

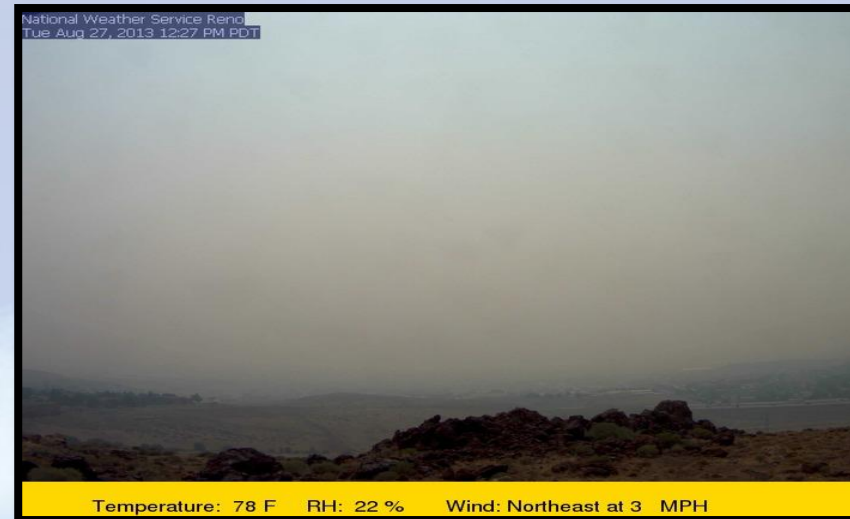
Prescribed Fire Vs Wildfire: An Air Quality Perspective

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Planning Program**

Washoe County Health District, Air Quality Management Division
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Reno NWS

Prescribed Fire Vs Wildfire





Washoe County Health District: Air Quality Management Division

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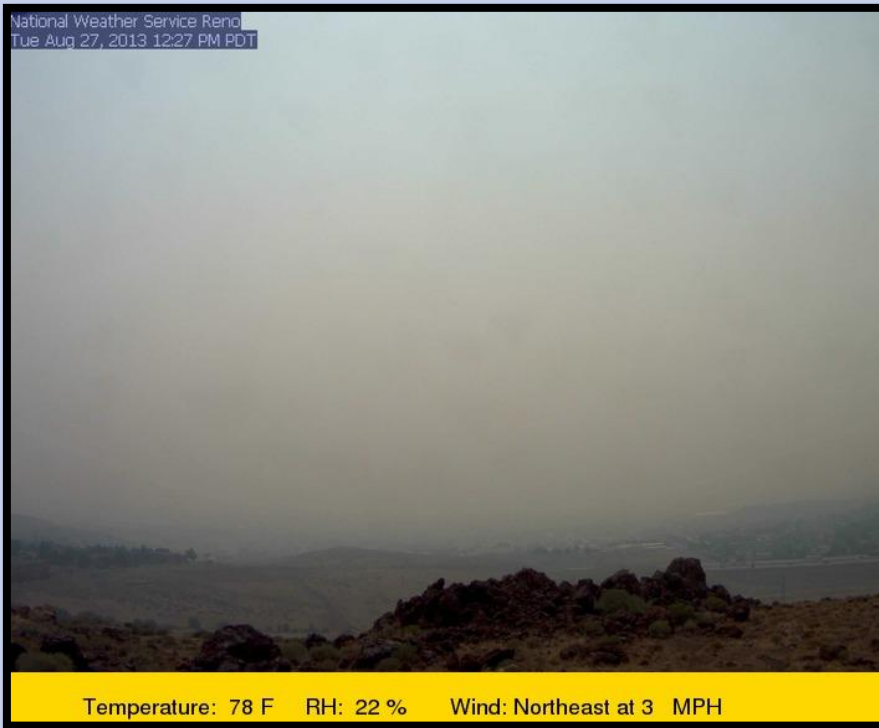
We are in **prescribed fire** season. By safely reducing excessive amounts of brush, shrubs, and trees, encouraging the new growth of native vegetation, and maintaining the many plant and animal species whose habitats depend on periodic fire, prescribed burning helps reduce the catastrophic damage and the major smoke impacts of wildfires.

