



# Pesticide Storage and Wildfire



Garnet Cooke  
Pesticide Coordinator  
Oregon OSHA



# Is Your Pesticide Storage Area Prepared for Wildfire?



# Fires Involving Pesticide Storage are COSTLY



BUT there are steps you can take!



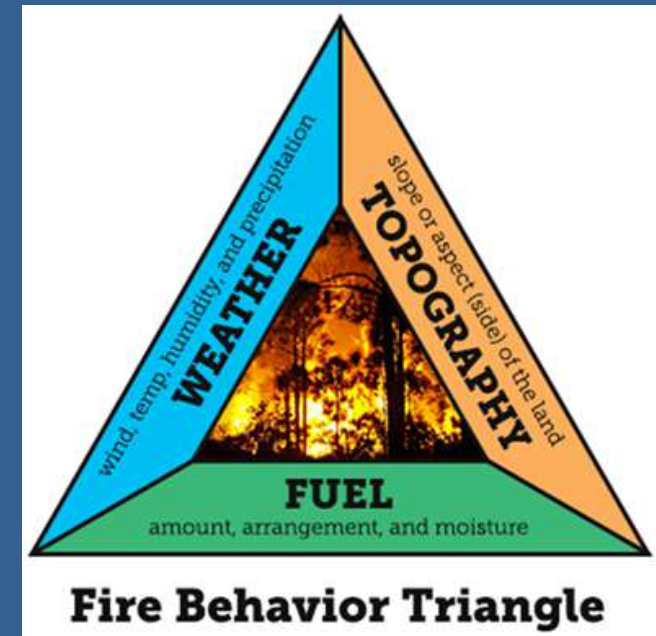
# Ag sites at greatest RISK

- Orchards
- Vineyards
- Christmas trees
- Wildland-Ag interface



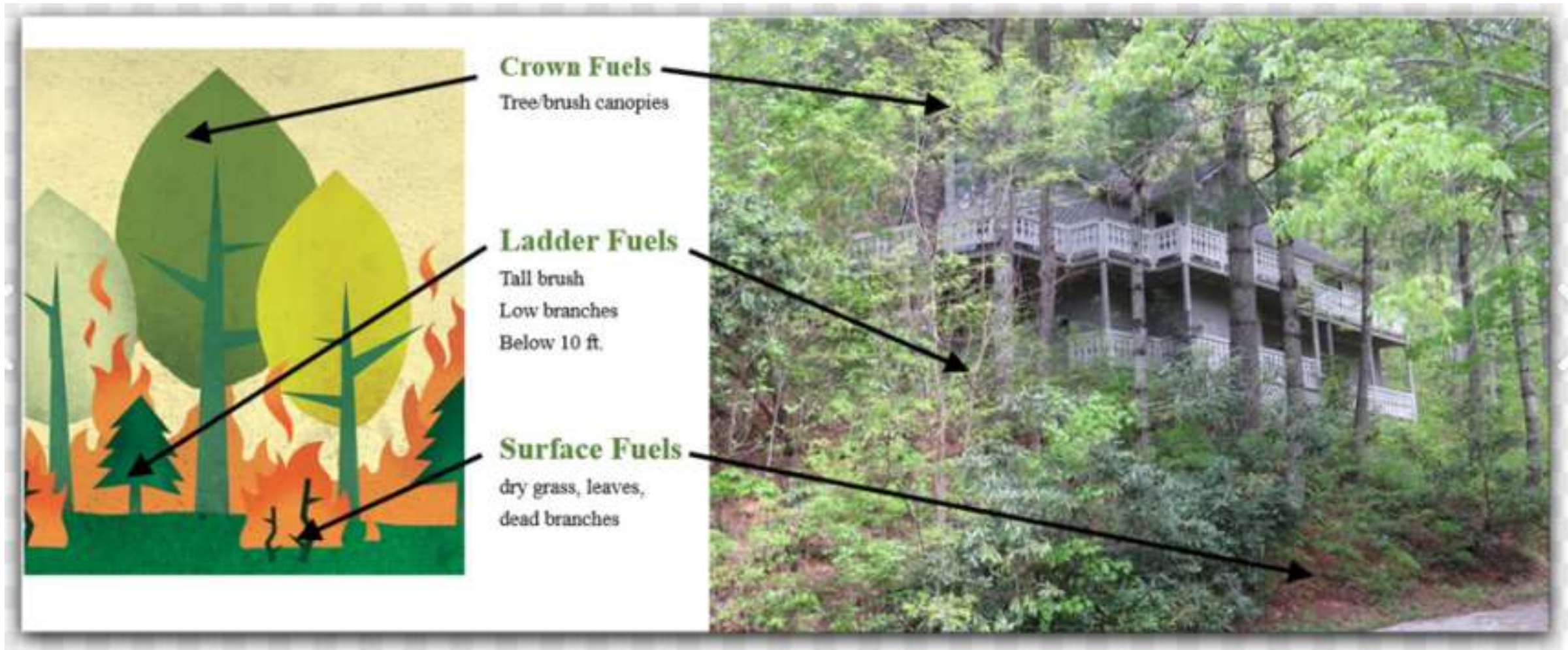
# Risk Factors to Consider

- Topography
- Fuel (vegetative/fuel storage)
- Structures – fire rated roof, vents screen, rain gutters and roof cleaned of debris?
- Buffer of 0-5 feet around the building?
- Water resources\*
- Access
- ✓ Equipment





# “Asbestos” Forest



# **A Rare Wind Event Has Northwest Oregon Under a Critical Fire Warning**

**The Beachie Creek Fire:  
Unprecedented expansion  
From 500 ac to 130,000 ac  
overnight  
Winds at 50-75 MPH  
Fire spread at 2.77 acres per  
second**





