

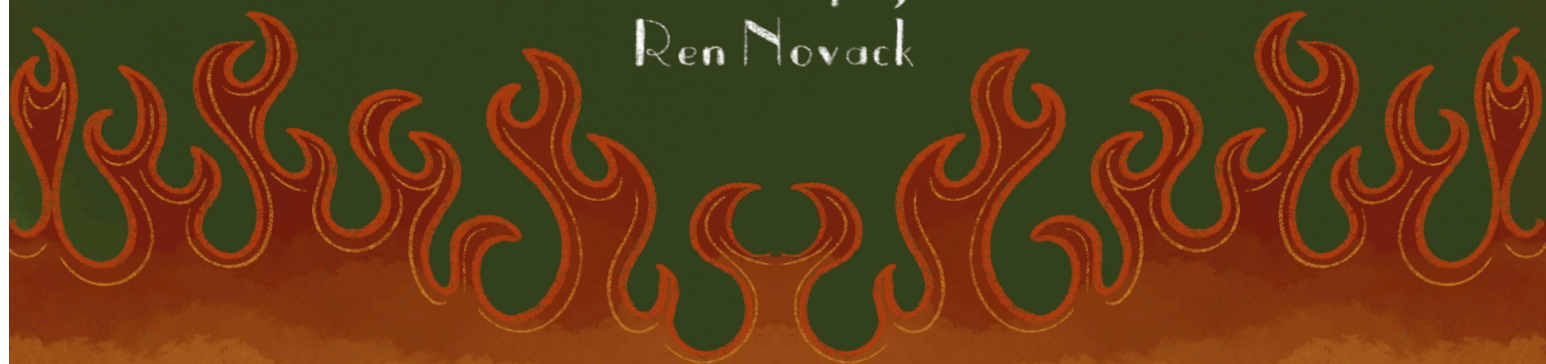


Protecting Homes from

Wildfires

By WSU Master Gardeners
of Chelan-Douglas Counties

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The purpose of this booklet is to provide adolescents with information about living safely in the fire prone environments of the Pacific Northwest. The booklet focuses on the landscapes around a home, where the reader may be able to take action to reduce the hazardous vegetation around a home and also influence the owners of the property to act at reducing the hazard. Other materials are available that focus on home construction and standards. This booklet focuses primarily on fire-resistant vegetation in the home landscape.

Welcome! Clove has chosen you as the newest recruit to assist him on his quest. Read the passages then complete each activity to acquire a badge. Collect all 6 badges to defeat the insatiable Blaze.



Wildfire in the Western U.S.

Wildfire is an ever-present and important part of the ecosystem in the Pacific Northwest. The fire regime, that is, the frequency and intensity of natural wildfire, has created an important inter-relationship between the living (biotic) and nonliving (abiotic) elements in the Northwest. Fires normally happen at regular intervals. In parts of the Northwest fires burn every few years and in other parts of the NW fires occur at longer intervals. However, with the Climate Change, fires everywhere are becoming more frequent and often burning with greater intensity.

Fire helps determine the types of plants that grow in the Pacific Northwest. The plants that grow here help determine what animals live here. This balance of plants and animals depends on the fire regime. When the fire regimes change, so does the balance of the entire ecosystem. People are part of the ecosystem. People influence the fire regime of the Northwest. The ways we interact, build our homes, and recreate all influence the elements of the ecosystem. Living with fire means we interact in a harmonious way with the environment.

Fire will continue to be a part of the ecosystem. Properly constructed, sited, and maintained with the proper landscaping, homes can be safe habitat for the people living in the Pacific Northwest



Match the word to its correct definition.

- | | |
|---------------------------|---|
| 1. Wildfire_____ | A. The place where organisms live |
| 2. Ecosystem_____ | B. The process of making a piece of land more suitable to one's needs and desires |
| 3. Fire Regime_____ | C. The surroundings or conditions in which people, animals and plants live |
| 4. Frequency_____ | D. Parts combined in an orderly, conforming arrangement |
| 5. Intensity_____ | E. Living things, biological organisms |
| 6. Climate_____ | F. Organisms in interaction with their environment |
| 7. Harmonious_____ | G. The measurable amount of heat (energy) produced by a fire |
| 8. Environment_____ | H. Non-living, physical thing i.e. rock, air, water, etc. |
| 9. Landscaping_____ | I. The pattern, frequency and intensity of wildfires in an area |
| 10. Habitat_____ | J. The rate at which something occurs over a period of time |
| 11. Biotic_____ | K. An unplanned, uncontrolled fire in vegetation |
| 12. Abiotic_____ | L. The long-term weather pattern of a region |
| 13. Defensible Space_____ | M. Combustible materials that allow a fire to climb from the surface into taller vegetation |
| 14. Ladder Fuel_____ | N. Able to catch on fire |
| 15. Combustible_____ | O. The area around a building where vegetation and combustibles are managed to reduce fire hazard |



