

USING NATIVE PLANTS IN A FIRE-RESISTANT LANDSCAPE

Saving water

Saving homes

Enriching habitat

Reducing maintenance

PURPOSE:

Share information on planting selected fire-resistant native vegetation to create a safe and beautiful landscape in a fire prone environment

A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, located in the lower right quadrant of the slide.

DEFINITIONS

Native plant

— A plant species that is found in a region because it developed and evolved in that region over thousands of years.

Plants that existed in a region prior to settlement - sometimes referred to as indigenous plants

Naturalized plant

— An exotic plant that was introduced into an area, escaped from cultivation and reproduces on its own (includes exotic invasive plants).

Many plants commonly thought to be natives were introduced by early settlers.

DEFINITIONS

Xeric or Xeriscape

- - refers to plants or a landscape that flourishes with very little water. Xeric plants require very little, if any, supplemental watering after the plant is fully established.

Biodiversity

- - the variety of living organisms in a particular habitat or ecosystem.

DEFINITIONS

Fire-resistant- The ability of a plant or material, to withstand fire or give protection from fire for a period of time.

Fire- resilient – A plant that “resists damage and recovers quickly from disturbances (fire)

Fire-tolerant- plants that can withstand severe heating and survive anyway

Fire-adapted- life history traits of plants that help them survive wildfire

SHRUB-STEPPE ECOSYSTEM:

Shrub – A woody plant with several stems arising at or near the ground

Steppe- A large areas of flat grassy land where there are few trees--- an area with bunchgrasses, numerous annual and perennial where wildflowers thrive in the spaces between shrubs and bunchgrasses.

GEOLOGY/GEOGRAPHY OF NORTH CENTRAL WASHINGTON

Mixed conifer

Dry forest

Sage-steppe



▶ Shrub steppe



0305509 © Mark Turner
www.turnerphotographics.com

Shrub/dry forest Ecotone



Dry Forest



▶ Mixed conifer



CATEGORIES OF PLANTS IN AN ECOSYSTEM

Trees

Shrubs

Grasses


Forbes (herbaceous perennials and annuals)

QUESTIONS??

On what we have covered so far

A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom-left towards the top-right, located in the lower right quadrant of the slide.

ATTRIBUTES OF FIRE-RESISTANT VEGETATION

- ▶ **Low growing**
 - ▶ **Open Configuration**
 - ▶ **High moisture content/ succulent parts**
 - ▶ **Water like sap**
 - ▶ **Broad- leaves**
 - ▶ **Herbaceous plant parts**
 - ▶ **Low accumulation of dead materials**
 - ▶ **Tight bark**
- 

