



Comment on the Proposed Lowering of National Ambient Air Quality Standards for Particulate Matter

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Bozeman, Montana

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Main Points

- **Prescribed fire is a critical tool for tackling the biggest source of particulate matter—wildfire smoke**
- **The disparate treatment given wildfire smoke and prescribed fire smoke makes it more difficult to reduce particulate matter pollution**
- **EPA’s proposal to lower the particulate matter standard without first fixing barriers to prescribed fire could worsen air quality and extend the wildfire crisis**

Introduction

The Property and Environment Research Center (PERC) respectfully submits this comment in response to the Environmental Protection Agency’s proposal to lower the primary annual PM_{2.5} standard. PERC is the national leader in market solutions for conservation, with over 40 years of research and a network of respected scholars and practitioners. Through research, law and policy, and innovative field conservation programs, PERC explores how aligning incentives for environmental stewardship produces sustainable outcomes for land, water, and wildlife. PERC has produced extensive research on the environmental consequences of the wildfire crisis and advocated policy reforms that would make it easier to restore the nation’s forests.¹ Founded in 1980, PERC is nonprofit, nonpartisan, and proudly based in Bozeman, Montana.

¹ See *Burn Back Better*, *supra* n.4; Eric Edwards & Sara Sutherland, *Does Environmental Review Worsen the Wildfire Crisis?*, PERC Policy Br. (2022); *Fix America’s Forests*, *supra* n.3; Dean Lueck & Jonathan Yoder, *Clearing the Smoke from Wildfire Policy: An Economic Perspective*, PERC Policy Series (2016); <https://www.perc.org/wp-content/uploads/old/pdfs/PS-56-WEB%20final.pdf>; Robert Nelson, *Charter Forests: A New Management Approach for National Forests*, PERC Policy Series (2015), https://www.perc.org/wp-content/uploads/old/PERC%20PS%2053_CHARTER%20FORESTS.pdf; See also Hannah Downey, Testimony Before the U.S. House Natural Resources Committee on America’s Wildfire Crisis (July 21, 2022), <https://perc.org/2022/07/21/testimony-before-the-u-s-house-on-americas-wildfire-crisis/>.

While reducing PM_{2.5} would benefit public health, simply lowering the standard may not translate into actual reductions. The western United States is in the midst of a wildfire crisis that threatens communities, watersheds, forest ecosystems, and air quality.² Indeed, smoke from catastrophic wildfires is already the most significant source of PM_{2.5}³ and is likely to continue growing. Lowering the standard will do nothing to address this problem because wildfire smoke is routinely excluded from this standard as an “exceptional event.”⁴ It will, however, penalize one of our most effective tools for tackling the wildfire crisis and reducing wildfire smoke—prescribed fire.⁵ Despite being less harmful, the smoke from prescribed fire counts against the standard. PERC urges EPA to address this imbalance before lowering the standard. Doing so is necessary to help federal agencies, states, tribes, and private parties restore “good fire” at the scale needed to fix America’s forests.

Lowering the PM_{2.5} standard without first fixing EPA’s treatment of prescribed fire under the Clean Air Act is likely to worsen air quality

The National Interagency Fire Center estimates that 60,000 wildfires burn roughly 8 million acres of land in the United States each year.⁶ 2020 demonstrated just how disastrous wildfires can be. That year, wildfires burned more than 10.2 million acres,⁷ killed 37 people⁸, and consumed \$20 billion in fire suppression costs and property damage.⁹ Even in a more typical year, wildfires threaten communities, scar forest ecosystems, degrade watersheds, and choke the air with smoke. With 80 million acres of national forests needing restoration, a growing wildland-urban

² See Exec. Order No. 14072, 87 Fed. Reg. 24851 (2022) (recognizing that wildfires present a crisis to the United States and that prescribed burns are one way in which they may be combatted).

³ See *Why Wildfire Smoke is a Health Concern*, U.S. ENV’T L PROT. AGENCY (last accessed Mar. 2, 2023), <https://www.epa.gov/wildfire-smoke-course/why-wildfire-smoke-health-concern>.

