

Board of Forestry and Environmental Quality Commission Joint Meeting

Item 2: Smoke Management Plan Update
March 3, 2021



Presenters

Smoke Management Plan Update

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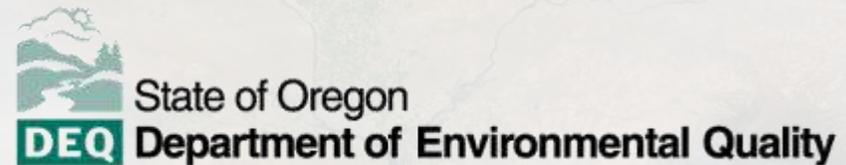
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Goals of the 2019 Smoke Management Rules update

- Create more opportunity for the use of prescribed fire
- Preserve public health protection, including vulnerable populations
- Encourage timely and comprehensive communications



State of Oregon
DEQ Department of Environmental Quality

Oregon
Health
Authority



Key Changes to Smoke Management Rules

- Intrusion threshold 26 μg^3 PM2.5 24-hour average or 70 μg^3 PM2.5 one-hour average.
- Develop Statewide Communication Framework. Develop Community Response Plans for smoke-vulnerable SSRAs.
- Burn more efficiently by removing size and thickness restrictions of polyethylene burn pile coverings.



Smoke Management Statistics

2019

Acres burned: **200,629**

10-yr average acres burned: **175,942**

Smoke incidents: **38**

Smoke intrusions: **6**

10-yr average intrusions: **9**

2020

Acres burned: **129,427***

10-yr average acres burned: **173,162**

Smoke incidents: **1**

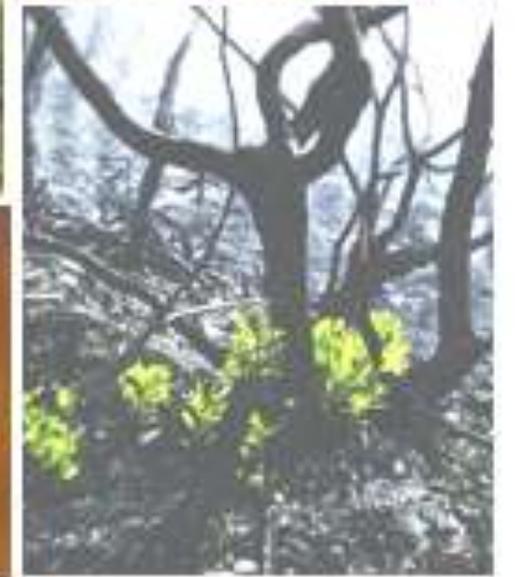
Smoke intrusions: **0**

10-yr average intrusions: **8**

* COVID, wildfire, and dry fall impacts

Fostering confidence and trust with people in Oregon to ensure the responsible use of prescribed fire in our forested ecosystems

What are the ecological benefits to prescribed fire in the wet season?



