



Update from Regulatory Perspective on A&WMA Critical Review 2020,
regarding Exceptional Events Guidance and Limitations

Wildfire and Prescribed Burning Impacts on Air Quality in the United States

Merlyn Hough, PE, BCEE

Former Director (2006-2021)

Lane Regional Air Protection Agency



Regulatory Perspective on:

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- Air Quality Index (AQI) Reporting and Advisories
- Applications of Low-Cost Consumer Sensors
- Social Media Expansion of Website Updates
- **Exceptional Event Guidance and Limitations**
- Community Safe Spaces and Resiliency Planning



Exceptional Events Limitations

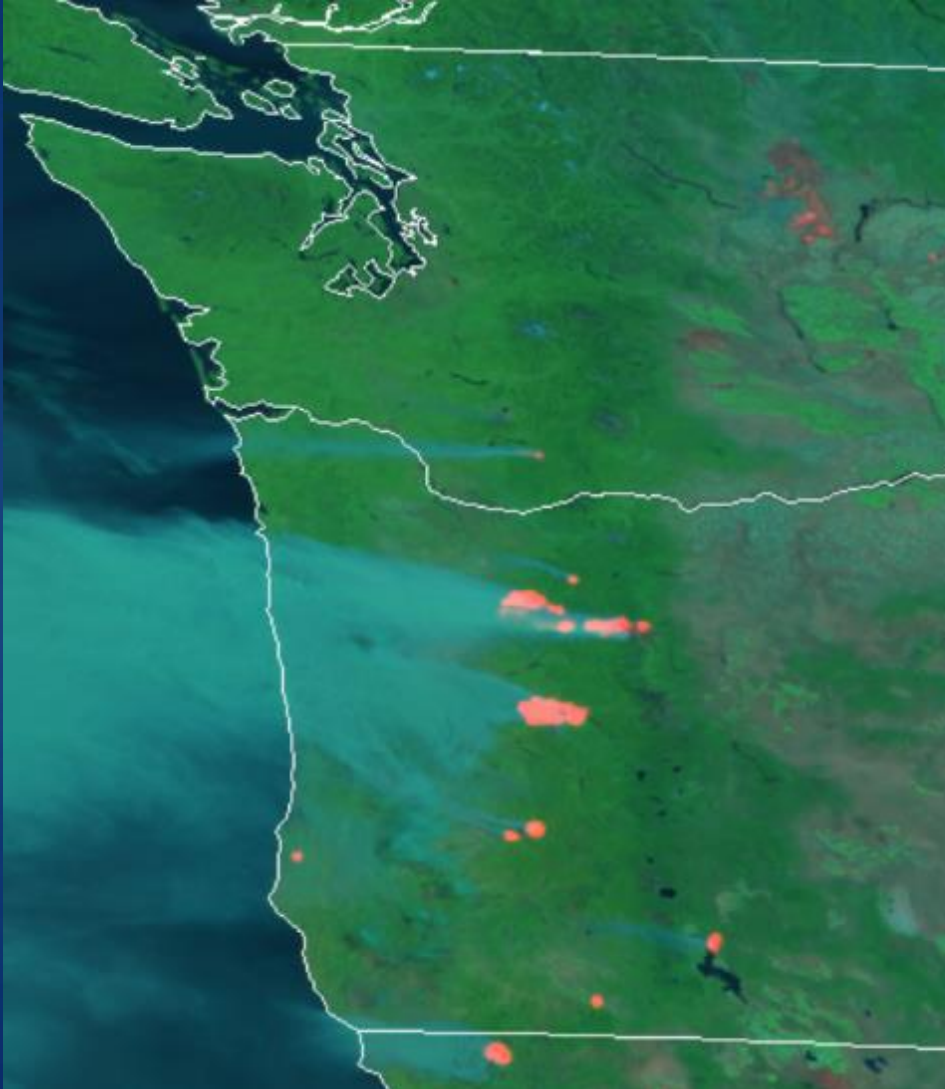
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- Exceptional Events (EE) guidance intended to prevent penalizing communities for events outside their control.
- Extensive experience now with EEs during wildfires in 2017-2020.
- The “regulatory significance” is a stumbling block.
- EE guidance fixes are necessary.