Wildland Urban Interface the WUI

The place where wildland, homes, and things that people make come together is sometimes referred to as the Wildland Urban Interface (WUI). This area is often called the WUI. (pronounced woeee). Wildlands are easy to define and most of us know when we are in wildland. There are no houses and other things that people make and use on a regular basis.

Wildlands can be covered with trees, or in parts of Eastern Washington covered with Sagebrush or other shrubs and grasses. Whatever the existing vegetation of the area there is an absence of homes and other types of human development.

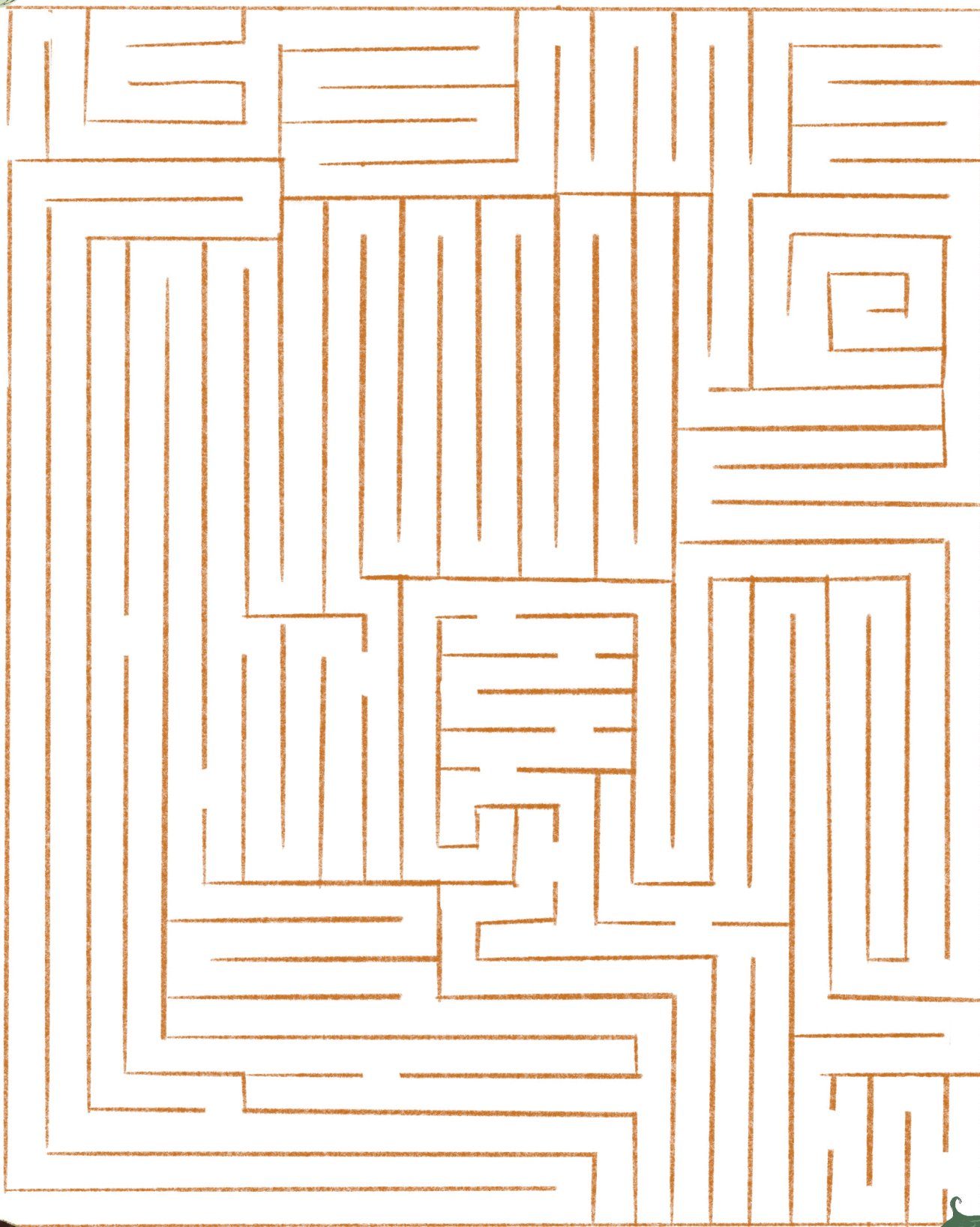
On the other hand, Urban areas are where homes, streets, businesses, and other human development exist. These are the places we live, play, and spend most of our time.

