

**BACKGROUNDER**

No. 3555 | NOVEMBER 2, 2020

THOMAS A. ROE INSTITUTE FOR ECONOMIC POLICY STUDIES

# A Proactive Environmental Policy Agenda for Congress and the Administration

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## KEY TAKEAWAYS

All Americans want a clean environment and a strong economy.

Policymakers do not have to choose between a clean environment and economic growth, individual freedom, or federalism.

Any environmental policy agenda should recognize that human ingenuity, transparency, and respect for federalism and property rights will yield the best outcomes.

**A**mericans want a clean and safe environment. This is a shared value regardless of ideology; nobody, either on the left or the right, has a monopoly on caring about the environment. However, while there is wide agreement that a clean environment is important, the path toward maintaining it, or addressing challenges, is often filled with disagreement.

This *Backgrounder* details a proactive environmental policy agenda for both Congress and the Administration, with recommendations covering air, water, land and wildlife, and science and transparency.<sup>1</sup> This agenda rejects policies that force Americans to choose between a clean environment and economic growth, individual freedom, or federalism as a false choice. Rather, it aims to improve collaboration and policy processes to solve environmental challenges, and reflects a commitment to achieving tangible environmental improvements while at all times taking into account the interests of all Americans.

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This paper, in its entirety, can be found at <http://report.heritage.org/bg3555>

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Accordingly, this policy agenda is informed by many important principles, including a respect for private property rights and the primary role of states in environmental protection. It recognizes that economic freedom, national wealth, and innovation are critical to successful environmental outcomes. Most important, it never loses sight of the fact that humans are the most important, unique, and precious natural resource.<sup>2</sup>

## Policy Recommendations: Air

Americans want to be able to go outside and breathe the air without being concerned about health impacts. Fortunately, air quality in the United States is amongst the best in the world.<sup>3</sup> It has gotten dramatically better for decades and continues to improve. From 1980 to 2019, Environmental Protection Agency (EPA) data show that the aggregate emissions of the six principle air pollutants (criteria pollutants) declined by 71 percent.<sup>4</sup> This decline occurred as gross domestic product (GDP) increased by 182 percent, vehicle miles travelled increased by 114 percent, population increased by 44 percent, and energy consumption increased by 28 percent.<sup>5</sup>

This context is extremely important in order to provide an accurate picture of the nation's air quality. The official air quality picture can be distorted when areas of the country fail to meet new, more stringent standards as regulators continue to move the environmental goal posts. This nonattainment is not a reflection of air quality getting worse, but of government-imposed standards becoming stricter.<sup>6</sup>

The issue for policymakers, though, is not what has been done in the past, but what they need to do in the future. Policymakers must recognize that while past improvements are significant, there is also a point of diminishing returns where smaller margins of tangible benefits are only achieved at great difficulty and cost. It does Americans more harm than good to regulate certain pollutants at background levels (the concentration levels that exist due to natural and foreign sources of the pollutants), which may already be happening. For example, there are some areas of the country that sometimes are already at, or near, background levels of ground-level ozone,<sup>7</sup> such that it may be impossible to get lower concentration levels from reducing the man-made domestic emissions of the pollutants that form ozone. Federal policymakers should also acknowledge the strong incentives that states and localities have for addressing their unique air quality issues in ways that reflect the priorities of their citizens who are directly affected by environmental policy decisions.

The following are recommendations addressing air quality issues, along with the issue of greenhouse gas (GHG) regulation under the Clean Air Act.

Policymakers should:

**Give Responsibility for Setting the National Ambient Air Quality Standards (NAAQS) to Congress.**

**Standards (NAAQS) to Congress.** Under the Clean Air Act (CAA), Congress delegated the responsibility of establishing standards for the criteria pollutants (carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide) to the EPA. Making the NAAQS even stricter is far more significant and controversial than it was decades ago and can be massively expensive. For example, the EPA estimated that the costs of reducing emissions to attain the 2015 ozone standards would total \$1.4 billion in 2025 (excluding California). A stricter standard considered by the EPA at the time, if adopted, could have been one of the costliest rules in U.S. history according to independent analysis.<sup>8</sup>

The question of *whether* to make the standards stricter is distinct from *how* to make the standards stricter. From a process perspective, Congress, not the EPA, should be making these critical decisions that have far-reaching implications for the health and livelihoods of Americans. Legislators should not skirt responsibility and accountability for policy decisions of this magnitude, and Congress should amend the CAA accordingly.

The EPA is supposed to set standards without regard to cost.<sup>9</sup> However, any notion that standard setting is best left to the agency because it is making a purely scientific decision is divorced from reality and is a misunderstanding of the NAAQS process that leaves significant discretion to the EPA Administrator's judgment.<sup>10</sup> The standard-setting process is informed by science, but science does not provide an objective answer to the "correct" standard. Risk considerations that are part of setting a standard are subjective by nature, and consciously or subconsciously, policy considerations (including costs) affect the setting of standards.<sup>11</sup>

Giving responsibility for these major policy decisions to Congress eliminates any pretense that a decision is purely scientific, and openly acknowledges the reality that any decision involves significant discretion and the weighing of political, economic, and social costs and benefits as informed by science. It is far better for elected representatives, who, unlike the EPA, have lawmaking power under the U.S. Constitution, to debate the merits of setting a stricter standard in an open and transparent fashion than for the EPA, with little to no accountability, to make these major decisions. Congress can continue to draw on the EPA's scientific expertise, and on the expertise of experts both inside and outside the federal government. The

EPA should still play a role when it comes to NAAQS, from providing advice to Congress to ensuring that there is no backsliding from meeting existing air quality standards.

### **End the Overreliance on Ancillary Benefits to Justify Clean Air Act Rules.**

When the EPA decides to regulate a specific air pollutant, it should be able to justify regulating it. Yet, this simple commonsense requirement has not been reflected by EPA practice. Instead, the EPA has made a habit of promulgating costly air regulations by relying on the ancillary or indirect benefits resulting from addressing air pollutants that are not the target of the regulations.

The Mercury and Air Toxics Standards (MATS) rule has become the prime example of this abuse.<sup>12</sup> The EPA justified this rule to address what are called *hazardous air pollutants* by relying on the ancillary benefits from addressing *non-hazardous air pollutants* (PM2.5). These ancillary benefits accounted for about 99.9 percent of all monetized benefits. This unreasonable reliance on ancillary benefits is no aberration. For example, according to NERA Economic Consulting data, in just the two-year period from 2009 to 2011, the EPA did not quantify *any* direct benefits (benefits from regulating the targeted pollutant) for six major CAA rules. The quantified benefits were exclusively from the ancillary benefits of addressing particulate matter.<sup>13</sup>

If this abuse is allowed to continue, the EPA will not have to justify the purpose of many of its air rules. It can also do legal end-runs around the CAA. For example, the EPA can move forward with a rule based on ancillary benefits from particulate matter even if the applicable statutory section prohibits the agency from using that section to regulate particulate matter.

The EPA recently proposed a rule to address benefit-cost analysis in the CAA.<sup>14</sup> The rule acknowledges the problems of abusing ancillary benefits, and would require the agency to disaggregate “benefits into those targeted and ancillary to the statutory objective of the regulation.”<sup>15</sup> While this transparency might help a little, the EPA should have clear requirements in the regulatory text of the final rule as to how ancillary benefits will be treated when deciding whether to move forward with a rule under the CAA.<sup>16</sup>

At a minimum, a rule should not be justified primarily based on ancillary benefits. In other words, direct benefits, not ancillary benefits, should constitute a majority of the benefits used to justify a rule. However, this still might give too much weight to ancillary benefits, especially when the specific statutory section would not otherwise allow regulation of the non-targeted pollutant (for instance, particulate matter).

Therefore, some better approaches would be to clarify that ancillary benefits should play no more than a marginal role<sup>17</sup> in justifying a rule or, ideally, requiring that direct benefits must exceed direct costs to move forward with a rule. In the latter approach, ancillary benefits would still play a role by requiring that total benefits (direct and ancillary benefits) must exceed total costs (direct and indirect costs) and also to inform the best regulatory alternative. Congress should amend the CAA to codify one of these approaches or something comparable, and help to put an end to these abuses.

**Prohibit the Regulation of Carbon Dioxide Under the Clean Air Act.**

Congress never intended, nor could have envisioned, that when it passed the CAA it was authorizing the regulation of carbon dioxide (CO<sub>2</sub>), an invisible and odorless gas necessary for life, and other GHGs.<sup>18</sup> On an issue of this magnitude, elected and accountable legislators, as opposed to the EPA, should clarify whether GHG regulation is authorized under the statute. When making that decision, Congress should expressly prohibit such regulation, covering not just future regulation but past regulation as well.

