

## **CHAPTER 1- FIRE PREVENTION AND WILDFIRE MITIGATION STANDARDS AND REGULATIONS APPLYING TO ALL DISTRICTS**

### **Sections:**

- 8-1-1: Purpose**
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### **Section 8-1-1: Purpose:**

This Chapter establishes regulations for prevention of wildfires and damage to property resulting from fire hazards. The purpose of this Chapter is to protect the public health, safety, and welfare by establishing standards to:

1. Minimize the potential of spreading fire from wildland areas to structures; and
2. Establish special standards that apply to new construction, alteration, moving, or change of use of habitable structures, with the intent to reduce the threat of loss of life and property from fire; and
3. Require vehicle turnouts on public and private roads with the intent to provide better emergency access to remote areas; and
4. Require that new development provide water supply systems and suitable access for firefighting crews, with the intent to increase the resources available to such crews and minimize the spread of fire; and
5. Establish standards for defensible space.

### **Section 8-1-2: Applicability:**

- A. These regulations shall apply to new development, alteration, moving or changing of use of residential, commercial or industrial structures within any zoning district as identified on the Wildfire Urban Interface ("WUI") overlay map. The limits of which have been adopted by the Board as shown on the WUI map on file at the Development, or as hereinafter may be amended.
- B. Uninhabitable structures shall be exempt from these regulations, except when located within the defensible space as set forth in the regulations of this Chapter.

### **Section 8-1-3: Standards:**

A. Important Facts about Wildfires in Elmore County:

1. Wildfire will find the weakest links in the defense measures you have taken on your property.
2. The primary determinants of a home's ability to survive a wildfire are its roofing material and the quality of the "defensible space" surrounding it.
3. Any measures taken to protect your home and property will make them more able to withstand wildfires.

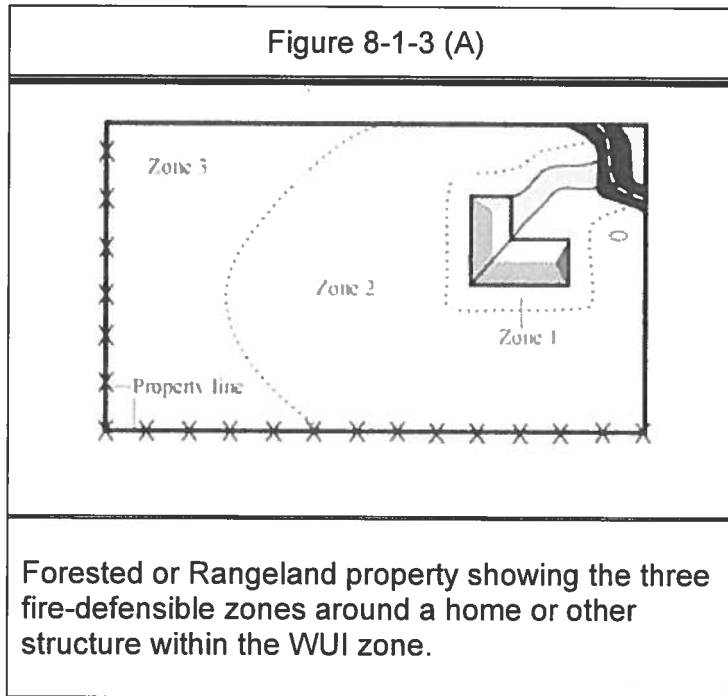
B. Roofing Materials. The specifications for roofing materials for development within the WUI overlay zone are as follows:

1. Wood roofing materials shall be prohibited; and
2. Only Non-Combustible roofing materials are allowed; and
3. Non-combustible roofing materials must meet Class C standards or exceed Class C standards for fire resistance.

C. Defensible Space. Defensible space is an area around a structure where fuels and vegetation are treated, cleared or reduced to slow the spread of wildfire towards a structure. It also reduces the chance of a structure fire moving from the building to the surrounding land. Defensible space provides room for firefighters to do their jobs. Your home and property are more likely to withstand a wildfire if grasses, brush, trees and other common forest/rangeland fuels are managed to reduce a fire's intensity.