⁴ See Holly Fretwell & Jonathan Wood, *Fix America’s Forests: Reforms to Restore National Forests and Tackle the Wildfire Crisis*, PERC Public Lands Rep. 14–15 (2021), <https://www.perc.org/wp-content/uploads/2021/04/fix-americas-forests-restore-national-forests-tackle-wildfire-crisis.pdf>.

⁵ Jonathan Wood & Morgan Varner, *Burn Back Better: How Western States Can Encourage Prescribed Fire on Private Lands*, PERC Policy Rep. (2023), <https://perc.org/wp-content/uploads/2023/01/PERC-BBB-Report-UPDATED-230113-web.pdf>.

⁶ See *Annual 2020 Wildfires Report*, NAT’L CTR. ENV’T L INFO. (last accessed Mar. 2, 2023), <https://www.ncei.noaa.gov/access/monitoring/monthly-report/fire/202013>.

⁷ *Wildfires and Acres*, NAT’L INTERAGENCY FIRE CTR. (last accessed Feb. 9, 2023), <https://www.nifc.gov/fire-information/statistics/wildfires>.

⁸ Jenna Hillhouse, *2020 Western United States Wildfires*, HOMELAND SEC. DIG. LIBRARY (Dec. 18, 2020), <https://www.hsdl.org/c/tl/2020-wildfires/>.

⁹ *Billion-Dollar Weather and Climate Disasters*, NAT’L CTR. ENV’T L INFO. (last accessed Feb. 9, 2023), [https://www.ncei.noaa.gov/access/billions/events/US/2020?disasters\[\]=all-disasters](https://www.ncei.noaa.gov/access/billions/events/US/2020?disasters[]=all-disasters).

interface, and climate-fueled droughts, the crisis is likely to get worse without a substantial increase in mechanical thinning and prescribed burning.¹⁰

Wildfire smoke is comprised of carbon monoxide, hazardous air pollutants, and particle pollution.¹¹ However, particle pollution is the main component of wildfire smoke and the largest public health threat. Wildfire smoke is responsible for 30% of PM2.5 emissions, the largest single source.¹² And, in many areas, it far outpaces any other source. In California’s San Joaquin Valley, for instance, EPA estimates that wildfire emissions produce nearly ten times as much PM2.5 as agricultural dust, the number two source.¹³ Despite wildfire smoke’s effect on air quality, the EPA routinely treats wildfires as exceptional events and excludes them from air quality standards.¹⁴

Federal, state, local, and tribal governments—as well as private entities—are actively working to address the wildfire crisis. Prescribed burns “reduce the overgrowth and accumulated fuel loads that blanket many national forests and contribute to catastrophic wildfires.”¹⁵ Prescribed burns also minimize the spread of insects and disease, remove invasive species, recycle nutrients, and promote the growth of trees and plants.¹⁶ Prescribed burns have been successfully utilized in the past. For instance, Oregon’s 2021 Bootleg Fire burned more than 400,000 acres. However, the fire was more destructive on unmanaged federal lands than on privately owned land that was managed with prescribed burning.¹⁷

In April 2022, President Biden expressed his intent to “conserve our mature and old-growth forests on Federal lands . . . by reducing the threat of catastrophic wildfires through . . . prescribed fires.”¹⁸ Other agencies are on board with that plan. For instance, the U.S. Forest Service considers the “increased use of

¹⁰ See U.S. Forest Serv., *Confronting the Wildfire Crisis: A Strategy for Protecting Communities and Improving Resilience in America’s Forests* (Jan. 2022), https://www.fs.usda.gov/sites/default/files/fs_media/fs_document/Confronting-the-Wildfire-Crisis.pdf.

¹¹ *Why Wildfire Smoke is a Health Concern*, ENV’T’L PROT. AGENCY (last accessed Feb. 9, 2023), <https://www.epa.gov/wildfire-smoke-course/why-wildfire-smoke-health-concern>.

