



WE ARE FIREWISE!
Living More Safely
in the
Wildland-Urban Interface

Owen Dell, RLA, ASLA

**IT CAN'T
HAPPEN
TO**

ME!











News › Science

US West enters 'new era' of unstoppable wildfires because of climate change, experts warn

'This is bigger than us and we're going to have to adapt to wildfire, rather than the other way around'

Ian Johnston Environment Correspondent | @montaukian | 2 days ago | 71 comments



Like Click to follow The Independent Online



A raging wildfire closes in on a tree as people flee near Clayton, California. Reuters

Table 3.2 - Increase in length of fire season 2011-2015

Year	Fire Season start date	Fire Season end date	Length (days)
2011	7/11	10/3	84
2012	7/11	10/16	97
2013	7/2	9/25	85
2014	7/1	10/14	105
2015	6/16	10/26	132
2016	7/5	10/4	91

THE WILDLAND/URBAN INTERFACE

Development in or adjacent to wild land

Complicates firefighting efforts

Lack of defensible space

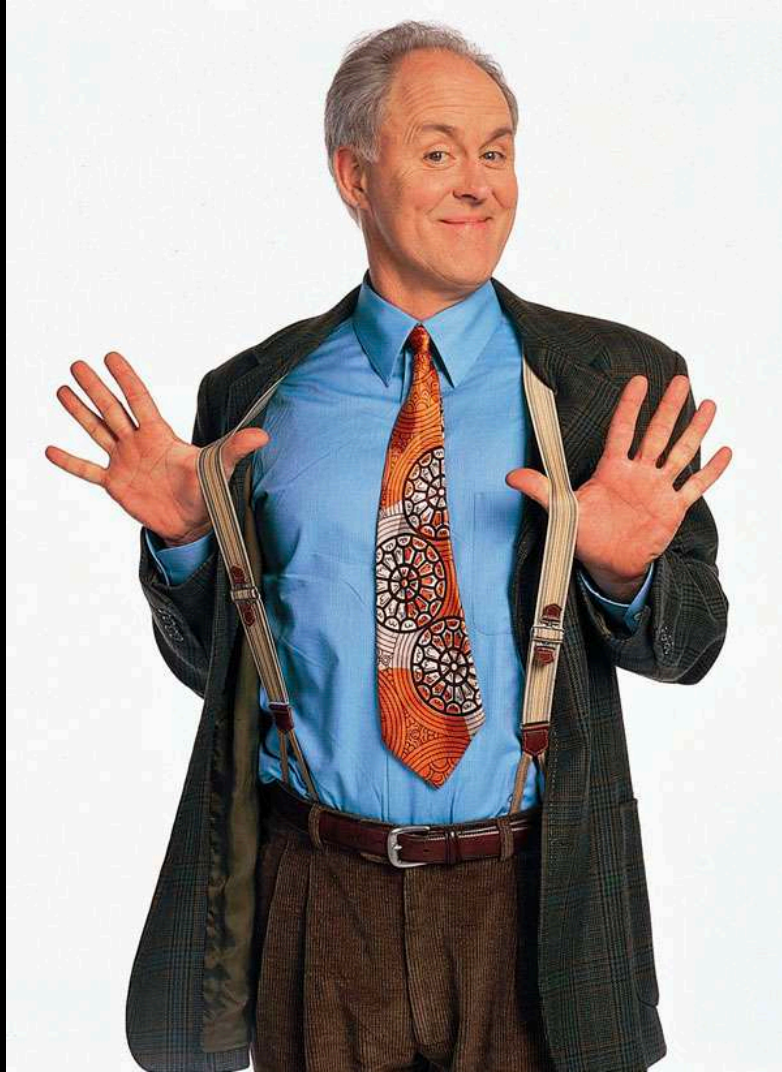
Fires are unpredictable

High energy: 1 Hiroshima every 5-1/2 minutes



The Three Top Causes of Wildfires





*Prudent
people take
reasonable
precautions*

Benton County, Oregon

Community Wildfire Protection Plan



Adopted by the Benton County
Board of Commissioners
June 2009

1500 Road Fire - Polk County, Oregon 2007

Circle the ratings in each category that best describe your home.

Table 2.2. Fuel Hazard Rating Worksheet		Rating	Results
Fuel Hazard (within 200 feet of structures)	Small, light fuels (grasses, non-woody plants, weeds, shrubs)	1	32%
	Medium size fuels (brush, large shrubs, small trees)	2	35%
	Heavy, large fuels (woodlands, timber, heavy brush)	3	33%
Slope Hazard (within 200 feet of structures)	Mild slopes (0-5%)	1	60%
	Moderate slope (6-20%)	2	32%
	Steep Slopes (21-40%)	3	7%
	Extreme slopes (41% and greater)	4	1%
Structure Hazard	Noncombustible roof and noncombustible siding materials	1	22%
	Noncombustible roof and combustible siding material	3	46%
	Combustible roof and noncombustible siding material	7	10%
	Combustible roof and combustible siding materials	10	22%
Additional Factors	Rough topography that contains several steep canyons or ridges	+2	Average -2.93 pts
	Areas having history of higher than average fire occurrence	+3	
	Areas exposed to severe fire weather and strong winds	+4	
	Areas with existing fuel modifications or usable fire breaks	-3	
	Areas with local facilities (water systems, rural fire districts, dozers)	-3	

Values below are the average responses to each question for those living in both rural and urban areas.

Fuel hazard	<u>2.12</u>	x Slope Hazard	<u>1.5</u>	=	<u>3.18</u>
Structural hazard	+		<u>4.58</u>		
Additional factors	(+ or -)		<u>-2.93</u>		
Total Hazard Points	=		<u>4.83</u>		

Table 2.3. Tabulation of Homeowner Assessed Risk.

- 00% – Extreme Risk = 26 + points
- 36% – High Risk = 16–25 points
- 34% – Moderate Risk = 7–15 points
- 63% – Low Risk = 6 or less points

Respondents were asked a series of questions regarding mitigation activities they had recently done or currently do on their property. The first question asked if they conducted a periodic fuels reduction program near their home; 92% said that they did. Respondents were also asked if livestock were grazed around their home; 21% indicated there were.

Finally, respondents were asked “If offered in your area, would members of your household attend a free or low cost, ½ -day training seminar designed to share with homeowners how to