Where the wildland and urban areas meet is called the interface. The interface is often bigger than we think it might be. The reason it is bigger is that the area affected can be changed by high winds and sparks from distant fires. Sparks can be transported by high winds for several miles in front of an approaching fire.





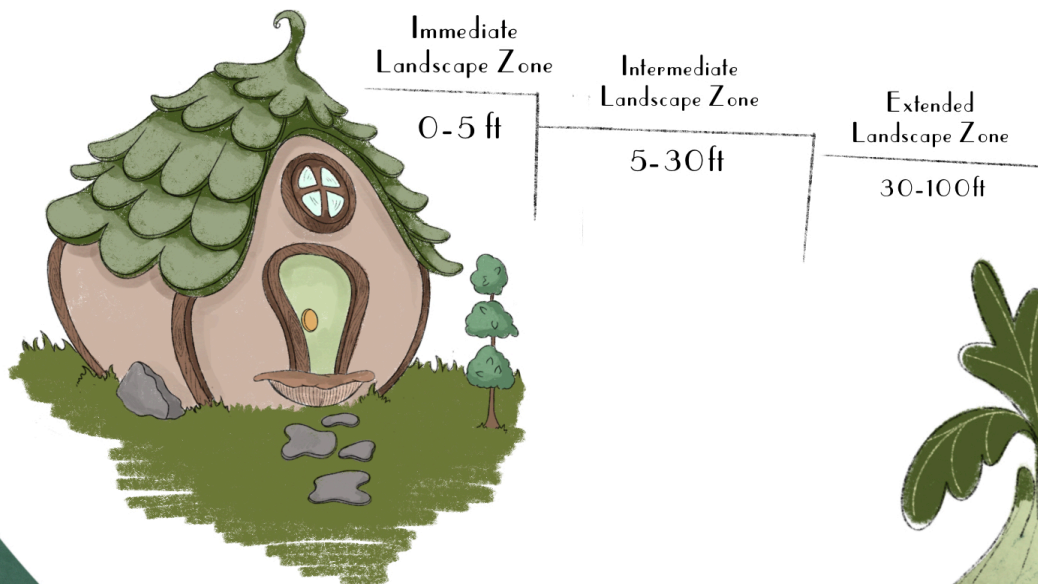
Clove is building a path of defensible space through the dry leaves.
Use a green pencil to help him find his way back to his home.



Home Ignition Zone

HIZ

The Home Ignition Zone, (sometime called the HIZ) is a concept used in wildfire risk management. The HIZ refers to the area around a home, or other structures, that can be managed to reduce the likelihood of the home, or another structure, from burning during a wildfire. This zone typically extends 100 to 200 feet from the home and is divided into three landscape zones: the Immediate Zone, 0-5 feet from the home or structure; the Intermediate Zone, 5-30 feet from a structure; and the Extended Zone 30-100 feet from a structure. By properly selecting, locating, and managing the plants in this area, homeowners can create a defensible space that greatly reduces the likelihood of losing a home to wildfire.



Immediate Landscape Zone

The Immediate Zone is a critical area in wildfire defense, encompassing the space within 0-5 feet of your home. This zone should be maintained with non-burnable materials to prevent your home from burning. It's essential to clear this area of combustible vegetation, debris, and other materials that could catch fire. By creating a non-burnable space in the immediate zone, homeowners can significantly reduce the risk of wildfire damage to their property.

An important item to remember is that many homes catch on fire by sparks or burning embers often from a fire a mile or more away from the home. If the immediate zone and the home's roof is free of burnable vegetation and other material the chance of the home surviving a wildfire is very high.