FIRE RESISTANT VS FIRE PRONE VEGETATION

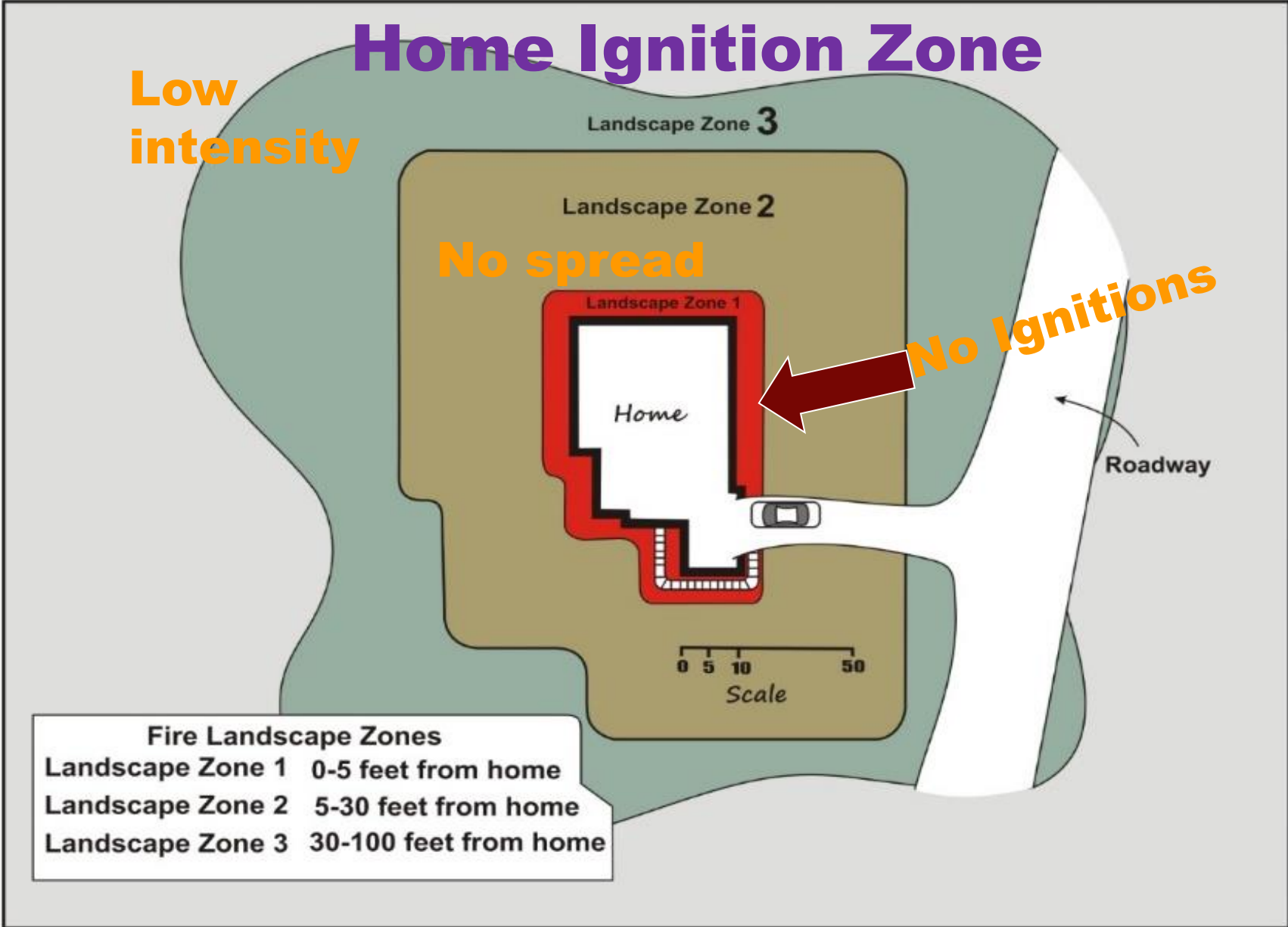
- ▶ **Short vs. Tall**
 - ▶ **Herbaceous vs. Woody**
 - ▶ **Deciduous vs. Evergreen**
 - ▶ **Spread out vs. Thick/dense**
 - ▶ **Tight vs. Loose Bark/wood**
 - ▶ **Watery vs. Thick/sticky sap**
- 
- A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, located in the lower right quadrant of the slide.

Home Ignition Zone

Low intensity

No spread

No Ignitions



| Fire Landscape Zones | |
|----------------------|-----------------------|
| Landscape Zone 1 | 0-5 feet from home |
| Landscape Zone 2 | 5-30 feet from home |
| Landscape Zone 3 | 30-100 feet from home |

HOME IGNITION ZONE

THREE LANDSCAPE ZONES

- ▶ **Zone 1** 0-5 feet (10ft)- basically non-flammable
- ▶ **Zone 2** 5-30 feet – Well spaced, pruned up, green, no dead fuels
- ▶ **Zone 3** 30-100 feet – well spaced wildland fuels and pruned up so nothing can ignite crowns – native vegetation is okay

CATEGORIES OF VEGETATION AND WHERE THEY BEST FIT IN THE LANDSCAPE ZONES

Landscape Zone 1

Ground Covers

Herbaceous Perennials and Annuals (**Forbes**)

Vines


Turf Grasses

LANDSCAPE ZONE 1

- ▶ Vegetation within 0-10/5 feet of the structure – **(Ignition Management)**
 - ▶ No trees or shrubs
 - ▶ No organic mulch
 - ▶ Low flammable plants
 - ▶ Inorganic mulch



ATTRIBUTES OF FIRE-RESISTANT VEGETATION

- ▶ **Low growing**
 - ▶ **Open Configuration**
 - ▶ **High moisture content/ succulent parts**
 - ▶ **Water like sap**
 - ▶ **Broad- leaves**
 - ▶ **Herbaceous plant parts**
 - ▶ **Low accumulation of dead materials**
 - ▶ **Tight bark**
- 