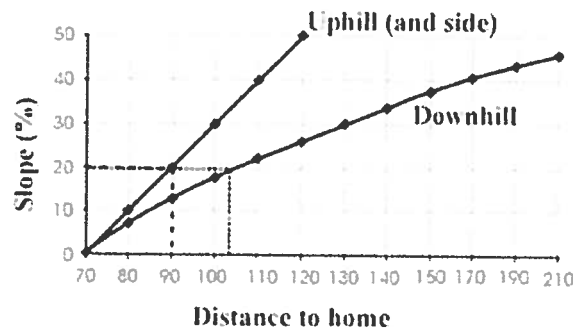
1. Fuel hazard: The measure of fuel hazard refers to its continuity, both horizontal (across the ground) and vertical (from the ground up into the vegetation crown). Fuels with a high degree of both vertical and horizontal continuity are the most hazardous, particularly when they occur on slopes. Heavier fuels (brush and trees) are more hazardous (i.e. produce a more intense fire) than lighter fuels such as grass.
2. Mitigation: Mitigation of wildfire hazards focuses on breaking up the continuity of horizontal and vertical fuels. Additional distance between fuels is required on slopes.
3. Defensible Space: Creating an effective defensible space involves developing a series of management zones in which different treatment techniques are used. See Figure 8-1-3 (A) for a general view of the relationships among these management zones. Defensible space around each building property located within the WUI overlay zone shall be required.

4. The actual design and development of defensible space depends on several factors: Size and shape of buildings, materials used in their construction, the slope of the ground on which the structures are built, surrounding topography, and sizes and types of vegetation on your property. These factors all affect your final design.



- D. Defensible Space Management Zone 1: Is defined, as the area of maximum modification and treatment. It consists of an area a minimum of thirty (30') feet around the structure in which all flammable vegetation is removed. This minimum thirty (30') feet is measured from the outside edge of the home's eaves and any attached structures, such as decks.
- E. Defensible Space Management Zone 2: Is defined, as an area of fuel reduction. It is a transitional area between Zones 1 and 3. The size of Zone 2 depends on the slope of the ground where the structure is built. Typically, the defensible space should extend seventy-five (75') to one hundred twenty-five (125') feet from the structure. See Figure 8-1-3 (B) for the appropriate distance for your home's defensible space. Within this zone, the continuity and arrangement of vegetation is modified. Remove stressed, diseased, dead or dying trees and shrubs. Thin and prune the remaining larger trees and shrubs. Be sure to extend thinning along either side of your driveway all the way to your main access road. These actions help eliminate the continuous fuel surrounding a structure while enhancing homesite safety and the aesthetics of the property.

Figure 8-1-3 (B)



This chart indicates the minimum recommended dimensions for defensible space from the home to the outer edge of Zone 2. For example, if your home is situated on a twenty (20%) percent slope, the minimum defensible space dimensions would be ninety (90') feet uphill and to the sides of the home and one hundred four (104') feet downhill from the home.

F. Defensible Space Management Zone 3: Is defined, as area of traditional forest or rangeland management and is of no particular size. It extends from the edge of your defensible space to your property boundaries.

G. Minimum required defensible space standards for all Zones: These standards shall apply to properties residing within the WUI overlay zone, unless specifically exempted by this Chapter.