Prescribed Burning Statistics

Best burn practices

Emission reduction techniques

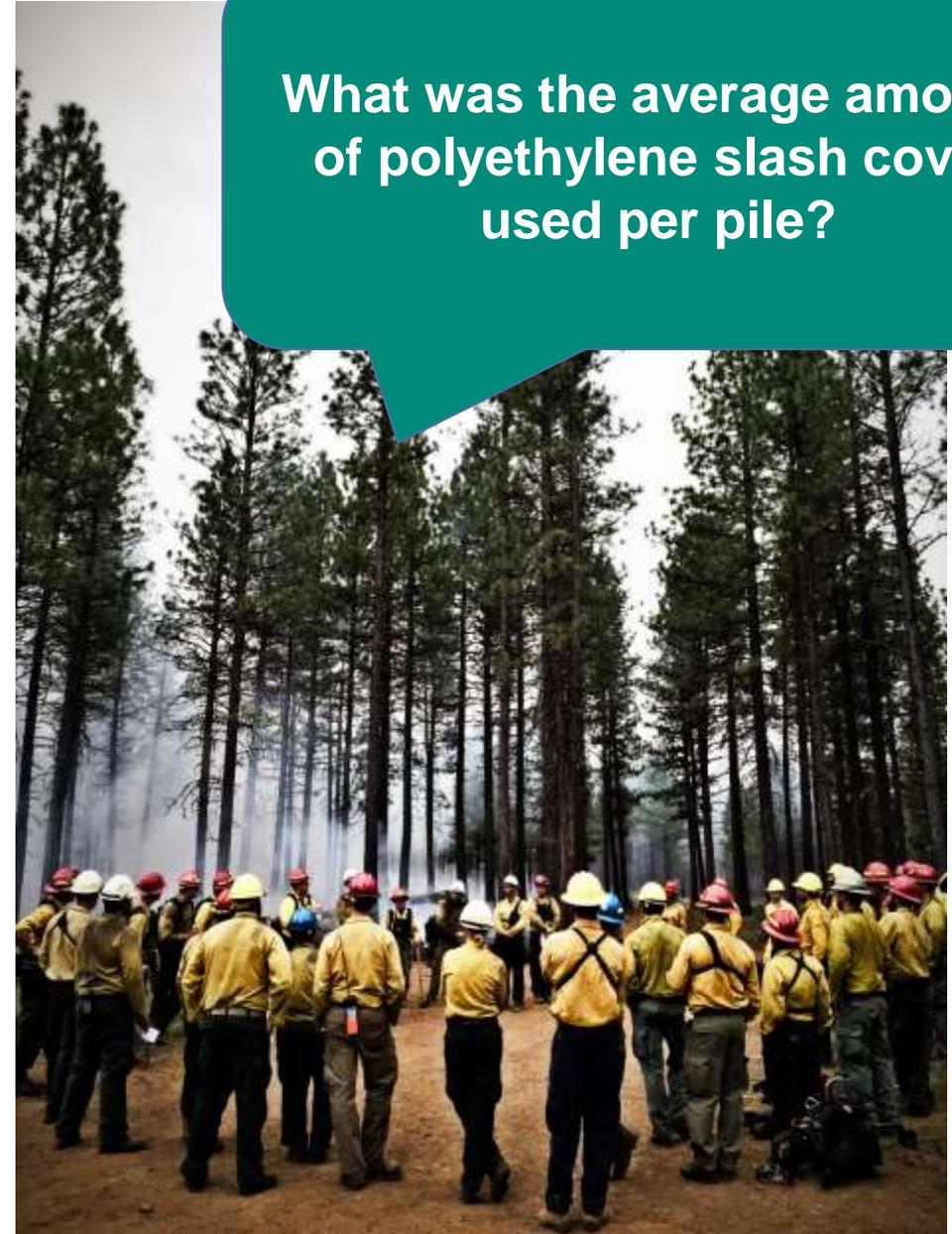


Ecological
Benefits &
Risk Reduction

Smoke
Management &
Public Health

FINDING THE BALANCE

What was the average amount of polyethylene slash cover used per pile?



Alternatives to pile burning



Timely Communication and After Actions Reviews (AAR)



- 1 – What happened?
- 2 – What was supposed to happen?
- 3 – Why did it happen?
- 4 – What are the lessons learned?

Summary of After Action Review – Chiloquin NAAQS Exceedance Nov 13-14, 2019

Participants:

- Peter Brewer Oregon DEQ
- Nick Yonker, Tom Jenkins, Christina Clemons – ODF Smoke Management, Salem
- Jake Barnett, Randy Baley, and John Pellissier – ODF Klamath-Lake District Office
- Rick Graw, Dana Skelly - USFS, R6 Regional Office
- Mitch Wilson, Evan Wright, and Garrett Souza – USDA FS, Fremont-Winema National Forest, Chiloquin RD
- Barry Shullanberger, Eric Knerr, Bob Crumrine – Fremont-Winema NF, Supervisor's Office

Air Quality

The DEQ monitor in Chiloquin, located on Duke Drive near the eastern shore of Agency Lake, measured two days in which the 24-hour average concentration of PM_{2.5} exceeded the National Ambient Air Quality Standard of 35 µg/m³. As shown in Table 1 below, on February 13, 2019 the 24-hour average concentration was 57.5 and 38.6 µg/m³ the following day.