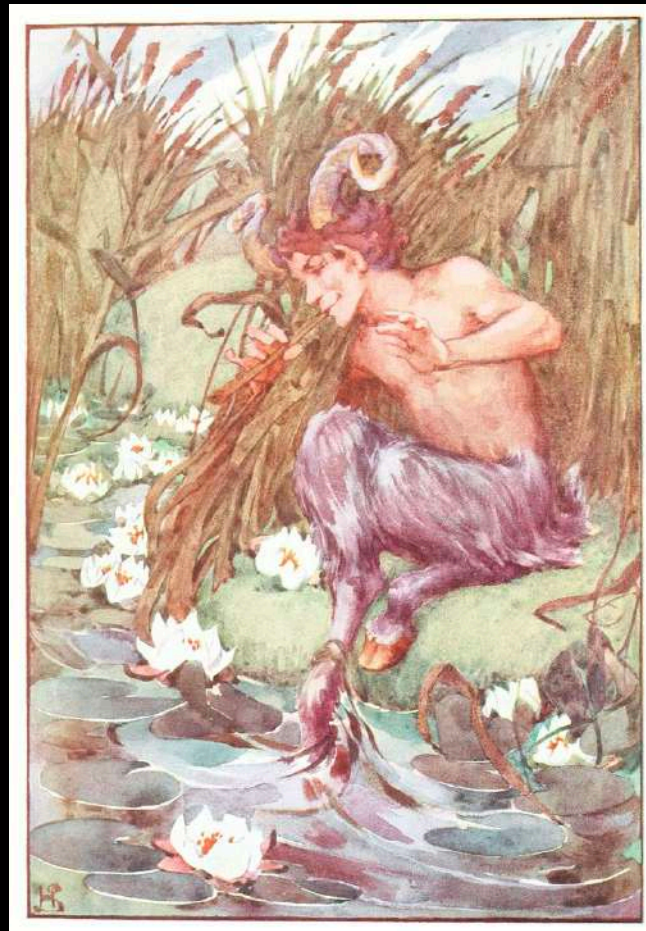
www.firewise.org



BENTON COUNTY'S RECOGNIZED FIREWISE COMMUNITIES

1. Pioneer Village, 2011
2. Vineyard Mountain, 2011
3. Ridgewood Estates, 2012
4. Chinook, 2014
5. Skyline West, 2016
6. Wren, 2016

Myths





**THE
ASBESTOS
FOREST???**

**The Tillamook Burn
Photographed in 1949
335,000 acres**



“No worries, mate!”



“I’m helpless!”



Why People Don't Take Action...

Unaware

Denial

Futility

Irresponsibility

Insurance

Unnatural

Aesthetics and Function

Discomfort

Absentee Owner

Foreclosures

Undesirable

Cost

Time

Unknowledgeable

Disposal

Unable

Maintenance

Illegal

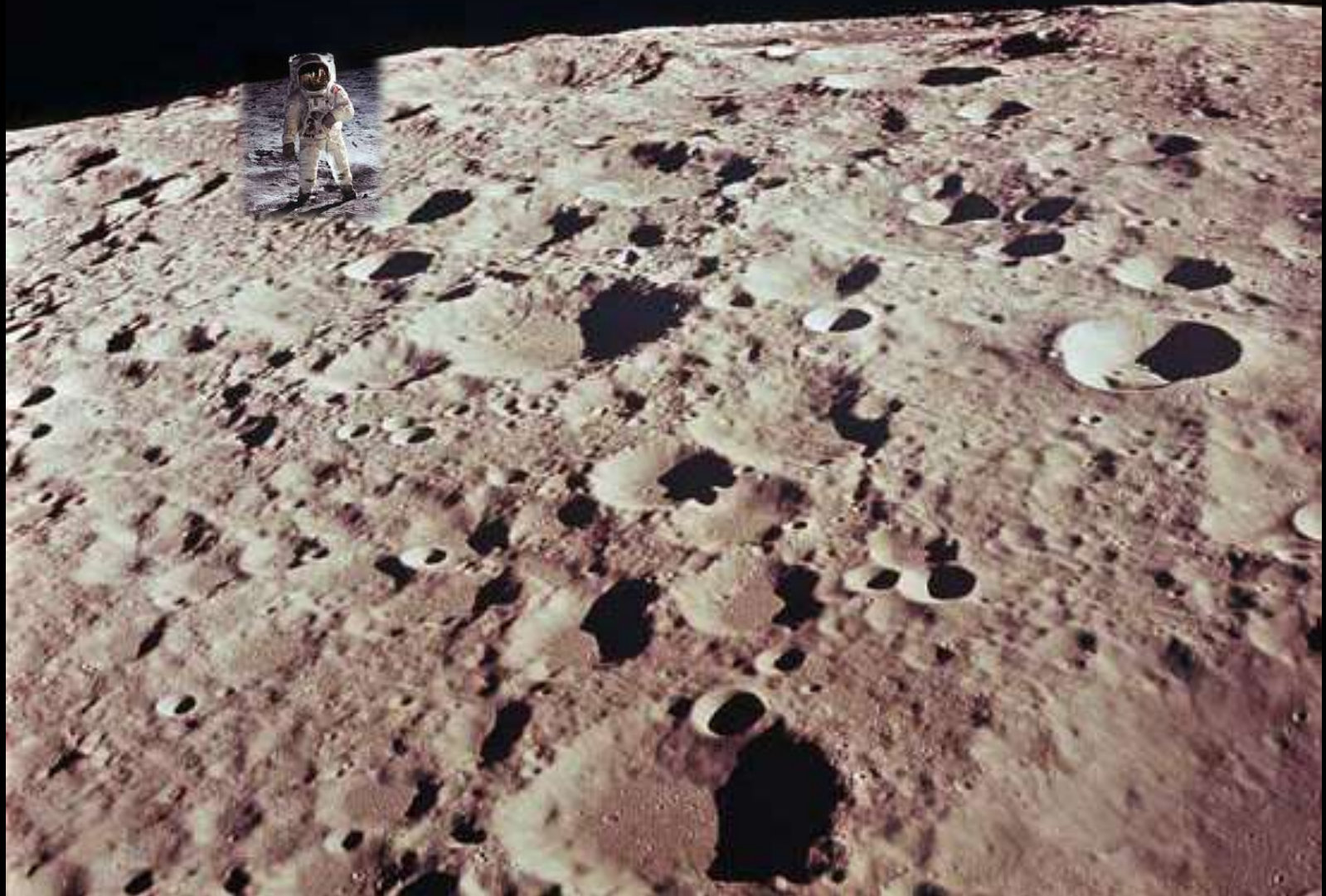
Lack of Ownership

Other

Other

Other

Moonscapes!









Oops!