Oregon Wildfires: September 8, 2020

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The September 2020 Labor Day Wildfire Event



Cliff Mass, David Ovens, and
Robert Conrick, Conor
McNicholas

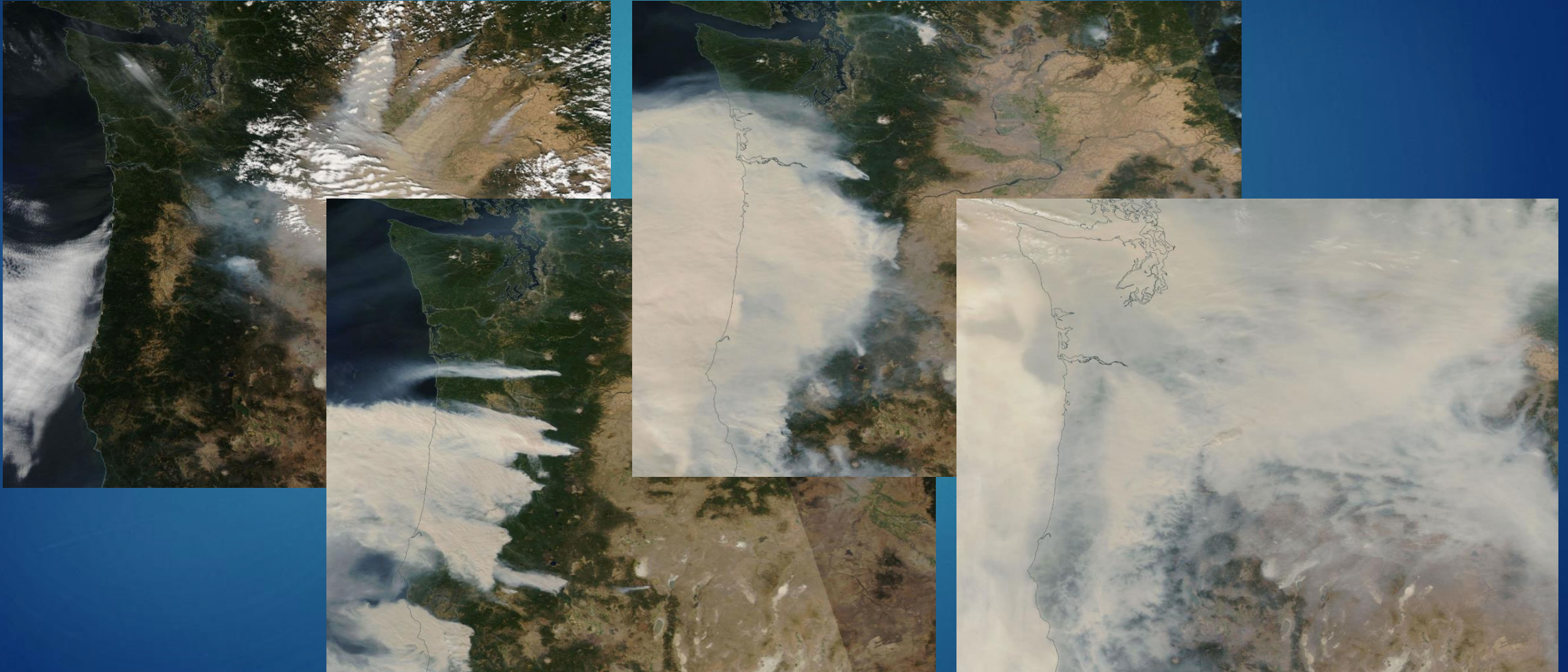
University of Washington

A&WMA Wildfires Virtual
Conference Series
April 14, 2021

Oregon Wildfires: September 2020

Satellite Photos: 7th – 8th – 10th – 12th