Although this sensor does not meet the requirement of a Federal Reference Monitor, the observed concentrations exceed the NAAQS threshold and as such it is desirable to understand what happened and learn how to avoid such circumstances from re-occurring.

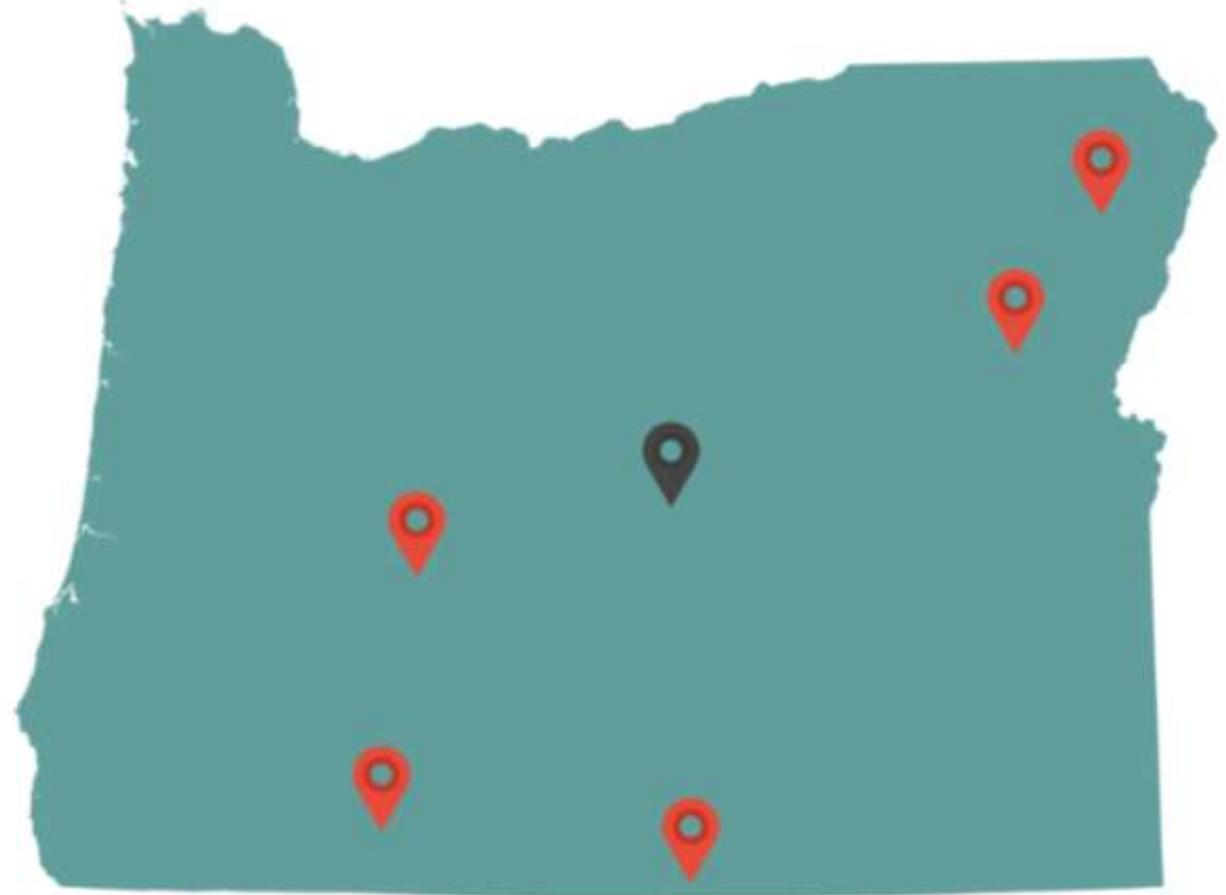
Table 1. 24-Hour Average PM_{2.5} Concentrations Measured at Oregon DEQ's Monitor Chiloquin.