FORBES (WILDFLOWERS)

- ▶ Inter- bunchgrass niche
- ▶ Insects
- ▶ Birds
- ▶ Critters
- ▶ Food/Medicine





PENSTEMON & LUPINE



Columbine & Strawberry



YARROW & PHLOX

CLARKIA AND FIREWEED



BITTERROOT & SCARLET GILIA

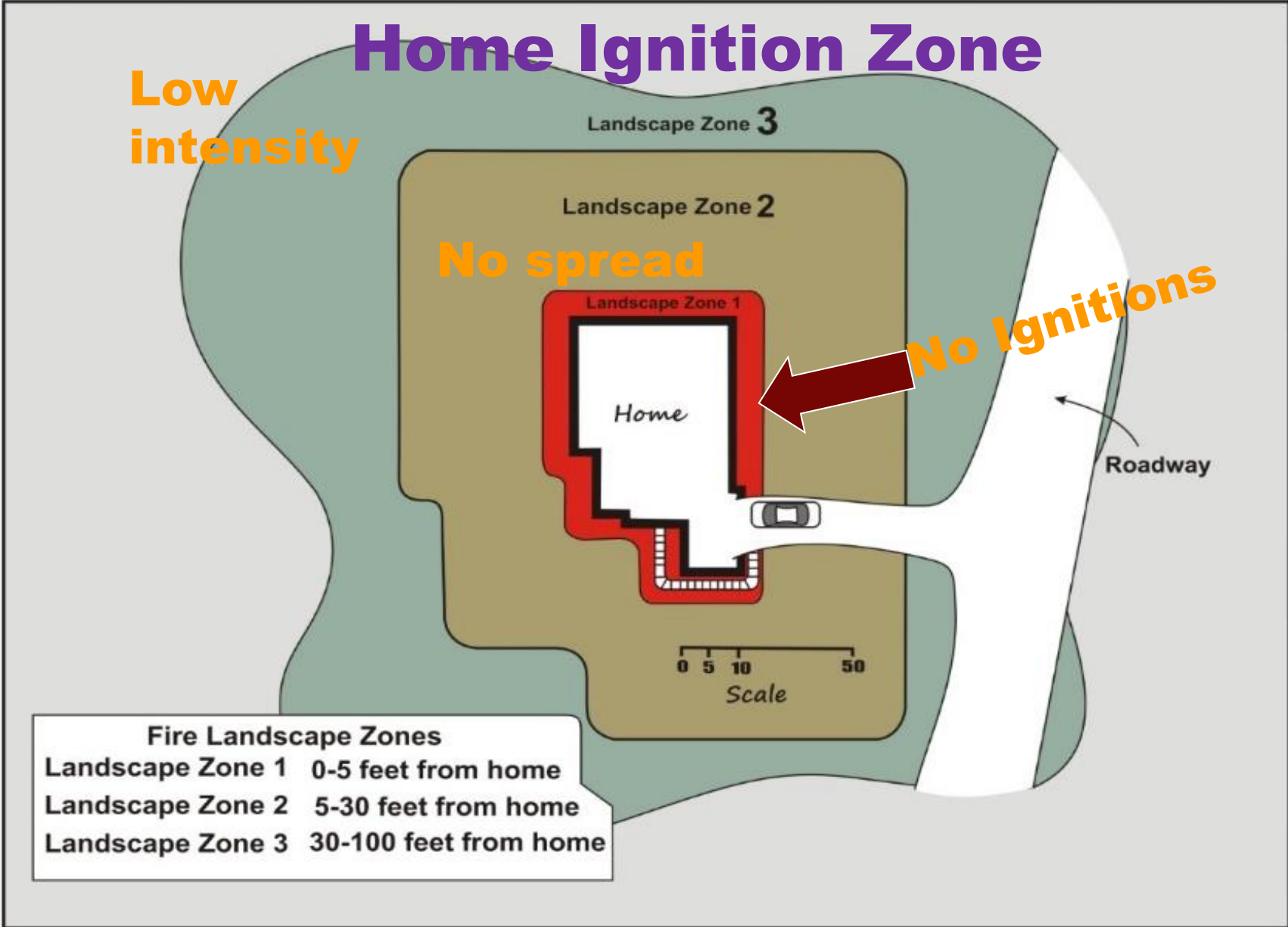


Home Ignition Zone

Low intensity

No spread

No Ignitions



| Fire Landscape Zones | |
|----------------------|-----------------------|
| Landscape Zone 1 | 0-5 feet from home |
| Landscape Zone 2 | 5-30 feet from home |
| Landscape Zone 3 | 30-100 feet from home |