Image taken yesterday by our smoke management air quality specialist at the North Lake Tahoe Fire Protection District's West 2nd Creek understory burn in Incline Village, Nevada.



Prescribed Fires

- Public Health
 - Public Notifications
 - Less Smoke Impacts
 - Shorter Duration
 - Temporary AQ Impacts
- Controlled Conditions
- Reduce Wildfire Severity



Wildfire Challenges

- Rapid Changes
 - Difficult to Forecast and Inform
- Monitoring Data
 - Hour Delay
- AirNow Delays
 - ~1.5 Hour Delay
- Mixed Message
 - Smoke in Valley
 - Green AQI

Current Conditions		
Air Quality Index (AQI) observed at 14:00 PDT		
<div style="display: flex; align-items: center; justify-content: center;"> 48 Good </div>		
Health Message: None		
<small>Note: Values above 500 are considered Beyond the AQI. Follow recommendations for the Hazardous category. Additional information on reducing exposure to extremely high levels of particle pollution is available here.</small>		
AQI - Pollutant Details		
Ozone	<div style="background-color: #90EE90; border-radius: 10px; padding: 5px 10px; font-weight: bold;">47</div>	Good
Particles (PM10)	<div style="background-color: #90EE90; border-radius: 10px; padding: 5px 10px; font-weight: bold;">22</div>	Good
Particles (PM2.5)	<div style="background-color: #90EE90; border-radius: 10px; padding: 5px 10px; font-weight: bold;">48</div>	Good

After the Event: Regulation Impacts Exceptional Events Demonstrations

- Narrative Conceptual Model
- Clear Causal Relationship
- Natural Event
- Not Reasonably Controllable or Preventable
- Conclusions and Recommendations

