



The Legal Consequences of EPA's Disruption of the NAAQS Process

By Laura Bloomer and Joe Goffman

INTRODUCTION

Under the Clean Air Act, EPA has a statutory mandate to set health-based air quality standards for six pervasive pollutants: carbon monoxide, lead, ground-level ozone, nitrogen dioxide, particulate matter, and sulfur dioxide. These standards, called the National Ambient Air Quality Standards (NAAQS), are a cornerstone of EPA's mission to achieve and maintain clean air. EPA must set the NAAQS at levels that protect the public health and welfare with an adequate margin of safety, and must review the NAAQS every five years. In practice, this means that as public health science advances and the health impacts of air pollutants are better understood, the agency's five-year reviews of the NAAQS often result in more protective standards.

Reviewing the NAAQS is a major effort that requires diverse scientific expertise. Understanding the importance of this responsibility, Congress charged an independent group of experts, now called the Clean Air Scientific Advisory Committee (CASAC), with assisting EPA in reviewing and revising the NAAQS. For over four decades, EPA – with the help of CASAC – has developed and carried out a scientifically sound and widely lauded approach to determining the NAAQS.

EPA conducts comprehensive assessments of the relevant science, the risks to human health and the environment associated with exposure to the regulated pollutants, and the implications of alternative policy options. As EPA's [website](#) states, “Scientific review during the development of these documents is thorough and extensive. Drafts of all documents are reviewed by CASAC and the public has an opportunity to comment on them.” EPA and the independent review panels use the “weight of the evidence” [framework](#) to analyze the impact of air pollutants on public health by considering evidence from many scientific disciplines. This process ensures that the agency meets its statutory obligation to set the NAAQS at levels that protect the public's health with an adequate margin of safety. CASAC's involvement insulates the NAAQS from politics and gives credibility to NAAQS rulemaking.¹ Like the EPA itself, the courts rely on CASAC's scientific recommendations and EPA's response to CASAC's recommendations when considering legal challenges to the NAAQS.

Now, the Trump Administration's [attacks on EPA's independent scientific review committees](#) are crippling the NAAQS review efforts and threatening EPA's ability to meet its statutory obligation. They are obstructing CASAC as it seeks to advise EPA on the NAAQS for ozone and particulate matter (PM) through a series of disruptions to the review process. A recent decision by the D.C. Circuit Court of Appeals, [Murray v. EPA](#), No. 15-1385 (D.C. Cir. Aug. 23, 2019) highlighted the legal importance of maintaining the integrity of CASAC. The court emphasized EPA's statutory obligation to follow CASAC's scientific advice or otherwise provide “substantial evidence” supporting an alternative determination. The court's essential presumption regarding the validity of CASAC's scientific advice

¹ For an in-depth discussion of NAAQS and the role of independent science, see William Boyd, *The Clean Air Act's National Ambient Air Quality Standards in LESSONS FROM THE CLEAN AIR ACT 15-55* (Ann Carlson & Dallas Burtraw eds., 2019).



reinforces that CASAC's determinations must reflect the best understanding of the current science and assist the agency in meeting its statutory duty to protect the public health.

Even so, the Trump administration is reshaping CASAC in a way that threatens the validity of CASAC's advice. The court may soon find itself at a fork in the road. In one direction, it could follow precedent and continue to make CASAC recommendations an essential component of its review. In that case, the court may unwittingly sanction an inferior scientific process to the detriment of the quality of the NAAQS and ultimately to public health. If it goes the other way, if CASAC loses credibility with the court, the court will need to reformulate its approach to reviewing the NAAQS.

In this post, we recount the steps that brought us here and discuss the consequences of these changes for setting air quality standards at the statutorily mandated level and for defending those standards in court.

EPA'S DIRECTIVES POLITICIZING & WEAKENING ADVISORY PANELS

While we provide a summary here of the recent actions by the Trump administration to undermine the scientific expertise within and available to CASAC, for a more thorough explanation of these actions, please see posts [by Gretchen Goldman at the Union of Concerned Scientists](#).

Restricting the science EPA can consider: In early 2018, EPA released a [proposed rule](#) that would severely limit the scientific studies that EPA and its advisory committees could consider when reviewing the NAAQS and undertaking other actions. Under the proposed rule, EPA would only be able to consider studies if the underlying data could be made publicly available, which would exclude many essential epidemiological studies that are foundational to understanding the harmful impacts of pollutants on human health. After a contentious public comment period during which public health and environmental organizations united in opposition to the rule, EPA recently announced it will not finalize the original proposal and instead expects to publish a supplemental proposal that will be available for public comment in early 2020. Regardless, the 2018 proposed rule signals EPA's preference to avoid considering epidemiological studies in its NAAQS reviews.