GRASSES

Native Grasses

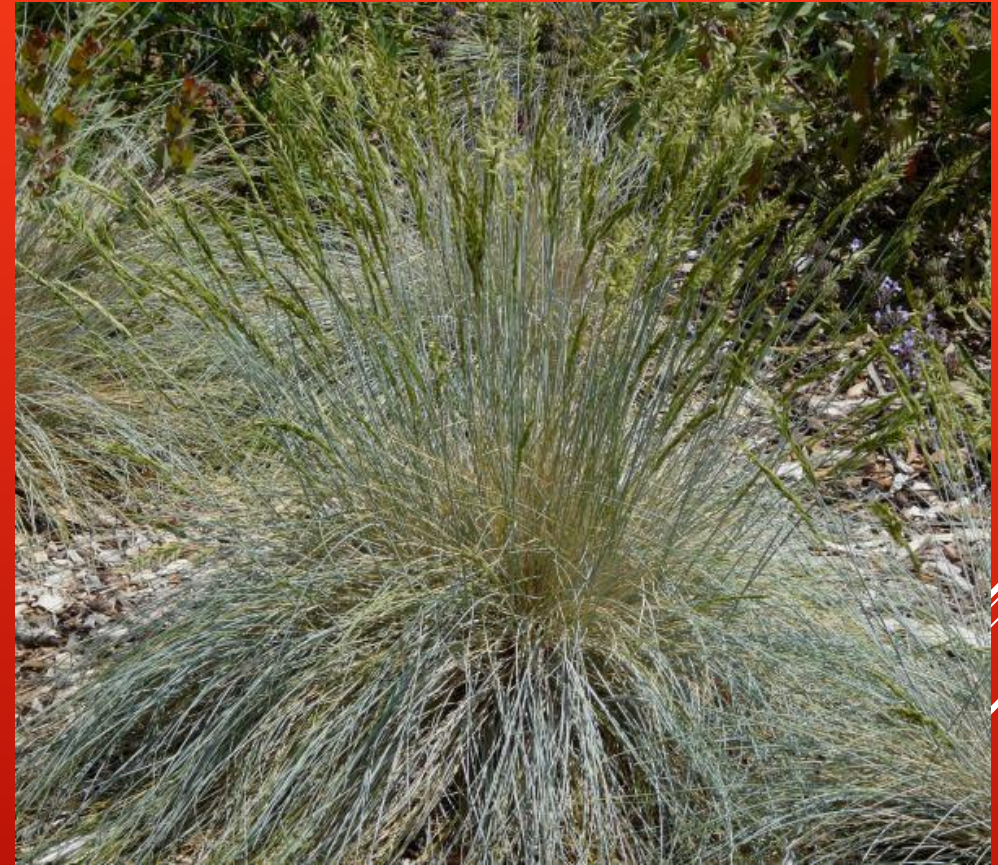
Root Systems

Xeric

Bunchgrasses



SANDBERGS BLUEGRASS & IDAHO FESCUE



NEEDLE AND THREAD & INDIAN RICE GRASS





Sand Dropseed & Prairie Junegrass

BLUE BUNCH WHEATGRASS & BASIN WILD RYE





PINE GRASS



SEDGES

QUESTIONS??

Are the Dots starting to make sense?


CATEGORIES OF VEGETATION AND WHERE THEY BEST FIT IN THE LANDSCAPE ZONES

Landscape Zone 2

Shrubs

Small Deciduous Trees

LANDSCAPE ZONE 2

- ▶ **Vegetation in the 5-30 feet from the structure (Manage for no fire spread)**
 - ▶ **Lean, Clean and Green Zone**
 - ▶ **Single trees pruned at least 10'**
 - ▶ **Single shrubs well groomed**
 - ▶ **No dead fuels**
 - ▶ **No continuous ground fuel**
- 

