




Wood Smoke in Multnomah County

Multnomah County
Health Department
November 27, 2017



The History of Oregon's Air



Eugene Mayor Les Anderson (left to right), Lane Regional Air Protection Agency Director Vern Adkinson and Oregon Governor Tom McCall view the blanket of haze from atop Skinner Butte on “Black Tuesday” in August 1969.

(Source: Wayne Eastburn - Eugene Register Guard)

Pollutant Emissions

Lightning

Natural

Volcanos

Wildfires

Forest



Cities

Area

Livestock

Fertilizer



Airplanes

Mobile

Cars, Trucks, Buses,
Motorcycles

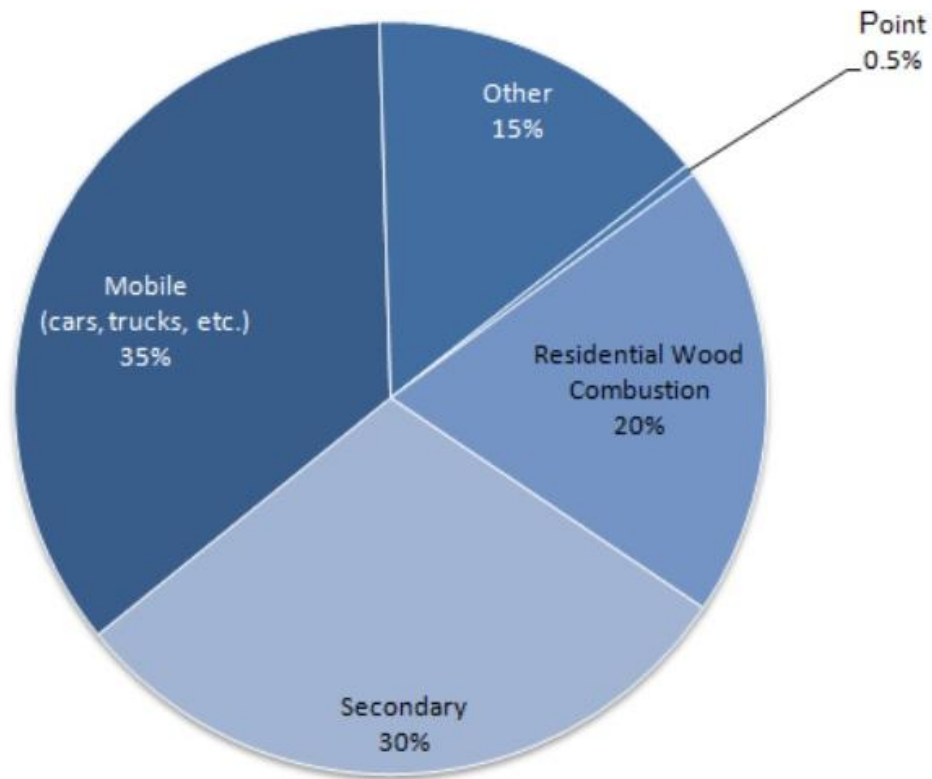