In considering any further climate policy, Congress and the Administration should keep in mind those GHG reductions that have already been achieved. Largely through market forces, overall GHG emissions have decreased in the U.S. by 10 percent compared to 2005 levels, even as global GHG emissions increased. Energy-related CO<sub>2</sub> emissions fell in the U.S. by 12 percent, even as global energy-related CO<sub>2</sub> emissions increased by 24 percent over the same period.<sup>19</sup>

It is also worth considering how economic freedom, affordable energy, and innovation have made measurable improvements to humans' ability to adapt to adverse climates, in contrast to more heavy-handed regulatory approaches. According to the Intergovernmental Panel on Climate Change, there has been a warming of 0.85 degrees Celsius between 1880 and 2012.<sup>20</sup> Yet, climate-related deaths across the globe have fallen by more than 80 percent in the past century,<sup>21</sup> and dramatic increases in access to energy and economic growth have contributed to an equally dramatic decrease in extreme poverty globally.<sup>22</sup> In contrast, both the extremely costly Paris Agreement and national climate policies proposed in Congress will have only a negligible impact on global temperatures by the end of the century.<sup>23</sup>

Any climate policy should expand access to affordable, reliable energy and remove barriers to innovation.<sup>24</sup> Additionally, any climate policy should be evaluated on its impact on global temperatures, rather than dubious metrics like the social cost of carbon, and should acknowledge the current realities of the international energy landscape.<sup>25</sup>

## Policy Recommendations: Water

The Clean Water Act (CWA) provides one of the best examples of Congress expecting states to play a leading role in environmental protection. The implementation of the CWA is also one of the best examples of agencies ignoring this congressional expectation. The CWA makes it clear at the outset of the statute that states are to play a primary role in addressing water pollution:

It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this Act.<sup>26</sup>

However, for decades, the EPA and U.S. Army Corps of Engineers, who implement the statute, have consistently been seeking to grab more power for the federal government. The prime example of this federal power grab is how the agencies have sought to define the term “waters of the United States,” a term that is critical because it informs which waters the agencies can regulate. The following recommendations address the “waters of the United States” and other important CWA issues.

Policymakers should:

**Properly Define “Waters of the United States” Under the CWA.**

The CWA authorizes the EPA and Corps to regulate “navigable waters,” a term that means “the waters of the United States, including the territorial seas.”<sup>27</sup> The agencies have long taken an expansive interpretation of which waters fall under the language “waters of the United States” and undermined the primary role states have to regulate waters. Congress understood that having clean water does not mean that the federal government must be heavy-handed in its regulation.<sup>28</sup> The Obama Administration’s 2015 Clean Water Rule, though, took this expansive view to a new level, regulating almost every water imaginable, including some “waters” that are actually dry land most of the year. The rule was also vague and highly subjective, such that property owners may have found it wiser not to engage in certain ordinary activities, such as farming and ranching, simply because it was unclear whether such actions would violate the rule.

The Trump Administration repealed the Obama Administration rule and finalized its own rule to define “waters of the United States.” This rule, the “Navigable Waters Protection Rule,”<sup>29</sup> is a major improvement on the Obama

rule because it better reflects the will of Congress and respects the constitutional limitations placed on the agencies under the Commerce Clause. It also provides greater clarity to both regulated parties and the agencies themselves. For example, the rule does not regulate “ephemeral waters” (waters that may exist only a few days a year after heavy precipitation) or wetlands that are not truly adjacent to regulated waters.

The new rule is inconsistent, however, in important ways with Justice Antonin Scalia’s plurality opinion in *Rapanos v. United States*,<sup>30</sup> which provides significant clarity in defining “waters of the United States.” For example, the plurality opinion stated that “waters of the United States” should be “reasonably permanent” waters, and at a bare minimum, there must be “the ordinary presence of water.”<sup>31</sup> Justice Scalia’s plurality opinion also rejected the inclusion of intermittent waters (those waters with just intermittent flow).

The Trump Administration’s final rule is inconsistent with these requirements, and would include intermittent waters, which it defines as “surface water flowing continuously during certain times of the year and more than in direct response to precipitation.” The inclusion of intermittent waters, which could cover a wide range of waters, will likely continue significant confusion.

Congress should not continue to delegate the matter to the agencies, and should instead define “waters of the United States” consistently with Justice Scalia’s plurality opinion in *Rapanos*. In doing so, property owners would know how to better comply with the law. Further, the agencies could focus their resources on those water pollution issues that are supposed to fall under their jurisdiction, as intended by the CWA, and would not have to divert resources on waters that should be regulated by states or on determining which waters meet the definition of “waters of the United States.” Improving compliance and enforcement would help to improve environmental protection, not hinder it. Two similar bills in this Congress would provide effective definitions: Representative Jaime Herrera Beutler (R-WA) introduced the Regulatory Certainty for Navigable Waters Act (H.R. 667),<sup>32</sup> and Senators Mike Braun (R-IN) and Joni Ernst (R-IA) introduced the Define WOTUS Act of 2019 (S. 2356).<sup>33</sup>

### **Prohibit Federal Efforts to Regulate (Directly or Indirectly)**

**Nonpoint Sources of Pollution.** The EPA is authorized to regulate point sources, which are “discernible, confined and discrete conveyances,” such as a pipe or well.<sup>34</sup> The agency is not authorized, however, to regulate non-point sources of pollution (pollution coming from multiple sources over a wide area, such as agricultural runoff, as opposed to pollution from point sources that are specific and identifiable).<sup>35</sup> States have the role of regulating nonpoint sources, but the agency has not always respected this role.<sup>36</sup>

The EPA's efforts to address water quality in the Chesapeake Bay is one example of the agency undermining state authority. Specifically, through the Chesapeake Bay Total Maximum Daily Load (TMDL),<sup>37</sup> the EPA is allocating specific limits of pollution for numerous segments of the Bay by source, including nonpoint sources. This overreach by the EPA has practical impacts on Americans' livelihoods, such as on farming. Former U.S. Secretary of Agriculture John Block illustrated this point:

Myopic rigidity, typical of federal regulators and particularly EPA, has human costs. In lower court filings, Pendleton County, West Virginia, reported that "a significant amount of farmland will have to be removed from production" as a result. Pendleton, the court document noted, is a poor county where families "displaced from farming would have little to no opportunity to replace their loss."<sup>38</sup>

A major concern is that the Chesapeake Bay TMDL will be a model for other watersheds. This approach, allowing the federal government to make what are supposed to be state and local decisions regarding nonpoint sources, could become the norm. Congress (and the EPA) should reaffirm that the EPA does not have the authority to regulate nonpoint sources or use various schemes to get around this prohibition through indirect means. In the context of TMDLs, Congress should clarify that the EPA can set total allowable limits of pollutants, but not direct how these allocations will be divided among sources. This is a power reserved for the states.

**Prohibit States from Denying Section 401 Certifications for Non Water Quality Reasons.** The federal government is usually the one undermining the cooperative federalism principles that are central to the CWA. However, when it comes to the Section 401 certification process,<sup>39</sup> some states have been the ones undermining these principles. The EPA explains:

Section 401 of the CWA requires that, for any federally licensed or permitted project that may result in a discharge into waters of the United States, a water quality certification be issued [by states and authorized tribes] to ensure that the discharge complies with applicable water quality requirements.<sup>40</sup>

States can use this certification process to ensure that state water quality will not be harmed by federally permitted activities. The problem is that some states have been denying Section 401 certifications for reasons that have nothing to do with water quality.<sup>41</sup> For example, the State of Washington blocked the Millennium Bulk Terminal project, a proposed large coal-export facility, due to factors such as vehicle traffic and train noise.<sup>42</sup>

The EPA issued a final rule<sup>43</sup> that would require states to use the Section 401 process for water-quality reasons only, not to achieve other state objectives.<sup>44</sup> Congress should codify this rule into law.

**Prohibit Pre-emptive and Retroactive Vetoes Under Section 404(c).** Under Section 404(c) of the CWA, the EPA can veto an approved Section 404 permit issued by the Corps or a state.<sup>45</sup> This veto power has led to abuses. In 2014, the EPA vetoed a Section 404 permit for the Alaska Pebble Mine project even before the application had been filed.<sup>46</sup> The EPA has also retroactively vetoed a permit (that is, a veto after the issuance of the permit). In 2011, four years after the Corps issued a permit to the Mingo Logan Coal Company, the EPA decided to revoke the permit for the company's activities at the Spruce 1 Coal Mine in West Virginia, even though the permit holder was in full compliance with permit conditions.<sup>47</sup>

In 2018, then-EPA Administrator Scott Pruitt signed a memo directing the Office of Water to propose a rule to eliminate the authority to issue a pre-emptive or retroactive veto.<sup>48</sup> To date, the EPA has not proposed this rule. In 2019, the EPA withdrew the pre-emptive Pebble Mine veto.<sup>49</sup> The EPA should propose and finalize rules that eliminate these types of vetoes, and Congress should amend the CWA to make these changes in statute.

## Policy Recommendations: Federal Land and Wildlife

In discussing the different, yet interrelated, issues of federal land, federal barriers to development, and wildlife, it is important to have some relevant background. The federal government owns about 28 percent of the land in the United States, around 640 million acres, an area larger than California and Mexico combined. Contrary to popular perception, only 80 million acres (12.5 percent) of that land consists of national parks.<sup>50</sup>

The extent of federal land ownership varies greatly depending on whether the land is in the western part of the country or elsewhere. The federal government owns 61 percent of the land in Alaska, and 46 percent of the land in the 11 contiguous Western states.<sup>51</sup> The federal government owns 62 percent of the land in Idaho, 80 percent in Nevada, 52 percent in Oregon, and 63 percent in Utah. As for the states outside Alaska and the 11 contiguous Western states, the federal government owns only 4.1 percent of the land.<sup>52</sup> Management decisions on these lands have an outsized impact on the ability of states and individuals to pursue diverse economic opportunities, such as raising property taxes and other taxes for services

like education and public safety, and accessing lands for a variety of cultural, recreational, and economic activities. It is easy to see why federal land ownership concerns are so prevalent in the West.

When it comes to wildlife, the main policy focus should be on the Endangered Species Act (ESA). This statute, enacted in 1973, was supposed to promote the conservation of species. It has failed to do so. As of October 14, 2020, only 48 domestic species<sup>53</sup> (less than 3 percent of the listed domestic species) have been “recovered” and delisted from the endangered species list in the 47 years of the ESA.<sup>54</sup> That is about one per year.

The following policy recommendations address the federal estate, including ownership and management issues, improving the national parks, federal barriers to development, and how to improve the ESA.