Data Time	Sensor B Pm2.5est ug/m3(L)
11/12/2019 24:00	7.2
11/13/2019 24:00	57.5
11/14/2019 24:00	38.6
11/15/2019 24:00	12.8

To better understand these exceedances, it's helpful to evaluate the hourly PM_{2.5} data for diurnal or other temporal patterns, and the magnitude of the concentrations. Figure 1 illustrates the time series plot of the hourly PM_{2.5} measured from the same monitor.

2020-2021 Smoke Mitigation and Community Response Grants

Lakeview/Lake County
City of Oakridge
City of Ashland
Enterprise/Wallowa County
Baker City/Baker County

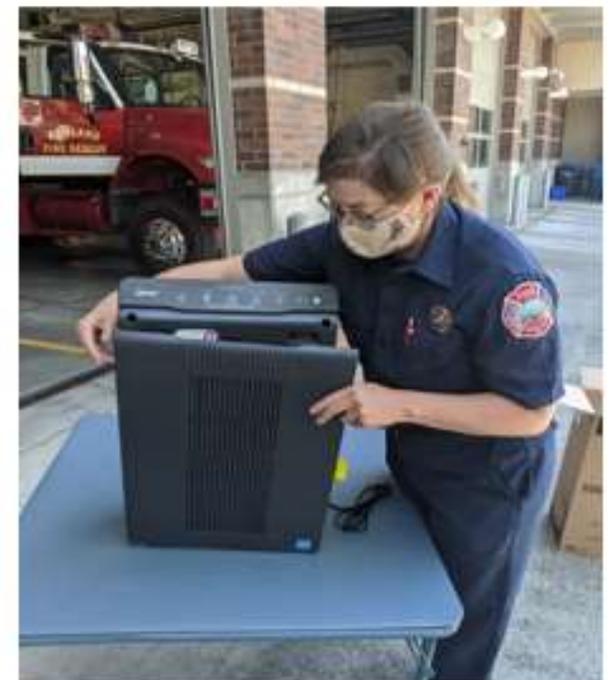


 = Bend

 = 2020 Community Planning and Smoke Mitigation Grant Recipients

Building Smoke Resilient Communities

- Bend and Ashland have active Community Response Plans
- Bend was approved for the one-hour exemption in 2019 and Ashland submitted for approval in January 2021
- Ashland distributed 400 HEPA air purifiers in 2020 and will distribute another 200 HEPA air purifiers in spring 2021
- Four other communities are working on Community Response Plans



