate Resilience Evaluation and Awareness Tool](#)" (see [before](#) and [after](#)) from planning for and adapting to "extreme weather" to planning for and adapting to "climate change." Interestingly, the "Creating Resilient Water Utilities" program [had been called the "Climate Ready Water Utilities" program until late 2016](#), but has not returned to that name under the Biden EPA.

In a major step to communicate the pace of climate change and the urgency of climate action, the Biden administration frequently uses the term "climate crisis." From executive orders to agency websites, the Biden administration is impressing upon people the crisis of unfettered climate change threatening ecosystems and infrastructure around the globe. The DOI has named "[Tackling the Climate Crisis](#)" as one of its seven priorities. In January 2021, the EPA "[Climate Change Research](#)" website was edited from stating its informational resources could be used to "effectively and sustainably manage the impacts from a changing world," to stating they could be used to "effectively, equitably, and sustainably tackle the climate crisis" (see [before](#) and [after](#)). In a poignant example of pro-environment priority shifting along with the claiming of climate crisis language, in May 2021, the EPA changed the headline of its "[Controlling Air Pollution from the Oil and Natural Gas Industry](#)" webpage from "Promoting responsible growth while reducing harmful air pollution" to "Reducing pollution to protect public health and tackle the climate crisis" (see [before](#) and [after](#); Figure 3).



Figure 3. The EPA's "Controlling Air Pollution from the Oil and Natural Gas Industry" webpage in April 2021 (left) and May 2021 (right). The new version centers the climate crisis while the old version centers economic growth in relation to air pollution.

The Biden administration has indicated through its language choices a justice orientation, in keeping with its Racial Equity [priority](#). "Environmental Justice" is now listed as a Key Topic on [the EPA's homepage](#). The [DOI overhauled its priorities](#) in advance of Secretary Deb Haaland's confirmation, and now for the first time, the DOI describes "centering equity and environmental justice" as one of five core components of its work on its "[Our Priorities](#)" webpage. In addition to highlighting environmental justice, there is a notable shift in language describing the DOI's responsibilities to Tribal Nations, from the Trump-era stated priority of "Ensure tribal sovereignty means something" to "Strengthening the government-to-government relationship with sovereign Tribal nations. We understand that tribal sovereignty and self-governance, as well as honoring the federal trust responsibility to Tribal Nations, must be the cornerstones of federal Indian policy." While it is outside the scope of this report to assess changes in DOI policies regarding government-to-government relationships with Tribal Nations, these language changes convey a more respectful tone and justice orientation by the Biden administration.

Opportunities for better protection of public information

While the Biden administration has made forward progress with the public information it now conveys, it has not yet put into place policies that specifically address the protection of public information. The information slashing of the Trump administration demonstrated that information policies, [both to require public information and to protect the integrity of it](#), are essential. With national political divides entrenched and the 2024 elections looming, time is of the essence for the Biden administration to take action for public information.

It will be up to the Biden administration to determine the most effective and efficient avenues to improve information policies, but better information policies are directly adjacent to issues that the Biden administration already has begun to address through executive orders and subsequent office and agency actions. For example, on January 27, 2021, President Biden issued a memorandum on [“Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking.”](#) As part of its response to this memorandum, in June 2021 the White House Office of Science and Technology Policy (OSTP) issued a [Request for Information to Improve Federal Scientific Integrity Policies](#). Two of the five areas of information requested regarded promoting public trust in federal science and the improvement of federal science communication. As described in our public comment in response to this request, stronger public information policies are necessary for both of those aims. To truly support federal scientific integrity and promote public trust in the government, [we recommend](#) the development of information policies that “require both scientific and policy context to be communicated to the public, enhancing federal science communications to help people build scientific literacy, creating an archival record of evolving scientific understanding and policy context, and adopting a culture and practice of information care and maintenance.”

