Smoke Management Rules
Statewide Communications Framework
In the Context of Respiratory Viruses

January 2, 2024, Update

Background

The 2019 Oregon smoke rules are in effect for the 2024 Spring burning season. There is increased interest in burning due to high volumes of slash from salvage logging after wildfires in the past three years. This increase in burning sometimes coincides with increases of flu, COVID-19, and respiratory syncytial virus (RSV) cases in the cold weather months.

This document provides updated guidance for the 2024 prescribed burning season, the need for prescribed burning, and what resources people can use to protect themselves from smoke. It also fulfills the requirements placed on the Oregon Department of Forestry (ODF) by ORS 629-048-0180 to develop and distribute a communication framework through local ODF offices and federal district offices to their respective local public health authorities.

Messaging

As outlined in revised rules approved by the Oregon Board of Forestry and accepted by the Environmental Quality Commission in the spring of 2019, the following information is being communicated about Oregon's smoke rules for the spring burning season. This meets the requirements of ORS 629-048-0180.

A. The purpose and importance of prescribed burning

What are the benefits of prescribed burns?

Controlled burns help maintain forest health and reduce the risk of high-intensity, catastrophic wildfires and the large volume of smoke associated with them. A more complete explanation is found in Oregon Administrative Rule 629-048-0020. The Rule states that:

> *…prescribed burning is an important tool used to reduce forest fuels, re-introduce fire on the landscape, and has been demonstrated to reduce the potential for a fire to start or reduce its severity. It has also been demonstrated that fire suppression actions are more effective and lower in cost in areas with a recent history of burning.*

(2) As a part of the natural ecology of forestlands, wildfire is neither good nor bad. In fire-dependent ecosystems, frequent wildfire serves to limit the spread of subsequent fires. However, there are a number of undesirable characteristics of unplanned, uncontrolled fires. Among these are threats to public safety, destruction of natural resources and property, and the adverse health effects that can occur from breathing a significant amount of fine particulate matter associated with wildfire smoke.

(3) When areas do not experience fire or other means of reducing forest fuels for extended periods, wildfire hazard increases. The likelihood of fire increases if unplanned natural or anthropogenic ignitions occur. The resulting wildfire will burn at greater intensity and be more difficult to suppress than if it was a prescribed fire.

(4) Because wildfires typically burn during hotter, drier conditions than those usually planned for prescribed fires, forest fuels are more completely consumed, producing more emissions. Also, wildfires often occur during periods of atmospheric stability, trapping smoke close to the ground where it's more likely to impact humans.

(5) Prescribed burning is an important forest management technique in all of Oregon's forests to reduce forest fuels for the purposes of both short-term and long-term fire prevention and to aid in fire suppression. Prescribed burning is typically conducted when weather conditions allow fine fuels to readily ignite while larger fuels are consumed to a lesser degree than in a wildfire. Resulting emissions are reduced and dissipated quickly, before affecting populated areas.

(6) When forest fuel reduction can be achieved economically without using prescribed burning, that choice is usually favored. Even so, there are often silvicultural or agricultural advantages to prescribed burning, such as site preparation before replanting, nutrient cycling and reduction of pests and disease that may not be achieved by simply removing the forest fuels. For all these reasons described above, the Legislative Assembly (ORS 477.552) and Board of Forestry have found it necessary to maintain prescribed burning as a forest management practice.

B. How to find out about current and upcoming prescribed burns

Is there any way to know ahead of time about planned forest burns?

- Yes. You can find out about upcoming controlled burns planned in your area at Oregon Department of Forestry's Weekly Registration Report.
- The Weekly Registration Report web page will include planned burns by the date they were registered, the county where burns are planned, the type of burn that is planned, the name of the landowner and the size of the burn as represented by the number of acres and estimated tons of plant matter to be burned/treated. Planned burns may be postponed or not completed due to weather or other conditions that do not allow for the burn to occur.
- For burns planned that same day, follow Oregon Department of Forestry's Daily Plans Report.
- Oregon Department of Forestry's prescribed fire map shows the location of all planned prescribed burns for today. (Please note that not all "planned" burns are actually conducted.)