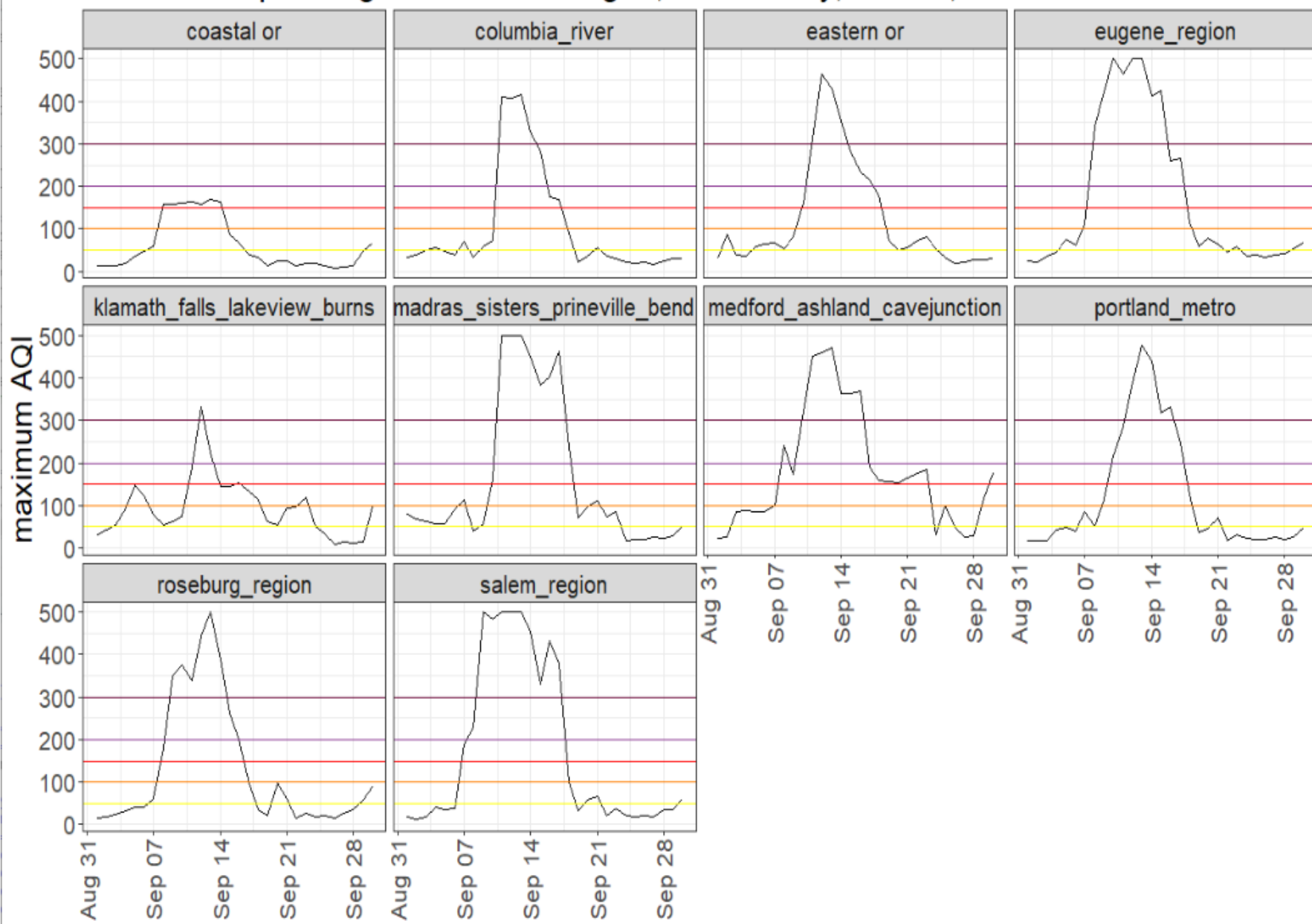
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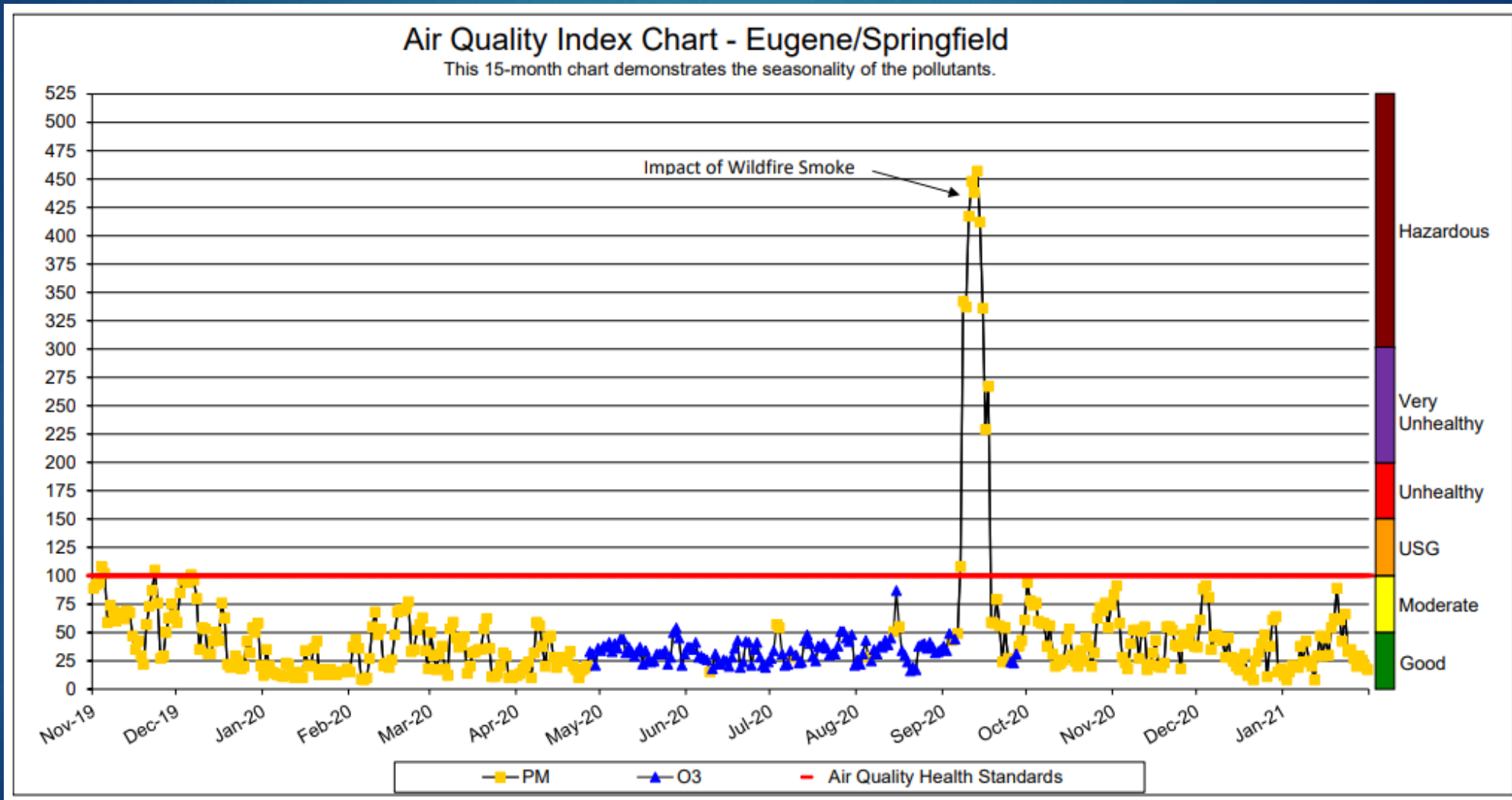
Maximum AQI levels and durations in various areas across the state