Policymakers should:

**Increase Use of Collaborative Land Management Policy Tools.** Four main agencies<sup>55</sup> manage federal land. Congress has charged these agencies with implementing overlapping, contradictory, and deceptively simple laws and management mandates that have haphazardly developed over time.<sup>56</sup> Unsurprisingly, decision-making on federal lands has been contentious for decades amongst the competing interests of federal, state, and local governments; private property owners; and various recreation and conservation organizations. Until Congress does a wholesale review of the federal estate and the Gordian knot of land management policies governing it, Congress and the agencies should invest in smaller, collaborative policy tools that have yielded good results within this broken system.<sup>57</sup> Examples include:

- The Forest Service’s Good Neighbor Authority, under which it has contracted with 32 states to complete management work on national forests;<sup>58</sup>
- Utah’s voluntary Grazing Improvement Program set up in partnership with the state government, the federal government, and private property owners to develop consensus recommendations for complementary grazing and rangeland stewardship plans and projects;<sup>59</sup> and
- Wyoming’s exemption under the Antiquities Act from unilateral presidential action without congressional approval for any “National Monument” designation.

Collaborative policy tools for environmental and energy management are used by other federal agencies to good effect, such as the EPA’s and

Nuclear Regulatory Commission's formal agreements with certain states to assume certain regulatory authority under the CWA and Atomic Energy Act, respectively. The Federal Lands Freedom Act proposed in previous Congresses recommended a similar model to allow states to implement their own regulatory programs for energy permitting and development on federal lands in lieu of federal requirements.<sup>60</sup>

Shifting more control over federal lands from Washington, DC, to those with direct knowledge of the land at issue and a clear stake in the outcome of decisions would be a step in the right direction.

**Incorporate Pricing and Other Market Reforms into National Park Service Visitor Services to Alleviate Maintenance and Overcrowding.** The U.S. Department of the Interior manages more than 400 National Park units, which historically have faced multibillion dollar maintenance backlogs and funding shortfalls as Congress continues to increase park land holdings.<sup>61</sup> Additional pressure has come from increased visitation and demand for recreational opportunities.<sup>62</sup> The Administration should work with Congress as necessary to incorporate market principles into the National Park Service to help alleviate pressure and incentivize better, innovative management. This collaboration should include: (1) streamlining the Federal Lands Recreation Enhancement Act so that individual parks can efficiently set market prices for park entrance and recreation access;<sup>63</sup> (2) charging international visitors higher entrance fees, as is commonly done in other countries and to account for the fact that these are the national parks of Americans, and international visitors do not pay taxes to support them; (3) expanding the use of privately run concessions and services; and (4) devolving National Park units that do not commemorate locations of *national* import back to states, localities, or private entities.<sup>64</sup>

Prices not only help to communicate and return value, but are also useful for managing overcrowding and overuse that can cause damage to landscapes. The Administration should also explore options to enable more parks to be managed entirely or jointly by private and nonprofit entities. Federal natural and historic sites can be managed successfully under such models, as shown by the Tallgrass Prairie National Preserve (jointly managed by the National Park Service and the Nature Conservancy), or George Washington's Virginia estate (privately operated by the Mount Vernon Ladies' Association).

**Develop State-Specific Land-Transfer Plans for States Dominated by Federal Ownership.** The federal government's land ownership in some states is astronomical, sometimes with the federal government owning the majority of the land. The Interior Department and Congress should start to

address this vast scope of federal land ownership. One good place to start is focusing on those states in which the federal government has a majority stake, more than 50 percent, of any one state. A state and its citizens should not be “visitors” within their own borders by owning less land than the federal government.

The Interior Department and Congress should work with these particular states—Alaska, Idaho, Nevada, Oregon, and Utah—to devolve ownership or, at a minimum, managerial power over “multiuse” federal lands. The federal government has devolved lands in the past to territories, states, and individuals through a variety of means. One such model is the South Nevada Public Land Management Act of 1998, which made 68,000 acres of federally owned lands near Las Vegas available for purchase.<sup>65</sup> Proceeds were shared among Nevada’s General Education Fund, the Southern Nevada Water Authority, and the U.S. Department of the Interior for conservation and maintenance projects.

#### **Establish Policies to Keep Any Further Land Acquisitions in Check.**

The federal government already owns 640 million acres, in addition to 700 million subsurface acres and 1.7 billion acres of the Outer Continental Shelf; it also has control over acreage tied up in study areas. The federal government struggles to effectively and consistently manage the lands and resources under its stewardship, and yet in the past 10 years three of the four major land agencies have increased their land holdings.<sup>66</sup>

Congress unwisely gave the Interior Department and Forest Service virtually unchecked power to acquire new lands through the Land and Water Conservation Fund.<sup>67</sup> The President should not exercise the limited executive authority to add to the federal estate through, for example, the National Wildlife Refuge System or Land and Water Conservation Fund. However, if the government acquires more land, the President should establish a policy to sell or devolve to state or private ownership at least two acres for every additional acre acquired by the Interior Department or the Forest Service.

While not always perfect, local expertise leads to successful environmental policy that is more responsive and better suited to unique landscapes than the federal government’s one-size-fits-all approach.<sup>68</sup> States already share the cost of the maintenance of federal lands, whether by the liability of no management, the lost opportunity of poor management, or the infrastructure needed to support development of resources. America benefits from experimentation and innovation that could be cultivated with a more decentralized approach. More state, local, and private management would encourage better care of the environment and natural resources by putting them in the hands of people who have an immediate stake in wise management.

## **Codify the Council on Environmental Quality's (CEQ's) National Environmental Policy Act (NEPA) Reforms into Law.**

On January 1, 1970, President Richard Nixon signed NEPA into law.<sup>69</sup> It was intended to create a process by which federal agencies consider the environmental impacts of their actions. Instead, it has become a means for some activists to delay and block important development, including major projects that are critical to the welfare of Americans and environmental stewardship.<sup>70</sup>

In July, the CEQ, itself a creation of NEPA, finalized new rules to modernize how the law is implemented.<sup>71</sup> Among the many changes, the rules establish reasonable timelines for permits, streamline environmental assessments, and allow for sensible consideration of alternatives.<sup>72</sup> The CEQ also generally precludes consideration of effects that are “remote in time, geographically remote, or the product of a lengthy causal chain.”<sup>73</sup> This should rightfully end any consideration of climate-change impacts.

When NEPA was passed, none of the major federal environmental statutes existed. If they had, it is unlikely that Congress would have even considered the need for NEPA, especially if it had known that the law would become less about reasonable consideration of environmental impacts and more about unreasonable ways to block development. Ideally, Congress should repeal NEPA, but short of that, codifying the CEQ reforms is an important first step to address this unduly burdensome law.

## **Codify the 2019 Endangered Species Act (ESA) Regulations to Improve Implementation of the Statute.**

Some problems with the ESA relate to the implementation of the law. In 2019, the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) finalized important rules<sup>74</sup> that will help with ESA implementation and do a better job of conserving species.<sup>75</sup>

For example, the FWS, unlike the NMFS, treated threatened and endangered species the same when it comes to “take,” which refers to the stringent prohibitions against activities that would harm species or their habitats. This includes severe restrictions on how property owners can use their own land. The general rule is that these prohibitions are supposed to apply to *endangered* species, not to *threatened* species. By expanding them to threatened species, the FWS undermined the incentive for private landowners to protect threatened species from becoming endangered in order to avoid the stringent prohibitions.<sup>76</sup> The 2019 rules would fix this problem and follow the plain language of the ESA by making it clear that the FWS would treat threatened and endangered species differently regarding “take” prohibitions.<sup>77</sup>

There are other important changes in the rules, too, including addressing unreasonable critical habitat designations that do not help a species but do hurt property owners, and improving the transparency of the ESA so that policymakers and the public know what the costs and benefits are for conserving species.<sup>78</sup> Congress should codify these rules into law to help improve the implementation of the ESA in order to achieve the goal of actually recovering endangered species.

**Shift ESA Costs Imposed on Property Owners to Society as a Whole.**

Private property owners often bear much of the cost of the ESA, such as having to limit how they use their land. Society has made a choice that protecting species is important, and therefore society as a whole should bear the costs, as opposed to the costs being borne by a relative small number of private property owners who have done nothing to warrant the burden of such penalties.

Courts afford little protection for property owners when regulations restrict the use and enjoyment of their property, even when most of a property's value has been lost. Therefore, Congress should create compensation mechanisms within the ESA to offset the costs connected to limiting the use and enjoyment of private property. This change would protect private property rights and require the federal government to be transparent about the true costs of the ESA.

**Separate the ESA Listing Process from Any Regulatory Requirements and Provide Greater Agency Flexibility.** Currently, when deciding whether to list a species as threatened or endangered, the FWS and NMFS are supposed to focus just on scientific evidence and may not consider economic effects.<sup>79</sup> Listings automatically trigger "take" prohibitions for endangered species and a requirement to designate critical habitat.<sup>80</sup> To ensure that listings are genuinely based on science, they should be kept distinct from other statutory requirements, such as those that are regulatory in nature, which could bias the listing process.<sup>81</sup>

Listings should have nothing to do with the processes that the agencies employ to address the conservation of species or how they decide which regulations and other tools should be used to achieve their conservation objectives. Post-listing decisions should be based on sound cost-benefit analysis, and the agencies should have flexibility in how to achieve their objectives, including by prioritizing some species over others based on the likelihood of success (triage). The agencies should also be able to work with states more easily and allow states to take the lead on species protection. Congress should codify these changes into law, and, as a result, help the agencies to better allocate resources and achieve better environmental outcomes.