SHRUBS

VARIETY

XERIC

FOOD SOURCE

SHADE/COVER



MOCK ORANGE & RED OSIER DOGWOOD



SERVICE BERRY & WOODS ROSE



ELDERBERRY & GOLDEN CURRANT



SPIREA



SHRUBBY CINQUEFOIL





Kinnikinic & Oregon Grape

Minimum Horizontal Clearance

SHRUBS

From edge of one shrub to the edge of the next

Flat to mild slope

(0% to 20% slope)

Two times (2x) the height of the shrub

(Two shrubs 2' high should be spaced 4' apart)



Mild to moderate slope

(20% to 40% slope)

Four times (4x) the height of the shrub

(Two shrubs 2' high should be spaced 8' apart)



Moderate to steep slope

(greater than 40% slope)

Six times (6x) the height of the shrub

(Two shrubs 2' high should be spaced 12' apart)



TREES

From edge of one tree canopy to the edge of the next

Flat to mild slope

(0% to 20% slope)

10 feet



Mild to moderate slope

(20% to 40% slope)

20 feet



Moderate to steep slope

(greater than 40% slope)

30 feet



QUESTIONS??

Are the dots starting to connect??

A series of several parallel white lines of varying lengths and positions, all slanted diagonally from the bottom-left towards the top-right, located in the lower right quadrant of the slide.

CATEGORIES OF VEGETATION AND WHERE THEY BEST FIT IN THE LANDSCAPE ZONES

Landscape Zone 3

Large trees

Larger Native/Adaptive Shrubs

Native/Adaptive grasses

LANDSCAPE ZONE 3

- ▶ **Native vegetation within 30-100 feet of structure: (Manage for low fire Intensity)**

Trees well spaced

No ladder fuels

Shrubs cared for and clean

Dead fuels removed

Surface and ground fuels discontinuous/low

Trees pruned up least 10'