C. Where to get up to date information about anticipated smoke impacts in Specific Smoke Sensitive Receptor Areas (SSRAS)

- Check the Air Quality Index (AQI) for current air quality in your area. The AQI is used to report information about the most common air pollutants, including particulate matter (PM2.5 or PM10) and ozone. For more information, visit www.airnow.gov or aqi.oregon.gov.
- Additional air quality readings from Oregon sensors are available at https://aqi.espacelabs.com/.
- Download the Oregon Air app for your smartphone. The app monitors air quality using data acquired from monitoring stations operated by Oregon Department of Environmental Quality and Lane Regional Air Protection Agency. New readings are available about 15 to 20 minutes past every hour.
- Where available, check the local air quality agency's air quality forecast on its website.

- Check local news outlets and their websites for reports of current or anticipated smoke impacts in the area.
- If a community chooses to develop a smoke response plan, it may create additional processes for notifying the public, or those caring for vulnerable populations, about anticipated smoke impacts in that community.

D. Health risks of smoke from wildfire and prescribed burns

How does smoke effect human health?

Wildfire smoke is a mixture of gases and fine particles from burning trees and other plant material. The gases and fine particles (known as particulate matter or "PM") can be dangerous if inhaled. Smoke can cause the following:

- shortness of breath, asthma attack, or lung irritation
- persistent cough, wheezing, phlegm, scratchy throat or irritated sinuses
- headache
- watery or dry eyes
- irregular heartbeat, chest pain or fatigue
- heart attack

Who is most likely to have health effects from smoke exposure?

Smoke may worsen symptoms for people who have pre-existing health conditions and those who are particularly sensitive to air pollution. Sensitive groups include:

- infants and children
- persons with asthma or other chronic lung disease
- persons with heart disease
- persons 65 years of age or older
- pregnant women or their unborn child
- smokers, especially those who have smoked for several years
- persons with or recovering from COVID-19

Additional groups may be disproportionately affected because of limited access to cleaner air spaces, limited income needed to invest in keeping indoor air clean, or higher risk of exposure because of where they live or work. These include:

- people who work outdoors
- people who live outdoors
- people with low incomes
- people of color
- Tribal communities

The amount and length of smoke exposure, as well as a person's age and degree of susceptibility, play a role in determining if someone will experience smoke-related health problems. Anyone experiencing serious medical problems during a smoke event should seek medical attention immediately.

How are forestry burning recommendations taking COVID-19 and smoke health risk into consideration?
Oregon Health Authority (OHA) monitors the capacity of hospitals, healthcare systems, and local public health authorities to continue providing health services and public health protections to our communities. Data tracked include emergency department visits for respiratory illness, disease outbreaks, and laboratory-confirmed respiratory illness cases, among other measures. Oregon's Respiratory Virus Data dashboards, published on OHA's website, have been updated for the 2023-2024 respiratory virus season.

Exposure to smoke increases the risk of contracting respiratory infections and can increase the severity of infections. For example, higher incidence of respiratory illnesses has been associated with elevated fine particulate matter (PM 2.5) from smoke. COVID-19, flu, and RSV vaccines have been proven to be safe and effective in preventing illness and death from the respective viral infections. OHA recommends talking with your health care provider about which vaccines are suitable for you and when to receive them.

Given the likely benefit of prescribed burns in decreasing the risk of life-threatening wildfires ODF recommends that public and private forest landowners plan burns for the spring of 2024 according to the 2021 prescribed burn rules.

OHA will advise ODF regarding changes in circumstances that may affect the recommendation to continue with the 2021 prescribed burning rules.

Doesn't Oregon already have a protocol for addressing severe smoke episodes?
Oregon's interagency protocol addresses severe smoke episodes caused by wildfires. Those protocols describe the specific roles various government agencies play during wildfires, including providing advance notice of possible smoke movement, monitoring air quality, explaining health risks and issuing health warnings.

The new communications framework described here is intended to provide advance notification to communities of smoke intrusions from prescribed burns. It also encourages smoke-sensitive receptor areas (SSRAs) vulnerable to smoke to ensure they have a plan in place to protect their residents from occasional smoke intrusions from prescribed burns. These burns typically produce smoke that is more temporary and at lower concentrations than smoke from wildfires. Communities may find it convenient to wrap how they will respond to smoke intrusions into plans for how they will help residents cope with wildfire smoke.

What health communication tools are available to inform the public about the effects of smoke, and how to prevent smoke exposure?
OHA maintains a communication toolkit (select Wildfire Smoke) for partners to help prepare for wildfire smoke and support consistent messaging across the state. It can be adapted for use in the prescribed burning context. The site offers templates that support local development of public-facing social media, responses to media questions and news releases. Available in both PDF and word document formats, the word format can be customized and adapted at the local level to fit the smoke conditions. Templates have been pre-translated and are available in up to eleven languages. Public-facing tools include Frequently Asked Questions about smoke and public health and what to do to protect yourself and family. Additional useful information is available at OHA's public-facing online information page.

