Grizzly Ranch Hazardous Fuel Treatment Standards

Adopted 10/21/2016

The Grizzly Ranch Association's (GRA) Covenants, Conditions, and Restrictions (CC&Rs) require all owners maintain the vegetation and fire fuels on the their properties to prevent them from becoming a fire hazard. *(CC&Rs, Section 7.02, Amended 2015)*

The community goals for wildfire safety are: 1) safety of the owners, visitors and guests, 2) protection of developed resources such homes and infrastructure, and 3) protection of natural resources. Most of the properties were initially treated when the community was developed, but the natural growth of the forest over time has created some areas that need additional attention. Owners must treat their properties according to the following minimum standards if we are to continue to meet these goals.

Minimum Standards for all Grizzly Ranch properties

A fire safe condition requires that trees, shrubs, and other fire fuel sources are treated to reduce and/or arranged in a way that makes it difficult for fire to transfer from one area to another.

These standards contain references to information from "Grizzly Ranch Wildfire Hazard Assessment" by Deer Creek Resources, dated January 2015 (available on the Association Website: **http://www.grizzlyranchassociation.com/fwassess.html**). Key excerpts and photos from that report are contained in the appendix to these standards. References below are by photo number – for example, (P4) refers to photo 4 in the appendix.

Surface fuels spread fire horizontally across the forest floor. Grass, brush, tree litter, saplings, small stands of trees, and slash all increase the speed of fire spread and intensity.

Surface Fuel Standards:

- Dead fuels such as brush, accumulations of down litter, and saplings are extremely hazardous and must be reduced, thinned, or removed. (P1)
- Large brush fields shall be separated horizontally so as not to be continuous with increased spacing on slopes. (P2)
- Dead branches shall be removed and smaller litter scattered. Down logs over 4 inches in diameter and pine needles less than 4 inches deep do not need to be removed. (P5)

Ladder fuels allow the transfer of surface fires up into tree canopies. These 'ladder' or 'under-story' fuels must be eliminated or modified to vertically separate surface fuels from fuels in the tree canopies. Ladder fuels include brush and small trees under mature trees and low hanging limbs of mature trees. Ladders fuels must be removed within the drip line of larger over-story trees.

Ladder Fuel Standards:

- Remove all saplings, mid-sized ladder trees and brush from under and down slope from mature trees. (P3)
- Stands of small trees or saplings must be aggressively thinned. (P1)
- On retained trees, remove all lower branches to 1/3 of the tree height or 10 feet, whichever is less. (P3)

- To promote future growth, retain healthy saplings using 10 to 15 foot spacing between each sapling located between mature trees. (P1)

Canopy fuels burning in the crowns of mature trees transmit wildfire by sending embers flying through the air. These embers increase the speed of fire spread by causing new and uncontrollable spot fires within the community and up to ½ mile and beyond.

Canopy Fuel Standards:

- Trees must be thinned to create separation of canopy fuels within the large contiguous stands of trees. Over-story thinning needs to balance the risk of crown fire hazard against the benefits of shade that a closed-canopy provides (reduced brush and tree seeding growth). This standard does not require that adjacent tree drip lines should not overlap. (P6)
- Tall, dominate trees shall only be removed where it is determined there is no other way to reduce the hazard of canopy fire.
- **Removal of trees over 5 inches in diameter measured at 4 feet above the ground requires specific approval by Grizzly Ranch Design Review Committee (GRDRC)** *(CC&Rs, Article 8.01(h)*)**. Specific requirements can be found on the Grizzly Ranch Association Website, under the Firewise Fuel Treatment tab: http://grizzlyranchassociation.com/fwfuel.html**

Additional fuel standards within 100 feet of a home or structure

Properties with a home or structure require additional fuel treatment. A defensible space zone (a minimum of 100 feet) surrounding the structure is legally required by California Public Resources Code 4291.

Defensible space standards are broken into two zones surrounding any home or structure to have fuels modification. (P7)

Within 30 feet of buildings, structures, decks, etc.

- Remove all dead plants, grass and weeds (vegetation).
- Remove dead or dry leaves and pine needles from your yard, roof and rain gutters.
- Trim trees regularly to keep branches a minimum of 10 feet from other trees or from the structure, remove all lower branches to 1/3 of the tree height or 10 feet, whichever is less.
- Remove branches that hang over your roof and keep dead branches 10 feet away from your chimney.
- Relocate wood piles more than 30 feet from structures. **(do not store firewood on or under decks)**
- Remove or prune flammable plants and shrubs near windows.
- Remove vegetation and items that could catch fire from around and under decks.
- Create a separation between trees, shrubs and items that could catch fire, such as patio furniture, wood piles, swing sets, etc.

