

**Oral Comment and Related Documents**  
**Regarding Science Advisory Board Draft Reports**

*Daren Bakst*  
*January 17, 2020*  
*Public Meeting of the EPA's Science Advisory Board*

**Enclosed Documents**

Oral Comment to SAB, January 17, 2020

**WOTUS**

- Written Comment Regarding Proposed WOTUS Definition (April 15, 2019)
- Report Regarding Obama Administration's Proposed Rule and the Connectivity Report: "EPA and the Corps Ignoring Sound Science on Critical Clean Water Act Regulations" (January 18, 2014)

**Sound Science/Transparency**

- Report: "Promoting Transparency in Federal Agencies' Use and Dissemination of Science" (November 25, 2019)

**MATS-Related/Ancillary Benefits**

- Written Comment Regarding MATS/Ancillary Benefits (April 17, 2019)

## **Oral Statement Regarding Science Advisory Board Draft Reports**

*Daren Bakst*

*January 17, 2020*

*Public Meeting of the EPA's Science Advisory Board*

My name is Daren Bakst and I am a Senior Research Fellow at The Heritage Foundation. The views I express in this statement are my own, and shouldn't be construed as representing any official position of The Heritage Foundation.

I'd like to briefly discuss the WOTUS and transparency draft reports.

### **1) The WOTUS Rule Draft Report**

The WOTUS report conflates science with policy and law.

It isn't a scientific or technical document. It's an effort to articulate policy and legal analysis and argue how the EPA should interpret the statutory term "waters of the United States."

This is, and should be, beyond the scope of the SAB.

The SAB exists to provide scientific and technical information, not policy and legal analysis.

The report points to the EPA's Connectivity Report.<sup>1</sup>

That report at least says it is focused on scientific issues only, and consideration of Clean Water Act jurisdiction didn't come into play.

That's the right approach for the SAB.

The SAB's report says the new proposed WOTUS definition isn't consistent with the Clean Water Act. Not only is that an inappropriate question to even answer, it's incorrect.

The Clean Water Act, at the outset of the law, deems states to play the primary role in addressing water pollution. In other words, there are significant limits to federal jurisdiction based on statutory considerations. The EPA and Corps are trying to respect this legal limitation.

The agencies are also trying to address constitutional considerations as well.

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<sup>1</sup> The connectivity report was supposed to inform the Obama WOTUS rule. Yet, the final report was published after the proposed rule was published. At a minimum, it gives the impression the report was less about informing the rule and more about validating what had been proposed. *See e.g.* Daren Bakst, "Promoting Transparency in Federal Agencies' Use and Dissemination of Science," The Heritage Foundation Backgrounder No.3453, <https://www.heritage.org/government-regulation/report/promoting-transparency-federal-agencies-use-and-dissemination-science>

The agencies are trying to do something different: they're trying to develop a WOTUS definition that will pass legal muster before the U.S. Supreme Court, something that has alluded these agencies.

A pervasive problem exists with agency science: agencies and their scientific experts too often seek to pass off subjective policy and ideological considerations as science.<sup>2</sup>

The SAB's WOTUS draft report contributes to this problem.

## 2) The Transparency Rule Draft Report

The transparency report rightfully acknowledges that “[s]trengthening transparency in regulatory science is a worthy goal.”

But then it doesn't elaborate on this point.

Quite simply, the report comes off as not supporting efforts to promote transparency.

Currently, there are significant concerns across scientific disciplines regarding reproducibility,<sup>3</sup> peer review processes,<sup>4</sup> and confirmation bias.

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<sup>2</sup> Susan Dudley, director of the GW Regulatory Studies Center, explained concerns over the conflating of science and policy in 2017 congressional testimony:

It is this tendency to “camouflag[e] controversial policy decisions as science” that Wendy Wagner called a “science charade” and it can be particularly pernicious. For instance, a 2009 Bipartisan Policy Center (BPC) 2009 report, *Improving the Use of Science in Regulatory Policy*, concluded that “a tendency to frame regulatory issues as debates solely about science, regardless of the actual subject in dispute, is at the root of the stalemate and acrimony all too present in the regulatory system today.” Both of these problems, hidden policy judgments and the science charade, can be the result of officials falling prey to the “is-ought fallacy”: incorrectly mixing up positive information about what “is” with normative advice about what “ought to be.”

U.S. Senate, “Hearing on Agency Use of Science in the Rulemaking Process: Proposals for Improving Transparency and Accountability,” 115th Cong. 1st sess., statement of Susan E. Dudley, Director, GW Regulatory Studies Center, March 9, 2017, (citations omitted), <https://www.hsgac.senate.gov/imo/media/doc/DUDLEY%20TESTIMONY.pdf> (accessed January 17, 2020).

<sup>3</sup> See e.g. Shannon Palus, “Make Research Reproducible,” *Scientific American*, Vol. 319, No. 4 (October 2018), pp. 56–59, <https://www.scientificamerican.com/article/science-under-scrutiny-the-problem-of-reproducibility/> (accessed January 20, 2020) and Monya Baker, “1,500 Scientists Lift the Lid on Reproducibility,” *Nature*, Vol. 533, No. 7604 (May 2016), pp. 452–454, <https://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970> (accessed January 17, 2020).

<sup>4</sup> The following articles provide some concerns regarding peer review and the academic publishing process: Jeffrey Brainard and Jia You, “What a Massive Database of Retracted Papers Reveals about Science Publishing’s ‘Death Penalty,’” *Science* (October 25, 2018), <https://www.sciencemag.org/news/2018/10/what-massive-database-retracted-papers-reveals-about-science-publishing-s-death-penalty> (accessed January 17, 2020). The authors explain: “A retraction does not always signal scientific misbehavior.” However, the authors also point out: “About half of all retractions do appear to have involved fabrication, falsification, or plagiarism—behaviors that fall within the U.S. government’s definition of scientific misconduct. Behaviors widely understood within science to be dishonest and unethical, but which fall outside the U.S. misconduct definition, seem to account for another 10%. Those behaviors include forged authorship, fake peer reviews, and failure to obtain approval from institutional review boards for research on human subjects or animals.” See also Tom Jefferson, Philip Alderson, and Elizabeth Wager, “Effects of Editorial Peer Review: A Systematic Review,” *Journal of the American Medical Association* (June 5, 2002),

The report should be highlighting these problems that exist and making it clear that the issue is not whether major action must be taken to improve transparency, but how to go about doing so.

The notion that the EPA can merely rely upon academic peer review is laughable, especially because the EPA's transparency efforts don't exist within the vacuum of a scientific community. The EPA is trying to develop policy to guide in the rulemaking process and the formulation of law that can impact the lives of all Americans.

Transparency, including public participation, is a fundamental aspect of the regulatory process and consistent with our nation's democratic principles.

The SAB should be championing efforts that ensure scientific studies used in rulemaking can be properly evaluated by the public, including by independent experts.

The EPA's goal should be to use the best available science to inform rulemaking, not to use the science that best supports pre-determined policy positions.

The SAB report should reflect this critical goal.<sup>5</sup>

Thank You.

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<https://jamanetwork.com/journals/jama/fullarticle/194989> (accessed January 17, 2020); Fred Barbash, "Major Publisher Retracts 43 Scientific Papers Amid Wider Fake Peer-Review Scandal," The Washington Post, March 27, 2015, <https://www.washingtonpost.com/news/morning-mix/wp/2015/03/27/fabricated-peer-reviews-prompt-scientific-journal-to-retract-43-papers-systematic-scheme-may-affect-other-journals/> (accessed January 17, 2020); John Bohannon, "Who's Afraid of Peer Review?" Science, Vol. 342, No. 6154 (October 2013), pp. 60–65, <https://science.sciencemag.org/content/342/6154/60> (accessed January 17, 2020); and Julia Belluz and Steven Hoffman, "Let's Stop Pretending Peer Review Works," Vox, December 7, 2015, <https://www.vox.com/2015/12/7/9865086/peer-review-science-problems> (accessed January 17, 2020).

<sup>5</sup> For more information on transparency, please see Daren Bakst, "Promoting Transparency in Federal Agencies' Use and Dissemination of Science," The Heritage Foundation Backgrounder No.3453, <https://www.heritage.org/government-regulation/report/promoting-transparency-federal-agencies-use-and-dissemination-science> (accessed January 17, 2020).

April 15, 2019

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*Submitted via Regulations.gov*

RE: Docket ID No. EPA-HQ-OW-2018-0149

Mr. McDavit and Ms. Moyer:

I appreciate this opportunity to provide comments<sup>1</sup> to the EPA and Corps (the agencies) regarding the definition of “waters of the United States” under the Clean Water Act (CWA).

For decades, the agencies have struggled to develop a definition that passes judicial scrutiny.<sup>2</sup> The definition has also failed to provide clarity for both regulated parties and the agencies.

In fairness, the statutory language does not offer detailed language to provide clarity as to what waters are “waters of the United States.” However, there is still plenty of information and lessons learned to inform the agencies as to what a definition should look like.

To their credit, the agencies in the proposed rule discuss many of these lessons learned and the obstacles that have prevented a proper definition from getting promulgated. This includes the need to respect the state role in addressing water pollution, the importance of clear regulations, and the limitations placed on the agencies by the Commerce Clause.

As recently as the 2015 Clean Water Rule,<sup>3</sup> the agencies had failed to learn and apply these lessons. Instead of developing regulations that are well within the authorized power of the agencies, there has been a constant and long-term process of interpreting the law in a manner that tries to get around limitations imposed by the CWA and by the courts.

The agencies need to act differently. They need to develop regulations that are well within their power. They need to respect the limitations and stop risking, once again, a definition that will not pass judicial scrutiny.

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<sup>1</sup> The views I have expressed in this comment are my own, and should not be construed as representing any official position of The Heritage Foundation.

<sup>2</sup> This is particularly true in terms of how the agencies have implemented and enforced their regulations.

<sup>3</sup> U.S. Army Corps of Engineers, Department of the Army, Department of Defense; and U.S. Environmental Protection Agency, “Clean Water Rule: Definition of ‘Waters of the United States,’” Final Rule, *Federal Register*, Vol. 80, No. 124 (June 29, 2015), pp. 37053–37127, <https://www.federalregister.gov/documents/2015/06/29/2015-13435/clean-water-rule-definition-of-waters-of-the-united-states>

It is therefore commendable that the agencies are trying to propose a rule that appreciates these limitations. The proposed rule is a step in the right direction. There are some significant concerns though that the agencies should address as it finalizes the definition, including removing “intermittent waters” as “waters of the United States.”

After first discussing important considerations to inform any definition of “waters of the United States,” this comment identifies and discusses recommended changes to the proposed definition.

### **Considerations for Informing a New Rule Defining “Waters of the United States”**

The scope of a possible “waters of the United States” definition may at first seem fairly broad. Yet, there are important considerations that would limit this scope. They are not merely subjective factors for the agencies to consider, but are actually required by law or necessary in developing a workable definition.

#### *Respecting the Primary Role of the States*

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>4</sup>

This primary role for states is one of the most important lessons that the agencies should have learned in developing a “waters of the United States” definition. Too often, the agencies have worked off an assumption that to have clean water, the federal government must seek to regulate almost every water imaginable. Yet, Congress expressly disagreed with such a mindset.

The U.S. Supreme Court in cases such as *Solid Waste Agency of Northern Cook County v. Army Corps of Engineers (SWANCC)*<sup>5</sup> and *Rapanos v. United States*<sup>6</sup> expressed concern over CWA regulatory overreach that encroached on state and local power. In his plurality opinion in *Rapanos*, Justice Antonin Scalia explained:

The extensive federal jurisdiction urged by the Government would authorize the Corps to function as a *de facto* regulator of immense stretches of intrastate land—an authority the agency has shown its willingness to exercise with the scope of discretion that would befit a local zoning board. We ordinarily expect a “clear and manifest” statement from

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<sup>4</sup> 33 U.S. Code § 1251(b), <https://www.law.cornell.edu/uscode/text/33/1251>

<sup>5</sup> *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers et al.*, 531 U.S. 159 (2001), <https://www.law.cornell.edu/supct/html/99-1178.ZO.html>

<sup>6</sup> *Rapanos v. United States*, 547 U.S. 715 (2006), <https://www.law.cornell.edu/supct/html/04-1034.ZS.html>

Congress to authorize an unprecedented intrusion into traditional state authority. The phrase “the waters of the United States” hardly qualifies.<sup>7</sup> [citations omitted]

For purposes of this proposed rulemaking and developing a “waters of the United States” definition, respecting the state role in addressing water pollution is a must. As applied, this should mean that if a definition would be so expansive as to make the state role secondary in nature, then the definition should be rejected. If the definition intrudes upon traditional state authority, then this should be a clear indication that the definition is flawed.

### *Developing a Clear Definition*

For many regulations, the challenge for regulated parties is how to comply with the regulations. The problem though is far worse for regulated parties under the CWA. Their first and arguably primary challenge is not determining how to comply, but whether they are even required to comply.