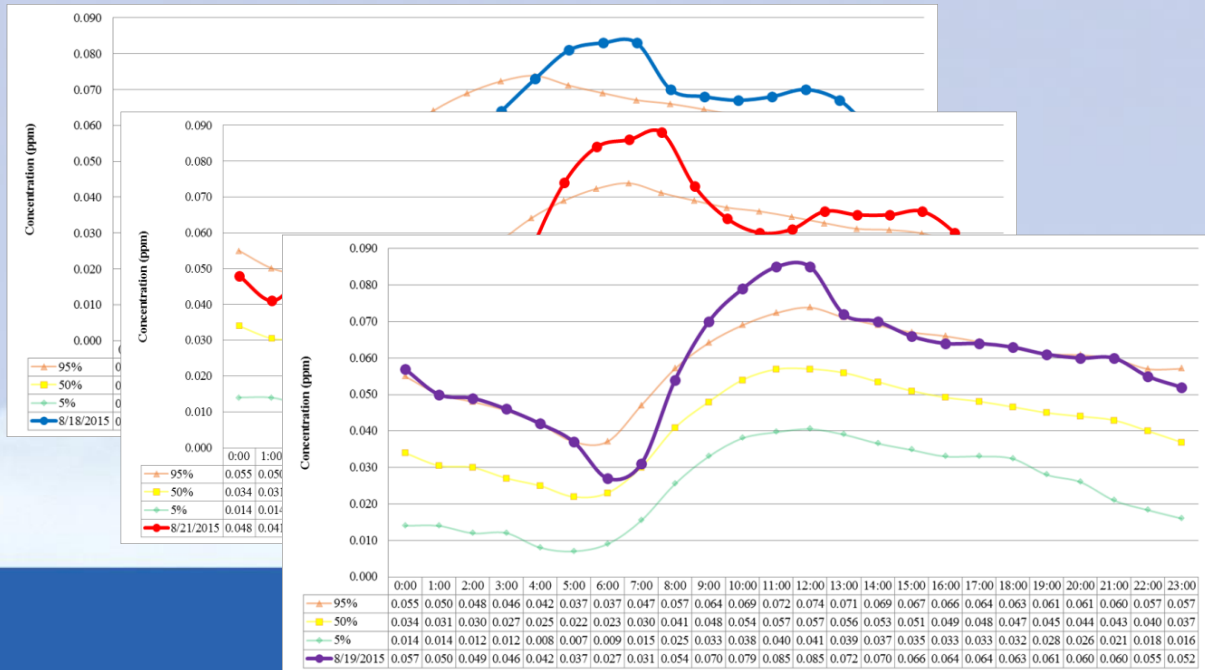
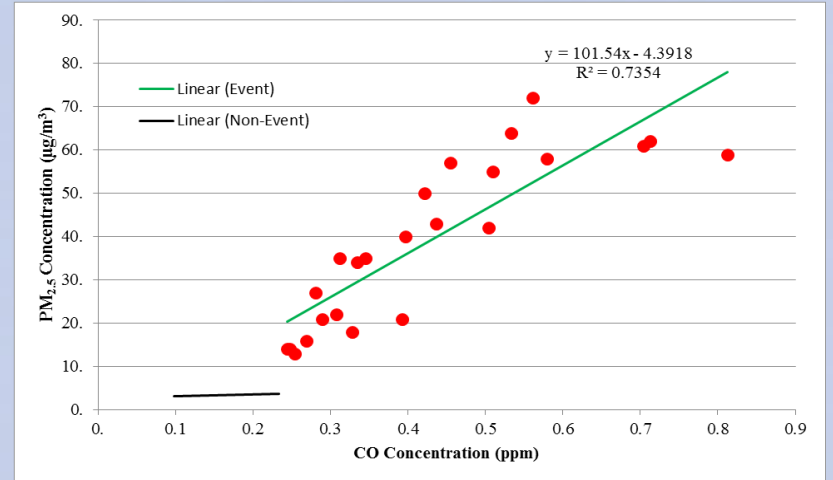
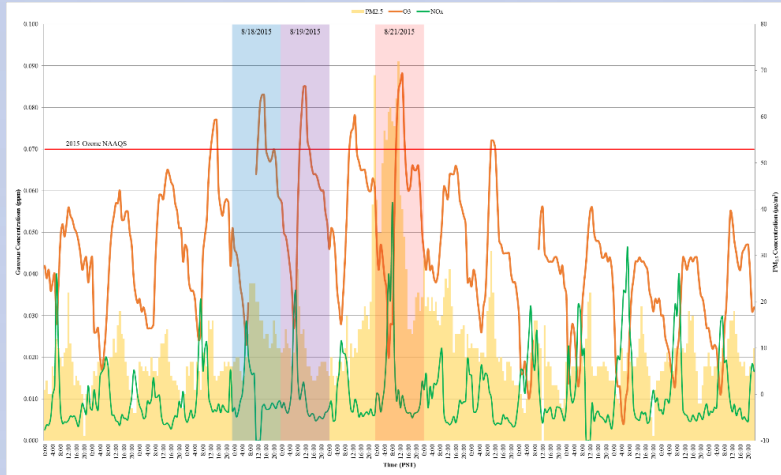


**Guidance on the Preparation of Exceptional Events Demonstrations
for Wildfire Events that May Influence Ozone Concentrations**