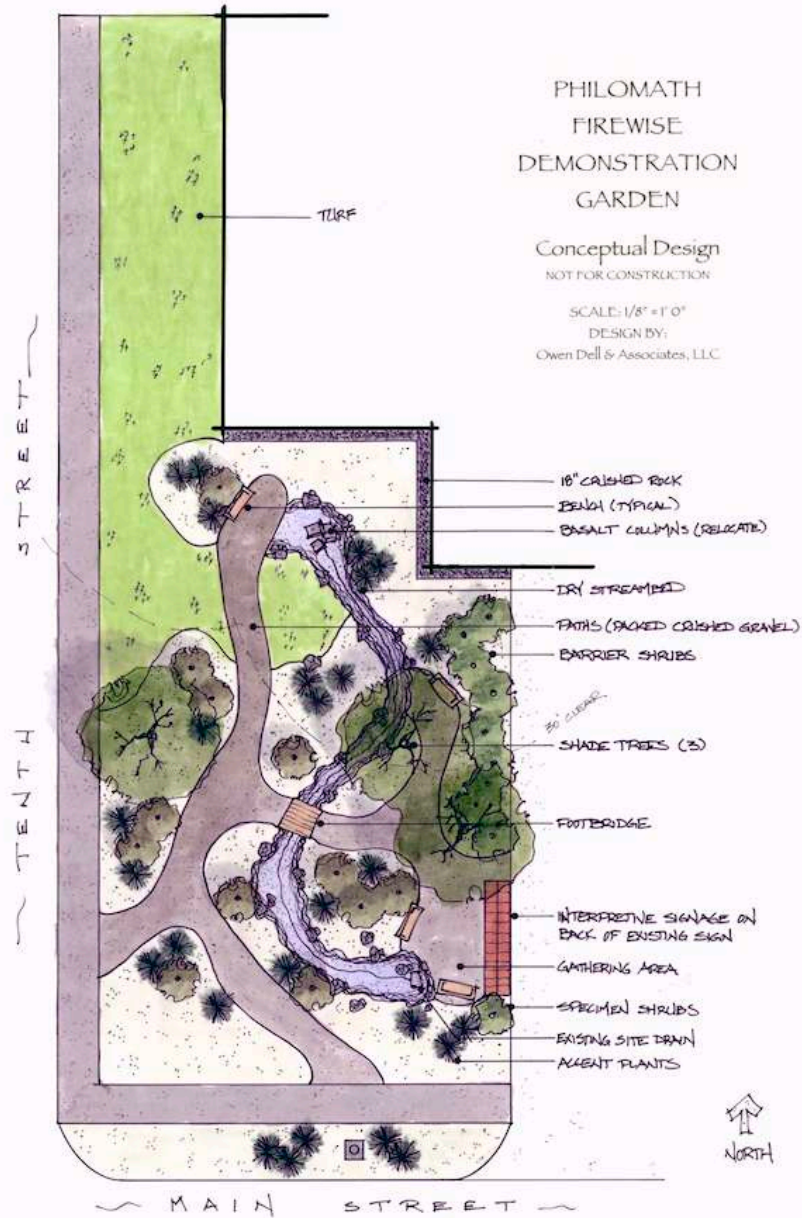
PHILOMATH
FIREWISE
DEMONSTRATION
GARDEN

Conceptual Design
NOT FOR CONSTRUCTION

SCALE: 1/8" = 1' 0"

DESIGN BY:

Owen Dell & Associates, LLC



A photograph of several firefighters in a forest, working to contain a large fire. The firefighters are wearing helmets and gear, and are positioned in front of a massive wall of flames. The scene is illuminated by the bright orange and yellow light of the fire.

Defensible space *is* your job

ummm, not my job, actually

DEFENSIBLE SPACE



Creating Defensible Space

Eliminate flammable materials within 10 ft. of house

Eliminate ladder fuels

Remove fuels around propane tanks

Create fuel breaks

Provide access for fire trucks

Before and After





IT'S ABOUT THE NEIGHBORHOOD!



LIMB TREES UP 8'-10'



REMOVE BRUSH PILES



KEEP MULCH AWAY FROM BUILDINGS!



REPUBLIC FIRE INSURANCE CO.



TRUSTEES.

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THE PIONEER
MUTUAL FIRE INSURANCE CO.
COMBINING THE ECONOMY
OF THE MUTUAL PLAN,
WITH THE SECURITY OF A
CASH CAPITAL.

OFFICE
16 WALL ST. NEW YORK.

BY THE CHARTER
THE INSURED RECEIVE
80 PER CENT. OF THE
PROFITS, WITHOUT
INCURRING ANY PERSONAL
LIABILITY.

CASH CAPITAL \$ 150,000.

SURPLUS OVER \$ 150,000.

Not here! No way!











Fire Safe??!!



In Order of Importance:

Firewise home

Topography

Firewise landscaping

H O M E I G N I T I O N Z O N E

Firewise Home

- “Class A” fireproof roof
- Fire-resistant wall materials
- Screen openings
- Small or no overhangs
- Enclosed eaves
- Eave vents placed on outside of eaves
- Vent openings covered with 1/8” mesh screen
- Roof slanted towards slope to reduce effect of convection heat
- Pools and concrete patios located on “fire side” of house
- Decks enclosed or eliminated
- Wood fences not connected to house
- Tempered safety glass on windows and doors and/or double glazing
- No large picture windows on fire side of house
- Approved spark arrestors on chimneys
- Stone or block walls to deflect flames and heat
- Fire curtains on all windows
- Roof sprinklers
- Wet roof systems
- Swimming pool pumps
- Locate swimming pool for easy access by fire trucks

ROOF

- Wood Shakes **BAD**
- Composite **GOOD**
- Steel **BEST**

SIDING

- Wood Shakes **BAD**
- Vinyl **BAD**
- Fiber-Cement **GOOD**

WINDOWS

- Single Pane **BAD**
- Double Pane **GOOD**
- Picture Windows **BAD**



DECKS



Zone 1:
Keep it Lean, Clean and Green

OREGON GARDEN FIRE SAFETY HOUSE

What is Zone 1?

Zone 1 is the area immediately surrounding your home. It is the area where a fire is most likely to start and spread. Keeping this area lean, clean, and green can help reduce the risk of a fire starting and spreading.

Fire-Safe Landscapes

Fire-safe landscapes are designed to reduce the risk of a fire starting and spreading. They include:

- Using fire-resistant plants and materials.
- Removing dead and dry vegetation.
- Creating defensible space around your home.

Fire-Resistant Plants

Fire-resistant plants are those that are less likely to catch fire and burn. They include:

- Native plants and shrubs.
- Plants with thick, waxy leaves.
- Plants with small, tightly packed leaves.