This problem is exacerbated by vague and subjective definitions. In 2004, the General Accounting Office (GAO)<sup>8</sup> highlighted the Corps’ inconsistent enforcement across districts and even asserted that definitions were intentionally left vague.<sup>9</sup> If experts within the agencies are unable to agree if a water is a “waters of the United States,” it is unreasonable to think that a lay person will be able to know that a water is a jurisdictional water.

In fact, if definitions are extremely vague and subjective, and enforcement is inconsistent, there is no way for *anyone* to know whether some waters are jurisdictional because the answers to those questions depend on the subjective whim of whatever government officials have decided to answer the questions.

For property owners, they may simply decide to forego certain activities on their property, such as farming, out of fear that they could be subject to civil and criminal penalties under the CWA. They may also engage in activities without having any reason to consider that the CWA might come into play, and then find out after-the-fact that a government official has subjectively determined they have violated the law.

Developing a rule that is clear is not merely a practical enforcement consideration. It could also be a constitutional challenge. There could potentially be Ex Post Facto Clause implications because the regulations as enforced have arguably been retroactive criminal lawmaking (especially for waters determined to be jurisdictional only through an after-the-fact case-by-case analysis).<sup>10</sup>

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<sup>7</sup> Ibid at 738.

<sup>8</sup> The GAO is now known as the Government Accountability Office.

<sup>9</sup> *Rapanos* citing U. S. General Accounting Office, Report to the Chairman, Subcommittee on Energy Policy, Natural Resources and Regulating Affairs, Committee on Government Reform, House of Representatives, Waters and Wetlands: Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction, GAO-04-297, pp. 20-22 (Feb. 2004), <http://www.gao.gov/new.items/d04297.pdf>

<sup>10</sup> Paul Larkin, “The ‘Waters of the United States’ Rule and the Void-for-Vagueness Doctrine,” Heritage Foundation *Legal Memorandum*, No. 207 (June 21, 2017), <http://www.heritage.org/government-regulation/report/the-waters-the-united-states-rule-and-the-void-vagueness-doctrine>

Further, under the Void-for-Vagueness Doctrine, an average person, without legal advice, must be able to understand regulations enforced through the criminal law.<sup>11</sup> The U.S. Supreme Court in *Lanzetta v. New Jersey* explained, “[n]o one may be required at peril of life, liberty or property to speculate as to the meaning of penal statutes. All are entitled to be informed as to what the State commands or forbids.”<sup>12</sup>

Any definition should be clear on its face so that an average person could know what waters are “waters of the United States.” Regulated entities should not be put in a position where they would not know or have a reasonable basis to know that a water is jurisdictional.

### *Staying Well Within the Bounds of the Commerce Clause*

The first question that should be asked about any federal legislation is whether Congress has the constitutional power to pass the law in the first place. For the Clean Water Act, Congressional power to regulate waters is derived from the Commerce Clause. As the proposed rule correctly points out, “Congress’ authority to regulate navigable waters derives from its power to regulate the ‘channels of interstate commerce’ under the Commerce Clause.”<sup>13</sup>

While the Commerce Clause power in general has been broadly interpreted by courts, this does mean the EPA and Corps have a green light to take a very expansive view of the Commerce Clause when defining “waters of the United States.” The SWANCC case provides a good explanation as to why the agencies’ view of Commerce Clause power should at a minimum be fairly narrow, and certainly not expansive.

As explained by the U.S. Supreme Court in SWANCC:

[w]here an administrative interpretation of a statute invokes the outer limits of Congress’ power, we expect a clear indication that Congress intended that result. This requirement stems from our prudential desire not to needlessly reach constitutional issues and our assumption that Congress does not casually authorize administrative agencies to interpret a statute to push the limit of congressional authority.<sup>14</sup> [citations omitted].

This explanation of the Court’s approach to evaluating agency interpretation of a statute in light of congressional authority provides guidance to the agencies in defining “waters of the United States.” The definition should clearly not push the limit of Commerce Clause power. Further, the definition should not put courts in the position where they need to even reach conclusions as to whether the agencies’ interpretation is a permissible use of Congressional power.

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<sup>11</sup> *Ibid.*

<sup>12</sup> *Lanzetta v. State of New Jersey*, 306 U.S. 451, 453 (1939), <https://www.law.cornell.edu/supremecourt/text/306/451>

<sup>13</sup> U.S. Army Corps of Engineers, Department of the Army, Department of Defense; and U.S. Environmental Protection Agency, “Revised Definition of ‘Waters of the United States,’” Proposed Rule, *Federal Register*, Vol. 84, No. 31 (February 14, 2019), pp. 4154–4220, <https://www.federalregister.gov/documents/2019/02/14/2019-00791/revised-definition-of-waters-of-the-united-states>

<sup>14</sup> *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers et al.*, 531 U.S. 159, 160 (2001), <https://www.law.cornell.edu/supct/html/99-1178.ZO.html>

The Court in SWANCC went even further, adding “[t]his concern [regarding administrative interpretation] is heightened where the administrative interpretation alters the federal-state framework by permitting federal encroachment upon a traditional state power.”<sup>15</sup>

Even if there were no federal-state questions, the agencies should be viewing the Commerce Clause power in a fairly narrow manner. When however the federal-state framework is affected, the need for a narrow approach is even more important.

### **Recommended Changes to the Proposed Definition of “Waters of the United States”**

While this section of the comment will provide specific recommended changes to the proposed rule, it will also clarify the many important aspects of the rule that should not be changed.

One such aspect of the rule is how the agencies have addressed categorical jurisdiction (those categories of waters that are automatically jurisdictional by rule). Unlike the 2015 Clean Water Rule,<sup>16</sup> the proposed rule does not assert that waters can be categorically jurisdictional when jurisdiction can only be determined on an after-the-fact, case-specific basis.

When developing those categories of waters that are jurisdictional by rule, the rule itself should clearly inform regulated parties what types of waters will be regulated. There is no way to have any clarity when a category of waters is so imprecise that the agencies are effectively saying they do not know what waters will be regulated, but they will know the waters when they see them.

There are some general points regarding categorical jurisdiction that the agencies should bear in mind. When identifying a category of waters that will be regulated, the category definition should be very precise. After all, the agencies are informing regulated parties that the waters within the category are so clearly jurisdictional, the agencies can make that determination within the rule itself.

This should mean that any category definition will not be over-inclusive; the category should identify only those waters that are clearly jurisdictional and not be drafted in a manner that is so vague or overbroad that waters not intended to be covered could fall under the category definition.

The following recommendations, in general, are all connected to developing precise category definitions that are consistent with the considerations identified earlier in this comment:

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<sup>15</sup> *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers et al.*, 531 U.S. 159, 160 (2001), <https://www.law.cornell.edu/supct/html/99-1178.ZO.html>

<sup>16</sup> U.S. Army Corps of Engineers, Department of the Army, Department of Defense; and U.S. Environmental Protection Agency, “Clean Water Rule: Definition of ‘Waters of the United States’,” Final Rule, *Federal Register*, Vol. 80, No. 124 (June 29, 2015), pp. 37053–37127, <https://www.federalregister.gov/documents/2015/06/29/2015-13435/clean-water-rule-definition-of-waters-of-the-united-states>

### *Traditional Navigable Waters*

There are two primary concerns regarding the traditional navigable waters definition in (a)(1) of the proposed rule: the definition should clarify that it is limited to the “transport” of commerce and provide clarity on “susceptible to use.”

The proposed rule’s (a)(1) language states:

- (i) Waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including the territorial seas and waters which are subject to the ebb and flow of the tide;<sup>17</sup>

A long line of cases starting with *The Daniel Ball*<sup>18</sup> have detailed consistent requirements to help determine what waters should be traditional navigable waters or “foundational waters.”

In *The Daniel Ball*, the U.S. Supreme Court explained:

Those rivers must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition, as highways of commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water.<sup>19</sup>

**Transport of Commerce.** As proposed, the “foundational waters” would include waters used in interstate or foreign commerce, without apparently any type of limit on the nature of the commerce. This is far too broad and is inconsistent with the law.

*The Daniel Ball* and its progeny have consistently used the concepts of “highways of commerce” and “trade and travel.”<sup>20</sup> For example, the U.S. Supreme Court in *United States v. Holt State Bank* provided a good summary of the law:

The rule long since approved by this court in applying the Constitution and laws of the United States is that streams or lakes which are navigable in fact must be regarded as navigable in law; that they are navigable in fact when they are used, or are susceptible of being used, in their natural and ordinary condition, as highways for commerce, over

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<sup>17</sup> U.S. Army Corps of Engineers, Department of the Army, Department of Defense; and U.S. Environmental Protection Agency, “Revised Definition of ‘Waters of the United States’,” Proposed Rule, *Federal Register*, Vol. 84, No. 31 (February 14, 2019), pp. 4154–4220, <https://www.federalregister.gov/documents/2019/02/14/2019-00791/revised-definition-of-waters-of-the-united-states>

<sup>18</sup> *The Daniel Ball*, 77 U.S. 557 (1870), <https://supreme.justia.com/cases/federal/us/77/557/>

<sup>19</sup> *Ibid* at 563.

<sup>20</sup> See e.g. U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers, “Appendix D: Legal Definition of ‘Traditional Navigable Waters’,” [https://www.epa.gov/sites/production/files/2017-05/documents/app\\_d\\_traditional\\_navigable\\_waters.pdf](https://www.epa.gov/sites/production/files/2017-05/documents/app_d_traditional_navigable_waters.pdf) and “Outline of Section 10 Case Law: Summary of Key Concepts and Terms Relevant to the Work of the Assumable Waters Subcommittee,” Draft Prepared for the Assumable Waters NACEPT FACA Subcommittee, <https://www.epa.gov/sites/production/files/2016-05/documents/7mar16sec10legal.pdf>

which trade and travel are or may be conducted in the customary modes of trade and travel on water.<sup>21</sup>

The Clean Water Act also helps to provide clarification on the nature of the commerce. Under Section 404(g)(1),<sup>22</sup> states can assume permitting authority for certain waters. Within this section, there is parenthetical language that identifies those waters in which the Corps must retain its permitting authority. This parenthetical language may not necessarily constitute the definition of “navigable waters,” but it is a reflection of what Congress understood to be traditional navigable waters or “foundational waters.”

The proposed rule helps to make this case, explaining:

[I]n 1977, when Congress authorized State assumption over the section 404 dredged or fill material permitting program, Congress limited the scope of assumable waters by requiring the Corps to retain permitting authority over Rivers and Harbors Act waters (as identified by the *Daniel Ball* test) plus wetlands adjacent to those waters, minus historic use only waters.<sup>23</sup>

Except for the inclusion of wetlands and arguably the exclusion of historic use only waters,<sup>24</sup> Congress was stating in 404(g)(1) its understanding of the *Daniel Ball* test. Therefore, except for the historic use waters, the following 404(g)(1) language reflects this Congressional understanding:

[T]hose waters which are presently used, or are susceptible to use in their natural condition or by reasonable improvement as a means to transport interstate or foreign commerce.<sup>25</sup>

The “transport” language in the CWA captures the “highways of commerce” and “trade and travel” requirements in the case law.

Further, the term “highways of commerce” is a clear indication of *movement* of commerce on the water. Therefore, the necessary commerce that must take place on the water is not a stationary activity, such as something recreational, but instead part of a commercial activity that helps move that activity along a channel of interstate or foreign commerce.

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<sup>21</sup> *United States v. Holt State Bank*, 270 U.S. 49, 56 (1926), <https://supreme.justia.com/cases/federal/us/270/49/>

<sup>22</sup> U.S. Environmental Protection Agency, “Overview of Clean Water Act Section 404,” <https://www.epa.gov/cwa-404/overview-clean-water-act-section-404>

<sup>23</sup> U.S. Army Corps of Engineers, Department of the Army, Department of Defense; and U.S. Environmental Protection Agency, “Revised Definition of ‘Waters of the United States,’” Proposed Rule, *Federal Register*, Vol. 84, No. 31 (February 14, 2019), pp. 4154–4220, <https://www.federalregister.gov/documents/2019/02/14/2019-00791/revised-definition-of-waters-of-the-united-states>

<sup>24</sup> This comment in no way asserts that past use must be included in any definition of “foundational waters.” The EPA and Corps should consider eliminating this past use requirement and carefully examine whether this language is required.

<sup>25</sup> U.S. Environmental Protection Agency, “Overview of Clean Water Act Section 404,” <https://www.epa.gov/cwa-404/overview-clean-water-act-section-404>

Without the “transport” language or something comparable, the agencies would be opening up the possibility of covering waters with a tenuous or speculative connection to interstate or foreign commerce, and as a result, inappropriately pushing the limits of the Commerce Clause.

**Susceptible to Use.** The proposed rule’s language uses the “susceptible to use” language that has been part of the case law and the CWA. However, it does not include the other relevant language to help inform what this term should mean.

In both the case law and 404(g)(1), susceptible to use is further clarified to mean susceptible to use in the water’s natural condition or by reasonable improvement to the water.

#### Recommended Changes to the (a)(1) language

(i) Waters which are currently used, or were used in the past, or may be susceptible to use in their natural condition or by reasonable improvement as a means to transport in interstate or foreign commerce, including the territorial seas and waters which are subject to the ebb and flow of the tide.

