

A large wildfire with thick smoke rising over a forest. The smoke is thick and billowing, with a bright orange glow from the fire below. The forest is dense with evergreen trees.

A HOMEOWNERS GUIDE: **UNDERSTANDING DEFENSIBLE SPACE AND WILDFIRE PREPAREDNESS**

Antelope Creek, Yellowstone. emartil, shutterstock.com

Homeowners need to be prepared in the event of wildfire, a frequent event across Wyoming. Maintaining defensible space and incorporating wildfire preparedness techniques has the potential to reduce wildfire risk.

Here is information and tips to prepare for wildfire season.

DEFENSIBLE SPACE

Create defensible space to improve a structure's chance of surviving a wildfire. Defensible space is a buffer intentionally created between a structure and the natural vegetation surrounding it to help slow or stop the spread of wildfire and is also important for firefighter safety.

The following outline provides a framework to create and maintain defensible space surrounding a property. Defensible space is categorized by three zones, starting

with the area closest to main structures.

Zone 1

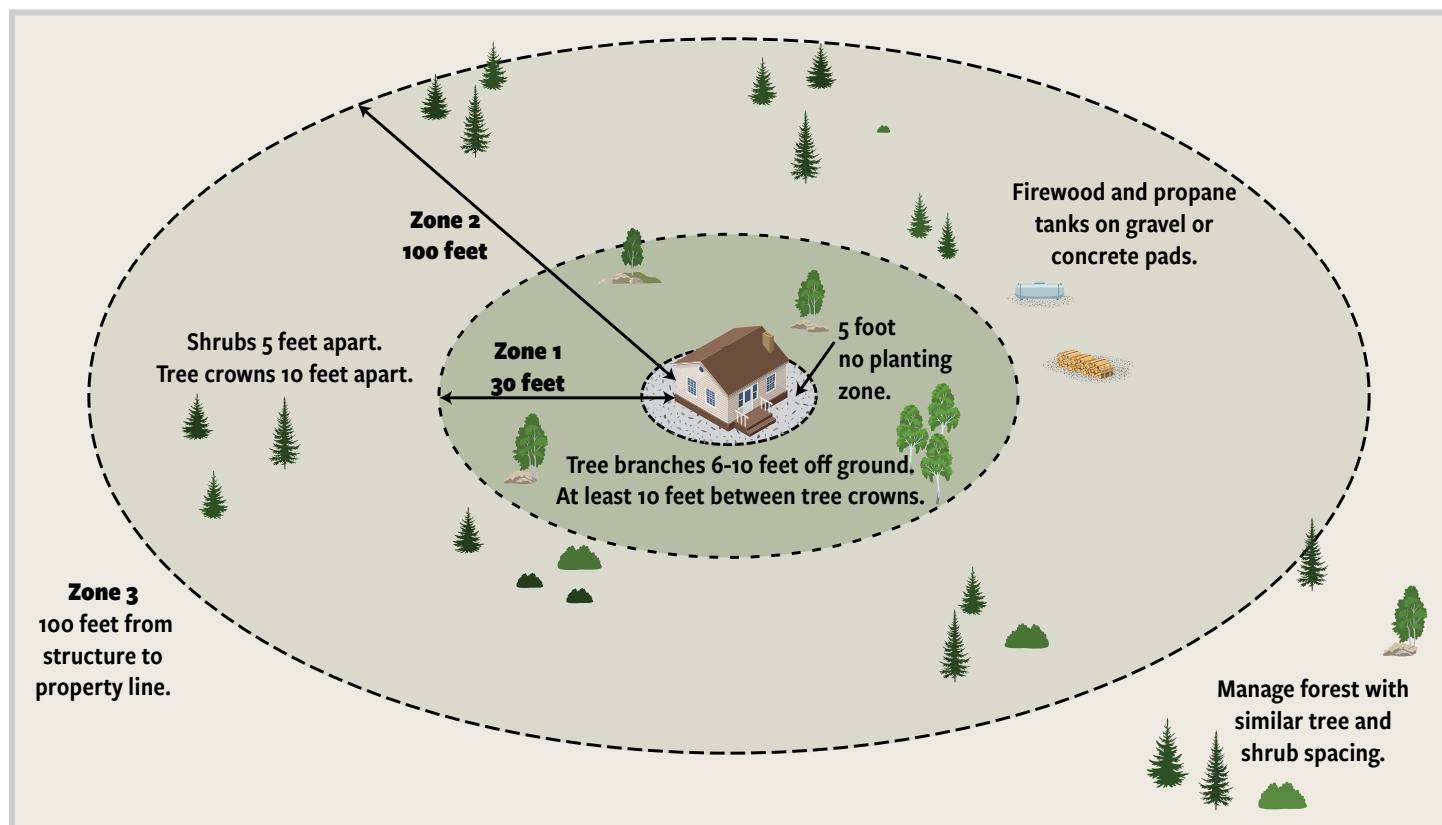
Zone 1 is a 30-foot zone immediately surrounding a structure. Clearing the area of dead vegetation and items that may easily ignite is crucial. Check out the following tips and recommendations:

- Remove dead plant materials from within the 30-foot zone of the structure.
- Clean debris (needles/leaves) from gutters and the roof.
- Prune tree branches to 6-10 feet off ground.
- Trim/thin trees to create at least a 10-foot distance between the crowns of the trees to reduce the risk of a running crown fire.
- Use deciduous plants for landscaping instead of conifers (limit the amount of plants within Zone 1).

- Prune branches away from roofs and windows.
- Use non-flammable landscaping materials such as rock instead of wood mulch around structures and decks, if applicable.
- Relocate firewood to Zone 2 (below).
- Irrigate within Zone 1, if possible.
- Do not plant anything within 5 feet of a structure.
- Enclose the underside of decks with 1/8 inch or smaller (1/16 inches preferred) metal mesh screening.

Zone 2

Zone 2 extends 100 feet out from a structure, providing an important intermediate boundary and is sometimes referenced as the extended zone. Removing dead vegetation is crucial. The following provides further insight into how to maintain this zone.



Tanya Engel, UW Extension

- Mow and maintain grass to a maximum height of 4 inches.
- Create horizontal spacing between trees and shrubs.
- Shrubs should be 5 feet apart on flat ground, with increased spacing between shrubs as slopes become greater.
- Trees should be 10 feet apart between crowns on flat ground, with greater spacing between tree canopy on slopes.
- Create vertical separation between all vegetation to limit ladder fuels, which is the source of burning materials between the ground and the treed canopy.
- Remove dead trees, shrubs, branches, needles, and leaves.
- Firewood and propane tanks should ideally be on gravel or concrete pads.

Spring checklist

Completing the following spring checklist is recommended to ensure you and your family are prepared for the wildfire season. Completing this checklist will get you more involved and focused on being firewise and fire safe.

- ☐ Clean fireplace chimney and install summer screen in front of the fireplace or make sure doors are closed.
- ☐ Clean gutters and downspouts.
- ☐ Clean roofs, including eaves and valleys, of all flammable materials.
- ☐ Move firewood away from any structures at least 100 feet and uphill, if possible.
- ☐ Clean deck surfaces between deck joints and underneath.
- ☐ Make sure address/street signs are clean and visible.
- ☐ Check roof/house vents have proper screening.
- ☐ Complete maintenance on Zone 1 of your defensible space.
- ☐ Remove flammable materials from under decks/houses for the summer.
- ☐ Conduct annual neighborhood spring cleanup days with community members.
- ☐ Inspect spark arresters on ATVs, lawnmowers, chainsaws, and other gas-powered tools.
- ☐ Go over an evacuation plan with family members and neighbors/community.
- ☐ Make sure any fire tools are easily accessible in case of a fire.
- ☐ Remove dead plant materials from 0-5 feet directly around a structure.
- ☐ Remove dead plant materials and dead trees completely from Zone 1 and if possible from Zone 2 and 3.
- ☐ Prune branches below 6 feet on yard trees.
- ☐ Prune branches overhanging roofs, away from the windows.
- ☐ Prune branches 12 feet or wider and 15 feet or higher from the driveway.
- ☐ Mow the lawn regularly.
- ☐ Maintain/service irrigation systems and have them fire ready.
- ☐ Make sure flammable liquids, fuel containers, propane cylinders, etc., are properly stored, preferably outside of Zone 1.