FENCES



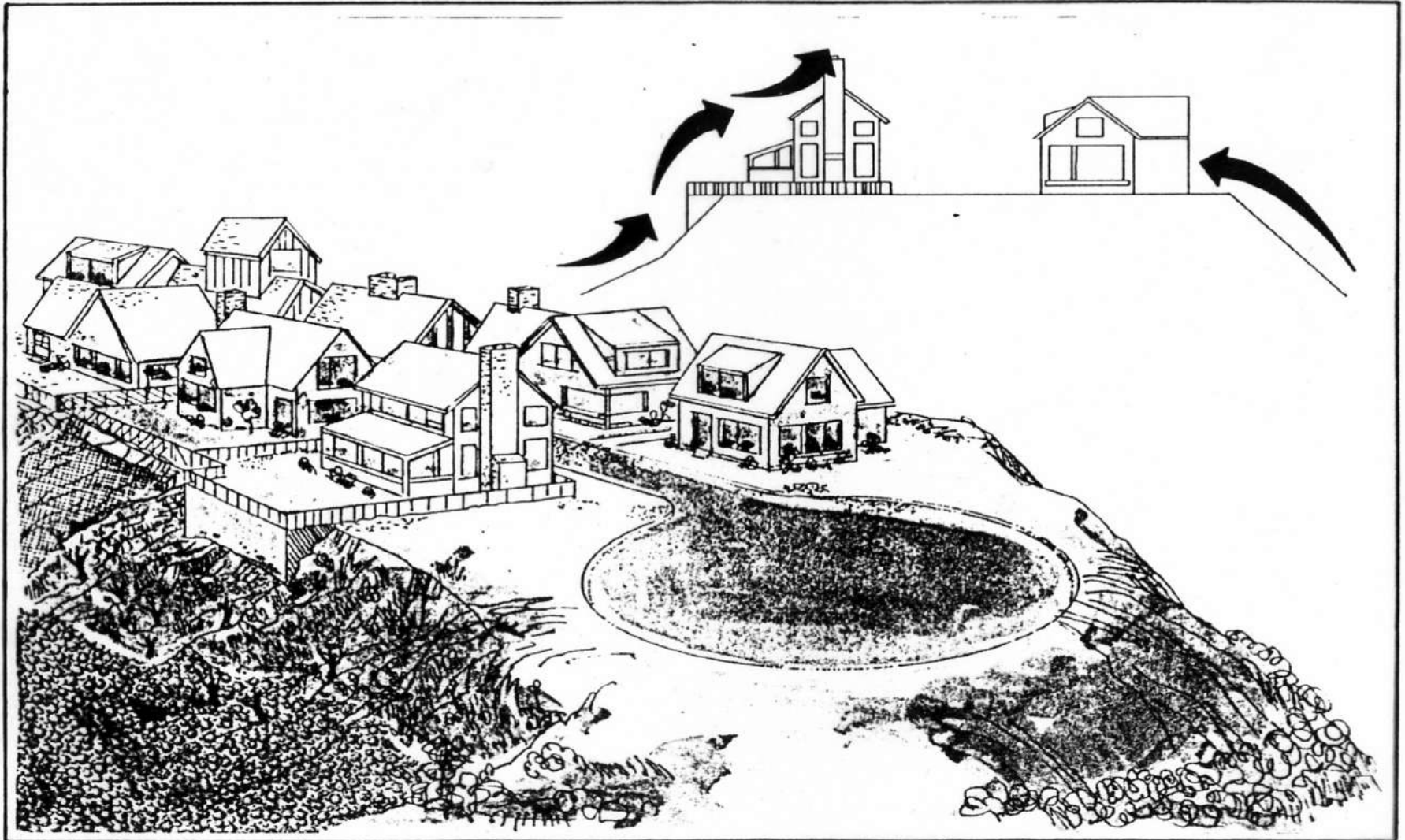
Availability of Water Supply



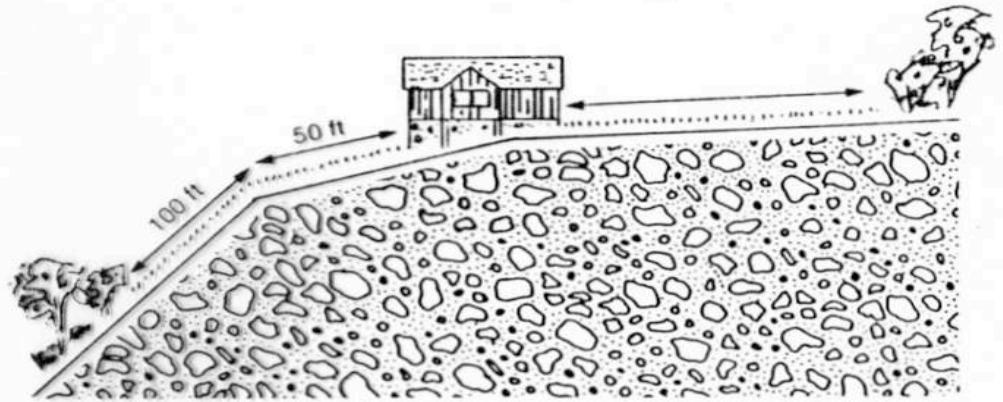
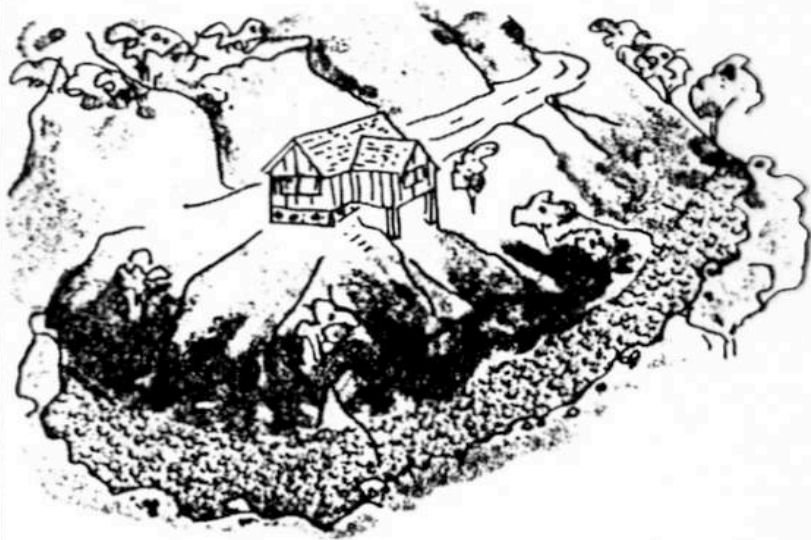
Topography



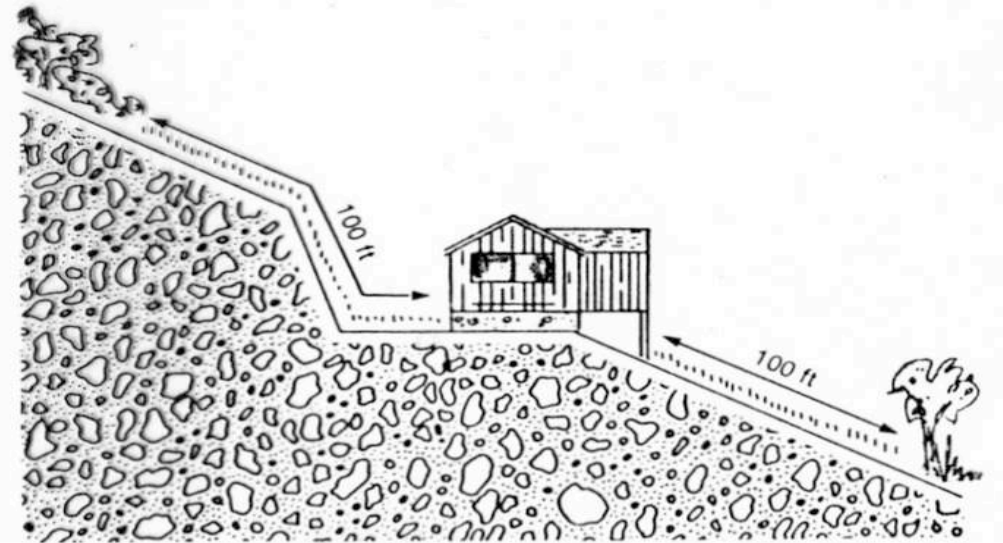
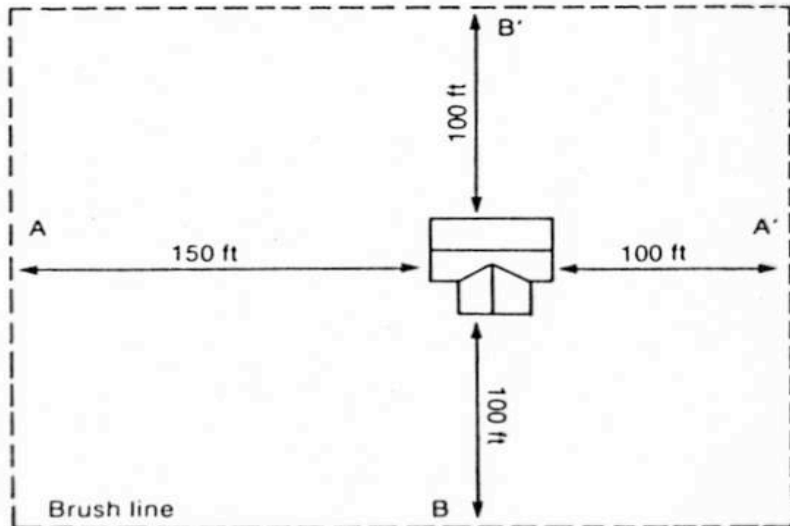
Terrain Matters