Between 30-100 feet from buildings, structures, decks, etc. (P 8/9)

- Cut or mow annual grass down to a maximum height of 4 inches.
- Create horizontal spacing between shrubs and trees.
- Create vertical spacing between grass, shrubs and trees.
- Prune branches to at least 6 feet off the ground
- Remove fallen leaves, needles, twigs, bark, cones, and small branches. However, they may be permitted to a depth of 4 inches.

For specific requirements see "General Guidelines for Creating Defensible Space", as adopted by the State Board of Forestry:

http://bofdata.fire.ca.gov/PDF/Copyof4291finalguidelines9_29_06.pdf

Or contact CALFIRE's Lassen, Modoc, and Plumas Unit's Quincy Office at (530) 283-9322.

On-going maintenance

On-going maintenance is required once the above treatments have been successfully completed. Forests continue to grow and periodic cleanup is required by all property owners to maintain a fire safe condition. The Grizzly Ranch Association will periodically survey properties and notify owners of the need for maintenance.

Questions

If you have questions regarding these standards, please contact a member of the Grizzly Ranch Firewise Committee.

Appendix to Grizzly Ranch Hazardous Fuel Treatment Standards

Hazard Ratings:

- 1) Good - Maintain in existing condition
- 2) Low - Some clean up needed, maintain in existing condition
- 3) Moderate - Minor thinning and regular maintenance needed
- 4) High - Thinning and/or brush removal required
- 5) Critical - Significant thinning and/or brush removal required

Photos:
The following photographs and descriptions of fuel hazards and mitigation strategies are excerpted from Deer Creek Resources report: Grizzly Ranch Wildfire Hazard Assessment – January 2015. The pictures and text show examples of existing conditions within Grizzly Ranch.

Photo 1 - Surface Fuels:

Notice the large number of new pine saplings here that have taken advantage of bare soil and sunlight on the forest floor following construction or grading. Thickets like the one in the photo above are common in Grizzly Ranch. While the trees are small, they are easily thinned. These thickets provide an opportunity to select a few of the most vigorous trees to retain for the future forest. Cut saplings shall be removed from the site.

Photo 2 – Surface Fuels:

Special attention should be given areas that have lots of fine fuels and lack of over story trees – like the photo above. The lack of over story allows the wind to blow directly on the surface. Any fire starting here under breezy conditions will spread almost immediately to the ladder fuels, climb into the canopy, and begin casting spot fires downwind. Large brush fields should be separated horizontally so as not to be continuous with increased spacing on slopes.

Photo 3 - Ladder fuels:

Here, small seedlings and saplings provide 'ladder fuels' that will allow a surface fire to burn up into the crowns of the largest trees. This is referred to as 'torching'. Any area with the potential for 'torching' should be a **High or Critical Priority** for treatment. Under windy conditions, (when most large fires have historically occurred in the Grizzly Ranch area) 'torching' causes ember showers that can start spot fires as far as ½ mile away. Spot fires dramatically increase the difficulty of fire control and are a primary agent that causes small fires to escape initial attack and become large.

In general, dense stands of trees should be thinned to 10-15 foot spacing, though clumps of several larger trees are acceptable if smaller ladder-fuel trees or brush are removed. Small trees represent tomorrow's large trees, so great care should be taken to select and retain healthy small trees to fill in the gaps in the forest. As a general rule, retain any small trees that are more than 10-15' from the base of a larger, over-story trees. Remove all lower branches to 1/3 of the tree height or 10 feet, whichever is less.