### **Remove Regulatory Barriers to Improve Forest and Wildfire**

**Management.** Wildfires are part of the natural order and, to a degree, are essential for healthy forests. Nationally, wildfires are down in number and acreage consumed over the past century even as the cost of suppressing them has increased significantly.<sup>82</sup> Devastating, high-profile wildfires in the West over the past several years have led many to correlate catastrophic fires with global warming. Ciphering out how and how much global warming may contribute to wildfires is complex and highly nuanced.<sup>83</sup> Regardless of that debate, there are actions that land managers can take now to reduce the likelihood of truly catastrophic wildfires.

Actively managed forests with harvesting and prescribed burns have improved the health of trees, habitat, and water quality while also proving more resilient, as fuel that would otherwise turn wildfires into catastrophic burns has been proactively cleared.<sup>84</sup> Yet the entire federal government conducted controlled burns on only six million acres in 2019.<sup>85</sup> Federal land designations, such as wilderness and roadless areas on tens of millions of acres, severely limit the legally permissible tools to manage forests and combat fires, and abuse of the NEPA process makes getting regulatory approval for such management activities arduous, slow, and sometimes impossible.<sup>86</sup> Risk of being in nonattainment of NAAQS standards has also disincentivized the use of prescribed burns. Congress should conduct a holistic review of regulatory barriers to better management, including barriers to prescribed burns. The Administration should also expand agreements with state and private property owners through the Forest Service's Good Neighbor Authority to improve coordination and stewardship of forests.

### **Policy Recommendations: Sound Science and Transparency**

Congress has delegated significant power to federal agencies that implement environmental laws, allowing unelected and generally unaccountable bureaucrats to make critical policy decisions affecting the lives of Americans. In some instances, Congress has effectively delegated its lawmaking power to these agencies.

Consequently, it is critically important for environmental policy decisions made by federal agencies to be based on sound science and for the public to know how these decisions have been made. In order for environmental policy to have legitimacy, the federal government must ensure that credible science is used, and promote transparency of how the agencies reach their final policy decisions.

In a 2009 memorandum on scientific integrity, President Barack Obama explained, “The public must be able to trust the science and scientific process informing public policy decisions.”<sup>87</sup> He was absolutely right.<sup>88</sup> However, the federal government must take action to make that trust happen.

The following policy recommendations address how to create public trust in the science used by the government. They also identify solutions to promote transparency<sup>89</sup> so that Americans can have confidence that environmental policy developed by agencies reflects sound decision-making, not political and ideological preferences.

Policymakers should:

**Make the Underlying Science Available to the Public.** When federal agencies develop regulations or disseminate information, they should provide the public the necessary information, including data and models, to evaluate the science that has been used. A Bipartisan Policy Center report recommended that “federal agencies, universities and journals should encourage or require on-line publication of the methods and data underlying published scientific studies.”<sup>90</sup> In 2013, the Administrative Conference of the United States adopted “Administrative Conference Recommendation 2013-13,”<sup>91</sup> which states:

To the extent practicable and in compliance with applicable legal restrictions, privileges, protections, and authorities, agencies should seek to provide disclosure of data underlying scientific research, including both privately and federally funded research being considered by the agencies.<sup>92</sup>

The need for transparency is even more important due to the many concerns that exist with peer review. In 2015, Richard Horton, editor of *The Lancet*, asserted that “much of the scientific literature, perhaps half, may simply be untrue.”<sup>93</sup> A 2016 *Nature* survey found that “more than 70% of researchers have tried and failed to reproduce another scientist’s experiments, and more than half have failed to reproduce *their own* experiments.”<sup>94</sup> (Emphasis added.)

The EPA is currently trying to address these scientific transparency problems, proposing a rule in 2018 to address the issue<sup>95</sup> and publishing a supplemental notice to the rule in 2020.<sup>96</sup> Many critics of these transparency efforts have articulated general support for transparency but then criticized these efforts by pointing to privacy, confidentiality, and confidential business information concerns. To the extent that there are legitimate concerns regarding these issues, appropriate and narrow steps should be taken, but this is hardly a justification for not moving forward with promoting transparency. The EPA should finalize its science transparency rule.

In the supplemental notice, the EPA tried to determine how to deal with studies when underlying data and models are unavailable. When there are *genuine* privacy, confidentiality, and confidential business information concerns, the EPA should not exclude studies, but give less weight to the studies when underlying information is unavailable. When there are no genuine concerns, the EPA should exclude the studies. Objective criteria should be developed to determine when there is no genuine concern. For example, if the authors of a study simply do not want to provide the underlying information, that is not a genuine concern.

These transparency efforts should not be limited to the EPA. Congress should pass scientific transparency legislation that covers agencies across the government (including independent agencies), including those involved in environmental policy.

**Make No Assumptions About the Accuracy of the Linear No-Threshold (LNT) Model.** The LNT model, used in environmental policy and across the federal government, assumes that there is no safe level of exposure to a chemical or other alleged hazard. In other words, if a chemical is harmful at a high exposure then the chemical is assumed to also be harmful at a low or null level. The Heritage Foundation's *Environmental Policy Guide* explains why the LNT assumption is inaccurate: "There are always thresholds at which any chemical can pose a health risk, and smaller exposures at which toxic effects do not exist. In many cases, very low exposures may actually produce benefits."<sup>97</sup>

In an article on the LNT model and radiation in the peer-reviewed journal *Dose-Response*, John Cardarelli and Brant Ulsh make a very important point:

The current [EPA] policy takes the position that the LNT model is accurate unless "compelling evidence to the contrary" is presented. This approach is included in the agency's guidelines that direct the use of the LNT even if the scientific evidence cannot substantiate that conclusion. This is a circular argument that excludes the option of other alternative models from being considered.<sup>98</sup>

Excessively conservative standards have increased cost and complexity of reasonable, healthy activities for little or no public health and safety benefit. When government overstates risk, it is not protecting the public and in fact can encourage decisions that are harmful to both people and the environment.<sup>99</sup> There should be no sweeping assumptions about the LNT model, or for that matter, any alternative models. Instead, the federal government should have to establish the accuracy of using the LNT model or another model.

**Prohibit Agencies from Giving Up Discretionary Authority and Eliminating Procedural Safeguards Through “Sue and Settle.”** In general, sue and settle refers to a party suing, and then settling with, the government in order to compel the government to take action allegedly required by law.<sup>100</sup> Sue and settle is especially prevalent in environmental policy due to the numerous citizen-suit provisions that exist in federal environmental statutes. On the surface, sue and settle may sound innocent, but in practice it can enable outside groups to effectively set agency policy priorities and influence agency policy agendas. The settlement process can result in behind-the-scenes policymaking, where a small number of special interests can obtain the federal government’s agreement to propose actions favored by those interests. This lessens the value of public participation in the rulemaking process, as the agency’s policy direction is already established.

Many sue-and-settle lawsuits are referred to as deadline suits, because the agencies are being sued after they failed to meet mandatory statutory deadlines. These types of lawsuits can lead to abuse because the government can agree to rush rulemaking processes and avoid the usual procedural safeguards that otherwise would exist.

Even more troubling than deadline suits are lawsuits in which agencies allow special interests to use the sue-and-settle process to dictate substantive policy proposals by the agencies.<sup>101</sup> The process for the proposed 2020 National Pollutant Discharge Elimination System multi-sector general permit (MSGP) for storm water discharges associated with industrial activity provides a current example of this problem.<sup>102</sup> The EPA has proposed to exclude from eligibility, under the general permit, industrial facilities that seal or reseal pavement using refined-coal tar-based sealcoat (RTS). In 2015, the EPA expressly rejected a RTS exclusion for the 2015 general permit.<sup>103</sup> Yet, just a year later, the EPA entered into a settlement agreement<sup>104</sup> with numerous environmental groups and intervenors, resolving a challenge to the 2015 general permit that completely reversed the EPA’s policy direction on RTS.

The EPA used this settlement as a way to mandate that the agency make the substantive policy decision desired by the outside organizations to propose the RTS exclusion in the 2020 general permit. The EPA did in fact propose this exclusion. The settlement made it far more likely that the exclusion would be included in the final permit. After the settlement, petitioners issued a press release commending the EPA “for taking the first federal measures to restrict the use of coal tar sealants in the United States.”<sup>105</sup> The EPA appears to think the restriction is a fait accompli. Instead

of the EPA deciding for itself whether to propose the exclusion, the agency is required to work backwards to justify its current proposal because it was mandated to be included in the proposed 2020 general permit.

Congress should prohibit federal agencies, including environmental agencies, from entering into any settlements that would rush the time necessary to promulgate a rule or otherwise avoid procedural safeguards in the rulemaking process. More important, Congress should prohibit agencies from agreeing to anything beyond meeting procedural *statutory* mandates; agencies in no way should agree to make substantive discretionary decisions, including what the agencies will propose in future rulemakings.

**Strengthen the Information Quality Act Through Clear Requirements and Judicial Review.** The Information Quality Act (IQA), enacted in 2000, is a federal law that directs the Office of Management and Budget (OMB) to develop government-wide guidelines to improve the accuracy of federally disseminated information.<sup>106</sup> In addition, the IQA requires that procedures are in place to allow affected parties to seek and obtain correction of erroneous information. This law has the potential to significantly improve the quality of federal-government-disseminated information (such as scientific reports) and the regulations that are informed by this information.<sup>107</sup>

The law has not lived up to this potential because, as implemented, there are insufficiently clear requirements imposed on agencies and insufficient means to enforce the law. The OMB has developed two primary documents regarding IQA implementation: the 2002 OMB guidelines<sup>108</sup> and OMB's "Final Information Quality Bulletin for Peer Review."<sup>109</sup> While these documents do provide useful guidance to agencies, much of the information is guidance or suggested practices rather than requirements. Even many of the requirements allow agencies to have so much discretion that they are difficult to enforce. This agency discretion has helped some courts to use it as the basis for denying judicial review under the Administrative Procedure Act. However, there are still plenty of requirements in these OMB documents that courts can, and should be, enforcing.