# The Wildfire Super Spreader





# Embers Cause Up to 90% of Home & Business Ignitions During Wildfire Events



**Vents: 1/8 inch**

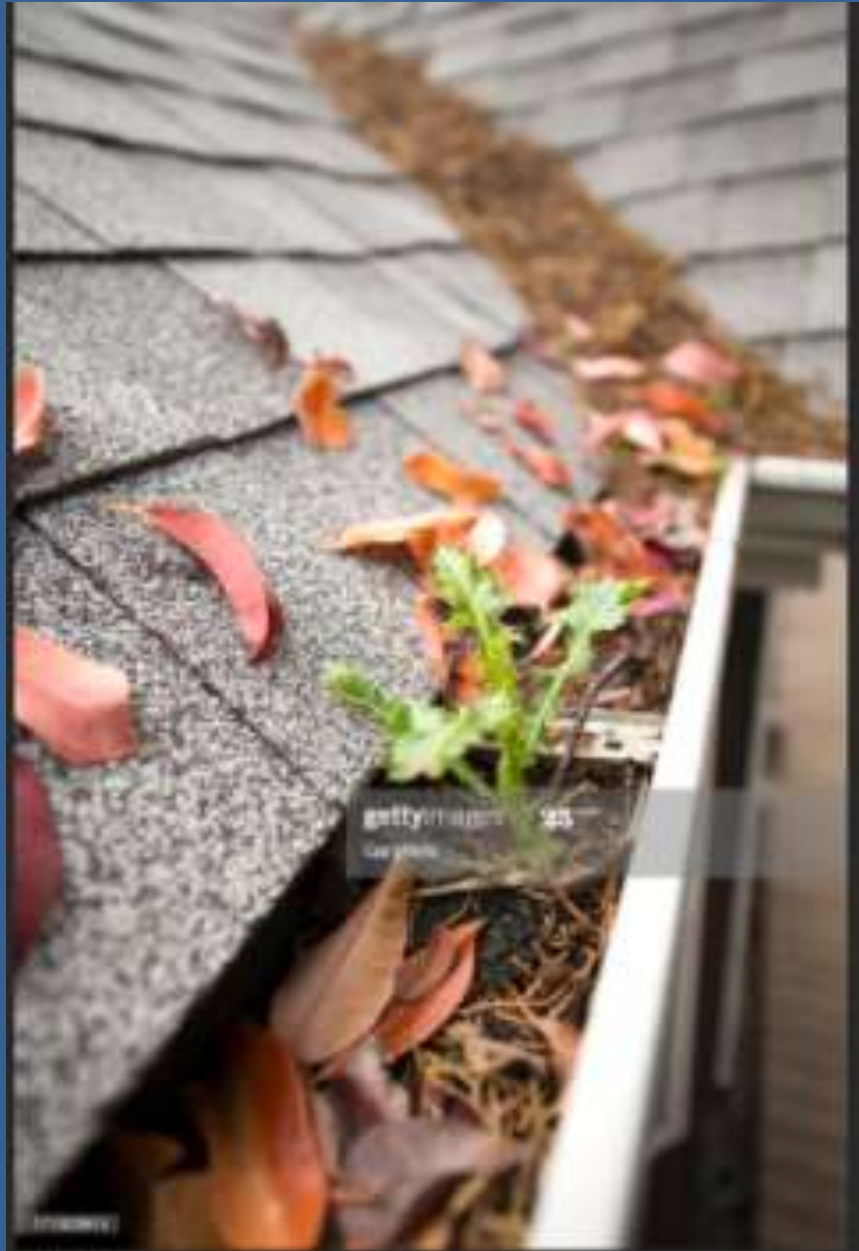


Wind pushing into soffits/ if vents are here....





Gutters filled  
with debris +  
**firebrands** =  
roof ignition







Roofing: Metal or  
Class A

Siding: Metal or  
non-combustible  
material



# Defensible Space – think flame length and flame contact

- Maintain 5 feet from structure with non-combustible vegetation or materials.
- If there is a nearby tree, ensure no ladder fuels
- Clean debris from roof and gutters
- Locate fuel tanks away from the pesticide storage area, maintain vegetation around the tanks



Which one are you?





# Wildfire Pre-plan



- Keep an inventory of all pesticides in storage
- Prior to fire season have a maintenance pre-check – minimize fuel such as cardboard, dried grasses
- Have an emergency plan
- Communicate with your fire service- FD, ODF, USFS



# Structural vs Wildland Firefighting

## Advice for firefighters

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Avoid accumulation of water. Product may be carried across water surface spreading fire or contracting an ignition source. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the “Accidental Release Measures” and the “Ecological Information” sections of this (M)SDS.

Review the SDS



## After a Fire

Contact the  
Pesticide  
Manufacturer  
For Assistance!

Not all Haz Mat  
Contractors are familiar  
with pesticides –  
especially aluminum  
phosphide!





① FACT SHEET

# Storage of agricultural pesticides

DAR 437 - Division 4/W