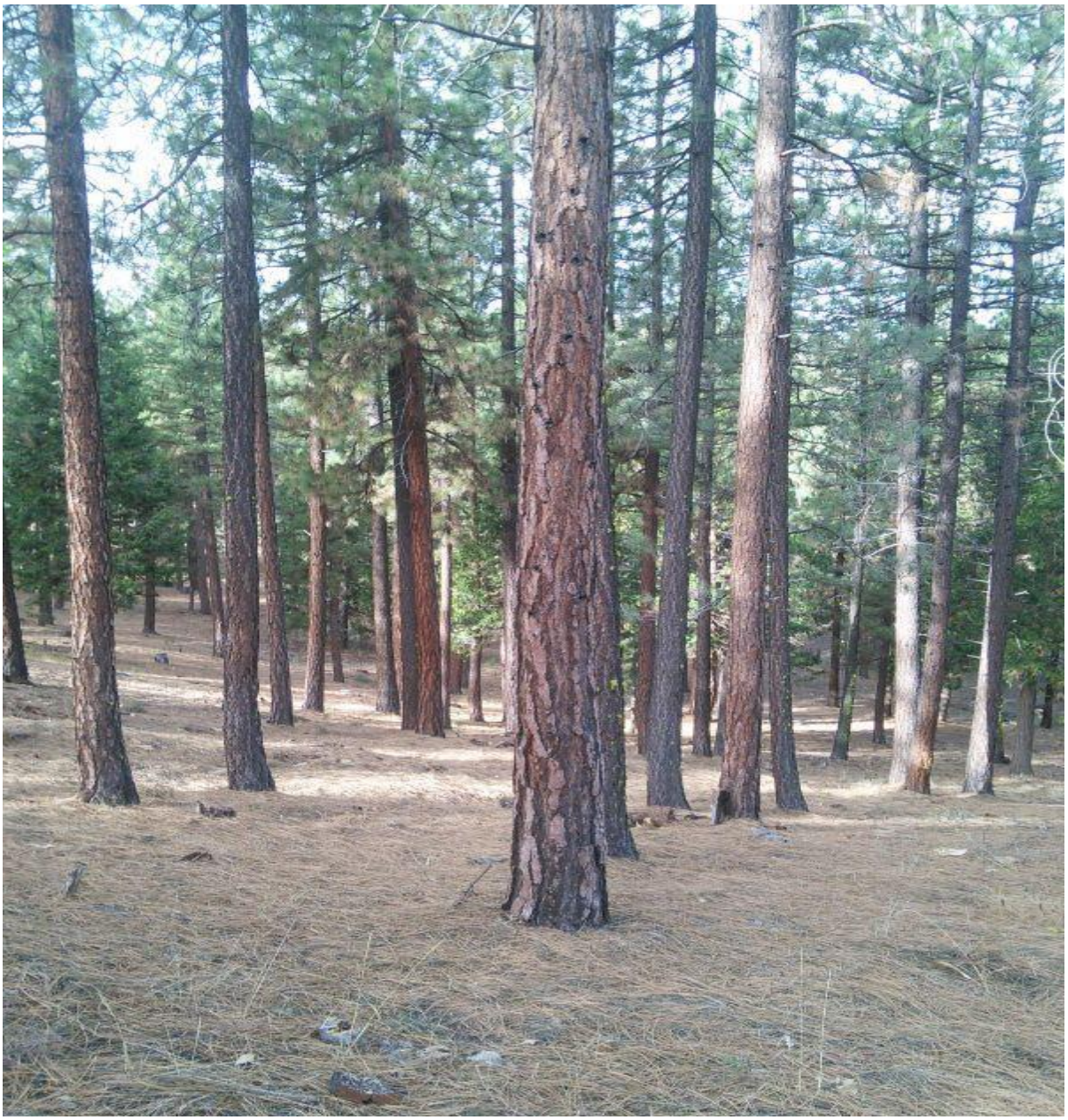
Photo 4 – Surface fuels/Ladder fuels:

Brush provides important food and habitat for deer and other animals. Outside of the 100' radius of existing homes, it is not necessary or preferable to remove all brush. Fuels treatment should focus on disrupting the continuity of the brush, especially in places where the brush can spread fire into the canopy. Areas with heavy brush should receive a combination of treatments which thin brush around trees, while also pruning up the lower branches of the nearby trees. These areas require several different kinds of treatments (i.e. pruning low branches, thinning small trees, removing ladder fuels, and removing surface fuels). The photo above illustrates an area in need of major thinning or brushing.