Final

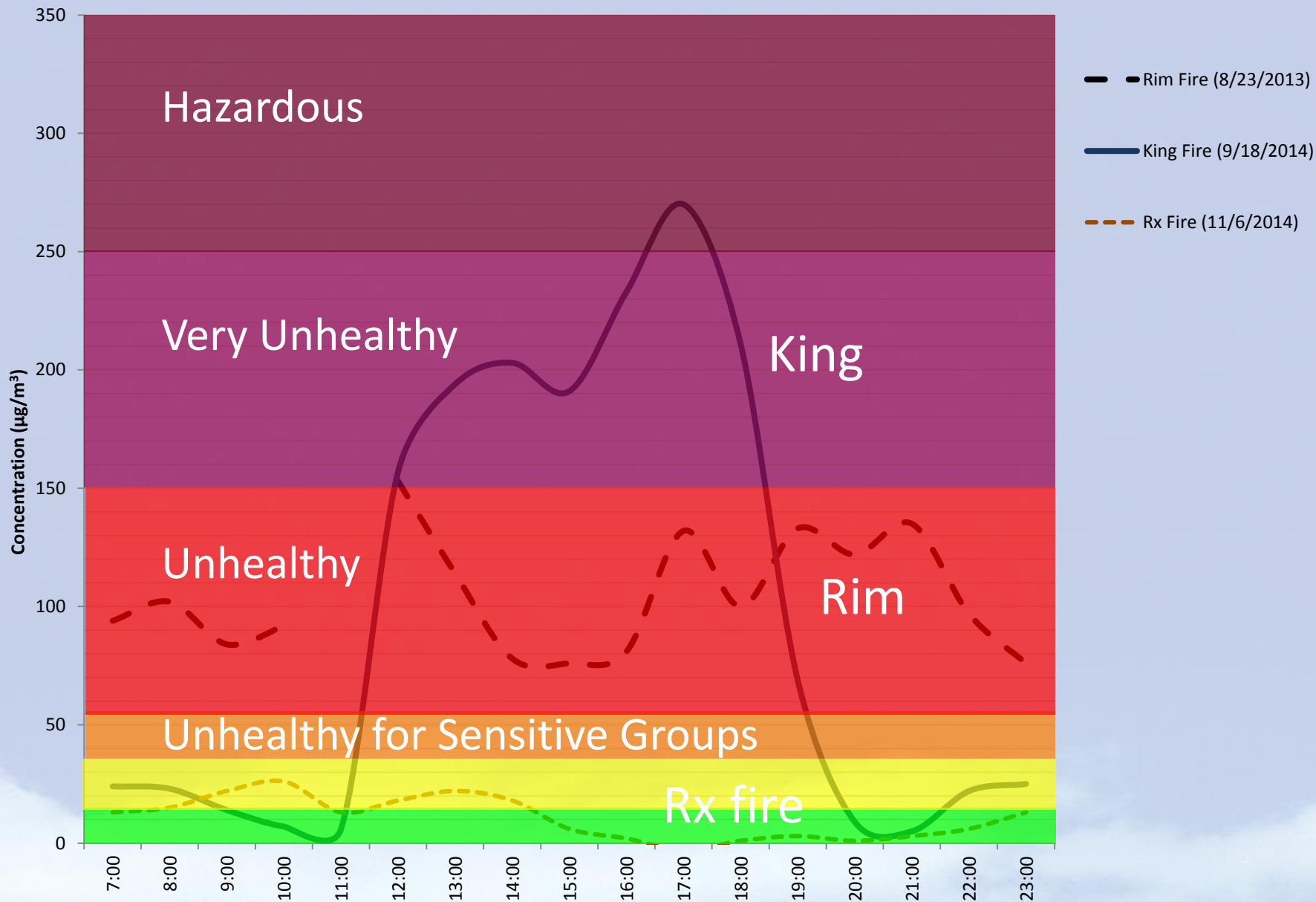
September 2016

Tier 3 EE Analysis = Very Complex



Fire Location/ Name	Lat/Long	Distance (km)	Acres Burned	Emissions (tons)	Q/D (tpd/km)
NW California/					
Fork Complex	40.45/-123.128	301	188	119	<1
Mad River Complex	40.34/-123.383	317	1,106	2,011	6
South Complex	40.62/-123.448	332	810	514	2
Route Complex	40.64/-123.586	345	193	351	1
River Complex	40.91/-123.437	345	2,415	2,106	6
Nickowitz	41.47/-123.750	396	952	851	2
Gasquet Complex	41.85/-123.969	436	1,864	1,667	4
Total			7,528	7,673	
Oregon/					
Canyon Creek	44.28/-118.96	561	7,755	5,618	10
Washington/					
Kettle	48.76/-118.461	1,066	1,842	1,335	1
Grizzly Bear	46.11/-117.679	814	36,000	65,296	80
Okanogan	48.519/-119.662	1,038	0	0	0

Hourly PM_{2.5} Concentrations Comparing Rx Fire and Wildfire



Questions and Comments



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OurCleanAir.com