TREES

Native Trees
Root Systems
Xeric



Trees



NETLEAF HACKBERRY



PACIFIC WILLOW

Trees



ASPEN



BIG LEAF MAPLE



PONDEROSA PINE



Categories of Vegetation and where they best fit in Firewise landscape zones

Landscape Zones 1

Ground Covers

Herbaceous Perennials and Annuals

Vines

Turf Grasses

Landscape Zones 2 or 3

Shrubs

Trees

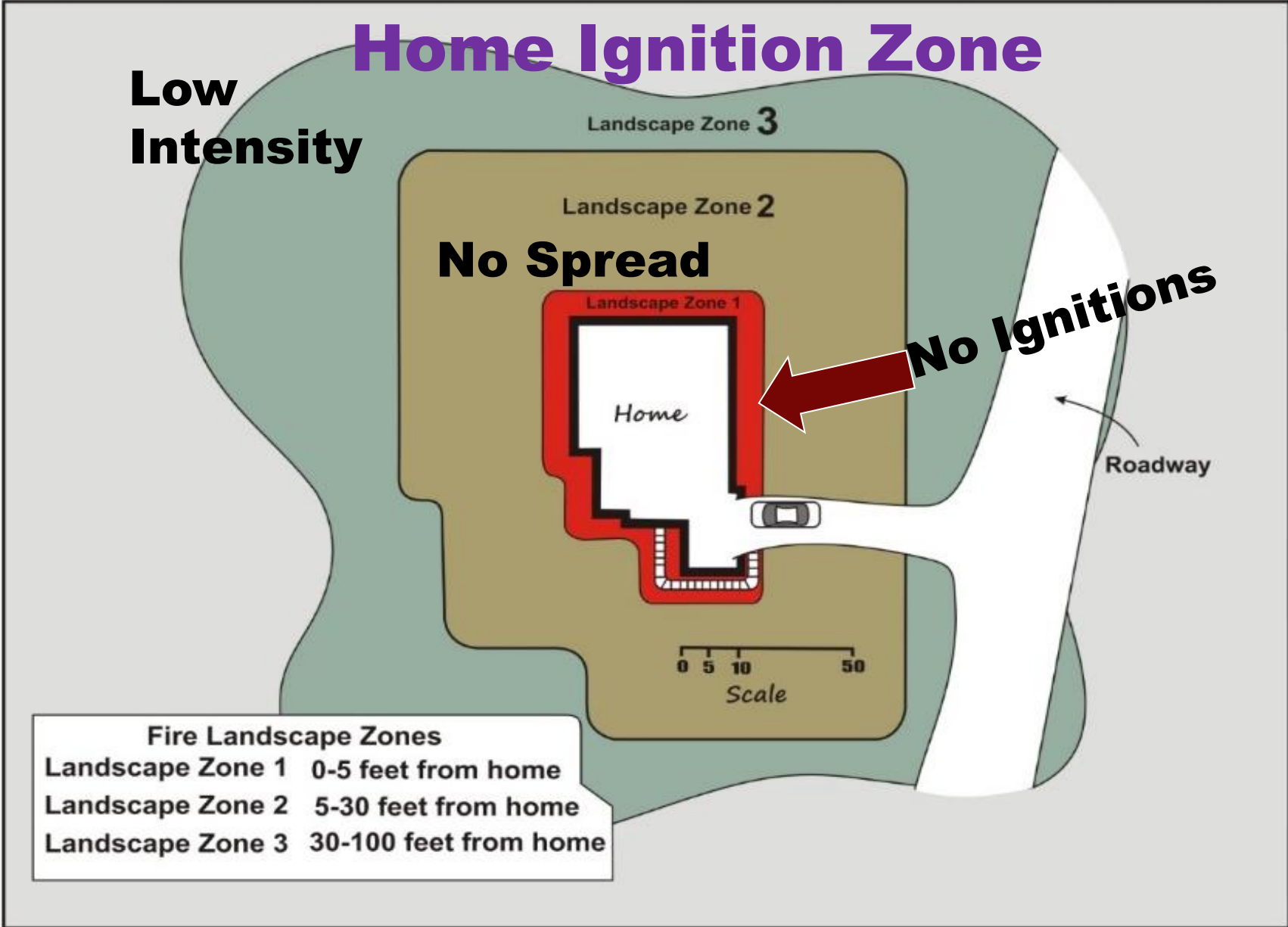
Large Native/Adaptive grasses

Home Ignition Zone

Low Intensity

No Spread

No Ignitions



| Fire Landscape Zones | |
|----------------------|-----------------------|
| Landscape Zone 1 | 0-5 feet from home |
| Landscape Zone 2 | 5-30 feet from home |
| Landscape Zone 3 | 30-100 feet from home |

MAINTENANCE PRACTICES TO REDUCE FIRE HAZARD

- ▶ **Washing out plants**
- ▶ **Pruning/Thinning/Spacing**
- ▶ **Raking**
- ▶ **Weeding**
- ▶ **Mowing/Weed Eating**
- ▶ **Mulches**
 - ▶ **Organic**
 - ▶ **Inorganic near structures**
- ▶ **Watering**
- ▶ **Roofs and Gutters**
- ▶ **Clean-up and proper yard waste disposal**



THE VALUE OF NATIVE PLANTS

▶ **Hardy plants**

A decorative graphic consisting of several parallel white lines of varying lengths, slanted upwards from left to right, located in the bottom right corner of the slide.

THE VALUE OF NATIVE PLANTS

- ▶ Hardy plants
 - ▶ Xeric



THE VALUE OF NATIVE PLANTS

- ▶ Hardy plants
 - ▶ Xeric
 - ▶ **Fire Adaptive**
- 

THE VALUE OF NATIVE PLANTS

- ▶ Hardy plants
 - ▶ Xeric
 - ▶ Fire Adaptive
 - ▶ Low manintance
- 

THE VALUE OF NATIVE PLANTS

- ▶ Hardy plants
 - ▶ Xeric
 - ▶ Fire Adaptive
 - ▶ Low manintance
 - ▶ Provide Habitat for beneficial Insects and critters
- 
- A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, located in the lower right quadrant of the slide.