Immediate Landscape Zone

0-5 feet

Home

Use only
flowers, green
lawn, rock mulch
or pavers in this
zone

Nothing
combustible
should be planted
or placed in this
zone

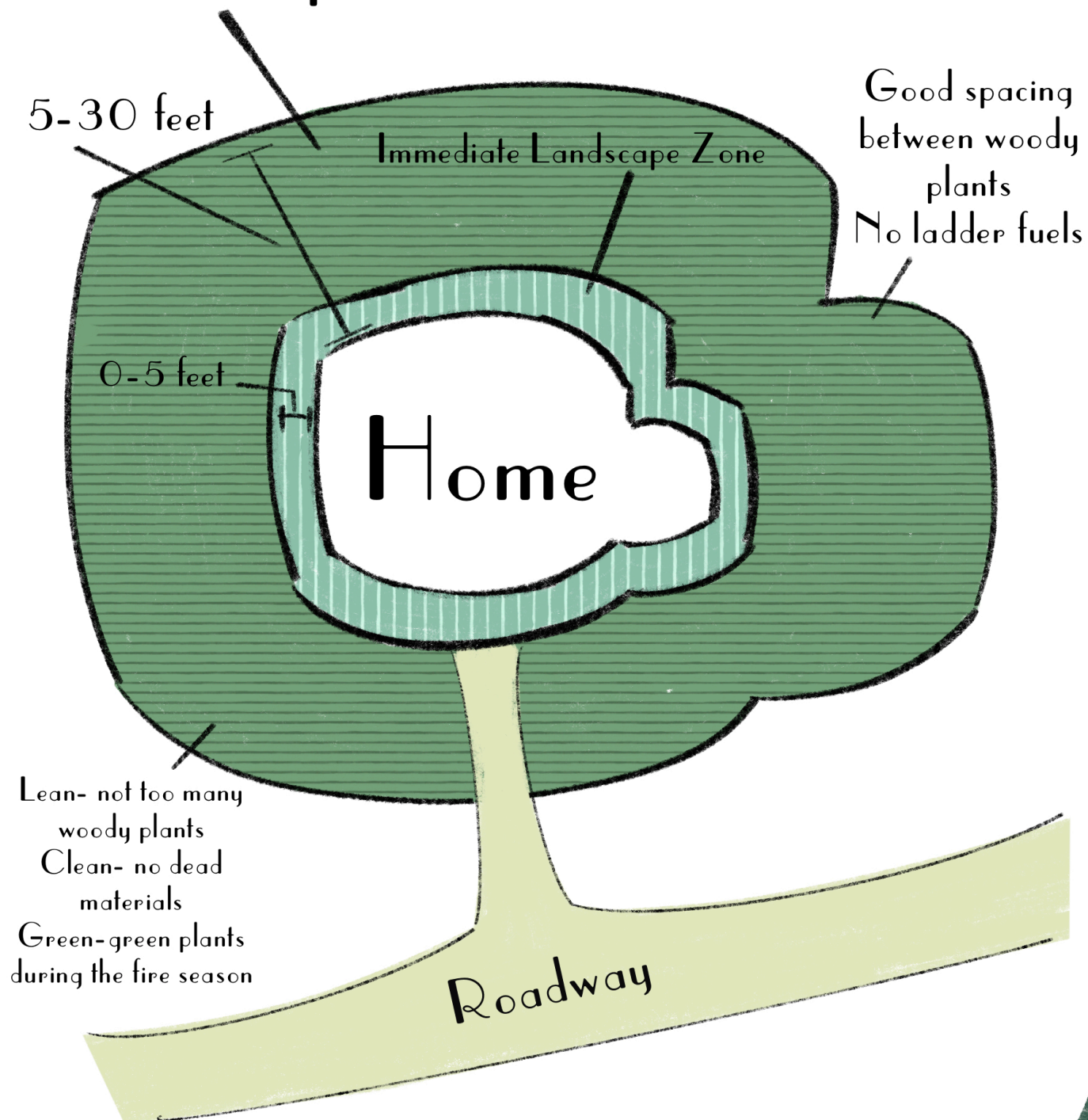
Roadway

Intermediate Landscape Zone

The Intermediate Zone in the HIZ concept plays a crucial role in wildfire defense. It extends from 5 to 30 feet from the home and involves careful landscaping to reduce fire spread. Strategies in this zone include creating fuel breaks with driveways and walkways, maintaining lawns, and removing ladder fuels under trees and shrubs. Properly managed, this zone can significantly decrease the likelihood of fire burning a home, providing an essential buffer in wildfire-prone areas.



Intermediate Landscape Zone





Extended Landscape Zone

The extended zone within the Home Ignition Zone (HIZ) is a critical area for wildfire defense, encompassing 30-100 feet from the home. This zone serves as a buffer, where strategic landscaping and maintenance can significantly reduce the intensity and the amount of heat a wildfire produces. By managing vegetation, removing combustible materials, and creating breaks in fuel continuity, homeowners can interrupt a fire's path. This keeps flames smaller and, on the ground, enhancing the survivability of their property during a wildfire event.

