



# SERPPAS Briefing Paper: EPA National Ambient Air Quality Standards (NAAQS) for PM<sub>2.5</sub> and Potential Impacts on Prescribed Burning

## Importance to SERPPAS

- The use of prescribed fire is important to numerous SERPPAS partners for minimizing the risk of destructive wildfires and restoring habitat and species in the Southeast. The continued and increased use of prescribed fire as a land management tool is critical to the overall SERPPAS mission and can be done in a way that maintains human health.
- Based on the newly strengthened EPA annual NAAQS for PM<sub>2.5</sub>, the preliminary air monitoring data show that there will be several areas within the SERPPAS region that will likely violate the NAAQS and be designated nonattainment.
- An exceptional event (EE) demonstration can be made for wildfires and prescribed burns; however, the current process is tedious and not efficient for states that will be submitting numerous EE demonstrations. In some states, such as Georgia, hundreds of EE demonstrations may need to be made to stay in attainment.
- If an area is designated nonattainment, the state air quality agencies set the course to bringing the area back into attainment, which is usually new emission control requirements (potentially including prescribed burning).
- SERPPAS partners can provide better smoke management by following Basic Smoke Management Practices and can collect, track, and submit data from their prescribed burns (i.e., burn objectives, location, acres, prompt public notice documentation, smoke management techniques, etc.) to assist in expediting the potential EE process.
- State Wildlife Action Plans (SWAPs) and other local, state, and national plans can be updated to include information on the natural community and fire return intervals (including maps) and other information that will be helpful to the EE process. Georgia has already updated their SWAP to include this information.

## SERPPAS Role & Accomplishments

- The SERPPAS Smoke working group was developed early in SERPPAS history in preparation for the forthcoming 2012 EPA PM<sub>2.5</sub> NAAQS revision. The Prescribed Fire Working Group was later formed in 2011 and has continued to work with EPA Region 4 to minimize the impacts of smoke from prescribed fires, while maximizing coordination between the fire and air communities.
- SERPPAS provided support in developing the Prescribed Fire Smoke Management Pocket Guide and the subsequent associated [Smokeapp website](#) and continues to support the biennial Smoke Summit with EPA Region 4 for the state fire and air communities. (*Note: this website has some broken links and needs to be updated.*)
- SERPPAS was instrumental in identifying the original need for the EE Rule process for prescribed burning.

## Potential Actions for SERPPAS Discussion and Endorsement

- Land management agencies commit to following basic smoke management practices and providing:
  - prompt public notification whenever air quality concentrations exceed or are expected to exceed an applicable ambient air quality standard;
  - public education concerning actions that individuals may take to reduce exposures to unhealthy levels of air quality during and following a prescribed burn; and
  - implementation of appropriate measures to protect public health from exceedances or violations of ambient air quality standards caused by a prescribed burn.
- Agencies work with their state air agency to identify efficiencies and share best practices for the EE process, using the forthcoming EE prescribed burn demonstration template from Georgia as an example.
- State forestry agencies commit to ensuring their burn permit process includes information to meet the needs of an EE prescribed burn demonstration.



- Consider capacity support for agencies involved in the EE Process.
- Host a technical meeting with a focus on this topic in the fall 2024.
- Put information about fire return intervals and recommendations into State Wildlife Action Plans.
- Encourage other SERPPAS states to conduct State Tabletop exercises similar to Georgia.
- Create a document explaining the change in standards for PM<sub>2.5</sub> to explain the rule and its potential effects on prescribed burning to partners such as Sentinel Landscapes.
- Encourage state forestry and air agency participation in the EPA Region 4 Prescribed Fire and Air Quality work group and the Biennial smoke summit.
- Establish a Smoke Management sub-work group within the SERPPAS Prescribed Fire work group.
- Consider the addition of the EPA designated PM<sub>2.5</sub> nonattainment areas to the SERPPAS Good Map/REPI Map.