Accelerating the NAAQS process: On May 9, 2018, Administrator Scott Pruitt signed a Memorandum, [Back-to-Basics Process for Reviewing National Ambient Air Quality Standards](#), which accelerated the process for reviewing and setting the NAAQS. The Administrator directed the agency to complete the current reviews of the ozone NAAQS by October 2020 and the PM NAAQS by December 2020. Scientists [contend](#) that these proposed timelines (which appear to have been [pushed back slightly](#) since the original memo) may prevent CASAC and EPA from effectively reviewing the NAAQS.

Altering the NAAQS process: The back-to-basics memo also proposed modifications to the NAAQS process that threaten its public health safeguards and scientific integrity. Prior to the May 2018 memo, EPA would first establish the air quality standard by considering only public health science. Once the standard was established, EPA could incorporate economic and technological considerations when determining how the standards would be met. These two determinations occurred separately to ensure that the scientific determination of the appropriate air quality standard was insulated from other considerations. As Janet McCabe explained in our [CleanLaw podcast](#), the back-to-basics memo compresses the review steps and could inject implementation considerations into the standard-setting process. This removes the public health safeguard of



requiring EPA to establish health-based standards and implementation guidance separately. Nearly two decades ago, the Supreme Court in *Whitman v. American Trucking Associations, Inc.*, ruled that EPA is not allowed to consider the costs of implementation when setting the NAAQS. Yet the memo suggests that EPA will consider economic effects during the NAAQS review process, given that those considerations are relevant to the implementation guidance.

Disqualifying many academic experts: In late 2017, EPA issued a [directive](#) that removed distinguished scientists from CASAC by prohibiting any person who had received a grant from EPA from serving as a member of independent scientific advisory panels. There is no parallel prohibition on experts who are compensated by or affiliated with industries regulated by EPA. This policy tips the balance against academic experts and towards industry-affiliated scientists, as many academic experts routinely receive government funding for research. What's more – this approach to an alleged conflict-of-interest has long been discredited by the federal courts, see e.g. *Cargill, Inc., v. United States*, 173 F. 3d 323, 339 (1999).

Appointing anti-regulatory, industry-affiliated experts to CASAC: By the end of 2018, EPA replaced the [entire seven member CASAC panel](#). The current CASAC does not include an epidemiologist. On the other hand, several industry-affiliated members have called into question the regulation of harmful particulates. As of September 2019, only two university-affiliated experts serve on the panel.

Eliminating essential panels of experts: EPA failed to convene an ozone review panel and disbanded the additional panel of 26 multidisciplinary experts it had formed to assist in reviewing the PM NAAQS. Previous NAAQS reviews have involved forming an auxiliary panel of experts to help the chartered CASAC in areas where it lacks expertise. Instead, Administrator Wheeler [appointed twelve consultants](#) who the CASAC chair may engage with on specific topics.

Changing appointment processes: A recent GAO report found that EPA did not follow the agency's established process for vetting members of CASAC. As the report [explains](#), during the vetting process, EPA creates an appointment packet for each candidate that includes rationales from career EPA staff "recommending the candidates EPA's staff deem best qualified and most appropriate for achieving balanced committee membership." The GAO report found that CASAC's 2018 appointment packets [did not include this documentation](#).

IMPACTS TO THE DEVELOPMENT OF AIR QUALITY STANDARDS

These recent actions call into question whether the agency will be able to meet its statutory mandate to set the ozone and PM NAAQS at a level requisite to protect public health. Unlike EPA Administrator Wheeler, the members of CASAC understand what's at stake. On April 11, 2019, CASAC wrote a [letter to Administrator Wheeler](#) recommending that EPA reappoint the disbanded PM panel and add expertise in diverse scientific fields to ensure that "meaningful independent scientific review" could occur.

CASAC's letter followed [multiple letters](#) from former CASAC chairs, review panel members, and independent experts urging EPA to reinstate the panel. As a December 2018 letter from past members of EPA's independent review panels stated, "the Charter CASAC, simply based on its number, cannot span the scope of science considered by the EPA as it guides the Administrator in assuring that the NAAQS will protect human health with an adequate margin of safety, as mandated



by the Clean Air Act.” The letter went on to say that the rushed schedule for ozone and particulate matter “will reduce transparency, opportunity for public input, and the quality of review.”