Extended Landscape Zone

Intermediate Landscape Zone

Zone

5-30 feet

Immediate Landscape Zone

30-100 feet

0-5 feet

Home

Pruned up
woody plants
Woody plants
properly spaced
Remove dead
material

Roadway

Home Safety

Home safety within the Home Ignition Zone (HIZ) is crucial for protecting residences from wildfires. The HIZ is a buffer zone around a home, extending up to 200 feet from the home, designed to reduce loss of homes. Homeowners can enhance their home's survivability by managing vegetation, using fire-resistant building materials, and regularly removing combustible debris from gutters and roofs. While these measures do not guarantee absolute safety, they significantly improve the likelihood of a home surviving wildfire. It's a continuous effort that not only safeguards individual homes but also contributes to the overall resilience of the community against wildfires.

Living in the WUI requires careful planning and adherence to specific building codes and land development standards to ensure they are resistant to catching on fire.



Maintenance



Can you look around at the next page and determine what maintenance activities are being performed to make the HIZ more resistant to wildfire and increase the likelihood of the home surviving a wildfire. Fill in the chart with the names of the different maintenance activities. After you're done look at page 17 for some suggested maintenance activities.



Maintenance Activities





Help Clove find the right words to build a plan to prevent Blaze from spreading.



W F P D J F E R D G R E E N C
L H Q V E A E S C O A C O I T
D C T O C Q I B A P F E R N C I
C G S O W I M F K C E S C K O K O U
J F Q J F E R O D S N L B A L W M N K
S T P T I K V S N O V L E S B P U D B
D H I I H S E T U N E M U A S I W U I
F C O O K O J E S C C D O V N R P C L
C O K M N Z M E A P S T N M A A C T C
K N V R E T H G I F E R I F Z D B I O
S V P S T I K M A V M J B R F I C O T
A E D B C I G J G C B Q J A U A O N I
E C G E O V O N F I E U V D M T H U D
E T C R I E A N I B R Z T S U I K O C
B I E S C R O U T T L F B I P O L W M
S O A R E A D Y Z K I Q S W O N B P U
A N J I N S Q U V M C O D T U N E Z P
L W M A V M G E S C I K N I E A R M O
M E B A E K S R E A B J U Z C B S A N
K O A B C A M E S C A P E R O U T E M
L W O E A S C S Q E A M G C K N J W D
B P N I M E A U G E S C L G M R E T U
M A I N T E N A N C E L U E L A V
K W G I Z R E A R O U T S S A D T
D E F E N S I B L E S P A C E N I

Ember
Ready
Lean
Clean

Green
WUI
Go
Set

Conduction
Convection
Firefighter
Maintenance

Home Ignition Zone
Defensible Space
Escape Route
Radiation



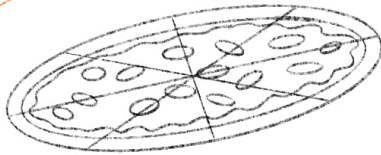
Summary of Maintenance Actions to Take in the HIZ

Maintaining the landscape within the home ignition zone is very important for reducing the risk of wildfire damage. Here are some important items to complete on a regular basis:

- **Create a Non-burnable Area-** Maintain a noncombustible zone at least 5 feet wide around the base of your home. Use flowers, green lawn, or, cinders, rock mulches, or hard surfaces such as brick and pavers.
- **Remove Dead Vegetation-** Regularly remove dead vegetation and debris from under decks and gutters. Never store lumber, firewood, or other flammable materials underneath decks.
- **Install Protective Screening-** Install screens under low-profile decks to prevent ember entry and screen attic, roof, eaves, and foundation vents with 1/8-inch metal mesh.
- **Maintain a lean, clean, and green space around the home-** Create and maintain safe space by mowing grass and weeds to a height of 4 inches or less. Rake and remove all pine needles and other flammable debris from around the foundation of your home and deck.
- **Manage Trees and Shrubs-** Remove branches that hang over the roof and chimney. Space shrubs apart at least two times their mature height and remove ladder fuels beneath trees.
- **Firewood and Propane Tanks-** Store firewood at least 30 feet away from the home and uphill or at the same elevation. Keep propane tanks at least 30 feet from the home and remove flammable vegetation within 10 feet of all tanks.
- **Driveway Clearance-** Maintain at least 10 feet between tree crowns and keep trees a minimum of 30 feet back from each side of the driveway along the entire distance from the house to the main access road.