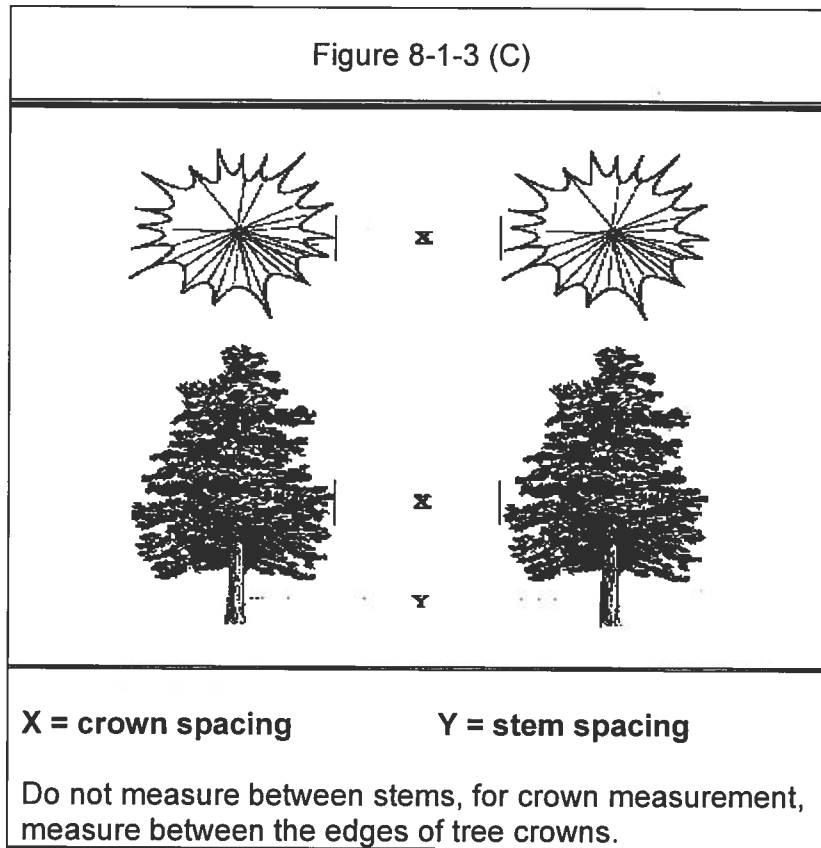
1. Defensible Space Zone 1:

- a. The defensible space of Zone 1 shall be a minimum of thirty (30') feet, measured from the edges of the structure. Within this zone, several specific treatments are recommended; and
- b. Plant nothing within three to five (3' to 5') feet of any structure if that structure is sided with wood, logs or other flammable materials. Decorative rock may be used instead, as it creates an attractive, easily maintained, nonflammable ground cover; and
- c. If the house has noncombustible siding, widely spaced foundation plantings of low growing shrubs or other "fire wise" plants are acceptable. Do not plant

directly beneath windows or next to foundation vents. Be sure there are no areas of continuous grass adjacent to plantings in this area; and

- d. Approved plants in this zone shall be frequently pruned and maintained to ensure a vigorous low growth profile; and
  - e. Dead branches, stems and leaves shall be removed. Firewood or other combustible materials shall not be stored in this zone; and
  - f. Screened decks shall be enclosed or screened with metal screening, and gravel shall be extended under the deck. Storage under decks shall be prohibited; and
  - g. Ideally, all trees from Zone 1 should be removed to reduce fire hazards. If you plant trees, you shall:
    - 1.) Not plant coniferous variety trees due to their inherent flammability; and
    - 2.) Consider it part of the structure and extend the distance of the entire defensible space accordingly; and
    - 3.) Isolate the tree from any other surrounding trees, and
    - 4.) Prune it to at least ten (10') feet above the ground; and
    - 5.) Remove any branches that interfere with the roof or are within ten (10') feet of the chimney; and
  - h. Remove all "ladder fuels" from beneath the tree. Ladder fuels are defined as vegetation with vertical continuity that allows fire to burn from ground level up into the branches and crowns of trees. Ladder fuels are potentially very hazardous but are easy to mitigate; and
    - 1.) No ladder fuels shall be allowed under tree canopies; and
    - 2.) In all other areas, prune all branches of shrubs or trees up to a height of ten (10') feet above the existing grade or one-half (1/2) the height of the tree or shrub, whichever is the least.
2. Defensible Space Zone 2: Shall be an area of fuel reduction designed to reduce the intensity of any fire approaching your home or buildings. The following standards shall apply:
- a. Thin trees and large shrubs so there is at least ten (10') feet between crowns. Crown separation shall be measured from the furthest branch of one tree to the nearest branch on the next tree, see Figure 8-1-3 (C); and

- b. On steep slopes, more space shall be required between tree crowns. See Figure 8-1-3 (D) for minimum required spacing; and
- c. Ladder fuels shall be removed from under trees; and