The fact sheet provides guidance about safely storing pesticides on your farm, ranch, or other agricultural facility. It is important to understand Oregon OSHA's standard, OAR 437-004-1080, Storage of Hazardous Chemicals, as well as regulations from other agencies.

### Where to store

Carefully consider soil and land surface characteristics when selecting a storage site to prevent contamination of groundwater and to minimize the potential for run-off into surface water or other sensitive areas. Refer to pesticide labels for guidance on storing, mixing, or loading at the appropriate distances from water sources.

If winds blow mostly from one direction, locate your storage facility downwind from dwellings and other areas where people spend time.

Keep food and animal feed separate from stored chemicals to prevent cross-contamination.

### The storage facility

Keep the pesticide storage area locked. Keeping your storage area or facility as small as practical allows you to have only the chemicals on site that you really need. Storage facilities should be constructed with nonflammable materials, when possible.

Chemical storage must be in compliance with the manufacturer's instructions on the label or safety data sheet (SDS) to prevent conditions that could adversely affect container integrity or product stability.

Physically separate substances and label each area to prevent the mixing of incompatible types of chemicals.

There must be enough natural or artificial light inside the storage area to allow workers to move and work safely. The rule requires at least 20 foot-candles (215.28 lux) of light.

Ventilate chemical storage areas to ensure that air contaminants are less than 25 percent of the lower explosive level (LEL) of any stored chemical before employees enter the facility. The permissible exposure limits (PELs) in OAR 437-004-0900, Air Contaminants, also apply.