Stationary



Industry, Power Plants, Sewage Treatment

Percent of total cancer risk from hazardous air pollutants by source category



Wood Smoke Pollution in Multnomah County



Health impacts of Particulate Matter 2.5

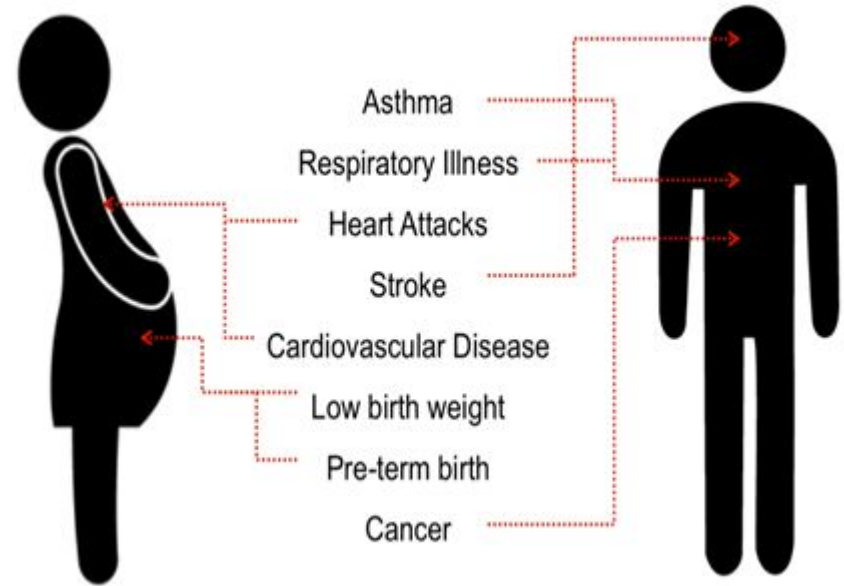
Carcinogenic: Lung, bladder, liver

Cardiovascular: Heart disease, stroke

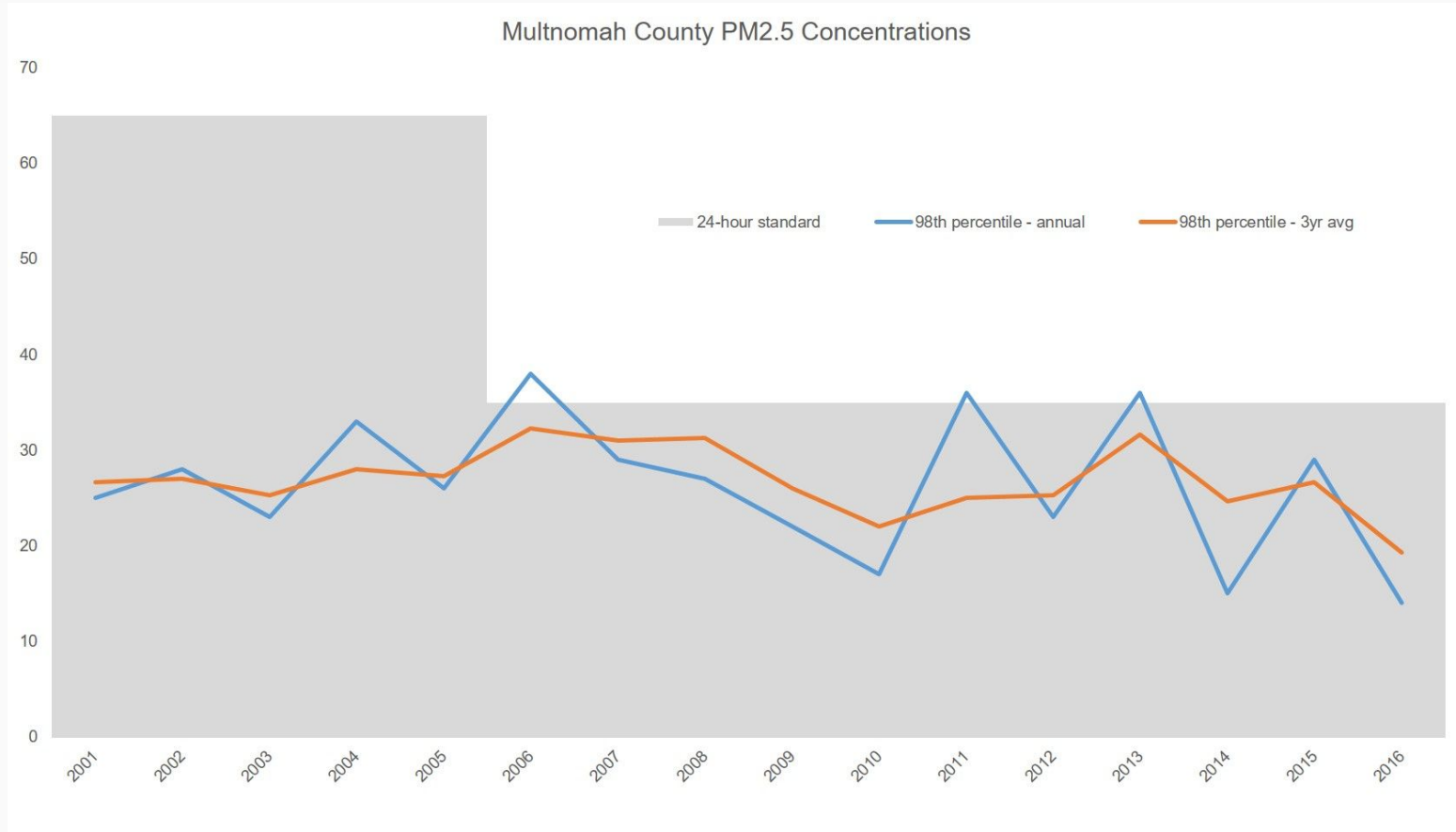
Respiratory: Asthma trigger, irritant

Developmental: Low birth weight

Emerging Research: Cognitive,
Alzheimer's risk



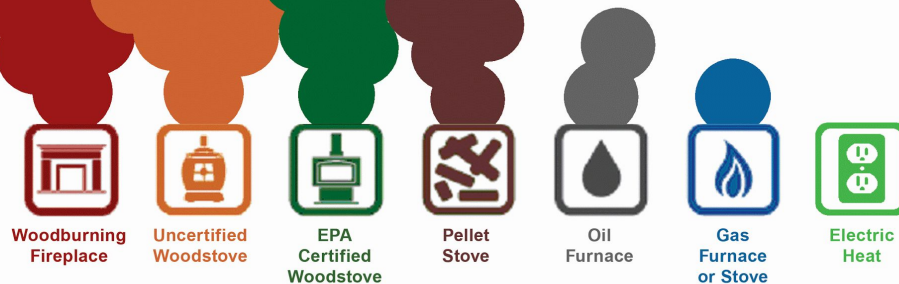
Regulatory implications of Particulate Matter 2.5



EPA recommends a three-pronged approach to reducing wood smoke

- **Outreach and Education on Burning Wise**
 - The type of wood, condition (moisture content) and log size all play a part in how much pollution is emitted.
- **Curtailment Ordinance**
 - Reduces the amount of harmful wood smoke pollution in our communities on days when air quality is forecast to be poor.
- **Incentive-Based Heating Device Changeout Program**
 - Assists households in replacing old, inefficient, higher polluting heating devices with newer, cleaner and more efficient ones.