Smart Setbacks



Section A-A'

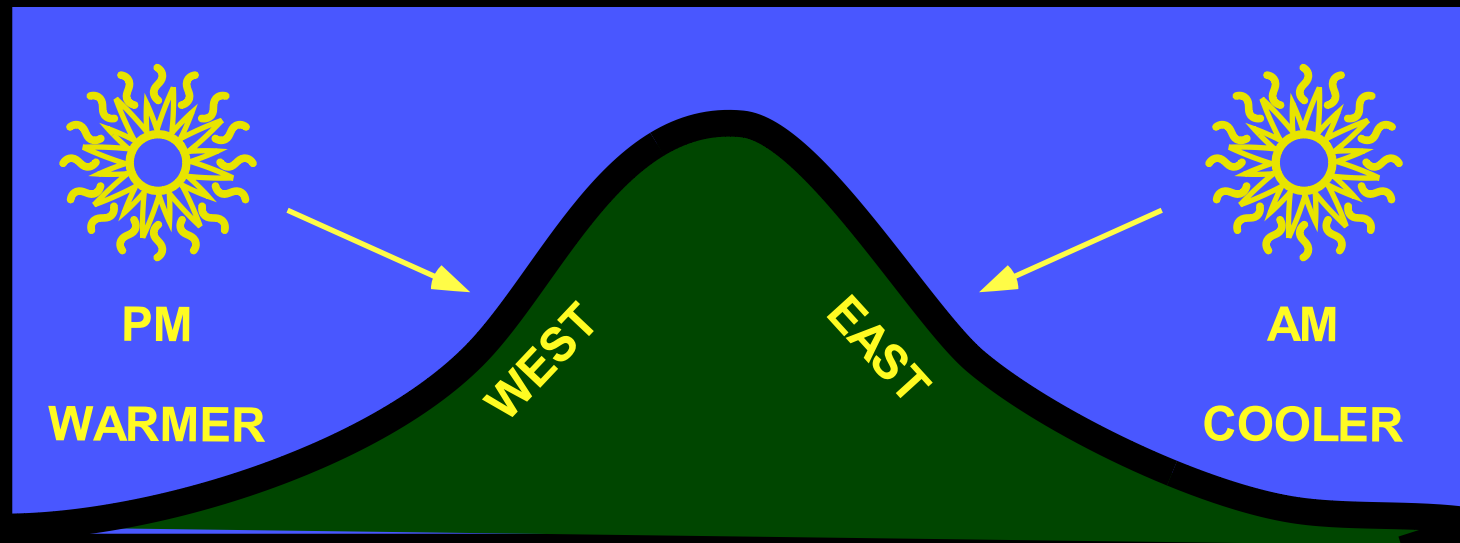
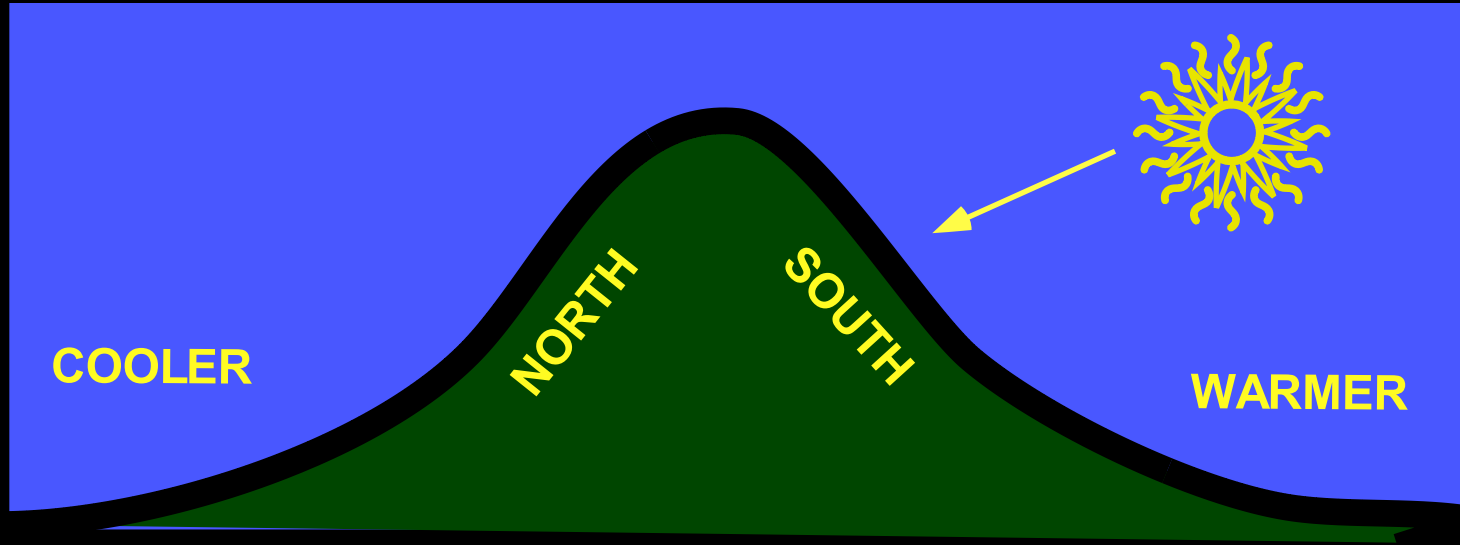


Section B-B'