Is there a difference in smoke from controlled forest burning compared to wildfires?

- It depends on where the wildfire burns. Controlled burns typically burn just plant material – brush, grass and downed limbs and logs. A wildfire burning through a forest is similar.

However, wildfires that burn structures may also have potentially hazardous materials from those structures (e.g., asbestos) mixed in the smoke and resulting ash.

- Even when only woody material is burned, high enough concentrations of smoke from either a wildfire or prescribed burn can be harmful to human health. A key difference is that prescribed burns are planned for times when weather conditions should disperse and carry smoke away from communities designated as smoke sensitive. However, smoke from prescribed burns may occasionally enter a protected SSRA. Usually, these episodes are of limited duration, perhaps only a few hours, and often during the evening.
- Wildfires typically produce much higher volumes of smoke than prescribed burns, and they may occur when weather conditions drive smoke right into communities, trapping it at ground level. Wildfires can burn and smolder for weeks or even months, keeping smoke over communities at unhealthy levels for extended periods of time.

E. Recommendations to reduce exposure to smoke

How can people reduce their exposure to smoke?

- **Reduce time spent outdoors.** This can usually provide some protection, especially in a tightly closed, air-conditioned house. Set your air conditioner to recycle or recirculate when at home or in your car to limit your exposure.
- **Reduce time you engage in vigorous outdoor activity.** Vigorous activity increases the amount of air you breathe in, so wait until after the smoke event to resume such activities outside.
- **Use indoor air cleaning devices.** Use high-efficiency particulate air (HEPA) cleaning filters, non-ozone producing electrostatic precipitator (ESP) filters, or a DIY filter made with a box fan and furnace filter, if available.
- **Avoid activities that increase indoor pollution.** Burning candles, wood stoves, fireplaces, and cooking food at high temperatures or over flames can increase indoor pollution. If you need to cook during a smoke event, use a range hood fan if one is available. Vacuuming stirs up particles already inside your home, contributing to indoor pollution. Wait to vacuum, if possible.
- **Stay hydrated. Drink plenty of water.**
- **If you have heart or lung disease such as asthma,** follow your healthcare provider's advice about prevention and treatment of symptoms.
- **If you are high risk or someone in your home has COVID-19 or another respiratory infection, create a room that is a cleaner air space**.
    - Close the windows and doors to help keep the smoke out.
    - Stay cool by running fans, window air conditioners set to recirculate, or central air conditioning.
    - Filter air using a central air system with a MERV-13 filter, or better, if you have central air in your home. If not, use a portable air cleaner that is the right size for the room. A DIY filter is also an option if used with caution to prevent safety concerns.
    - Spend as much time as possible in the cleaner air space.
    - If you have healthy members of the household and others with COVID-19 or another respiratory infection, consider having separate "sick" and "healthy" cleaner air spaces. This can be done by having one room set up as a cleaner air space for healthy household members, and a second room set up as a cleaner air space for ill household members.

People in homes that are too warm to stay inside with the windows closed or who are at-risk of smoke-related health effects should seek shelter elsewhere. To find a cleaner air space in your area, visit 211info.org and search for "Wildfire Related Clean Air Shelters." or call 211. Consider visiting family members, neighbors or public buildings that have air conditioning and air filtration. To reduce transmission of airborne diseases, OHA recommends that people wear a mask or face covering if they have an infection when in proximity to other people indoors.

What are responses to smoke that offer little or no protection?

- Wet towels, bandanas, cloth face coverings and common surgical masks covering the face may stop large particles but do little to prevent fine, small ones that can get into the lungs.
- Humidifiers or dehumidifiers are not air cleaners and will not reduce particles in the air during a smoke event.
- Boiling water with, or without, essential oils or herbs.

When should local officials issue warnings or cancel activities?
School and local officials should consult the Oregon Health Authority's Public Health Guidance for School Outdoor Activities during Wildfire Events when deciding to close or curtail local activities during smoke events. The document is available in eight languages to help school officials communicate with parents and staff.

Coaches and other athletics officials should consult the Oregon School Athletics Association's Air Quality Guidelines. These were developed in consultation with the OHA Public Health Division.