¹² See 88 Fed. Reg. 5,569 (Jan. 27, 2023).

¹³ See Regulatory Impact Analysis.

¹⁴ *Treatment of Data Influenced by Exceptional Events*, 81 Fed. Reg. 68216 (2016).

¹⁵ Hannah Downey, *The Irony of a Burn Ban*, PERC (May 24, 2022), <https://www.perc.org/2022/05/24/the-irony-of-a-burn-ban/>.

¹⁶ *Prescribed Fire*, U.S. FOREST SERV. (last accessed Feb. 9, 2023), <https://www.fs.usda.gov/managing-land/prescribed-fire>.

¹⁷ Wood & Varner, *supra* note 4 at 5.

¹⁸ *Supra*, note 1 at 24852.

prescribed fire” as a key component of its Wildfire Crisis Strategy Implementation plan.¹⁹

But for all the good that prescribed burns do, the smoke they emit usually counts against federal air quality standards, including the proposed PM2.5 standard.²⁰ Consequently, these standards have proven to be a significant and persistent obstacle to increasing the pace and scale of prescribed burning.²¹ The Forest Service has explicitly recognized the lack of Clean Air Act exemption as a barrier to prescribed burning implementation.²²

Acknowledging this problem, EPA has issued guidance allowing prescribed fires to be excluded from air quality standards as an “exceptional event.”²³ However, this process has proven too difficult and expensive. Indeed, EPA’s regulatory impact analysis discusses the proposal’s effect on excluding wildfires and fireworks as exceptional events but makes no mention of a successful exceptional events demonstration for prescribed fire.

Lowering the PM2.5 standard without first fixing the treatment of prescribed fire under the Clean Air Act could paradoxically worsen air quality by limiting an effective tool for reducing wildfire smoke. In fact, as the maps on the next page show, the areas that the EPA expects will have the most difficult time meeting the proposed standards are also those at greatest risk of wildfire and where prescribed fire is most urgently needed. These areas need more opportunities to implement controlled burns, not fewer. Under the Clean Air Act’s “requisite to protect public health” standard, EPA must consider the likely impacts of its proposal on prescribed fire and wildfire smoke.

¹⁹ *Confronting the Wildfire Crisis: A 10-Year Implementation Plan*, U.S. FOREST SERV. 10 (Jan. 2022), https://www.fs.usda.gov/sites/default/files/fs_media/fs_document/WCS-Implementation-Plan.pdf.

²⁰ *Fix America’s Forests*, *supra* n.3.

²¹ *See Burn Back Better*, *supra* n.4; *Fix America’s Forests*, *supra* n.3.

²² *National Prescribed Fire Program Review*, U.S. FOREST SERV. (Sept. 2022), https://higherlogicdownload.s3-external-1.amazonaws.com/WILDFIRELESSONS/d19e4406-ac0a-c1c2-273d-e4577e5a56e8_file.pdf?AWSAccessKeyId=AKIAVRDO7IEREB57R7MT&Expires=1677866597&Signature=NfYW%2BqZ74DoKQssAOj371j91TXI%3D.

²³ *See* EPA, *Exceptional Events Guidance: Prescribed Fire on Wildland that May Influence Ozone and Particulate Matter Concentration* (2019), https://www.epa.gov/sites/production/files/2019-08/documents/ee_prescribed_fire_final_guidance_-_august_2019.pdf.