#### *Tributaries and Intermittent Waters*

The proposed rule includes a definition of tributaries that is inconsistent with Justice Antonin Scalia’s plurality opinion in *Rapanos*. This is unfortunate for many reasons, especially since the plurality opinion provides the type of clarity, respect for the state role under the CWA, and proper constitutional limits that the agencies have explained is so important to them in developing a definition of “waters of the United States.”

The agencies should be commended for excluding tributaries with ephemeral flow. The tributary definition as proposed does *in part* list waters that are consistent with the Scalia plurality opinion, “a river, stream, or similar naturally occurring surface water channel.”<sup>26</sup> However, the definition covers those waters that contribute either perennial or intermittent flow. The plurality opinion expressly and properly rejected the inclusion of intermittent waters.

The definition also does not reflect important concepts in the Scalia plurality, including:

In sum, on its only plausible interpretation, the phrase “the waters of the United States” includes only those relatively permanent, standing or continuously flowing bodies of water “forming geographic features” that are described in ordinary parlance as “streams[,] ... oceans, rivers, [and] lakes.”<sup>27</sup>

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<sup>26</sup> U.S. Army Corps of Engineers, Department of the Army, Department of Defense; and U.S. Environmental Protection Agency, “Revised Definition of ‘Waters of the United States’,” Proposed Rule, *Federal Register*, Vol. 84, No. 31 (February 14, 2019), pp. 4154–4220, <https://www.federalregister.gov/documents/2019/02/14/2019-00791/revised-definition-of-waters-of-the-united-states>

<sup>27</sup> *Rapanos v. United States*, 547 U.S. 715, 739 (2006), <https://www.law.cornell.edu/supct/html/04-1034.ZS.html>

The plurality opinion stresses the Supreme Court’s past use of terms such as “discrete *bodies* of water,” “open water,” and “open waters” to describe navigable waters. The plurality also argues that at a bare minimum there must be “the ordinary presence of water.”<sup>28</sup>

The proposed rule’s tributary definition is not limited to “reasonably permanent” waters or waters that are “standing or continuously flowing.” It does not limit its scope to those waters where there is an “ordinary presence of water” or that can reasonable be described as a “body” of water or “open water.”

There are a large amount of waters falling between ephemeral waters and the tributaries that would be covered under the proposed rule. These are waters that in many ways might very well look like ephemeral waters.

The “intermittent” definition in the proposed rule states that “‘*intermittent*’ means surface water flowing continuously during certain times of a typical year and more than in direct response to precipitation.”

The duration that is meant by “certain times of a typical year” is far from clear, but it certainly appears to include anything from a matter of days to a duration that is not year-round (not a perennial water).

The 2015 Clean Water Rule was properly criticized for trying to regulate almost every water imaginable, including waters that would generally be considered land. The proposed rule as drafted appears to have some of the same problems. Justice Scalia’s plurality opinion in *Rapanos* is so important because it would help to avoid such an outcome.

The agencies should certainly look to Justice Scalia’s plurality opinion. It is also important to recognize that it does not require every tributary to have perennial (year-round) flow.

Footnote 5 of the plurality opinion explains:

By describing “waters” as “relatively permanent,” we do not necessarily exclude streams, rivers, or lakes that might dry up in extraordinary circumstances, such as drought. We also do not necessarily exclude seasonal rivers, which contain continuous flow during some months of the year but no flow during dry months—such as the 290-day, continuously flowing stream postulated by Justice Stevens’ dissent.<sup>29</sup>

### Recommendation

The agencies should exclude intermittent waters and take out references to intermittent flow in the definition of tributary. The tributary definition should mirror Footnote 5. This would include clarifying that while tributaries require perennial flow, there are limited exceptions when there are extraordinary circumstances such as drought, and for seasonal rivers, streams, or similar

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<sup>28</sup> Ibid.

<sup>29</sup> *Rapanos v. United States*, 547 U.S. 715, 732 n.5 (2006), <https://www.law.cornell.edu/supct/html/04-1034.ZS.html>

naturally occurring surface water channels<sup>30</sup> with continuous flow for a minimum of 183 consecutive days within the year. Requiring tributaries to have continuous flow for a majority of the year ensures that the water is not always coming and going (i.e. it is not always “fitful”) and that there is the “ordinary presence of water” and the water can still be considered “relatively permanent.”<sup>31</sup>

There is no question that deciding the length of continuous flow is somewhat subjective, but it is far from arbitrary.<sup>32</sup> After all, the agencies would be developing a workable standard that can provide clarity to regulated parties based on the plurality opinion in *Rapanos* and consistent with past Supreme Court opinions.

The agencies should be providing the answer to the continuous flow questions within any final rule. As currently proposed though, the length of continuous flow is an open question that the proposed rule does not answer. The agencies will be required to provide answers to these questions, and unless the answers are provided within the rule, they would have to be provided in post-agency actions after the rulemaking process, possibly on a case-by-case basis. This type of approach is in fact arbitrary and perpetuates the vague language problems that have undermined past definitions of “waters of the United States.”

The tributary definition should also incorporate terms such as “relatively permanent” that are used in the Scalia plurality opinion. This also includes using language such as “described in ordinary parlance as streams...” to describe the types of waters covered under the definition.

The use of “described in ordinary parlance” is more critical than it may first appear. It provides a clear indication that the streams and other waters covered will be those waters that are commonly understood to be streams, rivers, and similar waters. This as a result means the agencies should be looking to what the lay person would think is a tributary, not what some experts think should be regulated. Such a clarification is precisely the type of language that can better inform regulated parties and it also would likely help to ensure that waters with mere trickles (or insignificant flow) are not covered.

### *Ditches*

The proposed rule indicates, “[o]ne of the goals of this proposal is to address the confusion regarding whether ditches are point sources or ‘waters of the United States’ more generally, and

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<sup>30</sup> This recommendation uses “naturally occurring surface water channels” because this language was included in the proposed rule.

<sup>31</sup> The agencies should determine continuous flow based on multiple years, not unlike the “typical year” definition in the proposed rule.

<sup>32</sup> Based on footnote 5 in Justice Scalia’s *Rapanos* plurality opinion, there are a few reasonable ways to define the length of time that a tributary must have continuous flow. The approach discussed in this comment is to include a majority of the year to ensure that there is the “ordinary presence of water” and the water is “relatively permanent.” Another reasonable approach is to include three seasons (a minimum of 270 days), allowing for one dry season. The length of time could also be a minimum of 290 days, consistent with the stream postulated by Justice Stevens. One other possible option is to define continuous flow as a minimum of 90 days, or one season within the year. This however is problematic because it certainly does not meet the “ordinary presence of water” requirement and arguably not the “relatively permanent” requirement.

to provide clear categories for regulators and the regulated community for distinguishing between the two.”<sup>33</sup>

Unfortunately, the proposed rule does not provide the clarity desired. This is primarily because ditches are a category of navigable waters within the proposed rule.

Justice Scalia in *Rapanos* explained, “[t]he definitions thus conceive of ‘point sources’ and ‘navigable waters’ as separate and distinct categories.”<sup>34</sup> The statutory definition of point source expressly includes ditches.<sup>35</sup> Therefore, it simply does not make sense to include ditches as a category of “navigable waters” given that they are expressly not navigable waters. The agencies should instead include an exclusion that makes it clear that ditches are not navigable waters.

There could be some very limited exceptions to the exclusion. Footnote 7 of Justice Scalia’s plurality opinion in *Rapanos* captures important ways to distinguish between ditches that are not navigable waters and those “ditches” that could be navigable waters:

A permanently flooded ditch around a castle is technically a “ditch,” but (because it is permanently filled with water) we normally describe it as a “moat.” And a permanently flooded man-made ditch used for navigation is normally described, not as a “ditch,” but as a “canal.” [citations omitted].<sup>36</sup>

This exclusion approach would create far less confusion for regulators and the regulated community.

#### *Additional Points Regarding the Proposed Definition*

**Adjacent Wetlands.** The agencies’ definition appears to be clear and is a welcome change from the 2015 Clean Water Rule that effectively ignored any reasonable understanding of “adjacent.” The definition however should exclude reference to intermittent flow. The agencies barrier language within the definition is an important way to ensure that the wetlands are in fact adjacent to other covered waters.

**Prior Converted Cropland.** The proposed rule’s efforts to clarify the prior converted wetlands exclusion will likely be of significant value to agricultural producers. The abandonment language in the exclusion states:

Abandonment occurs when prior converted cropland is not used for, or in support of, agricultural purposes at least once in the immediately preceding five years.<sup>37</sup>

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<sup>33</sup> U.S. Army Corps of Engineers, Department of the Army, Department of Defense; and U.S. Environmental Protection Agency, “Revised Definition of ‘Waters of the United States,’” Proposed Rule, *Federal Register*, Vol. 84, No. 31 (February 14, 2019), pp. 4154–4220, <https://www.federalregister.gov/documents/2019/02/14/2019-00791/revised-definition-of-waters-of-the-united-states>

<sup>34</sup> *Rapanos v. United States*, 547 U.S. 715, 735 (2006), <https://www.law.cornell.edu/supct/html/04-1034.ZS.html>

<sup>35</sup> 33 U.S.C. § 1362(14), <https://www.law.cornell.edu/uscode/text/33/1362>

<sup>36</sup> *Rapanos v. United States*, 547 U.S. 715, 736 n.7 (2006), <https://www.law.cornell.edu/supct/html/04-1034.ZS.html>

<sup>37</sup> U.S. Army Corps of Engineers, Department of the Army, Department of Defense; and U.S. Environmental Protection Agency, “Revised Definition of ‘Waters of the United States,’” Proposed Rule, *Federal Register*, Vol. 84,

There is a potential unintended problem though with how the exclusion language has been drafted. Presumably, this language is supposed to mean, as described previously by the agencies that an area is “considered to be abandoned unless, [a]t least once in every five years the area has been used for the production of an agricultural commodity.”<sup>38</sup>

There is another reasonable reading of the exclusion language though as drafted: if just one time over the preceding five years the area has not been used for agricultural purposes, then it will be considered abandoned.

Again, this is not what the agencies presumably intended. Therefore, the following is recommended for the abandonment language:

To avoid being considered abandoned, prior converted cropland must be used for, or in support of, agricultural purposes at least once in the immediately preceding five years.

**The Term is “The Waters of the United States.”** The proposed rule’s definition section states that “the term ‘waters of the United States’ means” and then lists the definition. However, the term is “*the* waters of the United States.”<sup>39</sup> [emphasis added]. This might seem minor, but the agencies are defining the specific statutory language, and the precise language includes “the.”

Justice Scalia in *Rapanos* certainly did not find this issue to be minor. In his plurality opinion, he stated:

The use of the definite article (“the”) and the plural number (“waters”) show plainly that §1362(7) does not refer to water in general. In this form, “the waters” refers more narrowly to water “[a]s found in streams and bodies forming geographical features such as oceans, rivers, [and] lakes,” or “the flowing or moving masses, as of waves or floods, making up such streams or bodies.”<sup>40</sup>

This is likely simply an oversight. While it might be reasonable to drop “the” in some contexts,<sup>41</sup> it should not be dropped in the definition section of the regulation.

## **Conclusion**

I would like to thank the agencies for proposing a rule that recognizes the mistakes the agencies have made in the past when it comes to defining “waters of the United States.” I also want to

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No. 31 (February 14, 2019), pp. 4154–4220, <https://www.federalregister.gov/documents/2019/02/14/2019-00791/revised-definition-of-waters-of-the-united-states>

<sup>38</sup> Ibid.

<sup>39</sup> 33 U.S.C. § 1362(7), <https://www.law.cornell.edu/uscode/text/33/1362>

<sup>40</sup> *Rapanos v. United States*, 547 U.S. 715, 732 (2006), <https://www.law.cornell.edu/supct/html/04-1034.ZS.html>

<sup>41</sup> The agencies should consider whether dropping “the” really is appropriate in most, if not all, contexts.

thank the agencies for the opportunities they have provided the public to offer feedback on a “waters of the United States” definition, including the pre-proposal process in 2017.<sup>42</sup>

As the agencies finalize a rule, they should bear in mind that much of the “waters of the United States” problems have not been merely about the actual text of the regulations, but also the way vague language within the regulations have been interpreted by the agencies. A final rule should have precise language that is not susceptible to future interpretations that could undermine the goals the agencies are trying to achieve.

The proposed rule, as mentioned, is a good step in the right direction. Through making additional changes, many of which have been outlined in this comment, the agencies could develop a rule that truly provides the clarity and respect for the rule of law that has alluded the agencies for decades.

Sincerely,

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<sup>42</sup> U.S. Army Corps of Engineers, Department of the Army, Department of Defense; and U.S. Environmental Protection Agency, “Definition of ‘Waters of the United States’ – Pre-Proposal Outreach Comments,” Retrieved from regulations.gov: <https://www.regulations.gov/docket?D=EPA-HQ-OW-2017-0480>

# ISSUE BRIEF

No. 4122 | JANUARY 08, 2014

## EPA and the Corps Ignoring Sound Science on Critical Clean Water Act Regulations

Daren Bakst

The Environmental Protection Agency (EPA) and the Army Corps of Engineers have drafted regulations that would clarify what kinds of bodies of water are covered under the Clean Water Act (CWA).<sup>1</sup> This new definition would serve as the foundation of the CWA, determining the reach of the federal government's jurisdiction under this law.