Maximum aqi for regions across Oregon; Preliminary; ODEQ; 10/7/2020



Wildfire smoke impacts are obvious: A several-day event can be documented as easily as a single day.



Specific Exceptional Events Concerns

- Due to the 3-year standard (e.g., PM_{2.5}), the flagged wildfire-impact days may not be “regulatory significant” until a year or two later, and may “time out” before EPA approval.
- Design values (after EE review-approval based on “regulatory significance”) are typically recalculated to near the standard, and can thus trigger more frequent and costly monitoring.
- The EE-based design values can obscure the actual progress of controversial home wood heating strategies.
- Multiple data sets can result.



Exceptional Events: Example 1

- Nine exceedances in 2017 were flagged for wildfire smoke impacts and submitted to EPA for approval.
- When combined with 2015 and 2016 PM2.5 data, EPA proposed to approve only 2 of the 9 days as “regulatory significant” (with the 3-year PM2.5 24-hour standard) for 2015-2017.
- Before final EPA approval, the 2018 and 2019 data indicated all 9 days in 2017 were “regulatory significant” for the 2017-2019 period.
- Fortunately, EPA was able to approve all 9 days; otherwise, the 2017 data might have “timed out.”



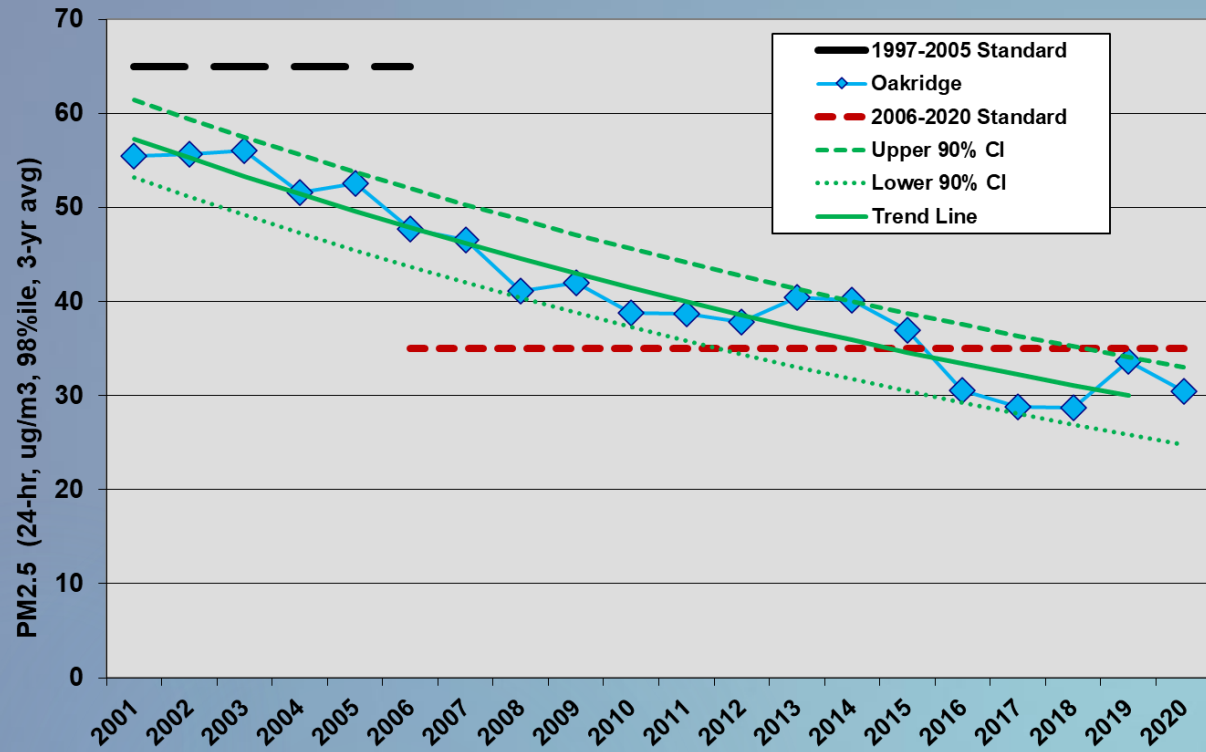
Exceptional Events: Example 2

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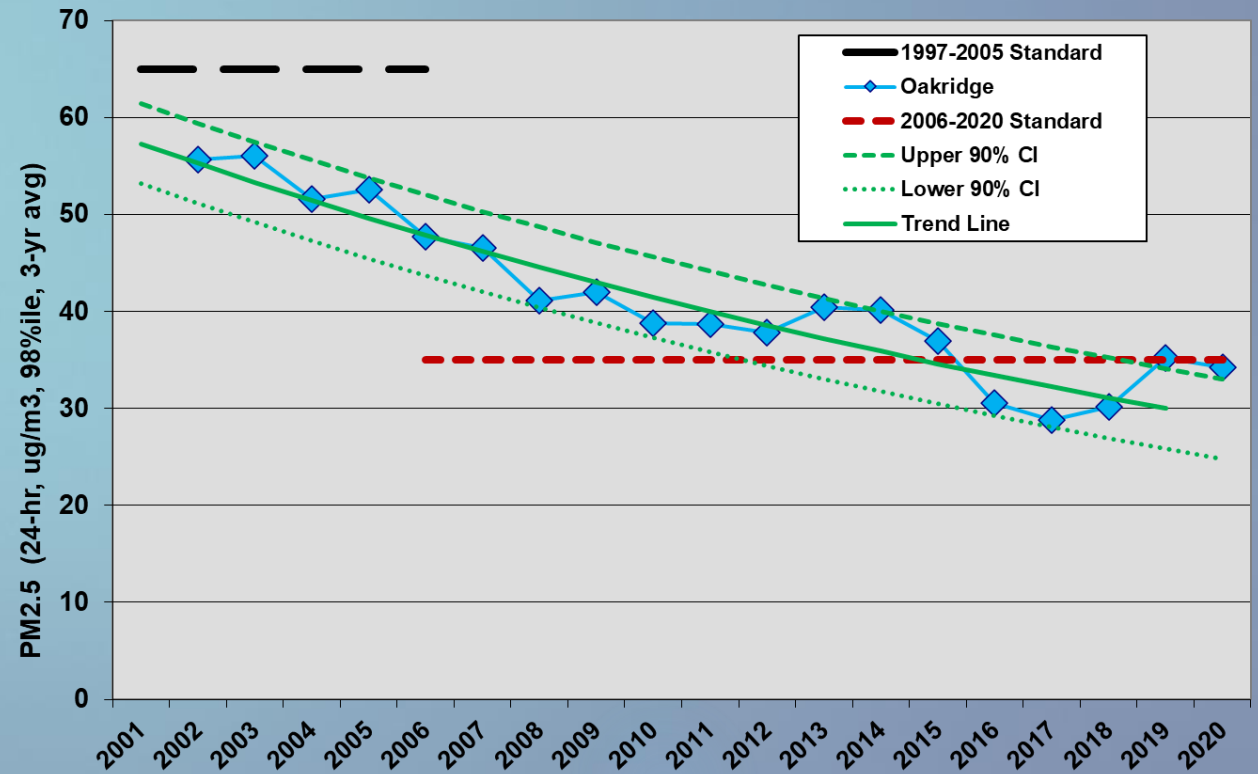
- Same example as before, nine EE exceedances in 2017 were flagged for wildfire smoke impacts and ultimately approved by EPA.
- Only one Exceptional Event flagged in 2018, none in 2019, 11 during the major wildfire impacts in September 2020.