In December 2021, President Biden signed the executive order [“Transforming Federal Customer Experience and Service Delivery to Rebuild Trust in Government.”](#) This executive order focuses on the need for federal services to be designed and implemented such that they are effective, efficient, and accessible to all people who use them. The executive order highlights the time burden, or “time tax,” of inefficient or overly complicated services and that federal services “should be driven fundamentally by the voice of the customer through human-centered design methodologies; empirical customer research; an understanding of behavioral science and user testing, especially for digital services; and other mechanisms of engagement.” Federal websites are a widely accessed federal service. They could be designed such that some of the specific services federal websites provide include facilitation of scientific literacy and civic engagement in streamlined, efficient, and effective ways, [as we have recommended](#).

There were lost opportunities to protect and steward public information with the executive orders dealing with the climate and environment. There is only one mention of public access to climate-related information in [“Tackling the Climate Crisis at Home and Abroad,”](#) and public information is not mentioned at all in [“Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis.”](#) Future executive orders

could do well to direct agencies to provide accessible, engaging, and thorough public information on topics of great public interest.

There are existing laws that could also be leveraged to support better information policies. The [Plain Writing Act of 2010](#) requires the federal government to use clear, concise language that lay people can understand and use. Training agency staff is a significant focus in carrying out responsibilities of this, and [some offices have voluntarily issued trainings](#) such as presentations about “the difference between good technical writing, which can use accurate legal and scientific language but still be understandable, and bureaucratic writing that uses unnecessary jargon and wordy phrasing.” While this law couldn’t provide the authority for many web governance issues, it could be a platform from which to develop policies to create ladders of information targeted toward stakeholders with a variety of background knowledge. Similarly, the [National Environmental Education Act of 1990](#) (NEEA) could help launch further public information efforts. The NEEA prefaces that, “Current Federal efforts to inform and educate the public concerning the natural and built environment and environmental problems are not adequate.” However, the law only specifies responsibilities regarding formal childhood education, and makes no mention of adult informal education or general public information. This law could readily be updated to include informal education in the digital age through agency websites.

Several avenues exist for the Biden administration to begin to make forward progress developing policies to protect and steward public information. Each approach to policy-making would take significant investment from the federal government, and the Biden administration must weigh the expediency of certain avenues (such as executive orders) against the lasting effectiveness of other avenues (such as new legislation). Ultimately, protecting information from the kinds of politicization and wholesale deletions the Trump administration employed is worth the investments it will take; it is vital to the continued survival of our democracy.

Conclusions

The Biden administration has significantly improved website public information in its first year. Across several federal agencies, efforts have been made to undo the harms the Trump administration inflicted when it manipulated public information to further its political ends. Efforts have also been made to move forward, improving information for public comprehension. Several key resources have been revamped and restored, such as the EPA’s “Climate Change” website, and several websites have been updated for the first

time since 2016, such as the EPA's "Climate Indicators" website. Agencies have made strides connecting information about related environmental issues on their websites and providing more regulatory history. Many have also made language changes to signal the importance of foundational issues such as climate change and environmental justice. Addressing all of the information that was stripped or otherwise undermined during the Trump administration remains a large task. An even larger and more critical task is to develop policies that would protect public information from being undermined in the future.

We [have previously recommended](#) that the Biden administration develop web governance policies for the creation and management of data and informational resources provided on digital platforms such as agency websites. Central to these policies should be the creation and maintenance of resources that expand civic and scientific literacy. The Biden EPA's revamped "Causes of Climate Change" webpage does this well while other resources, such as the new "Waters of the United States" website, lack scientific information that would foster greater understanding of the relevant environmental issue. We have also recommended that web governance policies preserve resources so that the average member of the public can find and make use of them. The Biden administration could do much more to ensure that previously available content is archived and that old URLs redirect to appropriate new locations when content is migrated.

Through several executive orders and actions, the Biden administration has demonstrated a commitment to rebuilding public trust in government. Implementing information policies, and particularly web governance policies, that address website structure, content, and access is integral to rebuilding that trust.