The EPA is developing a scientific study that is supposed to answer many of the questions that need to be addressed in formulating policy for these regulations. However, instead of waiting until its scientific report is completed, the agency has sent its proposed rules to the Office of Management and Budget (OMB) for its review while the report is still in draft form.<sup>2</sup> This premature action will undermine the scientific study and any final rules that are eventually developed.

**The Importance of the Rules.** There has been long-standing controversy over what the phrase “waters of the U.S.” means under the CWA. The EPA and the Corps have consistently taken very broad interpretations of this term. The United States Supreme Court in two recent cases rejected the broad overreach taken by both the EPA and the

Corps.<sup>3</sup> The new rules will try again to clarify the scope of federal agency power to regulate water bodies.

**The Scientific Study.** In July 2013, the EPA assembled a Scientific Advisory Board to peer review a study the agency compiled called the *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*.<sup>4</sup> The report is supposed to help develop any final rules. According to the EPA, “This report, when finalized, will provide the scientific basis needed to clarify CWA jurisdiction, including a description of the factors that influence connectivity [of streams] and the mechanisms by which connected waters affect downstream waters.”<sup>5</sup>

Yet the EPA sent its proposed rules clarifying CWA jurisdiction to OMB on September 17, 2013, and released its draft scientific assessment for public comment on the same day.<sup>6</sup> In fact, the scientific advisory panel did not meet for the first time until December 16, 2013—months after the proposed rule was sent to OMB.<sup>7</sup> As a result, the proposed rules have been drafted well before the report is even finalized.

The EPA claims, “When final, EPA’s science report on connectivity will provide the science foundation for agency decisions concerning the implementation of the Clean Water Act. The final rule will provide clarification for how that science is translated to policy.”<sup>8</sup>

The problem, though, is that the science report should first provide the foundation for the *proposed* rules. The EPA and the Corps are effectively jumping ahead to the final rule. This undermines both the scientific assessment and the rulemaking process:

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This paper, in its entirety, can be found at <http://report.heritage.org/ib4122>

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- **Undermining the scientific assessment.** The EPA has a strong incentive to avoid making major changes to the draft scientific report even if the scientific panel or the public have feedback that would necessitate such changes. If these changes were made, the agency would be admitting that the proposed rules are not based on sound science.
- **Undermining the rulemaking process.** The public is supposed to have a meaningful voice in the notice and comment process. This starts with having notice of proposed rules and the opportunity to provide comments to the agency regarding these proposed rules. This exchange of information does not just serve those providing comments and affected parties; it also helps agencies in making informed regulatory decisions.

By not waiting until its final science report is completed before drafting proposed rules, the EPA is giving the impression that its policy decisions are a foregone conclusion. There is also the opposite problem of the agency developing proposed rules that are not under genuine consideration. Since the science report could have a significant impact on the final rules, the proposed rules could be mere placeholders, not a reflection of actual policy proposals.

- **Introducing logical outgrowth doctrine questions.** When there is a significant difference between proposed and final rules, courts may decide that agencies must start the process all over again by drafting new proposed rules. According to the D.C. Circuit Court of Appeals, “Given the strictures of notice-and-comment rulemaking, an agency’s proposed rule and its final rule may differ only insofar as the latter is a ‘logical outgrowth’ of the former.”<sup>9</sup> The EPA and the Corps’s jumping the gun and issuing proposed regulations that could significantly differ from the final rules could be a costly waste of time.

**The Integrity of the Process.** The proposed rules should not be drafted until after the scientific report is finalized and based on sound science. OMB should send back the proposed rules to the EPA and the Corps until the scientific assessment has been finalized and the credibility of the report is established.

Even if this process is followed, this in no way means that the rules would reflect sound policy or even be grounded in sound science; however, at least the EPA would be letting its final science report inform the proposed rules. If this does not happen, legislation on this critical issue would be warranted.

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1. Nancy Stoner and Lek Kadeli, “EPA Science: Supporting the Waters of the U.S.,” EPA Connect, September 17, 2013, <http://blog.epa.gov/epaconnect/2013/09/watersoftheus/> (accessed December 27, 2013).
  2. Office of Management and Budget, *The Clean Water Protection Rule*, <http://www.reginfo.gov/public/do/eAgendaViewRule?pubId=201304&RIN=2040-AF30> (accessed December 27, 2013).
  3. *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001). See also *Rapanos v. U.S.*, 547 U.S. 715 (2006).
  4. U.S. Environmental Protection Agency, *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence (External Review Draft)*, September 24, 2013, <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=238345> (accessed December 27, 2013).
  5. *Ibid.*
  6. Stoner and Kadeli, “EPA Science.”
  7. EPA Scientific Advisory Board, “Meeting: Panel for the Review of the EPA Water Body Connectivity Report 12/16/2013 to 12/18/2013,” <http://yosemite.epa.gov/sab/sabproduct.nsf/MeetingCal/A243CB99328D3BF085257BBE0074E4E2?OpenDocument> (accessed December 27, 2013). See also Russell Riggs, “Scientists Meet on EPA Water Rule,” National Association of Realtors, December 20, 2013, <http://www.realtor.org/articles/scientists-meet-on-epa-water-rule> (accessed January 3, 2014).
  8. Stoner and Kadeli, “EPA Science.”
  9. *Environmental Integrity Project v. U.S. Environmental Protection Agency*, 425 F.3d 992 (D.C. Cir. 2005).
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# Promoting Transparency in Federal Agencies' Use and Dissemination of Science

*Daren Bakst*

## KEY TAKEAWAYS

Science helps to provide the underlying rationale for federal regulations that affect the lives of all Americans.

Stronger transparency requirements for federal agencies' use of science will provide much-needed accountability in policymaking and uphold democratic principles.

The Trump Administration should implement government-wide transparency requirements for agency use of science and Congress should codify key requirements.

Science plays a critical role in the policy work of federal agencies.<sup>1</sup> When federal agencies issue regulations, science often helps to provide the underlying rationale and scope for these laws that affect the lives of all Americans.

Even when a federal agency merely disseminates scientific information, it can have a major impact, as the imprimatur of the federal government carries significant weight. For example, the results of a single federal scientific study may be widely disseminated in media reports shaping public opinion, or be used by other federal agencies in their rulemakings.<sup>2</sup>

It therefore is critical that federal agencies properly use science in policymaking and when disseminating scientific information. 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>3</sup> He

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This paper, in its entirety, can be found at <http://report.heritage.org/bg3453>

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was right. It is also important that the science and the scientific process are, in fact, deserving of the public's trust.

For agency science to deserve this trust, there must be transparency in how federal agencies utilize the science.<sup>4</sup> This Backgrounder discusses numerous issues that should be addressed to promote transparency in federal agencies' use of science.<sup>5</sup>

## What Is Transparency?

The term "transparency" is commonly used when discussing the work of the government, but there is no clear and objective definition of what "transparency" means. A 2012 Congressional Research Service (CRS) report<sup>6</sup> on transparency in the executive branch examined this issue:

[T]here is no single definition of what constitutes transparency or method for measuring it. For the purposes of this report, transparency comprises not only the disclosure of government information, but also the access, comprehension, and use of this information by the public. Transparency, as such, requires a public that can acquire, understand, and use the information that it receives from the federal government. This concept of transparency, however, is not the only possible designation of the term.<sup>7</sup>

The CRS report highlights other definitions that include "the publicizing of incumbent policy choices,"<sup>8</sup> and "the availability and increased flow to the public of timely, comprehensive, relevant, high-quality and reliable information concerning government activities."<sup>9</sup> All of these definitions help to capture what is meant by transparency.

Quite simply, when the federal government uses or disseminates science, the public should be able to know the details of this science and have the necessary information to evaluate and test it, receive accurate information about the science, and have ways to challenge and correct the science.

To aid in the discussion of this broad topic, this *Backgrounder* divides<sup>10</sup> transparency into the following five categories:

1. Public availability of the science;
2. Reproducibility and validation of the science;
3. Distinction between science and policy;

4. Proper characterization and presentation of the science; and
5. Meaningful public participation that allows a voice in the use and dissemination of the science.

## The Importance of Transparency

Before examining transparency issues, it is helpful to recognize why transparency in general is so important. Transparency is a fundamental requirement for the work of federal agencies, including the rulemaking process.

Consistent with the nation's democratic principles, agency bureaucrats are not authorized to develop whatever policies they desire. Federal agencies must have statutory authority for their actions, comply with various process requirements, and conduct their work in an open manner that involves the public.<sup>11</sup>

For example, the Administrative Procedure Act of 1946 is the primary law governing the federal regulatory process.<sup>12</sup> This law promotes transparency in the rulemaking process by establishing processes that require public notice and opportunities for public participation.

Through a transparent system, the public can help to provide a much-needed check on agency officials and their broad policymaking. This helps the members of the public by ensuring that they have a voice in the process and can evaluate how agencies have reached certain conclusions. However, it also benefits the agencies themselves. Public feedback, including from top scientists, can provide insight and useful criticism that can better inform the science, and as a result, help to formulate better policy.

Further, just as it is difficult to remove regulations once they are on the books, it is also difficult to challenge the underlying science that provide justification for those regulations. The agencies have a self-interest to protect this science that can quickly become entrenched and viewed as conventional wisdom. As a result, agency science is often not susceptible to changes to reflect new understanding. Instead, it often reflects the science that has existed to serve the agency's policy agenda for years.

This need for transparency is especially important because Congress delegates too much power to federal agencies. In fact, much of the lawmaking reserved to Congress is arguably exercised by the agencies themselves. As a result, unelected and generally unaccountable agency officials are, in fact, creating laws, as opposed to merely implementing the will of Congress.

While more transparency will not offset the harm resulting from unlawful or excessive delegation of power that undermines representative government, it can instill some democratic principles into federal rulemaking that can help to mitigate the harm.

## I. Public Availability of the Science

A primary way to ensure transparency is to make the science available to the public. This does not merely include the underlying studies. It also includes any data, assumptions, computer code, or other relevant material that the public could use to properly evaluate the science.

Federal agencies should inform the public in a clear fashion which science has been used in any of its decision making. This includes explaining why some studies were chosen while other reliable studies were excluded. Agencies should not be able to, inappropriately, limit the studies that they consider when reaching conclusions. By providing the public a comprehensive picture of the applicable science on a specific issue, and identifying and explaining the decisions that went into deciding the best available science, the agencies are less likely to cherry pick results.

These requirements should not be controversial. In congressional testimony, former senior Environmental Protection Agency (EPA) official Jeff Holmstead correctly explained: “I don’t think anyone can object to the basic premise that scientific information used to support regulatory actions should be made public.”<sup>13</sup>

Yet, critics of EPA and congressional efforts to promote transparency at the EPA have used narrow concerns as a way to discredit the overall efforts to promote transparency. These concerns, to the limited extent they exist, such as potential improper disclosure of personally identifiable information or confidential business information (such as trade secrets), are solvable.

They are certainly not an excuse to ignore the basic premise that scientific information needs to be made available to the public. The redaction of information, for example, is one way of addressing the improper disclosure of personally identifiable information or confidential business information.

These concerns can also be overstated. In its 2013 report on the use of science in regulation, the Administrative Conference of the United States addressed the exaggerations that can occur in the context of confidential business information.<sup>14</sup> The report recommended:

Agencies that provide CBI [confidential business information] protections for studies or data that inform regulation should ensure that the CBI claims

are justified. Given the strong incentives to regulated parties for overclaiming CBI protection and the resultant costs from this overclaiming to public health protection and research, it is important that the agencies' CBI programs not provide a safe haven for unjustified suppression of relevant regulatory research. To that end and as a first step, the agencies should review their CBI programs to ensure that there is rigorous oversight of CBI and related trade secret claims on health and environmental research. Agencies should, where possible, penalize those CBI claims that, upon review, appear unjustified.<sup>15</sup>

Privacy and confidentiality protections should be respected. However, these protections should not be abused to block the disclosure of information that can be made available in a manner compliant with the law.

## II. Reproducibility and Validation of the Science

The science should be available to the extent that it can be fully evaluated and validated.<sup>16</sup> This means being able to determine whether scientific findings are the results of sound methodology and assumptions. It also means, in part, that the public should have the necessary information to reproduce the results of studies used by the agencies. Reproducibility is critical in science. As explained in the *Scientific American*:

Scientific ideas that are true should be reproducible: other researchers should be able to repeat the experiments and get similar results or use other methods to arrive at the same conclusions. You can't say that you discovered something new if someone else can't reproduce your result.<sup>17</sup>

Concerns over reproducibility in the science used by agencies is even more pronounced because there is major concern that a reproducibility crisis currently exists in science.<sup>18</sup> A 2016 *Nature* survey found that 52 percent of researchers surveyed agreed that there was a significant crisis of reproducibility, 90 percent of the respondents agreed that was either a significant or slight crisis, and only 3 percent said there was no crisis.<sup>19</sup> This same survey found that “[m]ore 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>20</sup>

While reproducibility is important, this does not mean that legal and privacy protections should be violated.<sup>21</sup> It also does not mean that the public must be able to do the impossible, such as replicate the exact results of a study when those results are unique to a particular time and place, including

replicating rare events, such as disasters.<sup>22</sup> An expectation of reproducibility does not mean common sense is thrown out the window.