Relative Emissions of Fine Particles



VERY DIRTY

VERY CLEAN

Highest
annual
pollution

244 lbs. of
annual
pollution

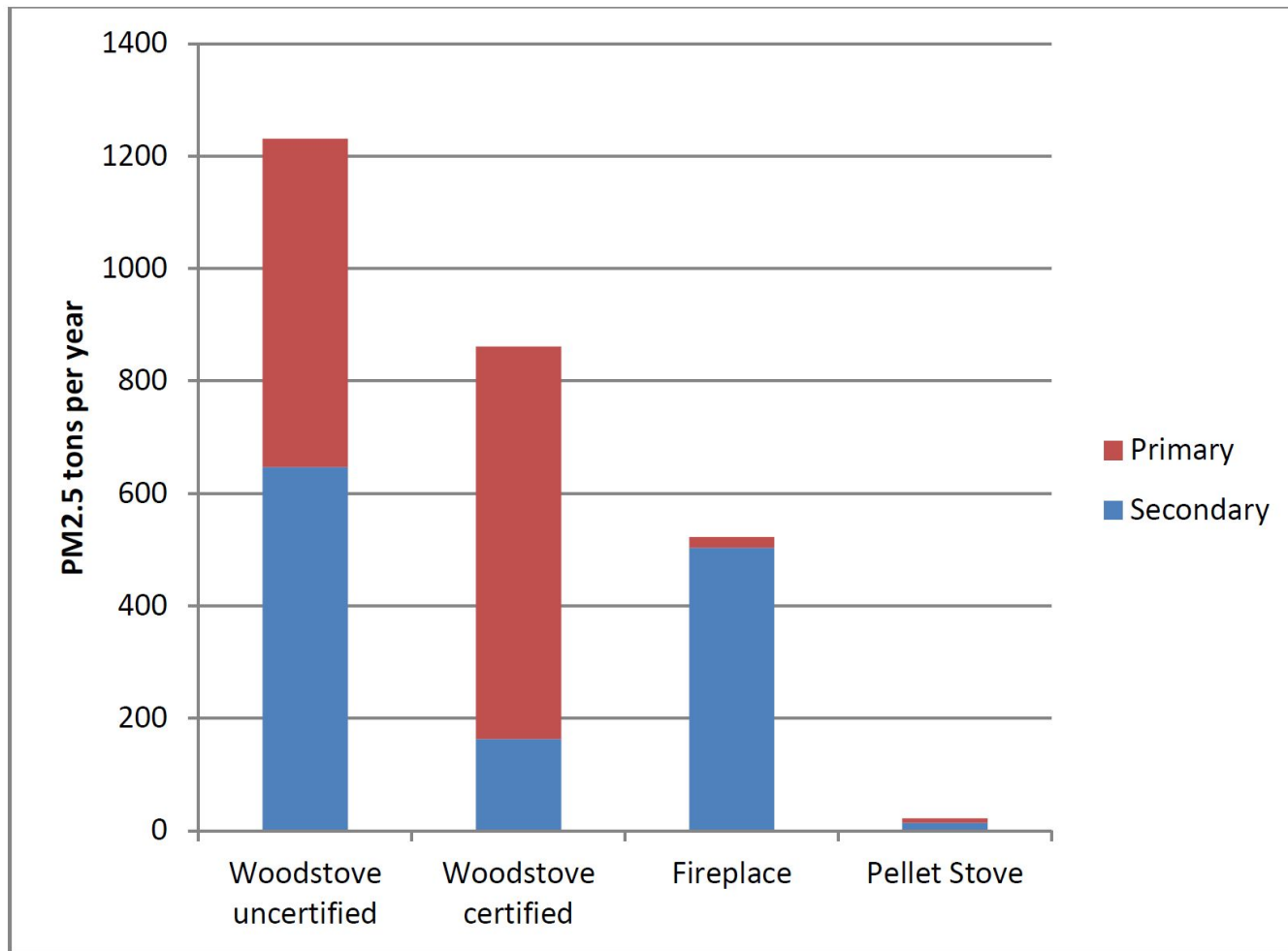
97 lbs. of
annual
pollution

27 lbs. of
annual
pollution

<1/4 lb of
annual
pollution

<1/6 lb of
annual
pollution

ZERO
annual
pollution



DEQ, 2014

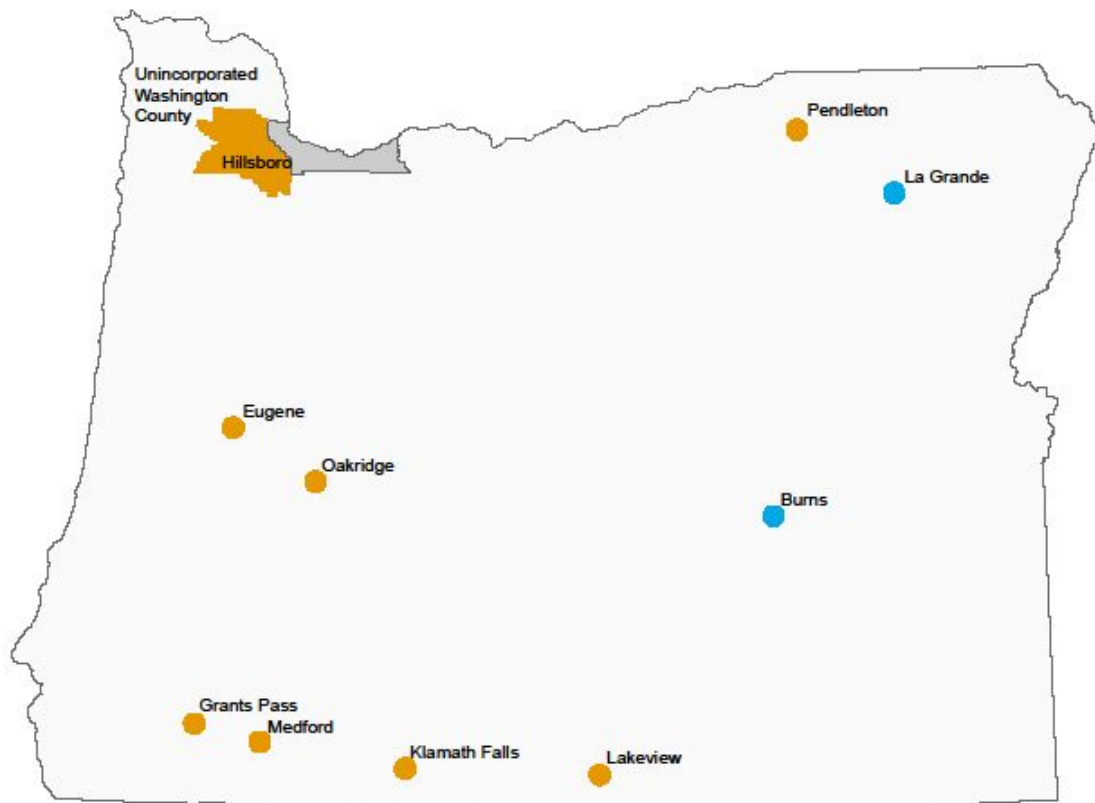
Figure 11 – PM_{2.5} Emissions from wood burning device types for primary and secondary burning

What are the proposed rules?

- The proposed rules would **prohibit people from burning wood on days forecast from October 1 through March 1 to have poor air quality (3-5 days/year on average), unless a qualified exemption is met.**
- Exemptions include **households where a wood burning device is the primary source of heat**, and **households where the primary source of heat is temporarily not functioning** (including utility outages). It would also exempt households that are **low-income**.

What are the proposed rules?

- Ultra low emission wood burning devices, including **pellet stoves and some EPA certified stoves may be exempted**- this is currently under consideration.
- **Outreach and education are the primary tools we will be using to help people understand what is required.** Enforcement would be complaint-based. Fines, if necessary, would begin on third and subsequent offenses.



Multnomah County Health Department 2017

Public Comment- What we've heard so far

- ***Ensure that there is an exemption process for religious or ceremonial fires***

There is an exemption clause included in the ordinance

- ***I live in a rural portion of the county, how will my neighbors that don't have internet or other common communication methods learn about this ordinance, and if a curtailment day is called?***

Communication about the ordinance and curtailment days will be distributed through social media, opt-in notification systems (such as PublicAlerts.org), county websites, and earned media to the extent possible. Additionally, the proposed enforcement structure will send warning notifications for the first two offenses, that will be focused on education. Fines *may* be issued on third and subsequent offenses, if necessary.

- ***EPA certified stoves should be exempt from the ordinance because they're clean burning***

The department is considering including an exemption for EPA certified stoves based on emissions rate per hour

- ***How will curtailment days be determined?***

The Health Department is coordinating with the National Weather Service Portland office, Oregon DEQ and neighboring jurisdictions to develop a consistent process based on factors such as wind speed, temperature, precipitation, and mixing ceiling height (inversion ceiling).

For more information visit:
bit.do/woodsmoke

Feedback and questions?