

# Communication and Coordination in Preparation of Successful Exceptional Event Demonstrations Under the New Exceptional Events Rule

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## 2016 Revisions to the Exceptional Events Rule

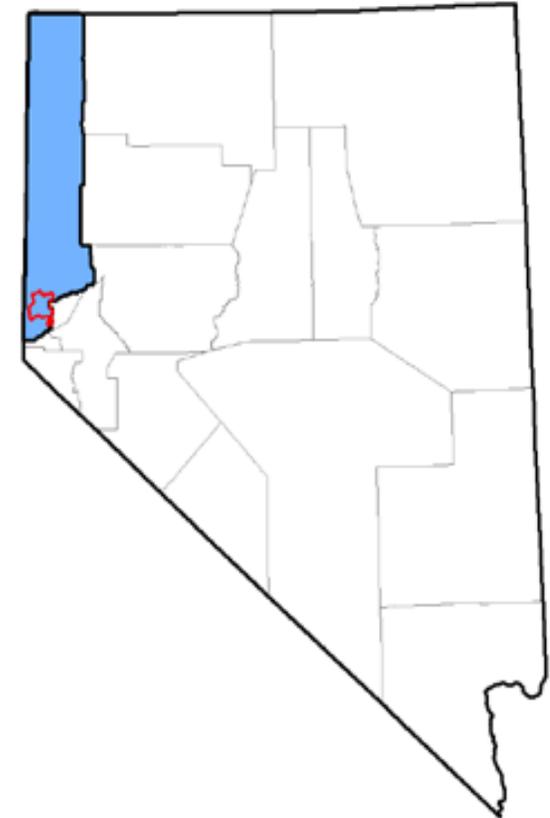
- In Sept. 2016, EPA finalized the **2016 Revisions to the Exceptional Events Rule**
  - Among other things, the revisions provide for early communication and coordination between EPA Regional Offices and submitting air agencies
- EPA also released new wildfire O<sub>3</sub> guidance
  - Clarified rule criteria and demonstration content requirements for wildfire O<sub>3</sub> events

**Washoe County submitted wildfire O<sub>3</sub> demonstrations for 2015 and 2016 events, which were the first demonstrations to be submitted, reviewed, and concurred upon under the new rule and guidance.**



## Washoe County and the 2015 O<sub>3</sub> NAAQS

- The Reno, NV area had one monitor violating the 2015 O<sub>3</sub> NAAQS with 2013-2015 and 2014-2016 design values
- Washoe County Air Quality Management Division (AQMD) claimed that the area was affected by wildfire emissions during events in 2015 and 2016
- **Exclusion of event data would result in the Reno area attaining the 2015 O<sub>3</sub> NAAQS (70 ppb) for those design value periods**
- Relevant for initial designations under the 2015 O<sub>3</sub> NAAQS



# Exceptional Events Communication Best Practices

## Communicate early and often!

Effective communication between air agencies and the EPA Regional office throughout exceptional events demonstration development, submittal, and review leads to timely and appropriate action on the submittal.

- EPA and state/local/tribal air agencies share an interest in having **technically and legally defensible** exceptional event demonstrations
  - Evidence must be technically sound
  - Must meet rule criteria
  - Timeline of process relative to regulatory actions is also very important
- The best way to achieve this is to work together!



# Exceptional Events Demonstrations – What Is Required?

- Initial Notification Process
- Demonstration content
  - **Narrative conceptual model** describing the event
  - **Clear causal relationship** analysis between the specific event and the monitored exceedance or violation
  - Event was **not reasonably controllable or preventable**
  - Event was a **natural event** (or was human activity that is unlikely to recur at a particular location)  
*Wildfire O<sub>3</sub> guidance document includes details on these elements specific to wildfire O<sub>3</sub>*
- Procedural requirements
  - Public comment period and response to any substantive comments
  - Flagging data in AQS
  - Meeting any relevant deadlines
  - Mitigation requirements as applicable



# Exceptional Events – EPA Region 9 Initial Notification Process

- **Communication tool** to assess regulatory significance, establish early and regular communication between EPA and the affected state/local/tribal air agencies, and clarify expectations
- Helps to identify which data is relevant to a qualifying regulatory action – can **reduce workload and resource investment** for both air agencies and EPA
- Components include:
  - Applicable NAAQS
  - Affected Regulatory Decision
  - Area Name/Designation Status
  - Design Value Period
  - Event Narrative
  - Event Specific Concentrations
  - **Design Value Calculations**

Table C: Summary of Maximum Design Value (DV) Site Information for 8-Hour Ozone (Effect of EPA Concurrence on Maximum Design Value Site Determination)

Maximum DV site (AQS ID) <b>without</b> EPA concurrence on any of the events listed in Table A above	Design Value 0.072 ppm	Design Value Site Reno3 (32-031-0016)	Comment Design value assumes concurrence with the 2015 Wildfire Ozone EE.
Maximum DV site (AQS ID) <b>with</b> EPA concurrence on all events listed in Table A above	Design Value 0.070 ppm	Design Value Site Reno3 (32-031-0016)	Comment Design value assumes concurrence with the 2015 Wildfire Ozone EE.