In general, the public should have the information necessary to independently evaluate and validate the merits of a study consistent with what is in fact necessary and feasible to conduct such an evaluation.

Some assert that journal peer review processes are sufficient to protect the public's interest in ensuring the credibility of the science that is used by agencies.<sup>23</sup> But these peer review processes have significant problems and there can be a big difference in the quality of the peer review processes across journals.<sup>24</sup> In addition, the independence of peer review is not something that can merely be assumed, especially when many of the peers could be close colleagues.

Concern over peer review is not just about independence or quality, but also about its limitations. George Wolff, a former chairman of the EPA's Clean Air Scientific Advisory Committee has explained:

In the development of regulations based on environmental studies, numerous subjective assumptions and choices must be made regarding the selection of data and models that have a profound impact on the strength of any statistical associations and even whether the associations are positive or negative. The appropriateness of the assumptions and choices are not adequately evaluated in the standard peer review process. That is why it is essential that the data and models be placed in the public domain for a more rigorous evaluation by qualified experts. The proposed regulation, Strengthening Transparency in Regulatory Science [the proposed EPA rule], will provide an opportunity for such evaluations.<sup>25</sup>

There seems to be an assumption, at least by some, that the agencies and scientific sources should be trusted without question. This notion completely ignores basic democratic principles. It is one thing when the peer review process is used for strictly academic purposes, but once studies are used by federal agencies, often as the basis for public policies that have serious real-world impacts on the lives of Americans, protections must exist to preserve these important democratic principles.<sup>26</sup>

Some critics of transparency efforts have tried to suggest that they are simply means to block certain science from being utilized by agencies, including the best available science.<sup>27</sup> To the extent the critics are referring to flawed science, they would be correct. Transparency efforts are designed to help ensure that the best available science is appropriately employed by federal agencies. Requirements, such as reproducibility, are not obstacles to the use of the best available science, they are the means necessary to ensure the use of the best available science.

### III. Distinction Between Science and Policy

Science does not answer policy questions. Science can inform policy decisions by providing answers to objective questions, without making value judgments. Policy decisions, though, require value judgments and subjective decision making. For example, science can inform policymakers about the likelihood that a product may cause harm to humans, but it does not answer the inherent value question about what constitutes an acceptable level of risk.

There is also a flawed assumption that scientists only answer science questions and that their conclusions will be independent of personal opinion. They may use a scientific process and the guise of science to actually conduct policy analysis with policy conclusions, or allow their own beliefs to inappropriately influence what are supposed to be scientific conclusions.

As just one example, ideological preference played such a prominent role during the 2015 federal Dietary Guidelines for Americans process that it veered the entire “scientific” process off mission. The Dietary Guidelines Advisory Committee (DGAC) was working on recommendations to provide to the Departments of Agriculture (USDA) and Health and Human Services (HHS).<sup>28</sup> Instead of focusing on dietary and nutritional factors, the DGAC started to work on climate change and environmental sustainability. As a result, the legitimacy of their nutritional recommendations were undermined by allowing their environmental policy preferences to influence their work.<sup>29</sup>

Susan Dudley, director of the GW Regulatory Studies Center, explained concerns over the conflating of science and policy in 2017 congressional testimony:

It is this tendency to “camouflag[e] controversial policy decisions as science” that Wendy Wagner called a “science charade” and it can be particularly pernicious. For instance, a 2009 Bipartisan Policy Center (BPC) 2009 report, *Improving the Use of Science in Regulatory Policy*, concluded that “a tendency to frame regulatory issues as debates solely about science, regardless of the actual subject in dispute, is at the root of the stalemate and acrimony all too present in the regulatory system today.” Both of these problems, hidden policy judgments and the science charade, can be the result of officials falling prey to the “is-ought fallacy”: incorrectly mixing up positive information about what “is” with normative advice about what “ought to be.”<sup>30</sup>

The EPA regulatory process defining “waters of the United States” (WOTUS) under the Clean Water Act (CWA) provides just one example

of an agency using science to improperly legitimize its policy choices. In 2014, when the EPA proposed its WOTUS definition rule (defining which waters can be regulated under the CWA), the agency stressed that the rule was informed by science.

The EPA developed a report called the “Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence.”<sup>31</sup> In January 2015, the EPA announced the release of this final report in a fact sheet.<sup>32</sup> The end of the document states: “Now final, this scientific report can be used to inform future policy and regulatory decisions, *including the proposed Clean Water Rule* being developed by EPA’s Office of Water and the U.S. Army Corps of Engineers.”<sup>33</sup> (Emphasis added.)

There was a problem, though. This scientific report was finalized *after* the proposed rule was published. As a result, the proposed rule was not informed by the report, and the public ended up providing comments on a proposal that did not take into account the “scientific basis needed to clarify CWA jurisdiction,” as the EPA explained was a purpose of the report.<sup>34</sup>

The EPA appeared to be using the scientific report as a way to create improper scientific legitimacy to the proposed rule, giving its policies a stamp of scientific approval.

Conflating science and policy certainly can involve improper agency actions. However, it is also extremely important that Congress not make similar mistakes by asking agencies to answer “science” questions that are, in fact, policy questions or that are impossible to separate from policy considerations.

For example, the decision to classify a species as threatened or endangered under the Endangered Species Act (ESA) should be based solely on the science, but currently these classification decisions can trigger regulatory requirements that will involve policy considerations. To promote and ensure purely scientific analysis, any decision on whether a species is threatened or endangered should be decoupled from any analysis of which policy steps, if any, should be taken. By keeping science and policy separated for the ESA, and across the board, the science used or disseminated by agencies is more likely to be genuinely based on science, and not on the conscious or subconscious policy concerns of agency officials.<sup>35</sup>

#### **IV. Proper Characterization and Presentation of the Science**

Even when the federal government does properly distinguish between science and policy, it too often presents this science in an inaccurate or misleading manner.

**Credibility of Science.** When federal agencies use and disseminate science, the accuracy of that science should be a priority. When certain important procedural steps are required, it is more likely that the public can have confidence in the science that the government disseminates to the public.

One important procedural step is to ensure the independence and objectivity of the science. When selecting reviewers of the science, the government can help to ensure this independence and objectivity by selecting individuals who do not have conflicts of interest. The National Academies conflict of interest policy states: “[T]he term ‘conflict of interest’ means any financial or other interest which conflicts with the service of the individual because it (1) could significantly impair the individual’s objectivity or (2) could create an unfair competitive advantage for any person or organization.”<sup>36</sup>

The National Academies conflict of interest policy also includes additional points, such as:

- “The term ‘conflict of interest’ applies only to current interests. It does not apply to past interests that have expired, no longer exist, and cannot reasonably affect current behavior”;<sup>37</sup>
- “The term ‘conflict of interest’ applies not only to the personal financial interests of the individual but also to the interests of others with whom the individual has substantial common financial interests if these interests are relevant to the functions to be performed”;<sup>38</sup> and
- “[A]n individual should not serve as a member of a committee with respect to an activity in which a critical review and evaluation of the individual’s own work, or that of his or her immediate employer, is the central purpose of the activity, because that would constitute a conflict of interest, although such an individual may provide relevant information to the program activity.”<sup>39</sup>

These are important considerations, but the entire issue of how to address conflicts of interest is very complicated. Bias can exist in numerous ways that may not be evident. Further, conflict of interest policies themselves could lead to biased outcomes based on selection criteria that favor or disfavor individuals. This is yet another reason why it is so critical that the public have access to the science, as well as a means to evaluate and address the science. Too much focus on the messengers can also be a distraction from what is ultimately the key issue: What is the message?

There should be skepticism of the government science regardless of the strength of conflict of interest policies, the evaluation by the “experts,” and the types of studies used in drawing conclusions. The only way to remove this skepticism is for the public to provide the necessary check on the science.

One important way to provide this check is to remove questionable assumptions about science that are entrenched across the board into the work of federal agencies. For example, the linear no-threshold (LNT) model is an assumption that has been employed throughout the federal government without regard for differences across scientific fields, even as evidence counters this assumption.

In very simple terms, the LNT model assumes that there is no safe level of exposure to a chemical or other alleged hazard. If a chemical is harmful at a high exposure, the LNT model assumes that the chemical is also harmful at a low 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>40</sup>

In an article on the LNT model and radiation in the peer-reviewed journal *Dose-Response*, authors John Cardarelli and Brant Ulsh, explain:

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>41</sup>

This approach is exactly the opposite of what should occur in agency science, especially when promoting transparency. Broad sweeping assumptions that are not even open to challenge should not exist in agency science. It very well may be true that the LNT model could be accurate in a specific situation, but the onus should be on the federal government to demonstrate that science supports this conclusion. If nothing else, there should not be an assumption one way or another.

When science is being used and disseminated, the government should not be able to simply point to some level of agreement among various scientific bodies or old conclusions that have become conventional wisdom. This is not to say that this information has no value, but testing and challenging the science should be the norm. The focus should be on what the

science actually says (and does not say), not merely relying on the conclusions drawn by so-called experts. Overreliance on old data and outdated assumptions ignores new scientific understanding and breakthroughs and makes it less likely that the best available science will be used by agencies.

**Accurate Communication of the Science.** Often, it is not just a question of the merits of the science itself or how the science was conducted, but how the scientific findings are communicated to the public. The following provide examples of how two of the leading agencies disseminating critical public health and safety information, the Food and Drug Administration (FDA) and the EPA, have disseminated information about the science that is either inaccurate or misleading:

In 2013, the FDA proposed its de facto ban on artificial trans fat.<sup>42</sup> In helping to make its case for this action, the FDA cited a Centers for Disease Control and Prevention (CDC) study (or what it claimed was a CDC study).<sup>43</sup> The proposed regulatory action asserted:

In addition, according to the Centers for Disease Control and Prevention (CDC), elimination of PHOs [partially hydrogenated oils] from the food supply could prevent 10,000 to 20,000 coronary events and 3,000 to 7,000 coronary deaths annually, if the marginal benefits of continuing to remove trans fats from food items remain constant.<sup>44</sup>

The study, though, was not a CDC study, and the CDC did not make any of the estimates that the FDA had widely promoted. Two authors who worked at the CDC published a study in the *Journal of the American Medical Association* in which they made the estimates.<sup>45</sup> The end of the published study expressly states: “The findings and conclusions in this report are those of the authors and do not necessarily reflect the official position of the US Centers for Disease Control and Prevention.”<sup>46</sup>

This was not a minor error. The FDA was incorrectly claiming the data was from a CDC study, thereby improperly giving the data much greater legitimacy due to the imprimatur of the government. This characterization of the data as coming from the CDC affected public perception. Had it been made clear to the public that the study was not a CDC study, it is less likely that the FDA would have used it as a major justification for its de facto ban. It also would have weakened its case for such a drastic change to the food supply.<sup>47</sup>

The EPA has also disseminated misleading information about science to the public, such as for its proposed 2015 ozone standard. To sell a more stringent ozone standard, the EPA listed a series of alleged facts in its “By

the Numbers” document<sup>48</sup> to persuade the public to believe that a more stringent standard was necessary. For example, according to the EPA, setting the ozone standard to between 65 parts per billion and 70 parts per billion would avoid:

- 65,000 to 180,000 missed work days, and
- 790 to 2,300 cases of acute bronchitis among children.<sup>49</sup>

This information was misleading, at best. Both of these alleged facts are based on reductions in fine particulate matter (PM<sub>2.5</sub>) alone, not ozone. The public was being led to believe that reducing ozone achieves these health benefits. In reality, these benefits had nothing to do with a reduction in ozone.<sup>50</sup>

Federal agencies should portray the science accurately, and not play fast and loose in presenting the findings to achieve agency objectives. It should not be difficult for an agency to properly attribute authorship or provide relevant context so that the public is not left with a misimpression about the science.<sup>51</sup>

A significant part of this problem is likely connected to the desire of agencies to go overboard in pushing their policy agendas.<sup>52</sup> There is nothing wrong with an agency communicating its rationale for its proposals, but in doing so, it should be cognizant of the fact that the agency is, rightly or wrongly, considered a reliable and objective source. Agencies should not take actions that threaten the legitimacy that the public often assumes is connected with government information.

## V. Meaningful Public Participation

Meaningful public participation is critical to transparency. This public role reflects important democratic principles and is a central aspect of the agency decision-making process. In order to have this meaningful level of participation, agencies should provide the necessary information in an accurate and understandable fashion. The main requirement, though, is for the public to have a direct voice in how the science is used and disseminated, and to be able to influence the science in a way that ensures its legitimacy.