- d. Tree branches shall be neatly pruned to a height of at least ten (10') feet from the natural grade; and
- e. Small clumps of two to three (2 to 3) trees may be occasionally left in Zone 2, provided more defensible space between the crowns of these clumps and surrounding trees has been allotted; and
- f. Because Zone 2 forms an aesthetic buffer and provides a transition between Zones 1 and 3, it is necessary to blend the requirements for Zones 1 and 3; and
- g. Thin the portions of Zone 3 adjacent to Zone 2 more heavily than the outer portions; and

- h. Isolated shrubs may remain, provided they are not under tree crowns. Prune and maintain these plants periodically to maintain vigorous growth; and
- i. Remove dead stems from trees and shrubs annually; and
- j. Limit the number of dead trees (snags) retained in this Zone. Be sure any snags left for wildlife use cannot fall onto the house or block access roads or driveways; wildlife only needs one or two snags per acre; and
- k. Mow grasses (or remove them) as needed through the growing season to keep them low, a maximum of six to eight (6" to 8") inches. This is extremely critical mid-summer to fall when grasses dry out and cure or in the spring after the snow is gone but before the plants green up; and
- l. Stack firewood and woodpiles uphill or on the same elevation as the structure but at least thirty (30') feet away; and
- m. Clear and keep away flammable vegetation within ten (10') feet of woodpiles; and
- n. Do not stack wood against your house or on/under your deck, even in winter as many homes have burned from a woodpile that ignited as the fire passed. Wildfires can burn at almost any time in Elmore County; and
- o. Propane tanks shall be located at least thirty (30') feet from any structures, preferably on the same elevation as the house and anchored securely. Clear and keep flammable vegetation at least ten (10') feet of these tanks. Do not screen propane tanks with shrubs or vegetation; and

<b>FIGURE 8-1-3 (D) MINIMUM TREE CROWN AND SHRUB CLUMP SPACING</b>		
<b>Percent (%) of Slope</b>	<b>Tree Crown Spacing In Feet</b>	<b>Brush and Shrub Clump Spacing</b>
0 -10 %	10'	2 1/2 x shrub height
11 - 20%	15'	3 x shrub height
21 - 40%	20'	4 x shrub height
> 40%	30'	6 x shrub height

- p. Slash piles (limbs, branches and other woody debris) shall be disposed through chipping or by piling and burning. Prior to any burning, contact the Department, Local Fire District, Idaho Department of Lands and/or County Sheriff's Office for information about burning slash piles. If neither of these alternatives is possible, lop and scatter slash by cutting it into very small pieces and distributing it over the ground. Avoid heavy accumulations of

slash. Lay it close to the ground to speed decomposition. If desired, no more than two or three small, widely spaced brush piles may be left for wildlife purposes. Locate these towards the outer portions of your defensible space.

3. Defensible Space Zone 3: Shall not be defined by a specific or specified size. It extends from the edge of your defensible space to your property lines. A gradual transition into this zone from defensible Zones 2 shall be attained. Space standards to other management objectives you may have for your property may be allowed. Typical management objectives for areas surrounding homesites or subdivisions shall:
  - a. Provide optimum recreational opportunities; and
  - b. Enhance aesthetics; and
  - c. Maintain tree health and vigor; and
  - d. Provide barriers for wind, noise, dust and visual intrusions; and

Figure 8-1-3 (E) Minimum Tree Spacing for Zone 3			
Tree Diameter Shown in Inches	Average Spacing Between Trees Shown in Feet	Tree Diameter Shown in Inches	Average Spacing Between Trees Shown in Feet
3	10	14	24
4	11	15	26
5	12	16	28
6	13	17	29
7	14	18	31
8	15	19	33
9	16	20	35
10	17	21	36
11	19	22	38
12	21	23	40
13	23	24	42

- e. Support production of firewood, fence posts and other forest commodities; or grow Christmas trees or trees for transplanting; and
- f. Specific requirements shall be dictated by your objectives for your land and the kinds of trees or brush present. See Figure 8-1-3 (E) for the minimum



spacing between trees. Forest management in Zone 3 is an opportunity for you to increase the health and growth rate of the forest and/or rangeland in this zone. Keep in mind that root competition for available moisture limits tree growth and ultimately the health of the vegetation; and