Photo 5 – Surface/ Ladder Fuels:

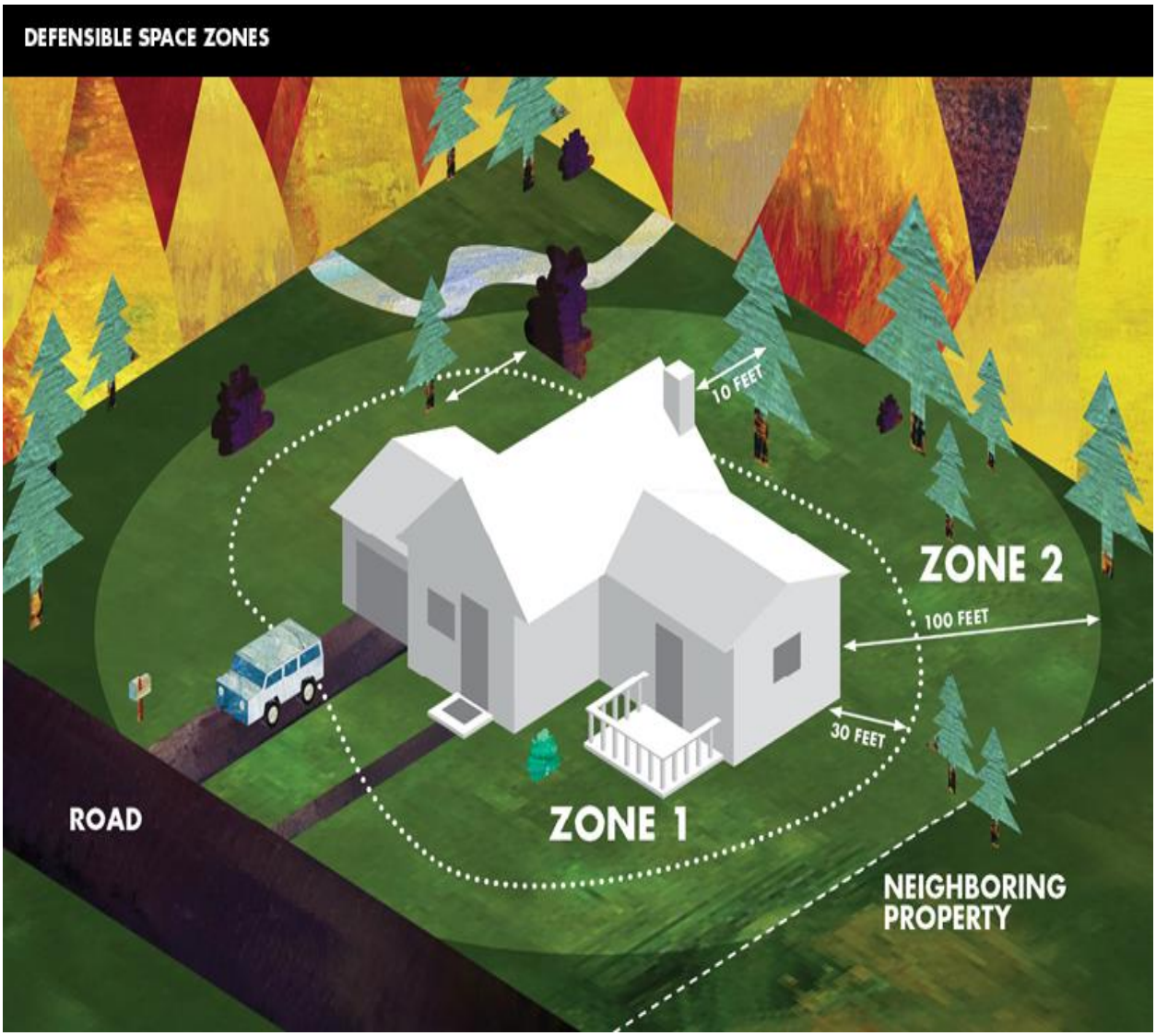
This shows examples of areas with concentrations of dead trees. While large down logs, like those in the picture above provide valuable habitat for wildlife and supply nutrients to build the soil, the smaller logs and branches provide fuel for wildfires. Larger logs can be left in place, but any limbs and logs less than 4" in diameter shall be removed. Fallen snags over 4" diameter at ground surface that are not yet decomposing shall be retained at rate of at least 3-4 per acre, especially if they show evidence of use by small animals or birds. Fallen snags that are readily decomposing into the organic horizon of soil should ALL be retained for soil resources protection, erosion control, and habitat.