Agencies try to take away this voice, such as when they inappropriately use regulatory guidance instead of conducting a proper rulemaking on issues that make substantive changes to the law.<sup>53</sup> This voice can also be silenced when agencies engage in what is known as “sue and settle.”

**Sue and Settle.** It is impossible for the public to have a meaningful voice when it is excluded from the rulemaking process. This is what happens through the “sue and settle” process. 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. This may sound innocent enough, but in reality, this can lead to behind-the-scene policymaking and rushed rulemakings in order to get around the usual procedural requirements. This way, the public’s voice on the science can effectively be silenced.

The case of the Hine’s emerald dragonfly provides a good example of how sue and settle can work. As explained by the U.S. Chamber of Commerce:

In 2008, environmental advocacy groups sued FWS [Fish and Wildlife Service] to protest the exclusion of 13,000 acres of national forest land in Michigan and Missouri from the final “critical habitat” designation for the endangered Hine’s emerald dragonfly under the Endangered Species Act. Initially, FWS disputed the case; however, while the case was pending, the new [Obama] administration took office, changed its mind, and settled with the plaintiffs on February 12, 2009. FWS doubled the size of the critical habitat area from 13,000 acres to more than 26,000 acres, as sought by the advocacy groups. Thus, FWS effectively removed a large amount of land from development without affected parties having any voice in the process. Even the federal government did not think FWS was clearly mandated to double the size of the critical habitat area, as evidenced by the previous administration’s willingness to fight the lawsuit.<sup>54</sup>

The Fish and Wildlife Service’s settlement may have led to a critical habitat area that was not substantiated by the science. If so, any property-use restrictions on the newly designated land was unnecessary, and likely imposed significant economic costs. Regardless, the public had no meaningful voice in the process, nor the chance to evaluate and provide public feedback on the science.

**Information Quality Act (IQA).** One of the best ways to promote public trust in the science and the scientific process is to allow the public to have a means to directly challenge the science. The IQA, enacted in 2000, makes it possible for the public to serve as a check on government dissemination of information and the soundness of agency science.<sup>55</sup>

The text of the IQA requires federal agencies to “issue guidelines ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by the agency.”<sup>56</sup> The IQA can help to ensure the accuracy of the information disseminated and promote transparency of the science used by agencies.

Unfortunately, the potential of the IQA to promote sound science has been undermined by insufficient agency accountability and judicial decisions holding the IQA does not authorize judicial review.<sup>57</sup> There need to be teeth put into IQA enforcement. This would involve requirements that agencies respond thoughtfully and in a timely manner to public requests under the IQA.<sup>58</sup> There should also be judicial review to ensure, in part, that agency science meets the established IQA guidelines, especially when informing policy decisions.

## Recommendations

There have been recent efforts to promote transparency in federal agency use of science, but the primary focus has been on improving transparency only at the EPA. In 2018, the EPA published a proposed rule entitled “Strengthening Transparency in Regulatory Science.”<sup>59</sup> In 2017, the House passed the HONEST Act.<sup>60</sup> Both of these measures, among other things, would have improved public access to the science.

These are important efforts, but there need to be major steps to promote transparency across the federal government. President Barack Obama did issue the above-referenced memorandum on scientific integrity in 2009; the memorandum is very broad, though, and only touches upon the importance of transparency. Much more is needed.

The Trump Administration should develop an executive order<sup>61</sup> that provides specifics to guide the agencies and directs them to issue regulations to implement these requirements. Congress should codify key transparency requirements into law.

**Public Availability of the Science.** Federal agencies should:

- Make the science they disseminate or use in policymaking available to the public.
- Include any data, assumptions, computer code, or other relevant material for the public to properly evaluate the science.
- Inform the public in a clear fashion which science has been used in any of their decision making. This includes explaining why some studies were chosen while other reliable studies were excluded.
- Take appropriate steps to prevent improper disclosure of personally identifiable information or confidential business information.

- Ensure that privacy and confidentiality concerns are not abused to block the disclosure of information unnecessarily.

**Reproducibility and Validation of the Science.** Federal agencies should:

- Provide the public with the information that is necessary to independently evaluate and validate the merits of a study.
- Provide the public with the necessary information to reproduce the results of studies used by the agencies.
- Recognize the wide problem of reproducibility in science generally, and ensure that the problem does not undermine agency use of science.
- Promote reproducibility to the greatest extent possible, recognizing that this does not mean the public must be able to do the impossible, such as replicate the exact results of a study when those results are unique to a particular time and place.
- Recognize that academic peer review processes are insufficient to protect the public's interest in ensuring the adequacy of the science that is used by agencies, especially given the numerous problems with academic peer review.

**Distinction Between Science and Policy.** Federal agencies should:

- Ensure that science is not conflated with policy.
- Develop protections so that scientists charged with providing scientific analysis for the agency only answer science questions, and that their conclusions are independent of personal opinion.
- Keep scientific advisory boards focused on their scientific responsibilities.
- Draw clear lines between science and policy analysis. (This also applies to Congress in what it expects agencies to do.)

**Proper Characterization and Presentation of the Science.** Federal agencies should:

- Develop strong conflict of interest policies, recognizing that any such policies themselves should be free of bias.
- Remove questionable assumptions about science that are entrenched in the work of federal agencies, including the assumption that the LNT model is accurate unless shown otherwise. (The burden should be the other way around.)
- Make the testing and challenging of the science the norm.
- Consider new scientific understanding and breakthroughs without defaulting to old data and outdated assumptions.
- Attribute authorship of studies properly and do not mislead the public about scientific conclusions.
- Do not exaggerate the science to help justify agency proposals; be cognizant of the fact that the agency is considered a reliable and objective source (rightly or wrongly).

**Meaningful Public Participation that Allows a Public voice in the Use and Dissemination of Science.** Federal agencies should:

- Recognize and embrace the fact that meaningful public participation in the agency's use and dissemination of the science is a fundamental democratic principle.
- Conduct notice and comment rulemakings instead of inappropriately using regulatory guidance; this ensures the public has a voice on the issue in question.
- Stop "sue and settle" abuse, which can leave the public out of the rulemaking process.
- Promote ways for the public to have a way of directly challenging the science, such as through the IQA.

- Strengthen the IQA by responding thoughtfully and in a timely manner to public requests under the IQA. (Congress should expressly authorize judicial review to ensure, in part, that agency science meets the established IQA guidelines, especially when informing policy decisions.)

## Conclusion

Promoting transparency in federal agency use of science will create new requirements that would make it more challenging for agencies to simply adopt whatever science they deem as meeting their needs. To some, these requirements might seem like artificial obstacles blocking agencies from fulfilling their missions. However, these protections are designed to ensure that agencies are, in fact, fulfilling their missions, not developing policy that reflects the interests of agency officials and special interests.

Agencies should have to evaluate the science more carefully. They should not be able to work backwards by identifying desired policy outcomes and then selecting the science that helps to reach those outcomes. Some critics of transparency promotion seem more concerned with efficiency and ease of using desired science. They fail to recognize that this entire transparency discussion is not occurring within the vacuum of a scientific community. Instead, it is occurring within the context of the lawmaking process.

The transparency issue is first and foremost about protecting democratic principles and promoting processes that can instill confidence and trust in the use and dissemination of science by federal agencies. Fortunately, achieving these objectives helps to simultaneously ensure that the best available science is used. Legitimate doubts about agency use of science should begin to be replaced by well-earned trust.

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## Endnotes

1. For the purpose of this *Backgrounder*, “science” refers to both natural and social science.
2. Concern over the dissemination of science is not limited to federal studies. When the federal government disseminates any science, especially science on which an agency has relied for a rulemaking, this can have a major impact.
3. 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 23, 2019).
4. This *Backgrounder* focuses on how federal agencies use science in rulemaking and in other policy-related matters, along with how federal agencies disseminate scientific information. The terminology “agency use of science” refers to these specific agency issues, not to all aspects of federal science, which are beyond the scope of this *Backgrounder*.
5. There should be transparency in the federal government generally, especially when it comes to rulemaking or information dissemination that can impact policy formulation. This *Backgrounder*, though, is focused on science.
6. Wendy Ginsberg et al., “Government Transparency and Secrecy: An Examination of Meaning and Its Use in the Executive Branch,” Congressional Research Service, November 14, 2012, <https://fas.org/sgp/crs/secrecy/R42817.pdf> (accessed October 23, 2019).
7. *Ibid.*
8. *Ibid.*, p. 2 (citing Richard W. Oliver, *What Is Transparency?* (New York: The McGraw-Hill Companies, 2004)).
9. *Ibid.*, p. 2 (citing Justin Fox, “Government Transparency and Policymaking,” paper for the Midwest Political Science Association Annual Convention, March 14, 2005).
10. There are no clear bright lines between these categories; there will be overlap. These categories are also not all-encompassing, but simply help to organize some of the bigger issues connected to transparency.
11. In reality, agencies do not always meet these requirements. This is just another reason why transparency is so important.
12. Administrative Procedure Act (APA; Public Law 79–404; 60 Stat. 237; 5 U.S. Code § 551, *et seq.*).
13. Jeff Holmstead, “Making the Environmental Protection Agency Great Again,” testimony before the Sciences, Space and Technology Committee, U.S. House of Representatives, 115th Cong., 1st Sess., February 7, 2017, [https://science.house.gov/imo/media/doc/Holmstead%20Testimony\\_2.pdf](https://science.house.gov/imo/media/doc/Holmstead%20Testimony_2.pdf) (accessed October 25, 2019).
14. Wendy Wagner, “Science in Regulation: A Study of Agency Decisionmaking Approaches,” University of Texas School of Law, February 18, 2013, prepared for the Administrative Conference of the United States, [https://www.acus.gov/sites/default/files/documents/Science%20in%20Regulation\\_Final%20Report\\_2\\_18\\_13\\_0.pdf](https://www.acus.gov/sites/default/files/documents/Science%20in%20Regulation_Final%20Report_2_18_13_0.pdf) (accessed October 23, 2019).
15. *Ibid.*, p. 152.
16. “Validation” is used in this *Backgrounder* as it would be used in common parlance.
17. Bonnie Swoger, “You Can’t Read Just One: Reproducibility and Multiple Sources,” *Scientific American* blog, October 29, 2013, <https://blogs.scientificamerican.com/information-culture/you-cane28099t-read-just-one-reproducibility-and-multiple-sources/> (accessed October 23, 2019).
18. Shannon Palus, “Make Research Reproducible,” *Scientific American*, Vol. 319, No. 4 (October 2018), pp. 56–59, <https://www.scientificamerican.com/article/science-under-scrutiny-the-problem-of-reproducibility/> (accessed October 23, 2019).
19. Monya Baker, “1,500 Scientists Lift the Lid on Reproducibility,” *Nature*, Vol. 533, No. 7604 (May 2016), pp. 452–454, <https://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970> (accessed October 23, 2019).
20. *Ibid.* This *Nature* survey appeared to be focused on reproducibility in terms of repeating experiments.
21. “Reproducibility,” as in this *Backgrounder*, is often used broadly to cover concepts, such as being able to reproduce results using the same data as a previous researcher or being able to replicate studies to show the legitimacy of a previous study when new data is used. It is helpful to bear in mind the different aspects of “reproducibility.” A May 2019 National Academy of Science report drew a distinction by using different definitions for “reproducibility” and “replicability.” According to the report, “‘Reproducibility’ is obtaining consistent results using the same input data; computational steps, methods, and code; and conditions of analysis.” “‘Replicability’ is obtaining consistent results across studies aimed at answering the same scientific question, each of which has obtained its own data. Two studies may be considered to have replicated if they obtain consistent results given the level of uncertainty inherent in the system under study.” News release, “New Report Examines Reproducibility and Replicability in Science, Recommends Ways to Improve Transparency and Rigor in Research,” The National Academies of Sciences, Engineering, and Medicine, May 7, 2019, <http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=25303> (accessed October 23, 2019). For the report itself, see National Academies of Sciences, Engineering, and Medicine, *Reproducibility and Replicability in Science* (Washington, DC: The National Academies Press, 2019), <https://www.nap.edu/catalog/25303/reproducibility-and-replicability-in-science> (accessed October 23, 2019). For another discussion on terminology, see Fiona Fidler and John Wilcox, “Reproducibility of Scientific Results,” *The Stanford Encyclopedia of Philosophy* (Winter 2018), <https://plato.stanford.edu/entries/scientific-reproducibility/> (accessed October 23, 2019).