In order for the IQA to reach its potential and improve the quality of federal-government-disseminated information, including information that affects environmental policy, the OMB should revise both its guidelines and Information Quality Bulletin. The OMB needs to create far more non-discretionary requirements and ensure that agencies do not have any wiggle room to deny the correction of erroneous information. Congress also needs to clarify that there is judicial review of IQA actions under the Administrative Procedure Act.

**Take Steps to Stop the Conflation of Policy and Science.** Sound science is vital to informing environmental policy. However, science itself does not answer environmental policy questions. Science provides answers to objective questions, without making value judgments. Policy decisions, though, require value judgments and subjective decision-making.

Too often, though, science is conflated with policy (or law or ideology). For example, the EPA’s Science Advisory Board (SAB) recently went off mission when it tried to answer what the legal term “waters of the United States” should mean.<sup>110</sup> The SAB does not exist so that the EPA can learn the legal opinion of scientists.

The EPA and other agencies should make it very clear that scientific advisory boards are supposed to be focused on science alone, seeking only to answer objective questions. They should also avoid putting experts on panels that answer questions unrelated to their expertise (such as economists answering biology questions). Congress should adjust the missions of any scientific panels that could have responsibilities beyond the science. Further, Congress should change procedures, such as with the ESA listing process, which are supposed to be about the science alone, but in reality are impossible to separate from policy considerations.

## Conclusion

The nation’s environment should be treated as a priority, recognizing that other priorities, such as a flourishing economy, help to improve environmental outcomes. To have the most success in protecting the environment, there must be a collaborative process that respects all the actors who can help to achieve desired environmental outcomes. This means respecting private property owners and the states, instead of viewing them as obstacles that the federal government must overcome. Many of the recommendations in this *Backgrounder* highlight the need for this collaboration and a shift away from one-size-fits-all approaches.

Another common thread among the recommendations is the focus on the processes by which environmental success should be achieved. These processes, such as increasing congressional accountability and promoting transparency in science, do not lead to specific policy outcomes. Instead, they are a way to ensure that when the federal government does make environmental policy decisions, these decisions are thoughtfully considered and deserving of the public’s trust.

Congress and the Administration should be proactive in pursuing the listed recommendations in this *Backgrounder*. In addition to improving

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collaboration and policy processes, the recommendations reflect a commitment to achieving tangible environmental improvements while at all times taking into account the best interests of all Americans. The United States does not have to choose between economic growth, individual freedom, federalism, and a clean environment. Policymakers should reject recommendations that force such a choice, and embrace those policies that view them as interrelated and integral to each other.

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## Endnotes

1. For an energy-focused agenda, see Nicolas D. Loris, "An Energy Policy Agenda for the Energy Consumer," Heritage Foundation *Backgrounder*, forthcoming.
2. Jack Spencer et al., "Environmental Conservation: Eight Principles of the American Conservation Ethic," The Heritage Foundation, July 27, 2012, <http://opportunity.heritage.org/conserve-the-environment-through-responsible-stewardship/>.
3. Yale Center for Environmental Law & Policy and Center for International Earth Science Information Network Earth Institute, Columbia University, *Environmental Performance Index 2020*, "Country Profile: United States of America," 2020, [https://epi.yale.edu/sites/default/files/USA\\_EPI2020\\_CP.pdf](https://epi.yale.edu/sites/default/files/USA_EPI2020_CP.pdf) (accessed October 21, 2020).
4. U.S. Environmental Protection Agency, "Air Quality—National Summary," <https://www.epa.gov/air-trends/air-quality-national-summary> (accessed October 21, 2020).
5. Ibid.
6. In addition to the stricter standards, media accounts that use misleading scare tactics can also distort the air quality picture. For example, numerous media outlets asserted that air quality is getting worse simply based on cherry-picking two years of data showing a slight increase in fine particulate matter (PM2.5) in 2017 and 2018. See, for example, Christopher Ingraham, "Air Pollution Is Getting Worse, and Data Show More People Are Dying," *The Washington Post*, October 23, 2019, <https://www.washingtonpost.com/business/2019/10/23/air-pollution-is-getting-worse-data-show-more-people-are-dying/> (accessed October 21, 2020), and Drew Kann, "Air Quality in the US Is Getting Worse and Could Be Killing Thousands, Study Finds," CNN, October 23, 2019, <https://www.cnn.com/2019/10/23/health/us-air-pollution-worsening-study-scn-trnd/index.html> (accessed October 21, 2020). Not surprisingly, in 2019, the concentration level declined significantly, even below the number of 2016. Such stories fail to provide the proper context. From 2010 to 2019, there was a 23 percent decline in PM2.5 concentration levels, and from 2000 to 2019, the decline was 43 percent. See U.S. Environmental Protection Agency, "Particulate Matter (PM2.5) Trends," <https://www.epa.gov/air-trends/particulate-matter-pm25-trends#pmnat> (accessed October 21, 2020). There do not appear to be many (or any) stories from these outlets discussing how this increase in PM2.5, about which the media raised alarm, disappeared in 2019, and there was actually a decline when looking at the base year used by the media (2016).
7. Ground-level ozone is not to be confused with the ozone layer. To learn more, see U.S. Environmental Protection Agency, "Ground-Level Ozone Pollution," <https://www.epa.gov/ground-level-ozone-pollution> (accessed October 21, 2020).
8. James E. McCarthy and Kate C. Shouse, "Implementing EPA's 2015 Ozone Air Quality Standard," Congressional Research Service, August 16, 2018, <https://fas.org/sgp/crs/misc/R43092.pdf> (accessed October 21, 2020). As the CRS explains: "EPA estimates the cost of meeting the 70 ppb standard in all states except California at \$1.4 billion annually in 2025. Because most California areas would have until the 2030s to reach attainment, EPA provided separate cost estimates for California (\$0.80 billion annually, post-2025)." The National Association of Manufacturers commissioned a study by NERA Economic Consulting that analyzed the then-proposed 2015 ozone standards based on a more stringent standard (65 parts per billion) than what the agency ultimately adopted (70 parts per billion). The EPA, though, was considering this stricter standard. Based on the report, this ozone standard could have been the costliest rule in U.S. history, reducing GDP by \$140 billion and eliminating as many as 1.4 million job per year. Job equivalents are defined as "total labor income change divided by the average annual income per job." National Association of Manufacturers, "Federal Ozone Regulation Could Be Costliest in U.S. History," 2019, <https://www.nam.org/wp-content/uploads/2019/05/Ozone-Regulations-2015-Update.pdf> (accessed October 21, 2020).
9. *Whitman v. American Trucking Associations*, 531 U.S. 457 (2001), <https://www.law.cornell.edu/supct/html/99-1257.ZS.html> (accessed October 1, 2020).
10. For primary standards, the EPA Administrator must set standards that are "requisite to protect public health with an adequate margin of safety." "Requisite" protection means establishing "standards that are neither more nor less stringent than necessary." Environmental Protection Agency, "Review of the Ozone National Ambient Air Quality Standards," Proposed Rule, *Federal Register*, Vol. 85, No. 158 (August 14, 2020), pp. 49830–49917, <https://www.federalregister.gov/documents/2020/08/14/2020-15453/review-of-the-ozone-national-ambient-air-quality-standards> (accessed October 21, 2020). "In *Lead Industries Association*, we held that the choice of how to set a margin of safety is 'a policy choice of the type that Congress specifically left to the Administrator's judgment.'" See *Mississippi v. EPA*, 744 F.3d 1334 (2013), <https://www.leagle.com/decision/inadvfc0140606000119> (accessed October 1, 2020). In his concurrence in *Whitman v. American Trucking Associations*, Justice Breyer explained, "the statute [CAA], by its express terms, does not compel the elimination of *all* risk; and it grants the Administrator sufficient flexibility to avoid setting ambient air quality standards ruinous to industry." *Whitman v. American Trucking Associations*, 531 U.S. 457 (2001), <https://www.law.cornell.edu/supct/html/99-1257.ZS.html> (accessed October 1, 2020).
11. For example, in 2011, President Barack Obama directed the EPA to withdraw its proposed ozone standards due to what appears to have been economic reasons. See Neela Banerjee, "Obama Asks EPA to Back Off Draft Ozone Standard," *Los Angeles Times*, September 2, 2011, <https://www.latimes.com/archives/la-xpm-2011-sep-02-la-pn-obama-ozone-20110902-story.html> (accessed October 21, 2020), and Juliet Eilperin, "Obama Pulls Back Proposed Smog Standards in Victory for Business," *The Washington Post*, September 2, 2011, [https://www.washingtonpost.com/national/health-science/obama-pulls-back-proposed-smog-standards-in-victory-for-business/2011/09/02/gIQAisTiwJ\\_story.html](https://www.washingtonpost.com/national/health-science/obama-pulls-back-proposed-smog-standards-in-victory-for-business/2011/09/02/gIQAisTiwJ_story.html) (accessed October 21, 2020).
12. U.S. Environmental Protection Agency, "Mercury and Air Toxics Standards (MATS)," <https://www.epa.gov/mats> (accessed October 21, 2020).
13. Anne E. Smith, "An Evaluation of the PM2.5 Health Benefits Estimates in Regulatory Impact Analyses for Recent Air Regulations," NERA Economic Consulting, December 2011, [https://www.nera.com/content/dam/hera/publications/archive2/PUB\\_RIA\\_Critique\\_Final\\_Report\\_1211.pdf](https://www.nera.com/content/dam/hera/publications/archive2/PUB_RIA_Critique_Final_Report_1211.pdf) (accessed October 21, 2020).

