

EPA Overview of Prescribed Fire on Wildland:

Addendum to the Guidance on the Preparation of Exceptional Events
Demonstrations for Wildfire Events that May Influence Ozone
Concentrations (*Prescribed Fire Guidance*)

U.S. EPA, Office of Air Quality Planning and Standards
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Exceptional Events Refresher and Webinar Objective

- In September 2016, the EPA revised the Exceptional Events Rule, which introduced new provisions to encourage more communication between air agencies and EPA Regional offices (*e.g.*, initial notification process), help ‘right-size’ demonstrations, and foster national program consistency.
- The revised rule clarified that all events must demonstrate (1) a clear causal relationship between the event and the exceedance or violation; (2) the event was not reasonably controllable or preventable; and (3) the event was human activity unlikely to recur at a particular location or a natural event.
- EPA is continuing efforts to improve the Exceptional Events Rule implementation process for air agencies, including developing new guidance documents such as the one we will discuss today.
- **Webinar objective:** To familiarize air agencies with draft *Prescribed Fire Guidance*, and facilitate air agency review/feedback.

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Background on Prescribed Fire and Exceptional Events

The EPA recognizes the importance of prescribed fire on wildland.

- Fire plays a critical role in restoring resilient ecological conditions in our wildlands.
- Increased use of prescribed fire and managed wildfire can reduce the effects of catastrophic wildfire.

The 2016 rule clarifies the EPA's long-standing interpretation that prescribed fire on wildland can be a human-caused event eligible for treatment as an exceptional event.

The EPA also recognizes the importance of continued dialogue among air agencies, the EPA, and other federal agencies to ensure that land managers have adequate available tools for prescribed fire programs, and to ensure that use of these tools is protective of public health.



Guidance Overview

- Assists in the preparation of right-sized demonstrations for prescribed fire ozone events that satisfy the requirements of the Exceptional Events Rule when air agencies elect to submit demonstrations.
- Is an addendum to the Wildfire/Ozone Guidance and is one-stop shopping for prescribed fire ozone events, with all exceptional events requirements identified in one document.
- Provides example language and sample analyses that air agencies may use in their weight-of-evidence demonstrations. Links to documents that can serve as examples for air agencies.
- Although this addendum focuses on prescribed fire events that influence ozone concentrations, many of the analyses may also be appropriate for other NAAQS.

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Summary of Criterion: Clear Causal Relationship (CCR)

- Wildfire/Ozone Guidance presents a tiered approach that helps right-size demonstrations based on the nature of the relationship between the fire and the exceedance.
 - Tier 1 analyses: fires located in close proximity to a monitor in an area or during a time of year with typically low ozone concentrations, and thus need the least amount of evidence.
 - Tier 2 analyses: situations with less clear wildfire impacts, but meet certain key factors, such as emissions/distance (Q/D) of 100 or more.
 - Tier 3 analyses: situations where the relationship between the wildfire and the monitored ozone exceedances or violations is complex and attenuated.
- Prescribed fire explanation does not differ from CCR discussion in Wildfire/Ozone Guidance, and identifies that demonstrating a clear causal relationship may be less rigorous for some fires than others.
 - However, prescribed fires are unlikely to be severe or extreme enough for Tier 1 or Tier 2 analyses.
 - Since prescribed fires are generally smaller in scale and well defined, the supporting data should be more readily available and quantifiable.

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Summary of Criterion: Human Activity Unlikely to Recur or a Natural Event (HAuR)

- As a general matter, prescribed fire is human activity. In the unlikely event that a prescribed fire develops into a wildfire, the event is considered a natural event, as is discussed in the Wildfire/Ozone Guidance.
- Prescribed fire demonstrations can address recurrence by describing the actual frequency with which a burn was conducted, and may rely upon either:
 - an assessment of the **natural fire return interval**; or
 - the prescribed fire frequency needed to establish, restore and/or **maintain a sustainable and resilient wildland ecosystem** contained in a multi-year land or resource management plan with a stated objective 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.