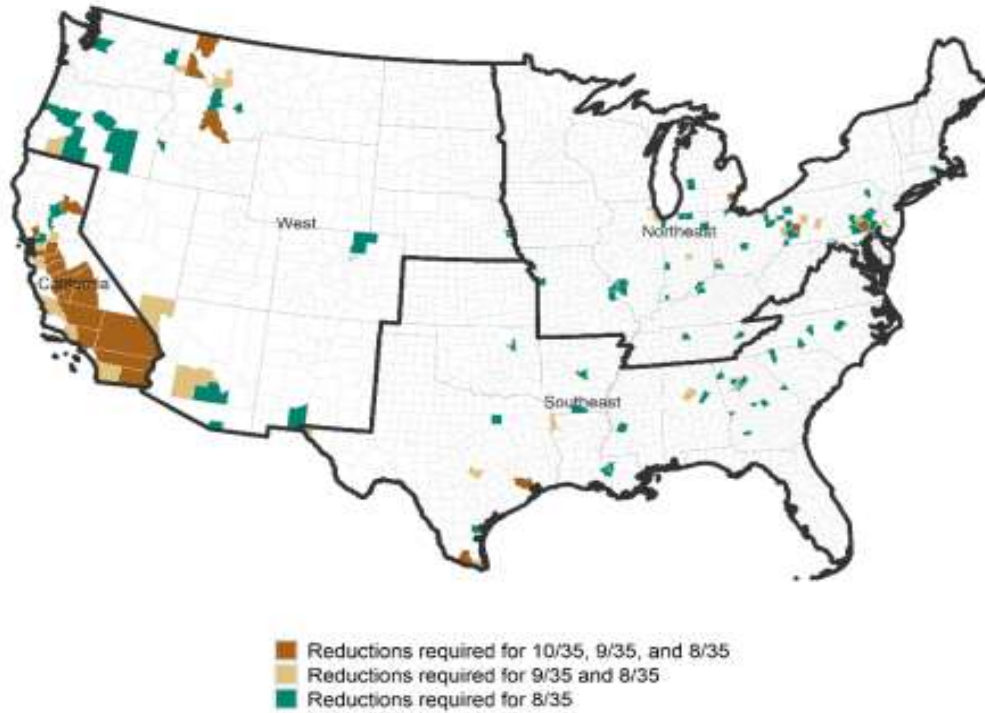
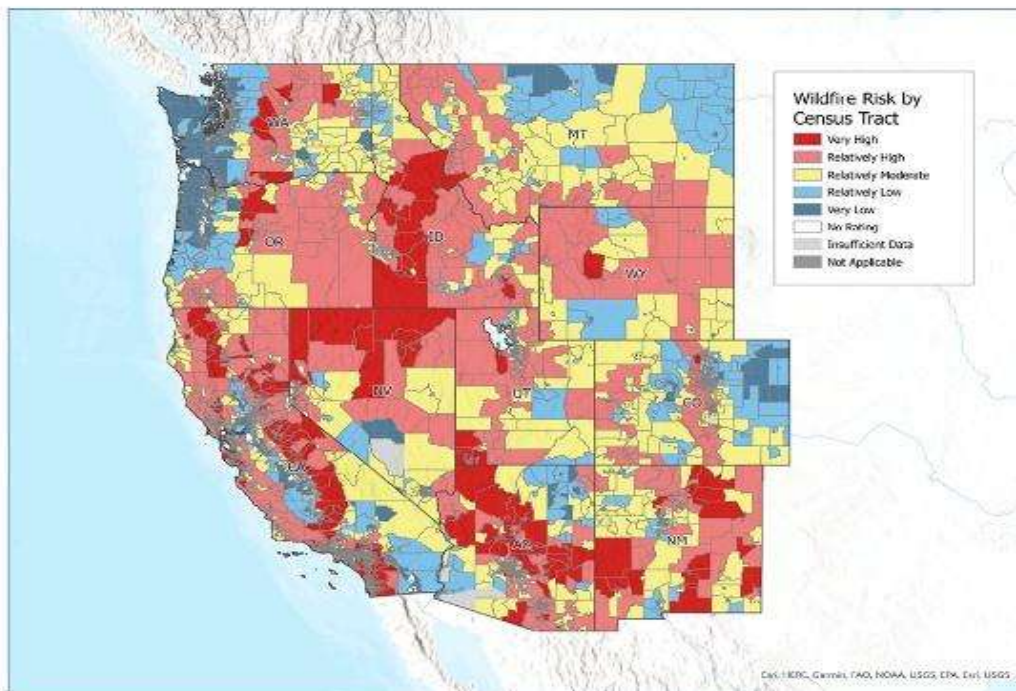


Figure 1 Counties That Would Be Out of Compliance With Proposed Standards

FIGURE 1:
Map of Wildfire Risk in Western States



The Federal Emergency Management Agency wildfire risk index rates a community's relative risk for wildfire. The map above displays FEMA wildfire risk by census tract for the 11 western states.