Blazing Saddles



Slope Aspect

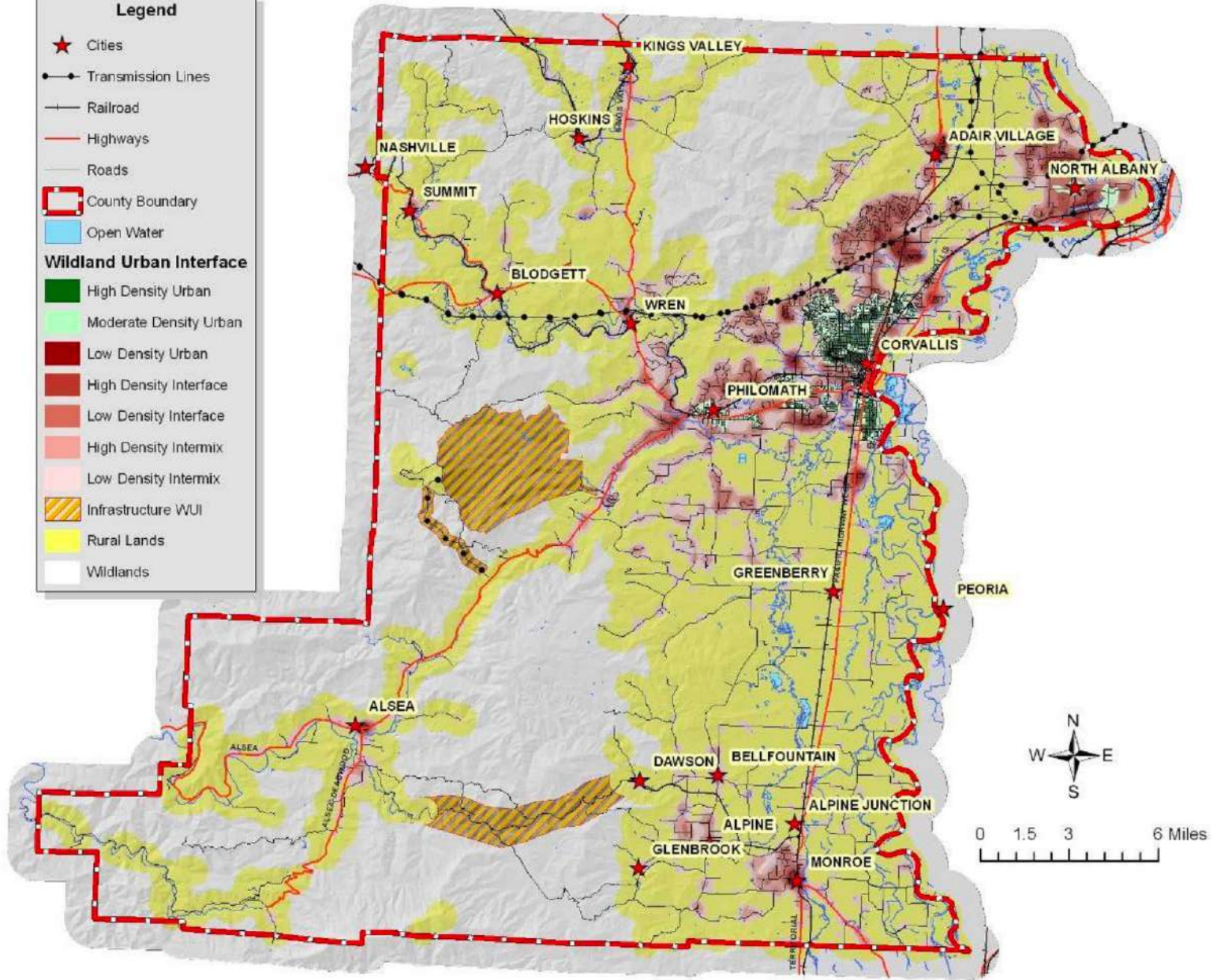


Legend

- ★ Cities
- Transmission Lines
- Railroad
- Highways
- Roads
- ▭ County Boundary
- ▭ Open Water

Wildland Urban Interface

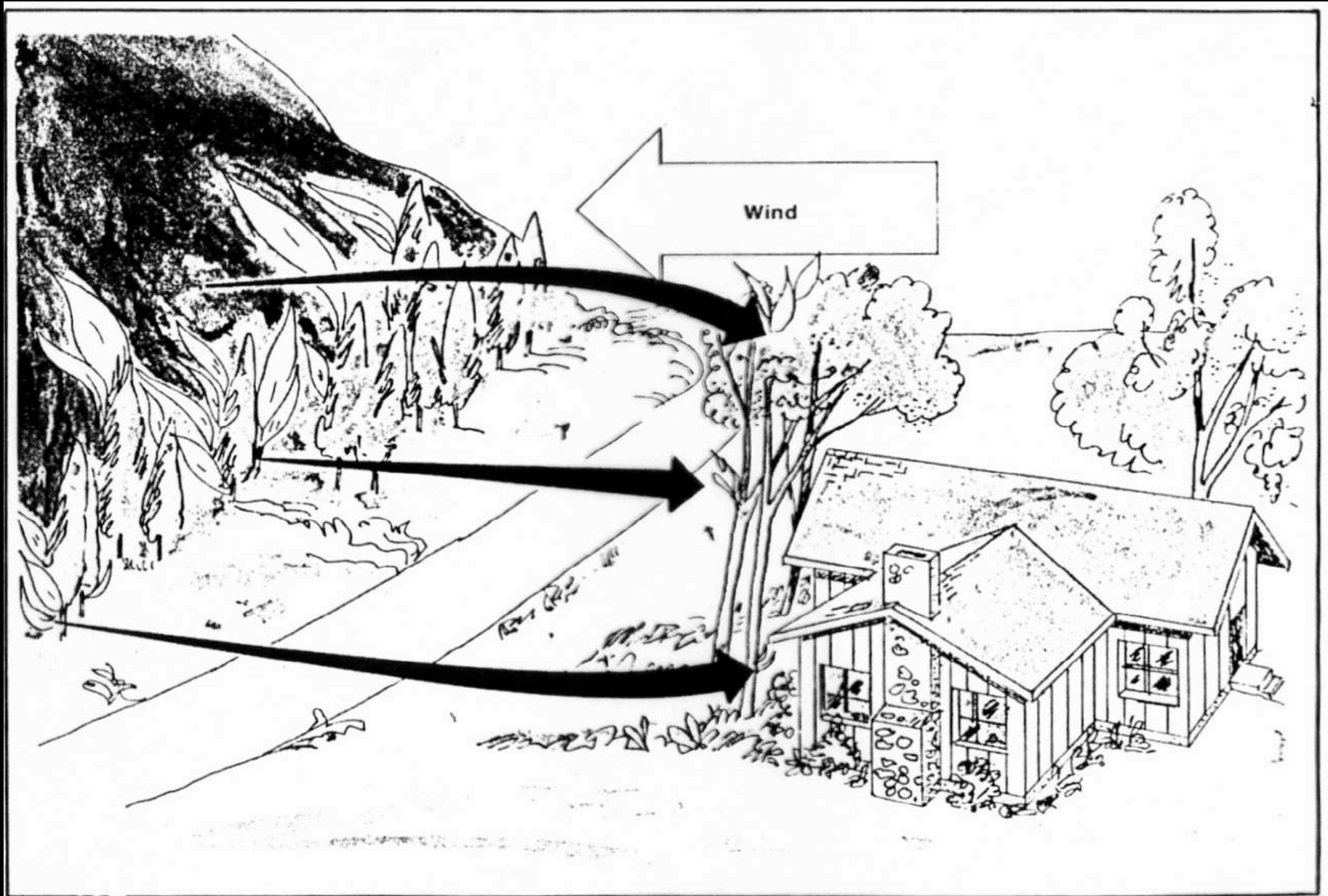
- ▭ High Density Urban
- ▭ Moderate Density Urban
- ▭ Low Density Urban
- ▭ High Density Interface
- ▭ Low Density Interface
- ▭ High Density Intermix
- ▭ Low Density Intermix
- ▭ Infrastructure WUI
- ▭ Rural Lands
- ▭ Wildlands