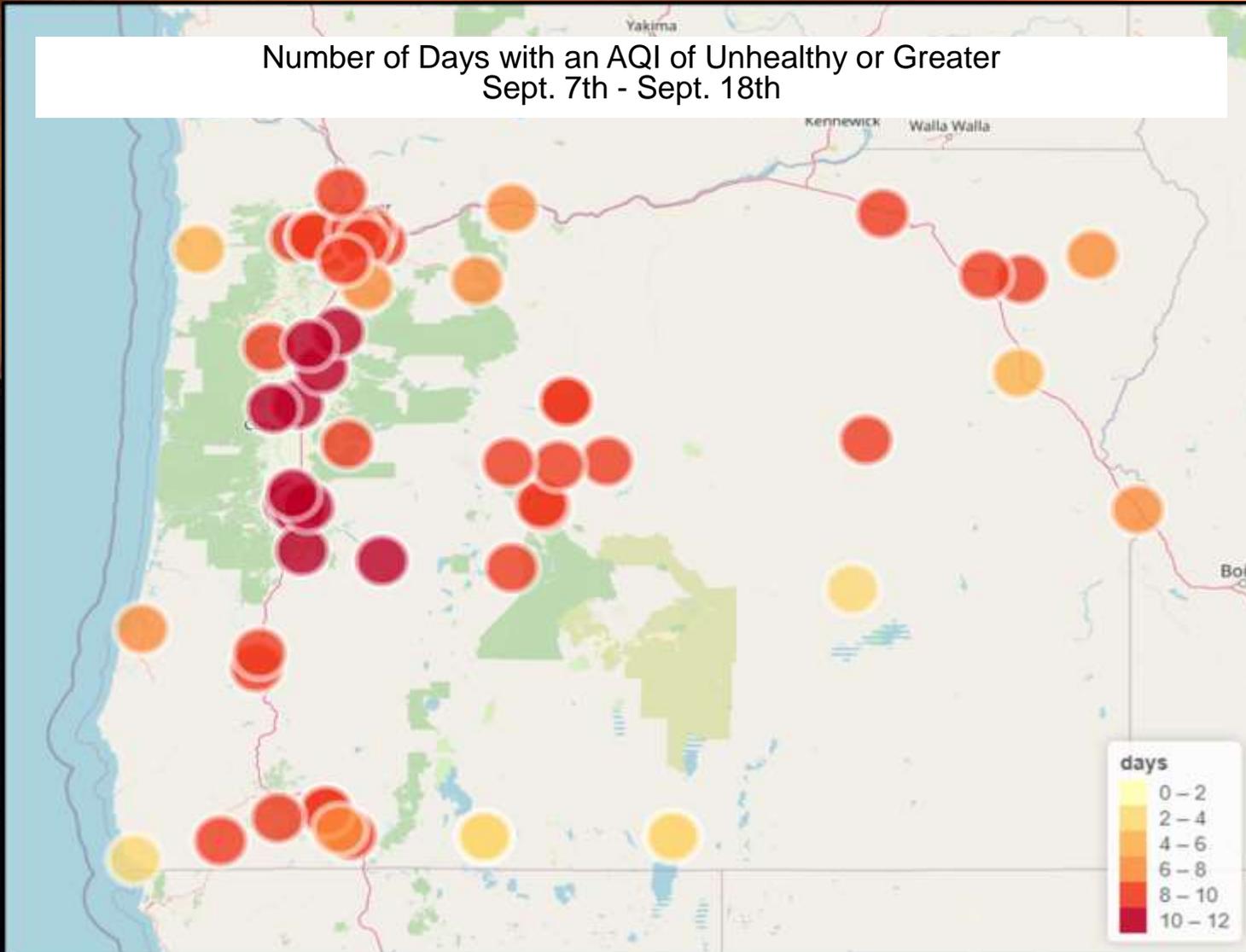
everbridge
NIXLE

Sign-up for alerts:
Text 97520 to 888777
or visit ashland.or.us/nixle

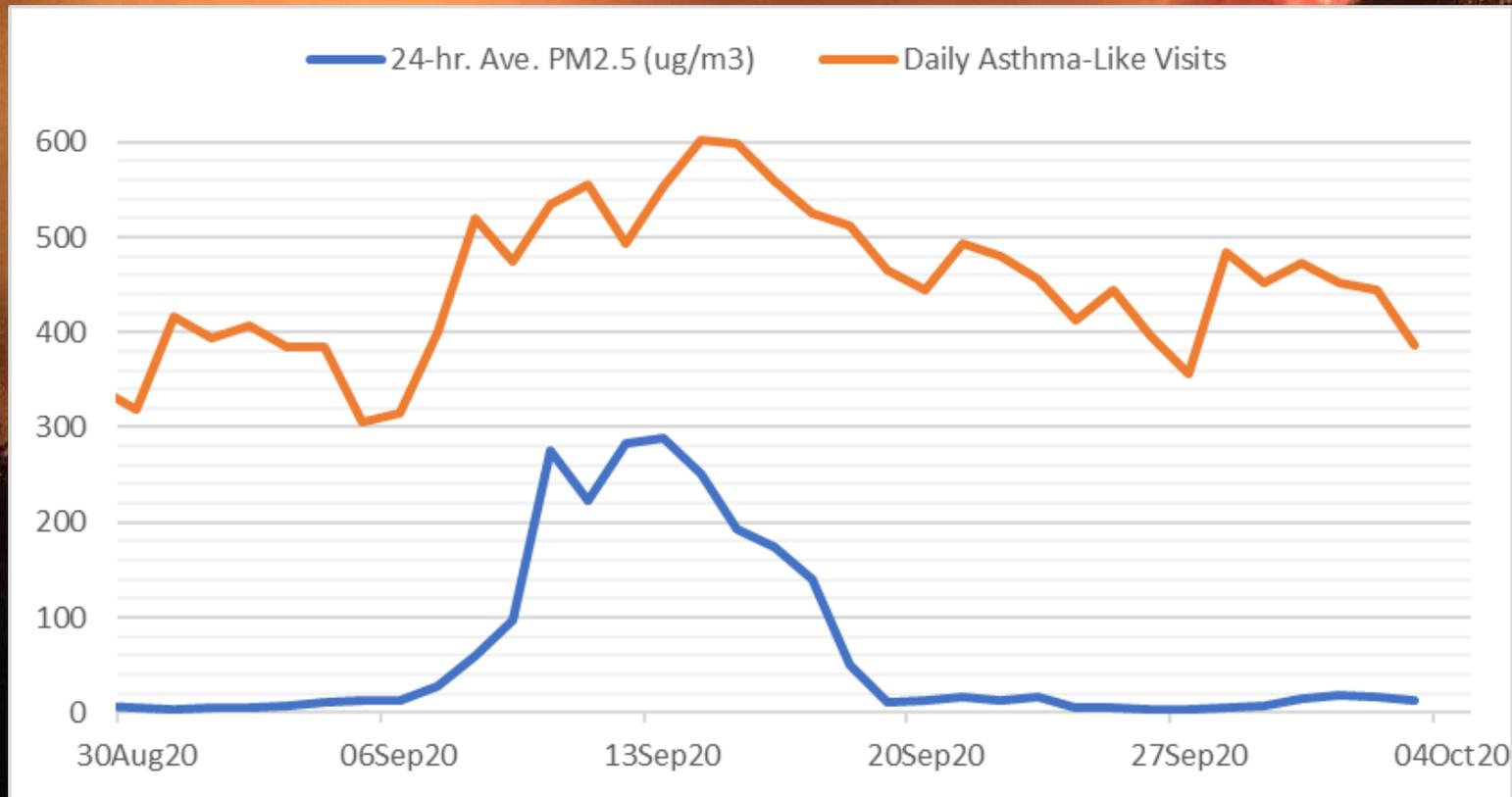
Sign up for NIXLE Alerts!

PM 2.5 Levels During the September 2020 Wildfire Smoke Event

Number of Days with an AQI of Unhealthy or Greater
Sept. 7th - Sept. 18th



September 2020 Wildfire Health Impacts



PM2.5 daily 24-hour average concentrations (provisional data from state, regional and tribal air quality monitoring)

Emergency department and urgent care asthma-like visits from near-real-time syndromic surveillance (ESSENCE)

Smoke & Your Health

Many factors influence a person's sensitivity to smoke, including severity and duration of smoke exposure and a person's health. Your health and the health of your family are important. There are things you can do to minimize the impacts of smoke on you and your family.

Smoke is made up primarily of small particles, gases, and water vapor. These particles can be inhaled deeply into the lungs, damaging lung tissue and causing respiratory and cardiovascular problems.

Regardless of the source, smoke is a form of air pollution that can pose a health risk. Symptoms of short-term smoke exposure can include:

- Watery or dry eyes
- Persistent cough, phlegm, wheeze, scratchy throat, or irritated sinuses
- Headaches
- Shortness of breath, asthma attack, or lung irritation
- Irregular heartbeat, chest pain, or fatigue



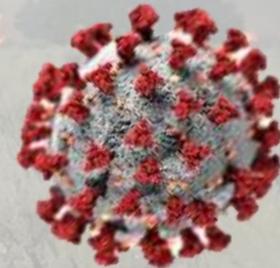
www.centraloregonfire.org

CITY OF ASHLAND COMMUNITY RESPONSE PLAN FOR SMOKE



COVID-19 and Smoke Management

- Uniform messaging
- Volunteer refrain on burning
- Fall and winter prescribed burning guides
 - Uses legacy rules
 - Uses county risk levels



Questions? Thank You!

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State of Oregon
Department of Environmental Quality