How to Fix It

The Clean Air Act defines an “exceptional event” as an event “determined by the Administrator through the process established in the regulations . . . to be an exceptional event.”²⁴ In 2016, the EPA revised their prior definition of “exceptional event” to ensure that there is a causal relationship between the event and emission exceedance, that the event was “not reasonably controllable or preventable,” and that the event was a human activity unlikely to recur at a particular location or was a natural event.²⁵ The EPA attempted to demonstrate what this should look like for prescribed fire burns but only demonstrated the burden²⁶ this process creates.²⁷

To rectify this issue, the EPA could streamline the exceptional event filing process by reducing the evidentiary burden on prescribed fire applicants, in accordance with 42 U.S.C. § 7619(b)(2)-(3). Additionally, the EPA should make this revised process binding, thereby giving certainty to states and landowners, by issuing it as a final rule.

EPA’s treatment of fireworks displays may provide a useful blueprint. EPA treats fireworks as exceptional events for purposes of NAAQS calculations on a categorical basis.²⁸ There are no rigorous showings a state must make to qualify. So long as the display “is significantly integral to traditional national, ethnic, or other cultural events including, but not limited to, July Fourth Celebrations” it qualifies for an exclusion.²⁹

For prescribed burns, however, EPA imposes numerous complex standards.³⁰ The state must adopt and implement a smoke management plan or prove that the individual burner followed smoke management practices.³¹ States must undertake a post-burn review of the prescribed burn.³² They must prove that they “periodically collaborate” with burn managers through outreach and education regarding how to manage smoke from prescribed fires.³³ And they must develop “a multi-year land or resource management plan” for any area where prescribed fire is to be applied and

²⁴ Clean Air Act, 42 U.S.C. § 7619(b)(1)(A)(iv) (2005).

²⁵ *Supra*, note 11 at 68225.

²⁶ By the EPA’s own estimate, this process can take more than a year.

²⁷ Scott Mathias & Richard Wayland, *Exceptional Events Guidance: Prescribed Fire on Wildland that May Influence Ozone and Particulate Matter Concentrations*, ENVT’L PROT. AGENCY 5 (Aug. 2019), https://www.epa.gov/sites/default/files/2019-08/documents/ee_prescribed_fire_final_guidance_-_august_2019.pdf.

²⁸ 40 C.F.R. § 50.14(b)(2).

²⁹ *See id.*

³⁰ 40 C.F.R. § 50.14(b)(3).

³¹ 40 C.F.R. § 50.14(b)(3)(ii)(A).

³² *Id.*

³³ 40 C.F.R. § 50.14(b)(3)(ii)(B).

formally commit “to establish, restore, and/or maintain a sustainable and resilient wildland ecosystem and/or to preserve endangered or threatened species through a program of prescribed fire.”³⁴ The EPA can reject an exceptional event determination for prescribed burns on many grounds, including by second-guessing the state’s determination of how best to manage wildland ecosystems and preserve listed species.³⁵

The EPA should not burden the process for categorizing prescribed burns as exceptional events while simultaneously streamlining the categorization of fireworks as exceptional events. It is entirely within EPA’s power to remove the unnecessary, complicated, and costly conditions it has imposed on states’ ability to expand prescribed burning while also complying with the Clean Air Act. It should prioritize those reforms before finalizing the proposed lowering of the PM2.5 standard, to ensure that EPA doesn’t paradoxically worsen air quality by further penalizing an effective tool for addressing wildfire smoke.

³⁴ 40 C.F.R. § 50.14(b)(3)(ii)(C).

³⁵ *Id.*