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Summary of Criterion: Human Activity Unlikely to Recur or a Natural Event (HAuR)

- Describing the actual frequency with which a burn was conducted:
 - The EPA is remaining flexible about what kinds of evidence will be sufficient.
 - The guidance provides (1) example information and fire parameters which may describe the actual frequency of the prescribed fire, and (2) what kinds of documents tend to contain this information.
 - Air agencies can work with federal partners to help identify and catalogue relevant information when developing prescribed fire programs.



Summary of Criterion: Human Activity Unlikely to Recur or a Natural Event (HAuR)

- **Assessment of the natural fire return interval:**
 - Generally includes (1) a review of the number of years between successive naturally occurring fires for a given vegetation type and (2) a review showing that the actual frequency by which the prescribed fires were conducted matches the natural fire return interval.
 - The natural fire return interval is highly site specific, and does not always have to exactly match the actual fire frequency.
- **An assessment of the prescribed fire frequency needed to establish, restore and/or maintain a sustainable and resilient wildland ecosystem:**
 - Guidance identifies examples of factors used in this assessment.
 - These factors can typically be found in a multi-year land use or management plan, or may be established via scientific literature.
- The EPA intends to compare the actual time pattern of prescribed fires on the land with the pattern described in the applicable multi-year plan in a general way, rather than treating the multi-year plan as containing a specific schedule to which management must adhere.

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Summary of Criterion: Not Reasonably Controllable or Preventable

- The event must be both not reasonably controllable and not reasonably preventable at the time the event occurred.
- To satisfy not reasonably controllable:
 - the prescribed fire was conducted under an adopted and implemented certified Smoke Management Program, or
 - the prescribed fire was conducted with appropriate Basic Smoke Management Practices.
- To satisfy not reasonably preventable:
 - Based on a qualitative assessment of benefits that would be foregone if the fire were not conducted.
 - Generally relies on the same evidence as the human activity unlikely to recur criterion.

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Summary of Criterion: Not Reasonably Controllable or Preventable

Smoke Management Programs (SMPs):

- SMPs must be certified before the burn and implemented during the burn.
 - Certification requires that a responsible state or delegated local agency certify in a letter to the EPA, that it has adopted and is implementing an SMP.
 - The Exceptional Events Rule suggests six components for an SMP as guidance.

Basic Smoke Management Practices (BSMPs):

- Can be used as a standalone method to satisfy this criterion, or can be used in conjunction with an SMP, such as when the SMP does not cover all the lands burned.



EE Rule requirements for Using BSMP

- **Collaboration requirement:**

- Air agencies, federal land managers, and other entities as appropriate, must periodically collaborate with burn managers to discuss and document the process by which parties will work together to protect public health. *See* 50 CFR 50.14(b)(3)(ii)(B)(1).
- The EPA is not defining the mechanism by which these discussions are conducted or documented, or the full scope of these discussion. However, discussions must include outreach and education regarding general expectations for the selection and application of appropriate BSMP.
- The EPA cannot concur with a demonstration for prescribed fire that was submitted after September 30, 2018, that relies on BSMP until this collaboration has been conducted and documented. Notably, this collaboration can occur after the fire.

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EE Rule requirements for Using BSMP, continued

- **Retrospective review requirement:**
 - After a prescribed fire occurs and if it causes an exceedance or violation of a NAAQS, the air agency that employed the BSMP must participate in a “lessons learned” review of the event, and examine why an exceedance or violation occurred notwithstanding the use of BSMP. *See* 40 CFR 50.14(b)(3)(ii)(A)
 - Either the air agency or the burn manager could initiate such a retrospective review. If the prescribed fire becomes the subject of an exceptional events demonstration, the demonstration must include documentation of the post-burn review before the EPA can concur with a demonstration.
- The EPA believes collaborative reviews including federal partners is vital for program implementation. We are eager receive input about any tools that may facilitate collaboration.



Timeline for Completion

- Feedback from air agencies requested by January 11, 2019, to gibson.benjamin@epa.gov.
- EPA will review feedback with the goal of finalizing and releasing the guidance by Spring 2019. OMB review will be a key next step after we received input from air agencies.
- You can find additional exceptional events resources at: <https://www.epa.gov/air-quality-analysis/treatment-air-quality-data-influenced-exceptional-events>.
- Feel free to contact your EPA Regional office or Ben Gibson (OAQPS program lead) at gibson.benjamin@epa.gov with questions or concerns about exceptional events.