- g. A high canopy forest reduces the chance of a surface fire climbing into the tops of the trees and might be a priority for you if this zone slopes steeply. The healthiest forest is one that has multiple ages, sizes, and species of trees where adequate growing room is maintained over time. Remember to consider the hazards of ladder fuels. Multiple sizes and ages of trees might increase the fire hazard from Zone 3 into Zone 2, particularly on steep slopes; and
- h. A greater number of wildlife trees can remain in Zone 3; and
- i. Make sure that dead trees pose no threat to power lines or fire access roads. While pruning generally is not necessary in Zone 3, it may be a good idea from the standpoint of personal safety to prune trees along trails and fire access roads. If you prefer the aesthetics of a well-manicured forest, you might prune the entire area. In any case, pruning helps reduce ladder fuels within the tree stand, thus enhancing wildfire safety; and
- j. Mowing is not necessary in Zone 3. Any approved method of slash treatment is acceptable for this zone, including piling and burning, chipping or lop-and-scatter.

H. Special WUI Recommendations: Tree spacing guidelines do not apply to mature stands of aspen trees where the recommendations for ladder fuels have been complied as defined in this Chapter. In areas of aspen regeneration and young trees, the following spacing guidelines and other requirements listed herein shall be followed:

1. Brush and Shrubs: Brush and shrubs are woody plants, smaller than trees, often formed by a number of vertical or semi-upright branches arising close to the ground. Brush is smaller than shrubs and can be either woody or herbaceous vegetation. On nearly level ground, minimum spacing recommendations between clumps of brush and/or shrubs is two and one half (2 ½) times the height of the vegetation. Maximum diameter of clumps should be two (2) times the height of the vegetation. As with tree crown spacing, all measurements are made from the edges of vegetation crowns, Figure 8-1-3 (D). For example: For shrubs six (6') feet high, spacing between shrub clumps should be fifteen (15') feet or more apart (measured from the edges of the crowns of vegetation clumps). The diameter of shrub clumps should not exceed twelve (12') feet (measured from the edges of the crowns). Branches should be pruned to a height of three (3') feet; and

2. Grasses: Keep dead, dry or curing grasses mowed to less than six (6") inches; and
3. Defensible space size can be reduced where grass is the predominant fuel, subject to review and approval of the Department. The minimum defensible space for grass fuels is shown in Figure 8-1-3 (F); and

Figure 8-1-3 (F) Minimum Defensible Space Size for Grass Fuels	
Percent (%) of Slope	Defensible Space Size Uphill, Downhill, Side Hill
0 - 20 %	30'
21 - 40%	50'
> 40%	70'

4. Windthrow: In Elmore County, certain locations and tree species, including several pine and spruce species, are especially susceptible to damage and uprooting by high winds called "Windthrow". If you see evidence of this problem on or near your property, or have shallow-rooted types of tree species, it is highly recommended that you contact a professional forester or landscape architect or agricultural extension office to help design your defensible space; and
  5. Adjustments: If your trees or homesite are susceptible to Windthrow and the trees have never been thinned, use a stem spacing of diameter plus five instead of the guides listed in the Zone 3 section. Over time (every 3 to 5 years) gradually remove additional trees. The time between cutting cycles allows trees to "firm up" by expanding their root systems. Continue this periodic thinning until the desired spacing is reached. Also consider leaving small clumps of trees and creating small openings on their lee side (opposite of the predominant wind direction). Again, a professional forester, landscape architect or agricultural extension office can help you design the best situation for your specific homesite and tree species. Remember, with species such as pine and spruce, the likelihood of a wildfire running through the treetops or crowns (crowning) is closely related to the overabundance of fuels on the forest floor. Be sure to remove downed logs, branches and excess brush and needle buildup.
- I. Maintaining Your Defensible Space: Your home and property is located in a forest/rangeland that is dynamic and always changing. Trees and shrubs continue to grow, plants die or are damaged, new plants begin to grow, and plants drop their leaves and needles. Like other parts of your home, defensible space requires maintenance. Use the following checklist each year to determine if additional work or maintenance is necessary.