For Washoe County demonstrations – the Initial Notification process was used to narrow down the scope of the demonstrations to a single monitor and a subset of days.



## Narrative Conceptual Model

*Describe the event causing the exceedance and a discussion of how emissions from the event led to the exceedance or violation at the affected monitor.*

### Examples of information to include for wildfire O<sub>3</sub>:

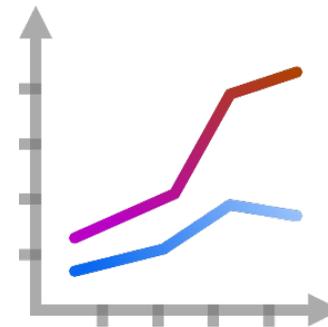
- Description of the geographic area
  - Maps of relevant monitors
- Typical non-event O<sub>3</sub> formation and meteorology
  - Average O<sub>3</sub> daily profiles
  - Seasonal variation
- Summary of fires
  - Description of the wildfires
  - Locations of specific fires, fire maps
- Event specific O<sub>3</sub> concentrations
  - Identify regulatory significance



## Clear Causal Relationship (CCR)

*The event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation.*

- Weight of evidence analyses
- Supported by a comparison of the claimed event-influenced concentration(s) to concentrations at the same monitoring site at other times



Communication during development of CCR analyses is critical:

- Share ideas for potentially compelling analyses – use technical expertise of EPA staff
- EPA can give preliminary feedback on technical requirements and rule criteria



## Clear Causal Relationship – Wildfire O<sub>3</sub> Guidance

- Uses a tiered approach for analyses to support the clear causal relationship criterion
  - Tier 1 clear causal analyses – key factor:
    - Wildfire-influenced ozone concentrations are **clearly higher** than non-event-related concentrations or occur **outside of the area's normal photochemical ozone season**
  - Tier 2 clear causal analyses – key factors:
    - Wildfire-influenced ozone concentrations are **higher** than non-event-related concentrations
    - **Fire emissions compared to the distance** of the fire from the affected monitor indicate a clear causal relationship (Q/D analysis)
  - Tier 3 clear causal analyses
    - Appropriate when Tier 1 or Tier 2 analyses are not conclusive
- EPA considered Washoe County's demonstrations to be Tier 3 demonstrations, based on evaluation of the Tier 1 and Tier 2 key factors.



## Other Rule Criteria– Wildfire O<sub>3</sub> Guidance

- Wildfires on wildland are presumed to be **not reasonably controllable or preventable** and a **natural event** (both rule criteria)
- Demonstration should provide evidence that the events were wildfires on wildland as defined in the EER:

***Wildfire** - fire started by an unplanned ignition caused by lightning; volcanoes; other acts of nature; unauthorized activity; or accidental, human-caused actions, or a prescribed fire that has developed into a wildfire. A wildfire that predominantly occurs on wildland is a natural event.*

***Wildland** - area in which human activity and development are essentially non-existent, except for roads, railroads, power lines, and similar transportation facilities. Structures, if any, are widely scattered.*



## Washoe County and EPA Region 9 Collaboration

- EPA Region 9 and Washoe County AQMD relied on frequent communication and information exchange to scope the demonstrations
  - Initial Notification process – helped narrow the number of monitors/days
  - Draft sharing – opportunity for EPA to give feedback before public comment and formal submission
  - Information/analysis sharing – able to strengthen the weight of evidence and utilize Region 9's technical expertise
  - Monthly coordination calls – able to identify upcoming issues, agree on timelines, and keep on track
- Washoe County AQMD and EPA Region 9 both devoted significant time and resources to complete demonstrations and meet accelerated timelines
  - Washoe: certified 2016 air monitoring data early, to enable work to begin on 2016 demonstration; submitted 2016 demonstration early enough for EPA to complete review prior to the originally anticipated June 2, 2017 deadline for 120-day letters
  - EPA: developed a new review template to match the new rule, accelerated our review timeline, and assisted Washoe County with technical analysis to strengthen the demonstration



## Communicate Early and Often

- Start talking as early in the process as possible
  - Use the Initial Notification process!
- Figure out what you need to do to meet relevant time frames
- Regular feedback and information exchange is crucial
- EPA Exceptional Events Website:
  - <https://www.epa.gov/air-quality-analysis/treatment-air-quality-data-influenced-exceptional-events>
  - Includes links to:
    - Final Rule and Wildfire O<sub>3</sub> Guidance
    - Examples of reviewed submissions (including Washoe 2015 and 2016 demos and EPA approval letter/technical support documents)
    - Exceptional Events Implementation Tools, Templates and Links

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