22. For a good discussion of how the concept of reproducibility can be misconstrued, see Marlo Lewis Jr., “Booker and Holt Caricature Science Transparency Rule at Senate Hearing,” Competitive Enterprise Institute, October 5, 2018, <https://cei.org/blog/booker-and-holt-caricature-science-transparency-rule-senate-hearing> (accessed October 23, 2019).
23. Gina McCarthy and Janet McCabe, “Scott Pruitt’s Attack on Science Would Paralyze the E.P.A.,” *The New York Times*, March 26, 2018, <https://www.nytimes.com/2018/03/26/opinion/pruitt-attack-science-epa.html> (accessed October 23, 2019).
24. The following articles provide some concerns regarding peer review and the academic publishing process: Jeffrey Brainard and Jia You, “What a Massive Database of Retracted Papers Reveals about Science Publishing’s ‘Death Penalty,’” *Science* (October 25, 2018), <https://www.sciencemag.org/news/2018/10/what-massive-database-retracted-papers-reveals-about-science-publishing-s-death-penalty> (accessed October 25, 2019). The authors explain: “A retraction does not always signal scientific misbehavior.” However, the authors also point out: “About half of all retractions do appear to have involved fabrication, falsification, or plagiarism—behaviors that fall within the U.S. government’s definition of scientific misconduct. Behaviors widely understood within science to be dishonest and unethical, but which fall outside the U.S. misconduct definition, seem to account for another 10%. Those behaviors include forged authorship, fake peer reviews, and failure to obtain approval from institutional review boards for research on human subjects or animals.” See also Tom Jefferson, Philip Alderson, and Elizabeth Wager, “Effects of Editorial Peer Review: A Systematic Review,” *Journal of the American Medical Association* (June 5, 2002), <https://jamanetwork.com/journals/jama/fullarticle/194989> (accessed October 25, 2019); Fred Barbash, “Major Publisher Retracts 43 Scientific Papers Amid Wider Fake Peer-Review Scandal,” *The Washington Post*, March 27, 2015, <https://www.washingtonpost.com/news/morning-mix/wp/2015/03/27/fabricated-peer-reviews-prompt-scientific-journal-to-retract-43-papers-systematic-scheme-may-affect-other-journals/> (accessed October 25, 2019); John Bohannon, “Who’s Afraid of Peer Review?” *Science*, Vol. 342, No. 6154 (October 2013), pp. 60–65, <https://science.sciencemag.org/content/342/6154/60> (accessed October 25, 2019); and Julia Belluz and Steven Hoffman, “Let’s Stop Pretending Peer Review Works,” *Vox*, December 7, 2015, <https://www.vox.com/2015/12/7/9865086/peer-review-science-problems> (accessed October 25, 2019).
25. News release, “EPA Administrator Pruitt Proposes Rule to Strengthen Science Used in EPA Regulations,” Environmental Protection Agency, April 24, 2018, <https://www.epa.gov/newsreleases/epa-administrator-pruitt-proposes-rule-strengthen-science-used-epa-regulations> (accessed October 25, 2019).
26. Federal agencies do have expert bodies, such as scientific advisory boards, that can provide an important way to help ensure the integrity of the science. However, they are not a substitute for providing the general public with access to the science. In addition, the agencies can have many problems themselves in terms of reviewing the science and drawing scientific conclusions.
27. See, for instance, Robinson Meyer, “Even Geologists Hate the EPA’s New Science Rule,” *The Atlantic*, July 17, 2018, <https://www.theatlantic.com/science/archive/2018/07/scott-pruitts-secret-science-rule-could-still-become-law/565325/> (accessed October 23, 2019).
28. U.S. Department of Health and Human Services and U.S. Department of Agriculture, “Dietary Guidelines for Americans: 2015–2020,” 8th ed., December 2015, <http://health.gov/dietaryguidelines/2015/guidelines/> (accessed October 23, 2019).
29. Daren Bakst, “Extreme Environmental Agenda Hijacks Dietary Guidelines: Comment to the Advisory Committee,” Heritage Foundation *Commentary*, July 17, 2014, <https://www.heritage.org/public-health/commentary/extreme-environmental-agenda-hijacks-dietary-guidelines-comment-the>.
30. U.S. Senate, “Hearing on Agency Use of Science in the Rulemaking Process: Proposals for Improving Transparency and Accountability,” 115th Cong. 1st sess., statement of Susan E. Dudley, Director, GW Regulatory Studies Center, March 9, 2017, (citations omitted), <https://www.hsgac.senate.gov/imo/media/doc/DUDLEY%20TESTIMONY.pdf> (accessed October 25, 2019).
31. Environmental Protection Agency, “Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence,” EPA/600/R-14/475F, January 2015, [http://ofmpub.epa.gov/eims/eimscomm.getfile?p\\_download\\_id=523020](http://ofmpub.epa.gov/eims/eimscomm.getfile?p_download_id=523020) (accessed October 25, 2019).
32. Environmental Protection Agency, “Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence,” *Federal Register*, Vol. 80, No. 10 (January 15, 2015), p. 2100, <https://www.federalregister.gov/documents/2015/01/15/2015-00339/connectivity-of-streams-and-wetlands-to-downstream-waters-a-review-and-synthesis-of-the-scientific> (accessed October 25, 2019).
33. Environmental Protection Agency, “Fact Sheet: Connectivity of Streams and Wetlands to Downstream Waters,” [http://ofmpub.epa.gov/eims/eimscomm.getfile?p\\_download\\_id=521414](http://ofmpub.epa.gov/eims/eimscomm.getfile?p_download_id=521414) (accessed October 25, 2019).
34. Daren Bakst, “EPA Inadvertently Makes Case against Its Own Power Grab,” *The Daily Signal*, January 23, 2015, <https://www.dailysignal.com/2015/01/23/epa-inadvertently-makes-case-power-grab/> (accessed October 25, 2019).
35. Another important example of Congress asking agencies to conduct analysis that is supposed to be based on science but in reality involves policy considerations is the EPA’s process in establishing national ambient air quality standards. The science can inform the EPA about which level of harm might be expected at certain air quality concentration levels, but it does not answer the policy question of which level of risk is acceptable.
36. The National Academies of Sciences, Engineering and Medicine, “Background Information and Confidential Conflict of Interest Disclosure for Studies Related to Government Regulation,” BI/COI FORM 1, March 2016, [http://www.nationalacademies.org/coi/bi-coi\\_form-1.pdf?\\_ga=2.230053660.1034447288.1572268054-1375335813.1572015564](http://www.nationalacademies.org/coi/bi-coi_form-1.pdf?_ga=2.230053660.1034447288.1572268054-1375335813.1572015564) (accessed October 25, 2019). Other forms on this Web page also contain this language: The National Academies of Sciences, Engineering, and Medicine, “Conflict of Interest Policies and Procedures,” [https://www8.nationalacademies.org/pa/information.aspx?key=Conflict\\_of\\_Interest](https://www8.nationalacademies.org/pa/information.aspx?key=Conflict_of_Interest) (accessed October 25, 2019).
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38. Ibid.
39. The National Academies of Sciences, Engineering, and Medicine, "Conflicts of Interest for Committees Used in the Development of Reports," May 12, 2003, <http://www.nationalacademies.org/coi/> (accessed October 25, 2019).
40. Robert Gordon and Diane Katz, eds., *Environmental Policy Guide: 167 Recommendations for Environmental Policy Reform*, The Heritage Foundation, March 4, 2015, p. 35, [http://thf\\_media.s3.amazonaws.com/2015/pdf/EnvironmentalPolicyGuide.pdf](http://thf_media.s3.amazonaws.com/2015/pdf/EnvironmentalPolicyGuide.pdf).
41. 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, 2019). See also, Charles Pennington and Jeffrey Siegel, "The Linear No-Threshold Model of Low-Dose Radiogenic Cancer: A Failed Fiction," *Dose-Response*, Vol. 17, No. 1 (February 2019), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6376521/> (accessed October 25, 2019).
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44. Food and Drug Administration, "Tentative Determination Regarding Partially Hydrogenated Oils; Request for Comments and for Scientific Data and Information," *Federal Register*, Vol. 78, No. 217 (November 8, 2013), p. 67169, <https://www.federalregister.gov/d/2013-26854/p-10> (accessed October 25, 2019).
45. Dietz and Scanlon, "Eliminating the Use of Partially Hydrogenated Oil in Food Production and Preparation," pp. 143 and 144.
46. Ibid.
47. Bakst, "Request for Correction of Information Disseminated to the Public that Improperly Attributed a Study to the Centers for Disease Control and Prevention (CDC)."
48. Environmental Protection Agency, "The National Ambient Air Quality Standards EPA's Proposal to Update the Air Quality Standards For Ground-Level Ozone By The Numbers," August 2015, [https://www.epa.gov/sites/production/files/2015-08/documents/proposal\\_bythenumbers.pdf](https://www.epa.gov/sites/production/files/2015-08/documents/proposal_bythenumbers.pdf) (accessed October 25, 2019).
49. Ibid.
50. Daren Bakst, "Alleged Benefits from Proposed Ozone Standard Have Little to Do with Ozone: Statement to the EPA," *The Daily Signal*, February 13, 2015, <https://www.dailysignal.com/2015/02/13/alleged-benefits-proposed-ozone-standard-little-ozone-statement-epa/>.
51. Another example of EPA misrepresentation is the EPA's dissemination of information on its mercury regulations. Currently, on the EPA's Web page on the Mercury and Air Toxics Standards, the EPA lays out numerous alleged benefits of its "mercury rule," such as fewer sick days and asthma attacks. There is nothing on the page, though, that explains that these alleged benefits have absolutely nothing to do with reductions in mercury emissions. Environmental Protection Agency, "Mercury and Air Toxics Standards: Healthier Americans," <https://www.epa.gov/mats/healthier-americans> (accessed October 25, 2019).
52. See, for example, Daren Bakst, "Report: EPA Broke Federal Law with 'Covert Propaganda' on Social Media," *The Daily Signal*, December 14, 2015.
53. Todd Garvey, "A Brief Overview of Rulemaking and Judicial Review," Congressional Research Service, March 27, 2017, <https://fas.org/sgp/crs/misc/R41546.pdf> (accessed October 25, 2019), and Executive Office of the President, "Promoting the Rule of Law Through Transparency and Fairness in Civil Administrative Enforcement and Adjudication," E.O. 13892 of Oct 9, 2019, *Federal Register*, Vol. 84, No. 199 (October 15, 2019), pp. 55239–55243, <https://www.federalregister.gov/d/2019-22624/p-1> (accessed October 25, 2019).
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58. On April 24, 2019, the Office of Management and Budget (OMB) issued a memorandum to help improve the implementation of the IQA by updating the 2002 OMB Guidelines on the IQA. Office of Management and Budget, “Memorandum for the Heads of Executive Departments and Agencies: Improving Implementation of the Information Quality Act,” Executive Office of the President, April 24, 2019, <https://www.whitehouse.gov/wp-content/uploads/2019/04/M-19-15.pdf> (accessed October 25, 2019), and Office of Management and Budget, “Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies,” *Federal Register*, Vol. 67, No. 36 (February 22, 2002), pp. 8451–8460, <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 25, 2019).
59. 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 25, 2019).
60. The Honest and Open New EPA Science Treatment (HONEST) Act of 2017, H.R. 1430, 115th Cong., 1st Sess., <https://www.congress.gov/bill/115th-congress/house-bill/1430/text> (accessed October 25, 2019).
61. There are other types of presidential documents, such as memoranda, that could meet this requirement. Ultimately, the goal is for the Administration to promote the transparency of agency use and dissemination of science across the federal government, to the fullest extent authorized by law.

April 17, 2019

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(D243-01)  
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*Submitted via Regulations.gov*

RE: Docket ID No. EPA-HQ-OAR-2018-0794

Ms. Johnson and Mr. Hutson:

I appreciate this opportunity to provide comments<sup>1</sup> to the EPA regarding its proposed rule reconsidering whether it is “appropriate and necessary” to regulate hazardous air pollutants (HAP) from coal- and oil-fired electric utility steam generating units (EGUs) under Section 112 of the Clean Air Act (CAA).<sup>2</sup>

In 2015, the U.S. Supreme Court in *Michigan v. EPA*<sup>3</sup> held that the “appropriate and necessary” requirements of Section 112(n)(1)(A) for EGUs dictated that the EPA consider costs (and, as will be argued below, a comparison of costs and benefits) for the Mercury and Air Toxics Standards (MATS rule).<sup>4</sup>

In response, the Obama Administration’s EPA published a supplemental finding<sup>5</sup> that the MATS rule was “appropriate and necessary” even though the benefits of about \$4 million-\$6 million were 1,600 to 2,400 times less than the costs of \$9.6 billion.<sup>6</sup>

The agency drew this conclusion based on two different approaches. The EPA’s preferred approach, a “cost-reasonableness” test, failed to compare benefits to costs. As the proposed rule correctly points out, this test was inconsistent with *Michigan v. EPA*:

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<sup>1</sup> The views I have expressed in this comment are my own, and should not be construed as representing any official position of The Heritage Foundation.

<sup>2</sup> 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,” Proposed Rule, *Federal Register*, Vol. 84, No. 26 (February 7, 2019), pp. 2670-2704, <https://www.federalregister.gov/documents/2019/02/07/2019-00936/national-emission-standards-for-hazardous-air-pollutants-coal--and-oil-fired-electric-utility-steam>

<sup>3</sup> *Michigan v. EPA*, 135 S. Ct. 2699 (2015), <https://www.scotusblog.com/case-files/cases/michigan-v-environmental-protection-agency/>

<sup>4</sup> Environmental Protection Agency web page entitled, “Mercury and Air Toxics Standards (MATS),” <https://www.epa.gov/mats>

<sup>5</sup> Environmental Protection Agency web page entitled, “Consideration of Cost in the Appropriate and Necessary Finding for the Mercury and Air Toxics Standards for Power Plants,” <https://www.epa.gov/mats/consideration-cost-appropriate-and-necessary-finding-mercury-and-air-toxics-standards-power>

<sup>6</sup> Ibid.