### Defensible Space and Fire Wise Annual Checklist

- Trees and shrubs are properly thinned and pruned within the defensible space. Slash from the thinning is disposed of.
- Roof and gutters are clear of debris.
- Branches overhanging the roof and chimney are removed.
- Chimney screens are in place and in good condition.
- Grass and weeds are mowed to a low height.
- An outdoor water supply is available, complete with a hose and nozzle that can reach all parts of the house.
- Fire extinguishers are checked and in working condition.
- The driveway is wide enough. The clearance of trees and branches is adequate for fire and emergency equipment. (Check with your applicable fire department and highway district.)
- Road signs and your name and house number are posted and easily visible.
- There is an easily accessible tool storage area with rakes, hoes, axes and shovels for use in case of fire.
- You have practiced family fire drills and your fire evacuation plan.
- Your escape routes, meeting points and other details are known and understood by all family members.
- Attic, roof, eaves and foundation vents are screened and in good condition.
- Silt foundations and decks are enclosed, screened or walled up.
- Trash and debris accumulations are removed from the defensible space.

J. Vegetation Control: Any new construction, alteration, or change of use of a habitable structure shall be required to establish a minimum thirty (30') foot defensible space around the perimeter. Property owners shall be responsible for maintaining the defensible space, unless such responsibility is transferred to another party through a binding contract. All accessory structures within the defensible space must meet applicable fire resistive construction standards for structures as established by the building codes adopted by Elmore County.

K. General Roadway and Property Access Requirements Related to the WUI: The minimum standards listed shall be required:

1. If an abutting public street or approved private road meets the standards for the defensible space as set forth above, the width of such roadway shall be counted as part of the defensible space; and
2. All areas within five (5') feet adjacent to private roads and driveways shall be cleared of vegetation; and

3. Single specimens of trees, ornamental vegetation, cultivated ground cover (such as green grass, ivy, succulents, or similar plants), or native grasses and weeds trimmed to a maximum height of six (6") inches are allowed provided any such plants do not form a means of readily transmitting fire; and
  4. For driveways, all areas within five (5') feet of each side of the driveway shall be cleared; and
  5. For private roads, the entire width of the private road easement shall be cleared. All vegetation shall be cleared from within thirty-six (36") inches of any above grade (overhead) electrical distribution and transmission lines; and
  6. All vegetation shall be cleared from within ten (10') radial feet of any non-insulated energized electrical conductor and associated live parts. Cultivated ground cover (such as green grass, ivy, succulents, or similar plants), or native grasses and weeds trimmed to a maximum height of six (6") inches are allowed provided any such plants do not form a means of readily transmitting fire. It is not the intent of this section to require an owner to relocate existing habitable structures, driveways, or utilities, nor to require an owner to remove vegetation from an abutting property.
- L. Private Roads and Property Access Requirements Related to the WUI. Vehicular turnouts for emergency vehicles shall be required on all new private roads. Such turnouts shall be spaced at a maximum interval of seven hundred feet (700') and shall be a minimum of eight (8') feet wide and thirty (30') feet in length or a seventy (70') foot radius cul-de-sac. Road construction shall meet the private road standards as set forth in this Ordinance. Maintenance of the private road shall include vegetation control as specified in this Section.
- M. Access to New Subdivisions located in WUI areas shall be served by an interconnected system of roadways and/or fire accesses such that emergency vehicles can travel to the lots from two (2) directions.
1. All subdivisions shall provide fire flow as adopted by the applicable fire authority; and
  2. The appropriate fire authority shall provide a written statement to the Department approving such fire flows. The fire flow shall be an approved drafting site, storage tanks, pond, hydrants etc. as deemed acceptable by the appropriate fire authority. Pumper access points shall be designed to all weather specifications and shall be capable of holding seventy thousand (70,000) pound loads.
- N. Alternative Development Proposals within the WUI area. The Director may allow, or recommend allowance to the Commission and/or Board, an alternative development proposal when the overall design, as proposed by the applicant, meets or exceeds

the intent and the requirements of this Chapter and shall not be detrimental to public health, safety, and welfare or increase possibility of wildfire damage.