Kinds of Heat

- Conduction
- Convection
- Radiation

Radiant Heat

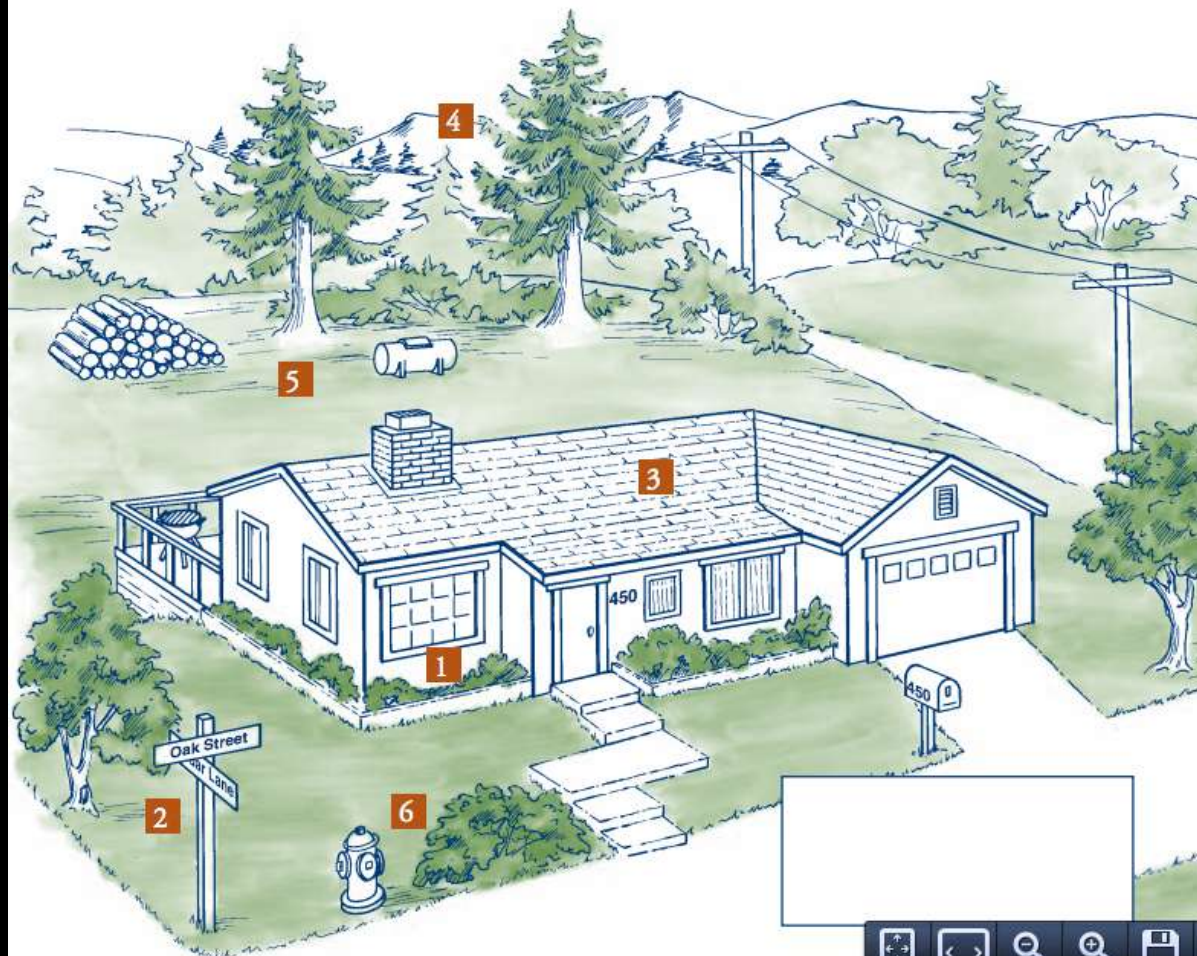


Homeowners Checklist



www.firesafecouncil.org

How To Make Your Home Fire Safe



Site Analysis

Local Fire History

Terrain

Prevailing Winds

Vegetation

Microclimate

Geology & Soils

Infrastructure



Which plants are best?

EM 9103 · February 2015

Fire-resistant Landscape Plants for the Willamette Valley

Brooke Edmunds ■ Barb Fick ■ Paula Rogers Lupcho



Oregon State | Extension
UNIVERSITY | Service

ARRANGEMENT !!



Protect Your Home from Fire

OREGON GARDEN FIRE SAFETY HOUSE

The Oregon Garden Fire Safety House project teaches you how to protect your house, your property, and your belongings against wildfire.

Take a tour around the house to discover how you can make your home, your property and your community fire-safe.

The Oregon Garden Fire Safety House and FIREWISE Communities are partners in this exhibit to show how a home can be protected from wildfire using defensible space strategies and fire resistant building techniques.

The Landscaping

You are here

1

Zone 1:

Keep it Lean, Clean, and Green

2

Zone 2:

The Firebreak Zone

3

Zone 3:

The First Line of Defense

4



The House

When Fire Happens

5

The Most Vulnerable Part of the House

6

The Last Stand: Is Your House Protected?

7

It's the Little Things

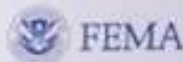
8

The Home Ignition Zones (Zone 1, Zone 2 and Zone 3) are the areas surrounding your home up to 200 feet away. How you care for these areas will determine how well your home and your family will withstand the effects of a fire.

PARTNERS:



SUPPORTERS:



The assistance to establish this Program & Fire Prevention and Safety Grants were provided by Federal Emergency Management Agency (FEMA) and the Department of Homeland Security (DHS).



Who is at Risk?

You may be at risk.

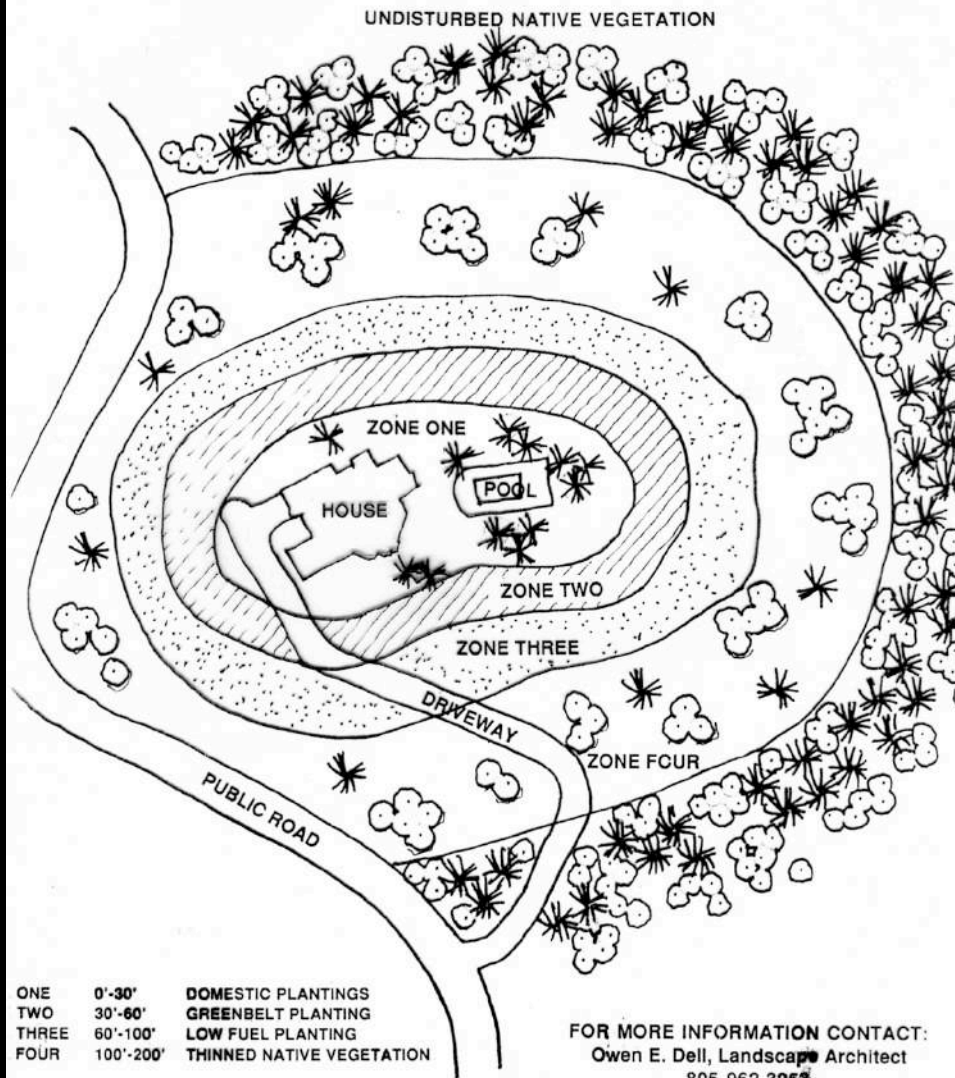
Wildfire can threaten those who live in the forested mountains, the city hills, the landscaped suburbs, the wild high country, or the rural countryside. Wildfire danger exists where homes meet nature.