- When all the flagged wildfire smoke days were excluded, the PM_{2.5} trend accurately reflected the PM_{2.5} improvement trend in 2015-2020 from the home wood heating strategies in the 2016 Attainment Plan.
- After EPA approval of the EEs based on “regulatory significance” in 2017-2020, the design value will be 35 ug/m³ in 2017-2019, and 34 ug/m³ in 2018-2020.



PM2.5 Trend with All Flagged Wildfire Data Removed



PM2.5 Trend with Regulatory Significant EEs Removed



Review of Exceptional Events Concerns

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- Due to the 3-year standard (e.g., PM2.5), the flagged wildfire-impact days may not be “regulatory significant” until a year or two later, and may “time out” before EPA approval – Example 1.
- Design values (after EE review-approval based on “regulatory significance”) are typically recalculated to near the standard, and can thus trigger more frequent and costly monitoring – Example 2.
- The EE-based design values can obscure the actual progress of controversial home wood heating strategies – Example 2.
- Multiple data sets can result – Example 2.



Recommendations:

- Consistent use of Air Quality Index for advisories.
- Expanded use of low-cost consumer sensors.
- Innovative use of social media to expand websites.
- **Revise Exceptional Event guidance based on the implementation experience of wildfire events.**
- Provide community safe spaces.



More Detailed Recommendations:

- Review all flagged wildfire impact days as EEs.
- Review and approve all EEs, even if older than three years by the time of EPA approval.
- The resultant PM trend data can then be used for:
 - ✓ Evaluating SIP strategy effectiveness.
 - ✓ State/local Key Performance Measures (KPMs), etc.
- Streamline and expedite EE review/approval process.