14. Environmental Protection Agency, "Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process," Proposed Rule, *Federal Register*, Vol. 85, No. 113 (June 11, 2020), pp. 35612–35627, <https://www.federalregister.gov/documents/2020/06/11/2020-12535/increasing-consistency-and-transparency-in-considering-benefits-and-costs-in-the-clean-air-act> (accessed October 21, 2020).
15. Ibid.
16. Specifically, the EPA should not include the requirement in the preamble of the final rule, but in the regulatory text of the final rule.
17. This would mirror preamble language in the "MATS reconsideration" rule, in which the EPA explains: "While the Administrator could consider air quality benefits other than HAP-specific benefits in the CAA section 112(n)(1)(A) context, consideration of these co-benefits could permissibly play only, at most, a *marginal role* in that determination, given that the CAA has assigned regulation of criteria pollutants to other provisions in title I of the CAA, specifically the NAAQS regime pursuant to CAA sections 107–110." (Emphasis added.) Environmental Protection Agency, "National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units—Reconsideration of Supplemental Finding and Residual Risk and Technology Review," Final Rule, *Federal Register*, Vol. 85, No. 100 (May 22, 2020), pp. 31286–31320, <https://www.govinfo.gov/content/pkg/FR-2020-05-22/pdf/2020-08607.pdf> (accessed October 21, 2020).
18. Congress should reject the infamous U.S. Supreme Court case *Massachusetts v. EPA*, which held that the Clean Air Act did authorize the EPA to regulate GHGs from new motor vehicles. *Massachusetts v. EPA*, 549 U.S. 497 (2007), <https://www.law.cornell.edu/supct/html/05-1120.ZS.html> (accessed October 22, 2020).
19. U.S. Environmental Protection Agency, "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2018," April 13, 2020, <https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf> (accessed October 19, 2020), and United Nations Environment Programme, "Emissions Gap Report 2019," 2019, <https://wedocs.unep.org/bitstream/handle/20.500.11822/30798/EGR19ESEN.pdf> (accessed October 21, 2020).
20. International Panel on Climate Change, "Climate Change 2014 Synthesis Report Summary for Policymakers," [https://www.ipcc.ch/site/assets/uploads/2018/02/AR5\\_SYR\\_FINAL\\_SPM.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/AR5_SYR_FINAL_SPM.pdf) (accessed October 19, 2020).
21. Hannah Ritchie and Max Roser, "Natural Disasters," November 2019, <https://ourworldindata.org/natural-disasters#deaths-from-disasters> (accessed October 19, 2020).
22. While it is not clear whether improved access to affordable, reliable electricity drives economic growth, or vice versa, it is clear that these trends go together and have positive ramifications for opportunity, education and jobs, social mobility, housing, and health care. Max Roser and Esteban Ortiz-Ospina, "Global Extreme Poverty," March 27, 2017, <https://ourworldindata.org/extreme-poverty> (accessed October 19, 2020), and Hannah Ritchie and Max Roser, "Access to Energy," November 2019, <https://ourworldindata.org/energy-access> (accessed October 22, 2020).
23. See, for example, this analysis on perhaps the most ambitious climate plan yet proposed, the Green New Deal: Kevin D. Dayaratna and Nicolas D. Loris, "Assessing the Costs and Benefits of the Green New Deal's Energy Policies," Heritage Foundation *Backgrounder* No. 3427, July 24, 2019, <https://www.heritage.org/energy-economics/report/assessing-the-costs-and-benefits-the-green-new-deals-energy-policies>.
24. For specific policy reforms, see Nicolas D. Loris, "Pursuing Policies to Drive Economic Growth and Reduce Emissions," Heritage Foundation *Backgrounder* No. 3444, October 16, 2019, <https://www.heritage.org/energy-economics/report/pursuing-policies-drive-economic-growth-and-reduce-emissions>.
25. A more useful tool is the Model for the Assessment of Greenhouse-gas Induced Climate Change (MAGICC). Developed at the National Center for Atmospheric Research in part with funding from the Environmental Protection Agency (EPA), MAGICC quantifies the temperature effect and sea-level changes from increases and decreases in GHG emissions.
26. 33 U.S. Code § 1251(b), <https://www.law.cornell.edu/uscode/text/33/1251> (accessed October 27, 2020).
27. 33 U.S. Code § 1362(7), <https://www.law.cornell.edu/uscode/text/33/1362> (accessed October 27, 2020).
28. CWA regulation is just one tool in a massive web of laws and programs to address surface waters. There are other federal laws and programs, states and local governments, and private actors that also address surface water issues. A separate federal law, the Safe Drinking Water Act, protects the water that Americans drink.
29. U.S. Environmental Protection Agency, "Final Rule: The Navigable Waters Protection Rule," April 21, 2020, <https://www.epa.gov/nwpr/final-rule-navigable-waters-protection-rule> (accessed October 21, 2020).
30. *Rapanos v. United States*, 547 U.S. 715, 734 (2006), <https://www.law.cornell.edu/supct/html/04-1034.ZO.html> (accessed October 27, 2020).
31. Ibid.
32. Regulatory Certainty for Navigable Waters Act, H.R. 667, 116th Cong., 1st Sess., <https://www.congress.gov/bill/116th-congress/house-bill/667/text> (accessed October 21, 2020).
33. Define WOTUS Act of 2019, S. 2356, 116th Cong., 1st Sess., <https://www.congress.gov/bill/116th-congress/senate-bill/2356/text> (accessed October 21, 2020), and news release, "Braun and Ernst Introduce 'Define WOTUS Act' in Senate," Office of Senator Mike Braun, August 4, 2019, <https://www.braun.senate.gov/braun-and-ernst-introduce-define-wotus-act-senate> (accessed October 21, 2020).

34. 33 U.S. Code § 1362(14), <https://www.law.cornell.edu/uscode/text/33/1362> (accessed October 27, 2020).
35. U.S. Environmental Protection Agency, “Basic Information about Nonpoint Source (NPS) Pollution,” <https://www.epa.gov/nps/basic-information-about-nonpoint-source-nps-pollution> (accessed October 21, 2020). See also Watershed Academy Web, “Introduction to the Clean Water Act,” U.S. Environmental Protection Agency, [https://cfpub.epa.gov/watertrain/moduleFrame.cfm?parent\\_object\\_id=2788](https://cfpub.epa.gov/watertrain/moduleFrame.cfm?parent_object_id=2788) (accessed October 21, 2020).
36. *American Farm Bureau Federation v. United States Environmental Protection Agency*, 792 F.3d 281 (2015). States and local governments also were unhappy with the Chesapeake Bay TMDL; 21 state attorney generals and eight counties filed amici briefs in *American Farm Bureau Federation v. United States Environmental Protection Agency*. John Vogel, “Battle Lines Drawn on EPA’s Chesapeake Bay TMDL Authority,” Farm Progress, April 29, 2014, <https://www.farmprogress.com/story/battle-lines-drawn-epas-chesapeake-bay-tmdl-authority-9-111890> (accessed October 22, 2020).
37. U.S. Environmental Protection Agency, “Chesapeake Bay Total Maximum Daily Load (TMDL),” <https://www.epa.gov/chesapeake-bay-tmdl> (accessed October 21, 2020). See also U.S. Environmental Protection Agency, “Overview of Total Maximum Daily Loads (TMDLs),” <https://www.epa.gov/tmdl/overview-total-maximum-daily-loads-tmdls> (accessed October 21, 2020).
38. John Block, “A Scheme to Say How Land Is Used,” *The Washington Times*, February 18, 2016, <https://www.washingtontimes.com/news/2016/feb/18/john-block-a-scheme-to-say-how-land-is-used/> (accessed October 21, 2020).
39. U.S. Environmental Protection Agency, “Basic Information on CWA Section 401 Certification,” <https://www.epa.gov/cwa-401/basic-information-cwa-section-401-certification> (accessed October 21, 2020).
40. U.S. Environmental Protection Agency, “Fact Sheet: Clean Water Act Section 401 Certification Final Rule,” June 2020, [https://www.epa.gov/sites/production/files/2020-06/documents/overview\\_fact\\_sheet\\_for\\_the\\_clean\\_water\\_act\\_section\\_401\\_certification\\_rule.pdf](https://www.epa.gov/sites/production/files/2020-06/documents/overview_fact_sheet_for_the_clean_water_act_section_401_certification_rule.pdf) (accessed October 21, 2020).
41. U.S. Environmental Protection Agency, “Clean Water Act Section 401 Certification Rule,” *Federal Register*, Vol. 85, No. 134 (July 13, 2020), pp. 42210–42287, <https://www.federalregister.gov/documents/2020/07/13/2020-12081/clean-water-act-section-401-certification-rule> (accessed October 27, 2020). “Certifying authorities have on occasion required in a certification condition the construction of biking and hiking trails, requiring one-time and recurring payments to State agencies for improvements or enhancements that are unrelated to the proposed federally licensed or permitted project.... [They] have also attempted to address all potential environmental impacts from the creation, manufacture, or subsequent use of products generated by a proposed federally licensed or permitted activity or project that may be identified in an environmental impact statement or environmental assessment, prepared pursuant to the NEPA or a State law equivalent.”
42. Washington State Department of Ecology, “Section 401 Water Quality Certification Denial (Order No. 15417) for Corps Public Notice No. 2010-1225 Millennium Bulk Terminals-Longview, LLC, Coal Export Terminal,” September 26, 2017, <https://ecology.wa.gov/DOE/files/83/8349469b-a94f-492b-acca-d8277e1ad237.pdf> (accessed October 22, 2020).
43. U.S. Environmental Protection Agency, “Clean Water Act Section 401 Clarification Rule,” *Federal Register*, Vol. 85, No. 134 (July 13, 2020), pp. 42210–42287, [https://www.epa.gov/sites/production/files/2020-07/documents/clean\\_water\\_act\\_section\\_401\\_certification\\_rule.pdf](https://www.epa.gov/sites/production/files/2020-07/documents/clean_water_act_section_401_certification_rule.pdf) (accessed October 21, 2020).
44. U.S. Environmental Protection Agency, “Final Rule: Clean Water Act Section 401 Certification Rule,” <https://www.epa.gov/cwa-401/final-rule-clean-water-act-section-401-certification-rule> (accessed October 21, 2020), and Daren Bakst, “EPA’s Section 401 Rule Respects Federalism While Addressing State Abuses,” *The Daily Signal*, June 4, 2020, <https://www.heritage.org/environment/commentary/epas-section-401-rule-respects-federalism-while-addressing-state-abuses>.
45. U.S. Environmental Protection Agency, “Updating EPA’s Regulations Implementing CWA Section 404(c) (Memorandum),” <https://www.epa.gov/cwa-404/updating-epas-regulations-implementing-cwa-section-404c-memorandum> (accessed October 21, 2020), and U.S. Environmental Protection Agency, “Clean Water Act Section 404(c) “Veto Authority,”” <https://www.epa.gov/sites/production/files/2016-03/documents/404c.pdf> (accessed October 21, 2020).
46. News release, “EPA Withdraws Outdated, Preemptive Proposed Determination to Restrict Use of the Pebble Deposit Area as a Disposal Site,” U.S. Environmental Protection Agency, July 30, 2019, <https://www.epa.gov/newsreleases/epa-withdraws-outdated-preemptive-proposed-determination-restrict-use-pebble-deposit> (accessed October 21, 2020).
47. See, for example, Deidre G. Duncan and Karma B. Brown, “EPA’s Unprecedented Exercise of Authority Under Clean Water Act Section 404(c),” American Bar Association *In-House Counsel Committee Newsletter*, Vol. 12, No. 2 (June 2011), <https://www.huntonak.com/images/content/3/7/v3/3734/EPAs-Unprecedented-Exercise-of-Authority-6.11.pdf> (accessed October 21, 2020).
48. U.S. Environmental Protection Agency, “Updating EPA’s Regulations Implementing CWA Section 404(c) (Memorandum),” <https://www.epa.gov/cwa-404/updating-epas-regulations-implementing-cwa-section-404c-memorandum> (accessed October 21, 2020).
49. News release, “EPA Withdraws Outdated, Preemptive Proposed Determination to Restrict Use of the Pebble Deposit Area as a Disposal Site.”
50. Carol Hardy Vincent, Lucas Bermejo, and Laura Hanson, “Federal Land Ownership: Overview and Data,” Congressional Research Service, February 21, 2020, <https://fas.org/sgp/crs/misc/R42346.pdf> (accessed October 16, 2020).
51. Ibid. Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.
52. Ibid.