### Background: Final Reconsideration of the NAAQS for Particulate Matter (PM)

- On February 7, 2024, EPA strengthened the NAAQS for Particulate Matter (PM NAAQS) from a level of 12 micrograms per cubic meter to 9.0 micrograms per cubic meter to protect millions of Americans from harmful and costly health impacts, such as heart attacks and premature death. ([89 FR 16202](#))
- Particle or soot pollution is one of the most dangerous forms of air pollution, and an extensive body of science links it to a range of serious and sometimes deadly illnesses.
- EPA is not changing the current: primary and secondary (welfare-based) 24-hour PM<sub>2.5</sub> standards, secondary annual PM<sub>2.5</sub> standard, and primary and secondary PM<sub>10</sub> standards.
- EPA is also revising the Air Quality Index to improve public communications about the risks from PM<sub>2.5</sub> exposures and making changes to the monitoring network to enhance protection of air quality in communities overburdened by air pollution.
- EPA's final designations will either be based on 2022-2024 or 2023-2025 Design Values.

### Background: Exceptional Events Demonstrations

- EPA's mission includes preserving and improving the quality of our nation's ambient air to protect human health and the environment; however, the Clean Air Act also recognizes that it may not be appropriate to use the monitoring data influenced by "exceptional" events that are collected by the ambient air quality monitoring network when making certain regulatory decisions.
- Exceptional events are unusual or natural occurrences that can affect air quality but are not reasonably controllable or preventable using techniques state, local, or tribal air agencies may implement to attain and maintain the NAAQS.
- The Exceptional Events Rule provides a framework for states and air agencies to request exclusion of air quality data influenced by exceptional events, including wildfires and prescribed fires, from certain regulatory decisions such as initial area designations. EPA has issued detailed guidance on how states can seek to exclude data influenced by such events under the Exceptional Events Rule.
- States must submit formal requests to trigger this process and for EPA to consider for approval. A state requesting to exclude air quality data due to exceptional events must take "appropriate and reasonable actions to protect public health from exceedances or violations of the national ambient air quality standards." Wildland and prescribed fire contribute to approximately 44% of PM emissions in the US. Exceptional Events demonstrations cover such events; however, it is a substantial lift for air agencies. Communication between air agencies, forestry commission, and DoD has also presented significant challenges. EPA is committed to ensuring that the process for requesting the exclusion of event-influenced data is clear. Where needed, EPA intends to offer clarifications or information to help support state, local, and Tribal air agencies (and their delegates) to seek exclusion of air quality monitoring data influenced by wildland fire smoke events.
- The [Designation Memo](#) and tools linked below cover exceptional events and specific dates these demonstrations will be due for 2024 PM NAAQS designation consideration. The volume of these events and quick timeline concerns have been clearly expressed by air agency partners.
  - [Exceptional Events Module Air Knowledge Training](#)



- [Informational Public Webinar on New Exceptional Events Implementation Tools](#)

## Additional Resources

- Final Reconsideration of the National Ambient Air Quality Standards for Particulate Matter:
  - <https://www.epa.gov/pm-pollution/final-reconsideration-national-ambient-air-quality-standards-particulate-matter-pm>
- Wildland Fire Fact Sheet:
  - <https://www.epa.gov/system/files/documents/2024-02/pm-naags-wildland-fire-air-quality-fact-sheet-final.pdf>
- Treatment of Air Quality Monitoring Data Influenced by Exceptional Events:
  - <https://www.epa.gov/air-quality-analysis/treatment-air-quality-monitoring-data-influenced-exceptional-events>
- Exceptional Events Analysis and Visualization Tools:
  - <https://www.epa.gov/air-quality-analysis/exceptional-events-analysis-and-visualization-tools>
- PM 2.5 Designations Mapping tool:
  - <https://experience.arcgis.com/experience/a2ca272ce9fc4019a88ce35b863e2cab/page/Page/>