Photo 6- Canopy Fuels:



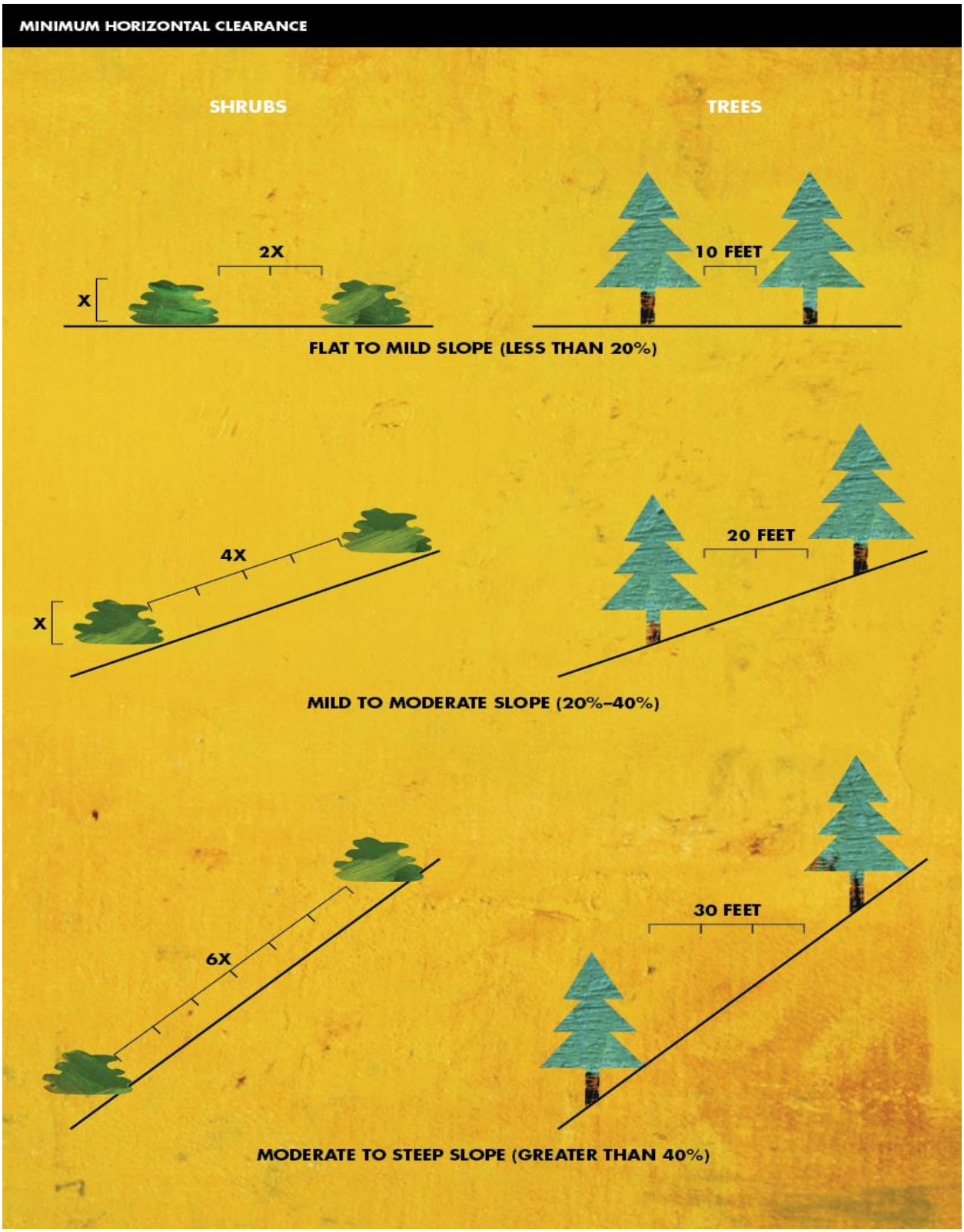
The reference photo above illustrates desirable conditions. There is plenty of spacing between trees and the surface fuels have been reduced. It is important not to over thin the over-story trees. More open stands let more sunlight reach the forest floor, creating drier conditions. Also, new seedling trees will flourish in direct sun, quickly creating ladder fuels.

Photo 7 – Defensible Space:



Creating and maintaining defensible space is essential for increasing your home's chance of surviving a wildfire. It's the buffer that homeowners are required to create on their property between a structure and the plants, brush and trees or other items surrounding the structure that could catch fire. This space is needed to slow the spread of wildfire and improves the safety of firefighters defending your home.

Photo 8/9 – Defensible space:



The spacing between grass, shrubs, and trees is crucial to reduce the spread of wildfire. The spacing needed is determined by the type and size of the shrubs and trees, as well as the slope of the land. For example, a property on a steep slope with larger plant life will require greater spacing between trees and shrubs than a level property that has small, sparse vegetation.