53. This includes recovered species listed as “Domestic” and “Both Domestic and Foreign.” U.S. Fish and Wildlife Service, “Delisted Species,” Environmental Conservation Online System, Database, <https://ecos.fws.gov/ecp/report/species-delisted> (accessed October 21, 2020).
54. The 48 recovered domestic species was divided by the total number of listed domestic species (1,668). U.S. Fish and Wildlife Service, “Listed Species Summary (Boxscore),” Environmental Conservation Online System, Database, <https://ecos.fws.gov/ecp/report/boxscore> (accessed October 21, 2020).
55. (1) The National Park Service; the (2) Bureau of Land Management; and (3) the U.S. Fish and Wildlife Service in the Department of the Interior; and (4) the Forest Service in the Department of Agriculture.
56. Allan Fitzsimmons, *Reforming Federal Land Management: Cutting the Gordian Knot* (Lanham, MD: Rowman & Littlefield Publishers, 2012).
57. Katie Tubb, “No More Standoffs: Protecting Federal Employees and Ending the Culture of Anti-Government Attacks and Abuse,” testimony before the Subcommittee on National Parks, Forests, and Public Lands, Committee on Natural Resources, U.S. House of Representatives October 22, 2019, <https://www.congress.gov/116/meeting/house/110104/witnesses/HHRG-116-II10-Wstate-TubbK-20191022.pdf> (accessed October 16, 2020).
58. Jason Hayes, “Conflict to Cooperation: Collaborative Management of Federal Lands in Michigan,” Property and Environment Research Center and the Mackinac Center, October 30, 2018, <https://www.perc.org/2018/10/30/conflict-to-cooperation-collaborative-management-of-federal-lands-in-michigan/> (accessed October 16, 2020). See also U.S. Forest Service, “Good Neighbor Authority,” <https://www.fs.fed.us/managing-land/farm-bill/gna> (accessed October 16, 2020).
59. Michele Straube and Lorien Belton, “Final Report and Consensus Recommendations,” Collaborative Group on Sustainable Grazing for U.S. Forest Service Lands in Southern Utah, December 2012, <https://ag.utah.gov/wp-content/uploads/2019/05/Sustainable-Grazing-for-Southern-Utah-Forests.pdf> (accessed October 16, 2020). Also see U.S. Bureau of Land Management, “BLM Seeks Public Comment on the Bison Fence Environment,” August 16, 2018, <https://www.blm.gov/press-release/blm-seeks-public-comment-bison-fence-environmental-assessment> (accessed October 16, 2020).
60. Katie Tubb and Nicolas D. Loris, “The Federal Lands Freedom Act: Empowering States to Control Their Own Energy Futures,” Heritage Foundation Backgrounder No. 2992, February 18, 2015, <https://www.heritage.org/environment/report/the-federal-lands-freedom-act-empowering-states-control-their-own-energy-futures>.
61. Vincent, Bermejo, and Hanson, “Federal Land Ownership.”
62. Nicolas D. Loris, “Tackling the Enormous Deferred Maintenance Backlog for America’s National Parks,” Heritage Foundation Backgrounder No. 3500, June 9, 2020, <https://www.heritage.org/environment/report/tackling-the-enormous-deferred-maintenance-backlog-americas-national-parks>.
63. The Federal Lands Recreation Enhancement Act, 16 U.S. Code §§ 6801–6814.
64. Loris, “Tackling the Enormous Deferred Maintenance Backlog.”
65. U.S. Bureau of Land Management, “Southern Nevada Public Land Management Act (SNPLMA),” [https://www.blm.gov/sites/blm.gov/files/documents/files/SNPLMA\\_New%20About%20Page.pdf](https://www.blm.gov/sites/blm.gov/files/documents/files/SNPLMA_New%20About%20Page.pdf) (accessed October 16, 2020).
66. Vincent, Bermejo, and Hanson, “Federal Land Ownership.”
67. Katie Tubb, “Senate Conservation Bill Can’t Offset Its Billions in Spending,” Heritage Foundation Issue Brief No. 5082, June 5, 2020, <https://www.heritage.org/environment/report/senate-conservation-bill-can-t-offset-its-billions-spending>.
68. See, for example, Holly Fretwell and Shawn Regan, “Divided Lands: State vs. Federal Management in the West,” Property and Environment Research Center *Public Lands Report*, March 2015, Figure 1, [http://www.perc.org/sites/default/files/pdfs/150303\\_PERC\\_DividedLands.pdf](http://www.perc.org/sites/default/files/pdfs/150303_PERC_DividedLands.pdf) (accessed October 19, 2020). For a private ownership example, see T. Edward Nickens, “The Plantation Broker,” *Garden&Gun*, June/July 2016, <https://gardenandgun.com/feature/the-plantation-broker/> (accessed October 19, 2020).
69. Council on Environmental Quality, “National Environmental Policy Act,” <https://ceq.doe.gov/> (accessed October 21, 2020).
70. See, for example, Katie Tubb, “Why National Environmental Policy Act Reform Matters for National Parks,” The Daily Signal, April 2, 2020, <https://www.heritage.org/environment/commentary/why-national-environmental-policy-act-reform-matters-national-parks>.
71. Council on Environmental Quality, “Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act,” *Federal Register*, Vol. 85, No. 137 (July 16, 2020), pp. 43304–43376, <https://www.federalregister.gov/documents/2020/07/16/2020-15179/update-to-the-regulations-implementing-the-procedural-provisions-of-the-national-environmental> (accessed October 21, 2020).
72. Diane Katz, “Curbing Abuses of a Politicized NEPA,” Heritage Foundation Backgrounder No. 3524, August 25, 2020, <https://www.heritage.org/government-regulation/report/curbing-abuses-politicized-nepa>.
73. Council on Environmental Quality, “Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act,” *Federal Register*.
74. U.S. Fish and Wildlife Service, “ESA Implementation: Regulation Revision,” September 8, 2020, [https://www.fws.gov/endangered/improving\\_ESA/regulation-revisions.html](https://www.fws.gov/endangered/improving_ESA/regulation-revisions.html) (accessed October 21, 2020).
75. Daren Bakst, “A Better Way to Conserve Endangered and Threatened Species,” The Daily Signal, November 9, 2018, <https://www.heritage.org/environment/commentary/better-way-conserve-endangered-and-threatened-species>, and Daren Bakst, “Trump Administration Promotes Species Conservation with New Rules,” The Heartland Institute, October 10, 2019, <https://www.heartland.org/news-opinion/news/trump-administration-promotes-species-conservation-with-new-rules> (accessed October 21, 2020).