Since Administrator Wheeler denied CASAC’s request to reconvene the panel and instead appointed consultants, CASAC members can only engage with the independent experts in writing and through Chair Tony Cox. Replacing the panel with consultants reduces transparency and quality of review, which ultimately threatens the outcomes of the NAAQS review process. Previously the panels held public meetings with CASAC, CASAC members were not required to filter questions through the Chair, and career EPA staff had significant input regarding the selection of the expert panel members. EPA also [announced](#) the appointment of an additional scientist to CASAC to replace a member who retired. Rather than appointing an epidemiologist or public health expert, as many experts have requested, EPA appointed a wildlife toxicologist.

Furthermore, many scientists and CASAC members have drawn attention to the substance of the scientific review. For example, experts have raised concerns regarding Tony Cox’s outlier approach to scientific assessment. As we explain in a [previous post](#), rather than using the weight of the evidence framework, his proposal would require that EPA only consider studies that show a direct causation between an air quality standard and a health benefit. This approach would severely narrow the science that EPA could use to set the NAAQS. Scientists write that it would “[fundamentally change](#) the EPA’s process for scientific assessment” and would weaken air pollution standards.

CASAC members also requested a second review of the integrated science assessment for PM, stating that the first draft “does not provide a sufficiently comprehensive, systematic assessment of the available science....” Though this call for a second review is not exceptional, it underscores the importance of elevating quality of review over efficiency of review.

As many voices have made clear, the dramatic cutting of independent scientific expertise from CASAC and the NAAQS process is directly impacting EPA’s ability to set air quality standards for ozone and PM that adequately protect the public health and welfare. In fact, the situation presents such a large threat to public health and to EPA’s statutory mandate that 21 members of the disbanded PM Review Panel have re-organized as the [Independent Particulate Matter Review Panel \(IPMRP\)](#). Though the IPMRP is now unaffiliated with CASAC and EPA, the panel submitted formal comments on the draft Integrated Science Assessment and will meet again in October 2019 to review the draft Policy Assessment. As the chair of IPMRP, Chris Frey, stated, “We will do what EPA tried to prevent us from doing: advise CASAC, EPA staff, the EPA administrator, and the public regarding our scientific advice pertaining to key science and policy issues.”

POTENTIAL LONG-TERM LEGAL CONSEQUENCES

The legal impacts of the Trump’s administration’s attacks on CASAC may outlive the administration. As the D.C. Circuit made clear in [Murray v. EPA](#), CASAC’s determinations – and EPA’s decision to follow or diverge from CASAC’s advice – are important components of the court’s review of the NAAQS. Under Section 307 of the Clean Air Act, EPA must offer an explanation of any important differences between a NAAQS rulemaking and the findings, recommendations, and comments by scientific review committees. Should EPA fail to adequately meet the requirements of Section 307, the court can remand the issue to the agency to either modify its determination or provide a more thorough explanation. As the D.C. Circuit acknowledged in a 2013 case, “Congress intended that



CASAC's expert scientific analysis aid not only EPA in promulgating NAAQS but also the courts in reviewing EPA's decisions." *Mississippi v. EPA*, 744 F.3d 1334, 1355 (D.C. Cir. 2013).

The Murray opinion raises an important question regarding the legal implications for EPA's current actions: what happens when CASAC is no longer comprised of independent, reputable scientists?

In one potential future, the court would continue to defer to CASAC's advice and would rely on its own precedent to compel EPA to heed the advice of CASAC, regardless of its scientific credibility. In another future, the court could question CASAC's legitimacy and decide to abandon its effective presumption towards CASAC's scientific advice. This outcome would give the EPA Administrator, a political appointee, more authority to determine health standards and could shift the NAAQS process away from hard science. Such a shift in the balance of power away from science, already under way via EPA's science-exclusion proposal and its disruption of CASAC's make-up and deliberative processes, seems to be exactly what EPA is seeking.

There is also a potential future in which the court defers to CASAC only to the extent CASAC represents independent, scientific expertise. But that reality would require significant legal advocacy on behalf of EPA and other litigants to prove the level of deference merited by each iteration of CASAC. The court should be able to rely on the assurance that committees mandated by the Clean Air Act to provide expert, independent scientific analysis will provide precisely that.

Ultimately, Trump's EPA is destabilizing an essential and basic premise of air quality standards and public health protections: that EPA's scientific advisory committees will provide necessary, independent scientific advice based on the best available science. These actions could have significant legal repercussions in the future – both within the agency as it seeks to fulfil its statutory duty and within the courts as it seeks to defend its decisions.