Remember, these actions require ongoing maintenance and are not a one-time effort. It's also beneficial to work together with family and neighbors to increase the community's resilience to wildfire.

Blaze is always hungry. Circle his favorite things to eat.



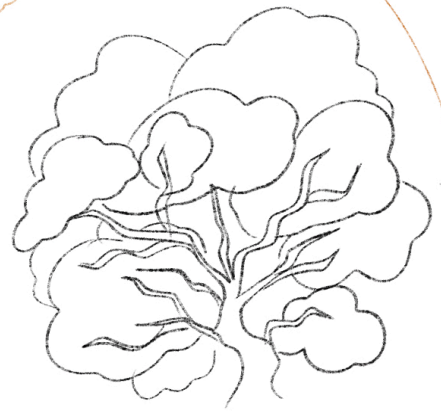
Pizza



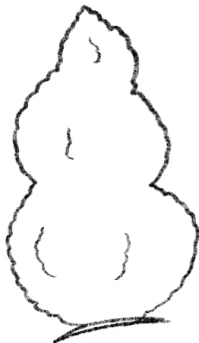
Popsicles



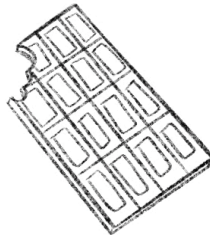
Dead Plants



Overgrown Vegetation



Arborvitae



Chocolate



Debris



Then color.

Further Information or References on Where to Go for More Help on Protecting Your Home from Wildfire

National Fire Protection Association -
<https://nfpa.org>

WSU Chelan/Douglas County Master Gardeners -
<https://extension.wsu.edu/chelan-douglas/gardening/>

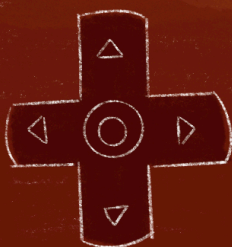


Washington DNR -
<https://www.dnr.wa.gov/>

USDA Forest Service -
<https://www.fs.usda.gov/>



Insurance Institute for Business & Home Safety (IBHS) -
<https://ibhs.org>



Unscramble the Words to Earn Your Badge

tiinongi

erfiwld

eennnaimtc

nealc

reeng

alen

gteefrfriish

efendbiles pecsa

ecpsae tuore

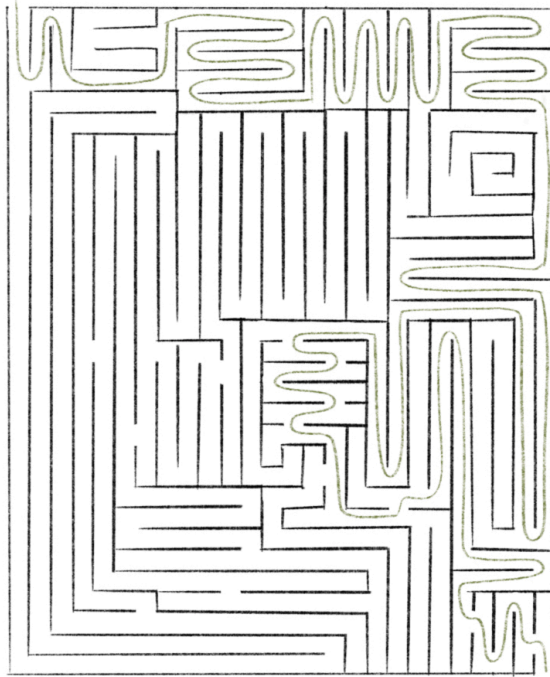


Victory! Blaze has been defeated. Color each badge that you earned by finishing the appropriate activity.



Answer key

1. Wildfire K
2. Ecosystem F
3. Fire Regime I
4. Frequency J
5. Intensity G
6. Climate L
7. Harmonious D
8. Environment C
9. Landscaping B
10. Habitat A
11. Biotic E
12. Abiotic H
13. Defensible Space O
14. Ladder Fuel M
15. Combustible N



Page 3

Page 5



Page 16



Page 18

tiinongi

erfiwld

eeennnaimtc

nealc

reeng

alen

gteefrfriish

efendbiles pecsa

ecpsae tuore

Ignition

Wildfire

Maintenance

Clean

Green

Lean

Firefighter

Defensible Space

Escape Route

Page 20