76. Rob Gordon, "Take It Back: Extending the Endangered Species Act's 'Take' Prohibition to All Threatened Animals Is Bad for Conservation," Heritage Foundation *Backgrounder* No. 3267, December 7, 2017, <https://www.heritage.org/government-regulation/report/take-it-back-extending-the-endangered-species-acts-take-prohibition>.
77. U.S. Fish and Wildlife Service, "Endangered and Threatened Wildlife and Plants; Regulations for Prohibitions to Threatened Wildlife and Plants," *Federal Register*, Vol. 84, No. 166 (August 27, 2019), pp. 44753-44760, <https://www.federalregister.gov/documents/2019/08/27/2019-17519/endangered-and-threatened-wildlife-and-plants-regulations-for-prohibitions-to-threatened-wildlife> (accessed October 21, 2020); Bakst, "A Better Way to Conserve Endangered and Threatened Species"; and Bakst, "Trump Administration Promotes Species Conservation with New Rules."
78. Bakst, "A Better Way to Conserve Endangered and Threatened Species," and Bakst, "Trump Administration Promotes Species Conservation with New Rules."
79. M. Lynne Corn and Alexandra Wyatt, "The Endangered Species Act: A Primer," Congressional Research Service, *Report for Congress*, September 8, 2016, <https://fas.org/sgp/crs/misc/RL31654.pdf> (accessed October 21, 2020).
80. Ibid.
81. A listing can have major implications beyond merely placing a species on a list. For example, "take" prohibitions can impose significant restrictions on land use.
82. National Interagency Fire Center, "Statistics," [https://www.nifc.gov/fireInfo/fireInfo\\_statistics.html](https://www.nifc.gov/fireInfo/fireInfo_statistics.html) (accessed October 21, 2020).
83. Nicolas D. Loris, "The Facts About Climate Change and California Fires," The Daily Signal, September 18, 2020 <https://www.heritage.org/environment/commentary/the-facts-about-climate-change-and-california-fires>.
84. For example, the White Mountain Apache Tribe mimics natural burn and growth cycles by clearing logs and brush that could otherwise become fuel for fires. The impact of the 2011 Wallow Fire in Arizona was markedly different on well-managed tribal lands than on neighboring federal lands. Tubb, "No More Standoffs."
85. That is a significant increase over the 19-year average, yet pales in comparison to the 85 million acres in the Forest Service alone that have been designated as high risk for wildfire and disease. National Interagency Fire Center, "Prescribed Fires and Acres by Agency," [https://www.nifc.gov/fireInfo/fireInfo\\_stats\\_prescribed.html](https://www.nifc.gov/fireInfo/fireInfo_stats_prescribed.html) (accessed October 21, 2020). See also Bill Imbergamo, "Green New Deal Policy Forum," testimony before the Western Caucus, February 27, 2019, [https://westerncaucus.house.gov/uploadedfiles/bill\\_imbergamo\\_testimony.pdf](https://westerncaucus.house.gov/uploadedfiles/bill_imbergamo_testimony.pdf) (accessed October 21, 2020).
86. Loris, "The Facts About Climate Change and California Fires."
87. Executive Office of the President, "Presidential Memoranda: Memorandum for the Heads of Executive Departments and Agencies 3-9-09," *Federal Register*, Vol. 74, No. 46 (March 11, 2009), p. 10671, <https://www.federalregister.gov/documents/2009/03/11/E9-5443/scientific-integrity> (accessed October 21, 2020).
88. Loris, "The Facts About Climate Change and California Fires."
89. The Obama memo also explains: "If scientific and technological information is developed and used by the Federal Government, it should ordinarily be made available to the public. To the extent permitted by law, there should be transparency in the preparation, identification, and use of scientific and technological information in policymaking." John Holdren, "Memorandum for the Heads of Executive Departments and Agencies," The White House, December 17, 2010, <https://obamawhitehouse.archives.gov/the-press-office/memorandum-heads-executive-departments-and-agencies-3-9-09> (accessed October 21, 2020).
90. Bipartisan Policy Center, "Improving the Use of Science in Regulatory Policy," August 5, 2009, <https://bipartisanpolicy.org/wp-content/uploads/2019/03/BPC-Science-Report-fnl.pdf> (accessed October 21, 2020).
91. Administrative Conference of the United States, "Recommendation 2013-3—Science in the Administrative Process," <https://www.acus.gov/research-projects/science-administrative-process> (accessed May 18, 2020).
92. Ibid.
93. Richard Horton, "Offline: What Is Medicine's 5 Sigma?" *The Lancet*, Vol. 385 (April 2015), p. 1380, [https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(15\)02960-9.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(15)02960-9.pdf) (accessed May 18, 2020). See also John P. A. Ioannidis, "Why Most Published Research Findings Are False," *PLOS Medicine*, Vol. 2, No. 8 (August 2005), <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.0020124> (accessed May 18, 2020). ("It can be proven that most claimed research findings are false.")
94. Monya Baker, "1,500 Scientists Lift the Lid on Reproducibility," *Nature*, Vol. 533 (2016), <https://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970> (accessed May 18, 2020).
95. U.S. Environmental Protection Agency, "Strengthening Transparency in Regulatory Science," *Federal Register*, Vol. 83, No. 83 (April 30, 2018), pp. 18768-18774, <https://www.federalregister.gov/documents/2018/04/30/2018-09078/strengthening-transparency-in-regulatory-science> (accessed October 27, 2020).
96. U.S. Environmental Protection Agency, "Strengthening Transparency in Regulatory Science," *Federal Register*, Vol. 85, No. 53 (March 18, 2020), pp. 15396-15406, <https://www.federalregister.gov/documents/2020/03/18/2020-05012/strengthening-transparency-in-regulatory-science> (accessed October 27, 2020).

97. Diane Katz, ed., *Environmental Policy Guide: 167 Recommendations for Environmental Policy Reform* (Washington, DC: The Heritage Foundation, 2015), [https://thf\\_media.s3.amazonaws.com/2015/pdf/EnvironmentalPolicyGuide.pdf](https://thf_media.s3.amazonaws.com/2015/pdf/EnvironmentalPolicyGuide.pdf).
98. John Cardarelli and Brant Ulsh, "It Is Time to Move Beyond the Linear No-Threshold Theory for Low-Dose Radiation Protection," *Dose-Response*, Vol. 16, No. 3 (July 2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6043938/> (accessed October 25, 2020). See also Charles Pennington and Jeffry Siegel, "The Linear No-Threshold Model of Low-Dose Radiogenic Cancer: A Failed Fiction," *Dose-Response*, Vol. 17, No. 1 (February 2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6376521/> (accessed October 25, 2019).
99. See, for example, decisions to evacuate and subsequent environmental remediation around the Fukushima Daiichi power plant in Japan, which were informed in part by recommendations from the U.S. Nuclear Regulatory Commission. Michael Shellenberger, "It Sounds Crazy, But Fukushima, Chernobyl, and Three Mile Island Show Why Nuclear Is Inherently Safe," *Forbes*, March 11, 2019, <https://www.forbes.com/sites/michaelshellenberger/2019/03/11/it-sounds-crazy-but-fukushima-chernobyl-and-three-mile-island-show-why-nuclear-is-inherently-safe/#416c1a591688> (accessed October 21, 2020).
100. William Kovacs, Keith Holman, and Jonathan Jackson, "Sue and Settle: Regulating Behind Closed Doors," U.S. Chamber of Commerce, 2013, <https://www.uschamber.com/sites/default/files/documents/files/SUEANDSETTLEREPORT-Final.pdf> (accessed October 21, 2020).
101. There are numerous examples as shown in *ibid.*
102. For information on the 2020 MSGP, see U.S. Environmental Protection Agency, "Stormwater Discharges from Industrial Activities," <https://www.epa.gov/npdes/stormwater-discharges-industrial-activities> (accessed October 21, 2020).
103. U.S. Environmental Protection Agency, "Response to Comments," June 4, 2015, p. 75, <https://www.regulations.gov/document?D=EPA-HQ-OW-2012-0803-0135> (accessed October 21, 2020).
104. U.S. Environmental Protection Agency, 2016 "Settlement Agreement," 2016, [https://www.epa.gov/sites/production/files/2020-01/documents/multi-sector\\_general\\_permit\\_msdp\\_2016\\_settlement\\_agreement.pdf](https://www.epa.gov/sites/production/files/2020-01/documents/multi-sector_general_permit_msdp_2016_settlement_agreement.pdf) (accessed October 21, 2020).
105. Waterkeeper Alliance, "U.S. EPA Proposes First-Time Measures to Restrict the Use of Coal Tar Sealants," August 23, 2016, <https://waterkeeper.org/news/u-s-epa-proposes-first-time-measures-to-restrict-the-use-of-coal-tar-sealants/> (accessed October 21, 2020).
106. Fiscal Year 2001 Consolidated Appropriations Act § 515(a), Public Law No. 106-554.
107. For a detailed discussion of the IQA, see Daren Bakst, "Strengthening the Information Quality Act to Improve Federally Disseminated Public Health Information," *Food and Drug Law Journal*, Vol. 75 (2020), p. 234, forthcoming.
108. Office of Management and Budget, "Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies; Republication," *Federal Register*, Vol. 67, No. 36, (February 22, 2002), p. 8452, <https://www.federalregister.gov/documents/2002/02/22/R2-59/guidelines-for-ensuring-and-maximizing-the-quality-objectivity-utility-and-integrity-of-information> (accessed October 29, 2020).
109. Joshua B. Bolton, "Issuance of OMB's 'Final Information Quality Bulletin for Peer Review,'" Office of Management and Budget, December 16, 2004, <https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/omb/memoranda/fy2005/m05-03.pdf> (accessed October 27, 2020).
110. Daren Bakst, "On 'Waters of U.S.' Rule, EPA's Science Advisory Board Conflates Policy Preferences for Science," The Daily Signal, January 31, 2020, <https://www.heritage.org/environment/commentary/waters-us-rule-epas-science-advisory-board-conflates-policy-preferences>.