You have control.

Creating defensible space around your home now improves the chances that your home will survive a wildfire.



THE ZONE CONCEPT





FIRE TRIANGLE

What makes a plant more flammable?

- Dry leaves
- Fine foliage
- Resins and oils
- Loose papery bark
- Dead leaves and twigs



What Makes a Plant Less Flammable?

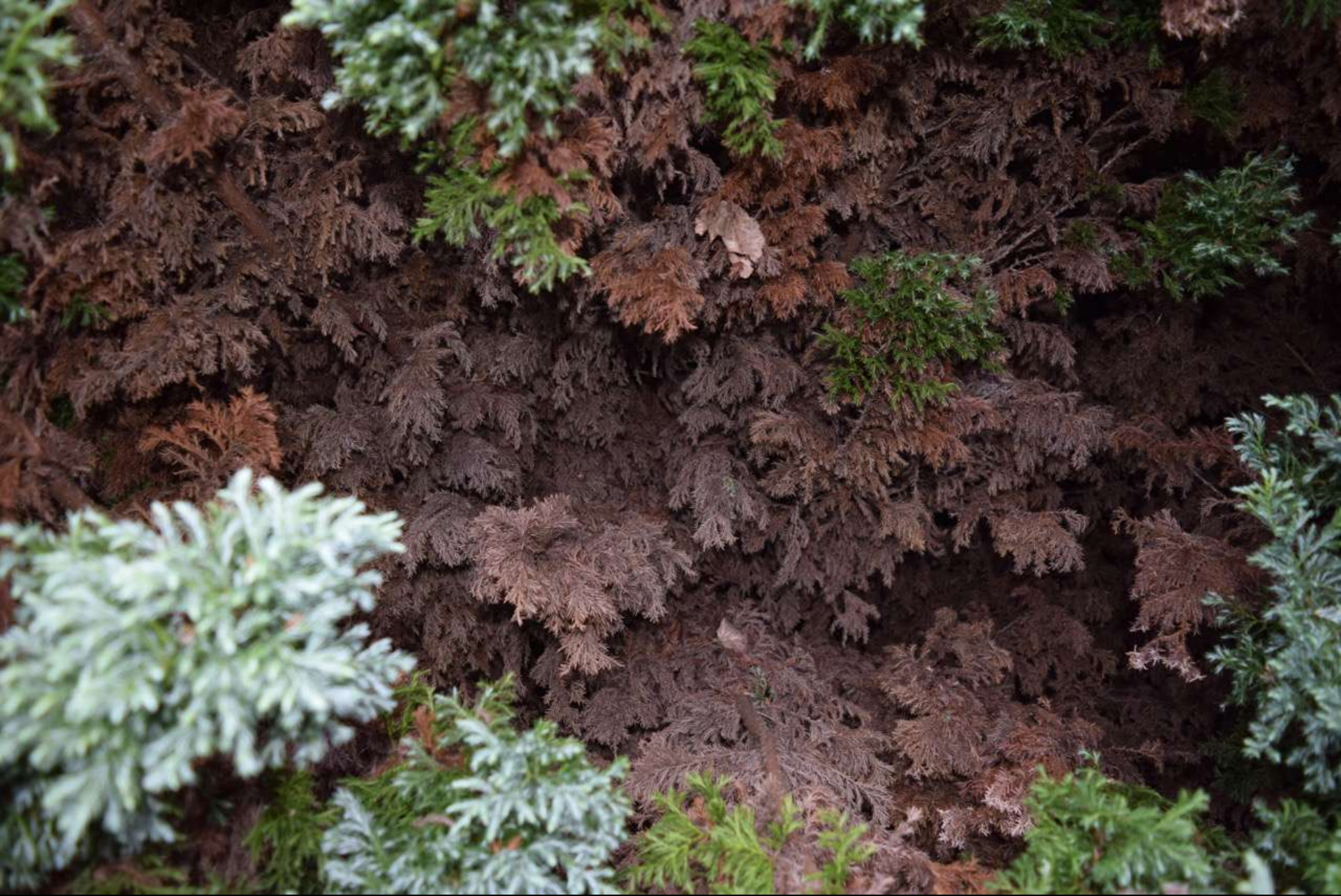


- Low fuel volume
- High moisture content
- High salt content
- Low aromatic oil content
- High kindling point/ignition temperature
- Low heat value
- Minimal production of dry litter
- Suited to local growing conditions
- Properly maintained
- **Remember that any plant will burn**

Any plant will burn!







So are Native Plants Bad?

Flammability varies by species

Many are less flammable than exotics

Condition and density matter

Don't destroy native ecosystems!

Local Opportunity: Restoration Plus Firewise



Benton Soil and Water
CONSERVATION DISTRICT



*Chip Ross Park
Corvallis, Oregon*









PLANTS TO AVOID



Yew



Junipers



Arborvitae



Leyland cypress

How Everyone Can Prepare for Wildfire

- Clean your gutters regularly.
- Keep your lawn and plantings watered and maintained. If it's brown cut it down!
- Remove fuel within 3-5 feet of your home.
- Prune trees so the lowest branches are 8 to 10 feet high.
- Remove debris and brush.
- Plant slow-growing, carefully placed shrubs and trees.
- Landscape with less-flammable plants.

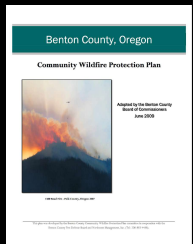


Local Resources



OSU Extension

extension.oregonstate.edu/



Community Wildfire Protection Plan

co.benton.or.us/cd/page/community-wildfire-protection-plan



Oregon Dept. of Forestry

Website oregon.gov/ODF/pages/index.aspx



Firewise firewise.org



Keep Oregon Green keeporegongreen.org

**FOR MORE INFORMATION
OR FOR A HOME FIREWISE EVALUATION CONTACT:**

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COMMUNITY DEVELOPMENT**
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**WHAT WILL
YOU DO
TOMORROW?**