The primary, fatal flaw of the 2016 Supplemental Finding's "preferred approach" was its disregard for the *Michigan* Court's suggestion that, under CAA section 112(n)(1)(A), the Agency must meaningfully consider cost within the context of a regulation's benefits. The decision contemplated that a proper consideration of cost would be relative to benefits. For example, the Court questioned whether a regulation could be considered "rational" where there was a gross imbalance between costs and benefits and stated that "[n]o regulation is "appropriate" if it does more harm than good."<sup>7</sup>

The Court did explain that the Clean Air Act (CAA) does not "unambiguously require" the EPA "to conduct a formal cost-benefit analysis in which each advantage and disadvantage is assigned a monetary value." However, the opinion still required that a cost-benefit analysis be conducted, and specifically that there must be a comparison of the costs and the benefits. To answer a question posed by the proposed rule, a direct comparison of costs and benefits is the only permissible approach to consider costs in response to *Michigan v. EPA*.

The Court repeatedly explained that costs must be considered in light of the benefits. For example, the Court stated:

- "One would not say that it is even rational, never mind 'appropriate,' to impose billions of dollars in economic costs in return for a few dollars in health or environmental benefits."
- "No regulation is 'appropriate' if it does significantly more harm than good."
- "Agencies have long treated cost as a centrally relevant factor when deciding whether to regulate. Consideration of cost reflects the understanding that reasonable regulation ordinarily requires paying attention to the advantages *and* the disadvantages of agency decisions."<sup>8</sup>

The second approach used in the 2016 supplemental finding to justify the MATS rule was a formal cost-benefit analysis. This cost-benefit analysis though relied almost exclusively upon the co-benefits of reducing fine particulate matter (PM<sub>2.5</sub>) to justify the MATS rule.

This comment focuses on the problems connected to this overreliance on co-benefits, including how this co-benefits abuse violates basic principles of cost-benefit analysis. In making its case that it is not "appropriate and necessary" to regulate EGUs under Section 112, the EPA should highlight how these basic principles are being ignored.

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<sup>7</sup> 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," Proposed Rule, *Federal Register*, Vol. 84, No. 26 (February 7, 2019), pp. 2670-2704, <https://www.federalregister.gov/documents/2019/02/07/2019-00936/national-emission-standards-for-hazardous-air-pollutants-coal--and-oil-fired-electric-utility-steam>

<sup>8</sup> *Michigan v. EPA*, 135 S. Ct. 2699 (2015), <https://www.scotusblog.com/case-files/cases/michigan-v-environmental-protection-agency/>

## **The Inappropriate Use of Co-Benefits**

Some important problems with overreliance on PM<sub>2.5</sub> co-benefits include:

**Illogical to Principally Justify any CAA Rule Based on Co-Benefits.** The EPA correctly points out in the proposed rule, “it would be highly illogical for the Agency to make a determination that regulation under CAA section 112, which is expressly designed to deal with HAP, is justified principally on the basis of the criteria pollutant impacts of these regulations.”<sup>9</sup>

It would also be illogical for *any* Clean Air Act regulation that has been promulgated to address a specific targeted pollutant<sup>10</sup> unrelated to a criteria pollutant to be “justified principally on the basis of the criteria pollutant impacts of these regulations.”

**Direct Benefits Should be Given More Weight than Co-Benefits.** Direct benefits provide necessary support to justify the purpose of a rule. Co-benefits, however, are actually “ancillary benefits”<sup>11</sup> and subordinate or supplemental to the direct benefits.<sup>12</sup>

According to OMB, “[a]n ancillary benefit is a favorable impact of the rule that is typically unrelated or secondary to the statutory purpose of the rulemaking.”<sup>13</sup> It makes no sense to give subordinate or secondary benefits the same weight as primary (i.e. direct) benefits.

**Overreliance on Co-Benefits Can Undermine Proper Analysis of the Targeted Pollutant.** If a rule can be justified solely or almost exclusively on co-benefits alone, then what point is there for an agency to conduct the most basic requirements of cost-benefit analysis, such as quantifying direct benefits or seeking alternatives to achieve the purpose of the rule? This overreliance on co-benefits allows the EPA to regulate a pollutant without ever making the case that regulation of the targeted pollutant is even warranted.

In fact, according to NERA Consulting data,<sup>14</sup> based on 26 regulatory impact analyses (RIAs) of

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<sup>9</sup> 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,” Proposed Rule, *Federal Register*, Vol. 84, No. 26 (February 7, 2019), pp. 2670-2704, <https://www.federalregister.gov/documents/2019/02/07/2019-00936/national-emission-standards-for-hazardous-air-pollutants-coal--and-oil-fired-electric-utility-steam>

<sup>10</sup> It is true that Section 112 provides express language regarding the section’s focus on HAP. Even if a rule was not based on a section with similar express language, this would not change the illogical nature of an agency issuing a rule to address a specific non-criteria pollutant problem and then justifying that rule principally on the basis of criteria pollutants.

<sup>11</sup> Office of Management and Budget, Circular A-4, (2003), [https://obamawhitehouse.archives.gov/omb/circulars\\_a004\\_a-4/](https://obamawhitehouse.archives.gov/omb/circulars_a004_a-4/)

<sup>12</sup> See e.g. the definition of “ancillary,” *Merriam-Webster.com*, (2019), <https://www.merriam-webster.com/dictionary/ancillary>

<sup>13</sup> Office of Management and Budget, Circular A-4, (2003), [https://obamawhitehouse.archives.gov/omb/circulars\\_a004\\_a-4/](https://obamawhitehouse.archives.gov/omb/circulars_a004_a-4/)

<sup>14</sup> Anne E. Smith, "An Evaluation of the PM<sub>2.5</sub> Health Benefits Estimates in Regulatory Impact Analyses for Recent Air Regulations," *NERA Economic Consulting* (December 2011), [https://www.nera.com/content/dam/nera/publications/archive2/PUB\\_RIA\\_Critique\\_Final\\_Report\\_1211.pdf](https://www.nera.com/content/dam/nera/publications/archive2/PUB_RIA_Critique_Final_Report_1211.pdf)

major rules between 1997 and 2011, 21 of the rules derived most of their benefits from PM<sub>2.5</sub> co-benefits. In eight of these RIAs, the only benefits quantified are the PM<sub>2.5</sub> co-benefits (the EPA did not even bother to quantify direct benefits).<sup>15</sup>

**The Stated Purpose of the Rule is Not Really the Purpose of the Rule.** At some point, when co-benefits are so massive in relation to the direct benefits, the stated purpose of the rule cannot reasonably be claimed to be the true purpose of the rule. Instead, the rule is really about addressing the pollutant yielding the co-benefits.

The true purpose of the MATS rule is not the reduction of HAP emissions. The rule, given the extreme reliance on co-benefits, is in effect a PM<sub>2.5</sub> rule. As such, the EPA should have stated this as the actual purpose of the rule, and conducted cost-benefit analysis accordingly, including examining more cost-effective alternatives to reducing PM<sub>2.5</sub>. Regulating mercury to achieve these PM<sub>2.5</sub> reductions is an indirect means of achieving such reductions and likely an ineffective and costly way of doing so.

This overreliance on co-benefits can lead to significant abuse. For example, the EPA could be using regulation of mercury emissions or other air pollutants as a pretext for regulating PM<sub>2.5</sub>.<sup>16</sup> It also could very well be using PM<sub>2.5</sub> as a means to regulate pollutants such as mercury that the agency could not otherwise regulate *but for* the co-benefits. The EPA may simply recognize that many rules are not justified and yield little benefits connected with the purpose of the rule, so it uses PM<sub>2.5</sub> co-benefits to justify regulating whatever pollutants it desires.<sup>17</sup>

The EPA would not only be reasonable to ensure such abuse does not exist, it would be *unreasonable* if it failed to take action.

**Undermining Transparency.** An important goal of cost-benefit analysis is to provide transparency. When there is an overreliance on co-benefits, this can lead to misleading information being conveyed to the public. The MATS Rule is a prime example. On the surface, when discussing benefits of the rule, including the co-benefits, the public gets the misimpression that regulating mercury emissions yields billions of dollars in benefits. No distinction is drawn between the co-benefits and the direct benefits; they are merely conflated together and as a result the public is misled.

To see an example of this problem, one needs to look no further than the EPA's web site. On a MATS-related web page entitled "Healthier Americans,"<sup>18</sup> the page lays out numerous alleged

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<sup>15</sup> Ibid.

<sup>16</sup> This could very well be a legal problem when the statute would not authorize regulation under a specific statutory section of the law. This problem is discussed later in the comment.

<sup>17</sup> The EPA could simultaneously be over-relying on co-benefits to achieve both objectives.

<sup>18</sup> Environmental Protection Agency web page entitled, "Healthier Americans," <https://www.epa.gov/mats/healthier-americans>

benefits of the rule, such as fewer sick days and asthma attacks. It makes grandiose statements, such as:

Continuing to improve our air quality with the new Mercury and Air Toxics Standards means the difference between being sick and being healthy - in some cases, life and death - for hundreds of thousands of people.<sup>19</sup>

There is nothing on the page that explains that all of these alleged benefits have absolutely nothing to do with reductions in mercury emissions.

**Double Counting.** The EPA has repeatedly used PM<sub>2.5</sub> co-benefits to justify CAA rules, which risks the possibility of double counting. To the extent co-benefits are identified, it is critical that a very clear baseline is established taking into account any previous rules assumed to reduce PM<sub>2.5</sub>. If the agency does not do so, there is a real possibility of double counting.

**End Runs Around the Clean Air Act.** When there is an overreliance on PM<sub>2.5</sub> co-benefits as exists with the MATS rule, it does not matter what the stated purpose of the rule is because the massive co-benefits (and miniscule direct benefits) make it clear the rule is in effect a PM<sub>2.5</sub> rule. If the EPA wants to regulate PM<sub>2.5</sub>, then it has a specific statutory structure in place to do so without trying to regulate PM<sub>2.5</sub> through Section 112. The EPA is correct in the proposed rule when it states:

Congress established a rigorous system for setting standards of acceptable levels of criteria air pollutants and wrote a comprehensive framework directing the implementation of those standards in order to address the health and environmental impacts associated with those pollutants...To the extent that additional reductions of these criteria pollutants are necessary to protect public health, regulation explicitly targeted at these pollutants is best reserved for the NAAQS program, under which Congress provided the EPA ample authority to regulate.<sup>20</sup>

The EPA should not allow end-runs around the use of the NAAQS program or any statutory prohibitions against regulating PM<sub>2.5</sub> under a specific statutory scheme, such as Section 112.<sup>21</sup> A Cato Institute amicus brief provides a good summary of some key prohibitions:

Not only does the NAAQS program manifest Congress's intention that EPA not force reductions of these pollutants below the level that is requisite to protect public health with a margin of safety, Congress manifested its specific intention that EPA not use the

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<sup>19</sup> Ibid.

<sup>20</sup> 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," Proposed Rule, *Federal Register*, Vol. 84, No. 26 (February 7, 2019), pp. 2670-2704, <https://www.federalregister.gov/documents/2019/02/07/2019-00936/national-emission-standards-for-hazardous-air-pollutants-coal--and-oil-fired-electric-utility-steam>

<sup>21</sup> If the EPA determines that PM<sub>2.5</sub> could not be directly regulated under Section 112, then the agency should not be allowed to, in effect, directly regulate PM<sub>2.5</sub> through the overreliance on co-benefits in the MATS rule.

Section 112 program to regulate emissions of NAAQS pollutants except in very limited circumstances that are inapplicable here: “No air pollutant which is listed under section 7408(a) of this title may be added to the list under this section.” The Act thus draws a clear regulatory distinction between HAPs and NAAQS pollutants like fine particulate matter, expressly barring EPA from regulating the latter as if it were the former.<sup>22</sup>  
[citations omitted]

## **Conclusion**

I commend the EPA for addressing the “appropriate and necessary” analysis and not allowing the flawed 2016 Obama Administration’s revised finding to be the last word on how this analysis should have been conducted for the MATS rule.

The EPA should utilize this rulemaking process to explain some very basic principles that are not only applicable to the MATS rule but future CAA rulemakings as well. There has been a long-standing problem of co-benefits abuse by the agency. To the extent practicable, the EPA should use this rulemaking to limit future abuse.

Sincerely,

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<sup>22</sup> Brief of Amicus Curiae Cato Institute In Support of Petitioners, *Murray Energy Corporation v. U.S. EPA*, No 16-1127 (D.C. Cir.) [https://www.edf.org/sites/default/files/content/murray\\_energy\\_v\\_epa\\_-\\_cato\\_amicus.pdf](https://www.edf.org/sites/default/files/content/murray_energy_v_epa_-_cato_amicus.pdf)