### Where you store restricted-use pesticides:

- ✓ Lock the storage area to prevent access by unauthorized people.
- ✓ Provide separate sections within the storage area for each category of pesticide product. Examples include insecticides, herbicides, fungicides, and fumigants. Label these areas by the general category.
- ✓ Ensure floors and shelves are constructed with a chemically-resistant material or coated, sealed, or accompanied with secondary containment that prevents the absorption of the hazardous chemicals.
- ✓ Provide sufficient containment of any potential leaks or spills when the storage area contains enough chemicals that a leak or spill could cause the material to leave the storage facility.



Salem Central Office  
162 Winter St., NE  
Salem, OR 97301-3882

Phone: 503-239-3272  
Toll-free: 800-433-2688  
Fax: 503-947-7461

### Safe storage practices

Storage, handling, and removing hazardous chemical containers must not create hazards to workers.

Follow all manufacturer's instructions, usually found on the chemical container's label or on the SDS. Remember that for pesticides, the label is the law.

All containers must have a legible label. Keep chemicals in their original containers. Never store chemicals in containers normally used for other purposes, such as food storage. Store pesticides in their own separate area away from food and personal items and away from sources of fire or ignition.

Keep your SDS and fire extinguishers where they are safely accessible in an emergency.



### Local responders

Notify your local emergency responders (fire and police) about where you keep your pesticides and other hazardous chemicals. Chemical storage areas should

comply with appropriate state and local fire codes. Identify chemical storage buildings with a sign in accordance with NFPA 704. For example, some pesticides are flammable and will produce toxic fumes when they burn. Other pesticides – such as the fungicide aluminum phosphide – react violently in contact with water.



Minimum Phosphide fire response building sign



### Other requirements

Storage of Hazardous Chemicals, OAR 437-004-1080 provides additional information not included in this fact sheet.

Other Oregon OSHA rules that apply to the safe storage or handling of chemicals:

- Subdivision 4/H, Hazardous Material
- Subdivision 4/I, Protective Equipment
- Subdivision 4/K, Medical/First Aid
- Subdivision 4/S, Electricity
- Subdivision 4/W, Worker Protection Standard
- Subdivision 4/Z, Chemical/Toxic

### Other regulators

The following agencies also have rules and responsibilities regarding the storage of pesticides and other hazardous chemicals:

- Oregon Department of Environmental Quality  
[www.oregon.gov/DEQ/index.html](http://www.oregon.gov/DEQ/index.html)
- Office of State Fire Marshall  
[www.oregon.gov/OSFM/index.html](http://www.oregon.gov/OSFM/index.html)
- Building Codes Division  
<http://www.oregon.gov/BOD/index.html>
- Oregon Department of Agriculture  
[www.oregon.gov/ODA/index.html](http://www.oregon.gov/ODA/index.html)
- Your local fire and law enforcement agencies

The National Institute of Occupational Safety and Health (NIOSH) has created a fact sheet to highlight health and safety programs and to help employers understand the information is intended to supplement the rules and provide best practices to employers.



A Division of the  
Department of Consumer  
and Business Services

osha.oregon.gov  
201-0294-201/2019 01-01





# Resources:



**FIREWISE USA<sup>®</sup>**  
RESIDENTS REDUCING WILDFIRE RISKS

# RESOURCES

- Old chemicals:

[www.oregon.gov/oda/programs/Pesticides/Water/Pages/PesticideStewardship.aspx](http://www.oregon.gov/oda/programs/Pesticides/Water/Pages/PesticideStewardship.aspx)

Grants: Soil & Water Conservation Districts

General issues: Free Consultative Services

Fire Preparedness: [www.firewise.org](http://www.firewise.org) [www.ibhs.org](http://www.ibhs.org)

Fire Readiness: ODF, FD



# Other Considerations

- Evacuation plan for labor housing occupants
- Where will they go, how will they get there
  - Have they got Go Bags?
- Do not under estimate the fear factor
- Think and **PLAN: Before, During and After** the Fire





Garnet Cooke  
Pesticide Coordinator  
Oregon OSHA  
(503)930-4204  
[Garnet.r.cooke@oregon.gov](mailto:Garnet.r.cooke@oregon.gov)