- Stack firewood uphill away from any structures, if possible.

Zone 3

Zone 3 is perhaps the most crucial as it can rapidly slow an advancing wildfire before it reaches structures on a property. This zone creates and promotes healthy forests that can fight against insect and disease outbreaks while increasing resilience against wildfires. The area extends from the outer edge of Zone 2, 100 feet from the structure to the remaining portions of a property. Follow these steps while completing Zone 3.

- The larger Zone 3 is, the more protection for saving a structure on a property.
- It is easier to maintain Zone 3 for smaller properties given there is less square footage. For larger properties, break Zone 3 into smaller, manageable project areas.
- Manage Zone 3 with traditional forest management. This entails thinning trees to create a healthy forest that might not always take aesthetics into consideration.
- Consult your local forester/natural resource professional to ensure tree spacing is helpful and done appropriately.
- Tree spacing and canopy spacing are just as crucial in this zone as in Zones 1 and 2.
- Remove all dead, down, and dying trees. Some snags (dead standing trees) could be left for wildlife habitat, but make sure they do not pose a threat to life safety and power lines.
- Prune all residual trees to reduce ladder fuels. Ladder fuels are living or dead plant materials that allow a fire to climb from

the ground to the canopy of trees.

- Treat all slash (pruned branches and limbs) within Zone 3. There are several different techniques to treat slash. Consult your local forests/natural resource professional for treatment recommendations and other questions
- Specific thinning requirements will depend on the management objectives for your land.
- Thinning trees helps reduce insect and disease outbreaks and improves forest health while promoting a fire-resilient landscape
- Consult and collaborate with neighboring landowners on establishing and maintaining your defensible space within Zone 3. The larger Zone 3 is, the more resilient the landscape will be to high-intensity wildfires and provide a better chance of a property surviving a wildfire event.
- Conduct yearly maintenance in Zone 3, with additional thinning occurring every 10-15 years.
- Zone 3 could include fuel breaks (a gap in vegetation aimed to prevent the spread of fire) along roads and property boundaries if the property is large enough (for example, two acres or larger).

Establishing and maintaining all three defensible space zones can help reduce wildfire risk near your property, help with firefighter safety, and help maintain the landscape for future generations.

EMBER WASH

Ember wash is burning materials such as tree branches and pinecones that spread in advance of a wildfire. Considering ember

Contact your local forester/natural resource professional for additional information and resources. Barnyards and Backyards has a publication specifically dedicated to wildfires in Wyoming, *Living with Wildfire in Wyoming*, which can be found online at bit.ly/1wildfirewyoming.

wash is critical when developing a defensible space plan. Winds disperse ember wash and start new fires in front of the main fire front. Picture blowing snow in the winter - the snow blows everywhere and piles up in certain locations. Embers from a wildfire will do the same. Know the following about ember wash:

- Most structures/houses catch fire from the ember wash and not the main wildfire.
- If evacuated during a wildfire or leaving for an extended period of time, remove all outdoor furniture including cushions and put them inside a secure building. These materials are great ember catchers.
- Embers can enter all places, vents, chimneys, decks, etc. Be prepared and remove flammable debris from all these areas.

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We hope **Nich Zaczek**, **Travis Pardue**, and **Melissa Mokry** do not have their hands full with fires this season as part of their jobs at the Wyoming State Forestry Division. Zaczek is the senior resource forester-fuels and can be reached at nick.zaczek@wyo.gov; Pardue is the assistant district forester and can be contacted at travis.pardue@wyo.gov; and Mokry is the outreach forester and can be reached at melissa.mokry@wyo.gov.