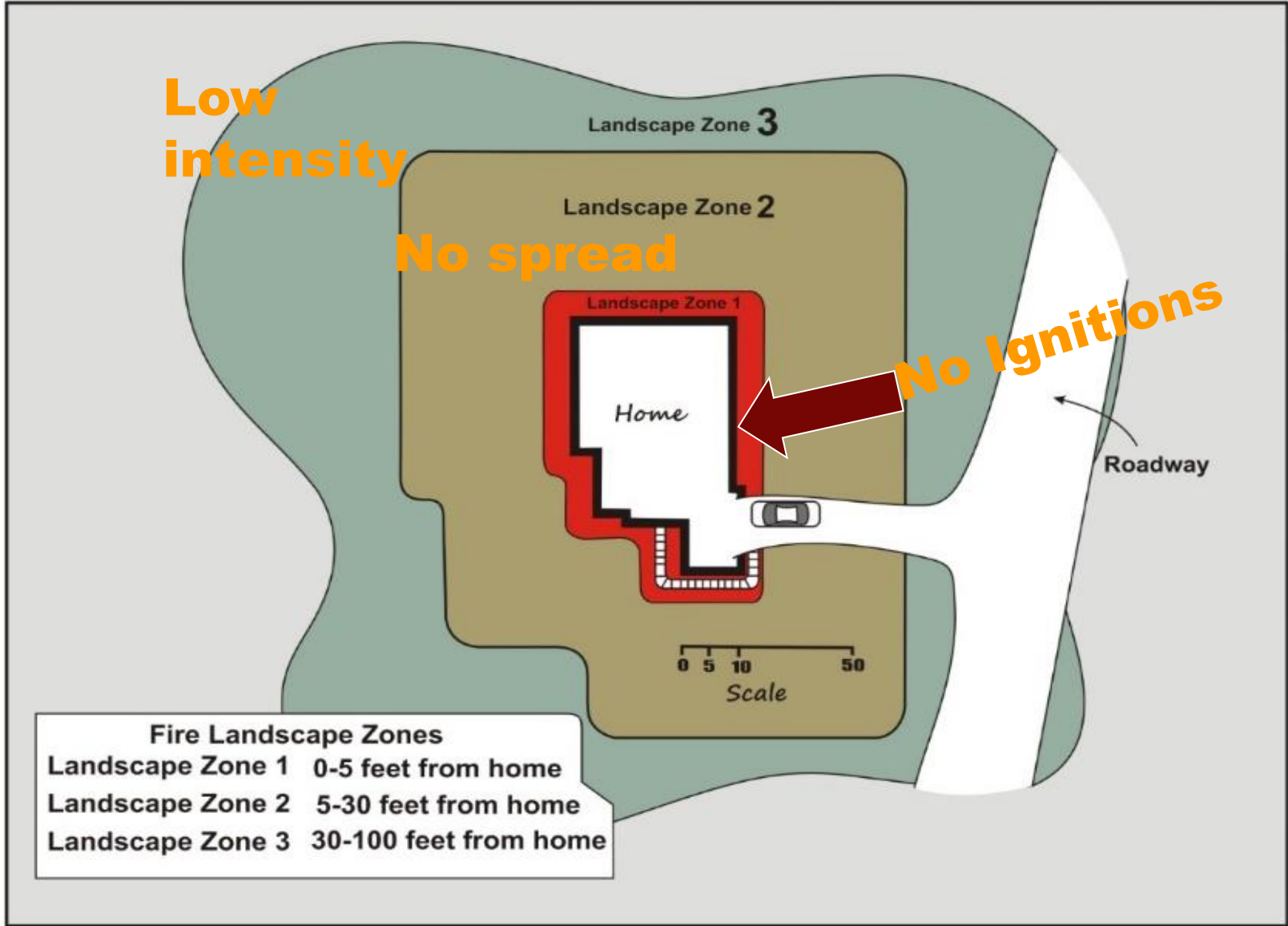
THE VALUE OF NATIVE PLANTS

- ▶ Hardy plants
 - ▶ Xeric
 - ▶ Fire Adaptive
 - ▶ Low manintance
- ▶ Provide Habitat for beneficial Insects and small critters
 - ▶ They are in harmony with the local environment

THE VALUE OF NATIVE PLANTS

- ▶ Hardy plants
- ▶ Xeric
- ▶ Fire Adaptive
- ▶ Low maintenance
- ▶ Provide Habitat for beneficial Insects and critters
- ▶ They are in harmony with the local environment
- ▶ Available locally (Don't have to order on Amazon)

Home Ignition Zone



FURTHER READING/WEBSITES

- <https://wrangle.org> - WORLD RANGELAND LEARNING EXPERIENCE
- www.bentler.us/eastern-washington/plants/wildflowers.aspx
- <https://derbycanyonnatives.com/> - Ted Alway native plant nursery
- **Flora of the Pacific Northwest: An Illustrated Manual** 4th printing by C. Leo Hitchcock, Arthur Cronquist

Questions?