

Thinning Standards
Village of Ruidoso Adopted July 9 2013

Sec. 42-80. Fuels management standards:

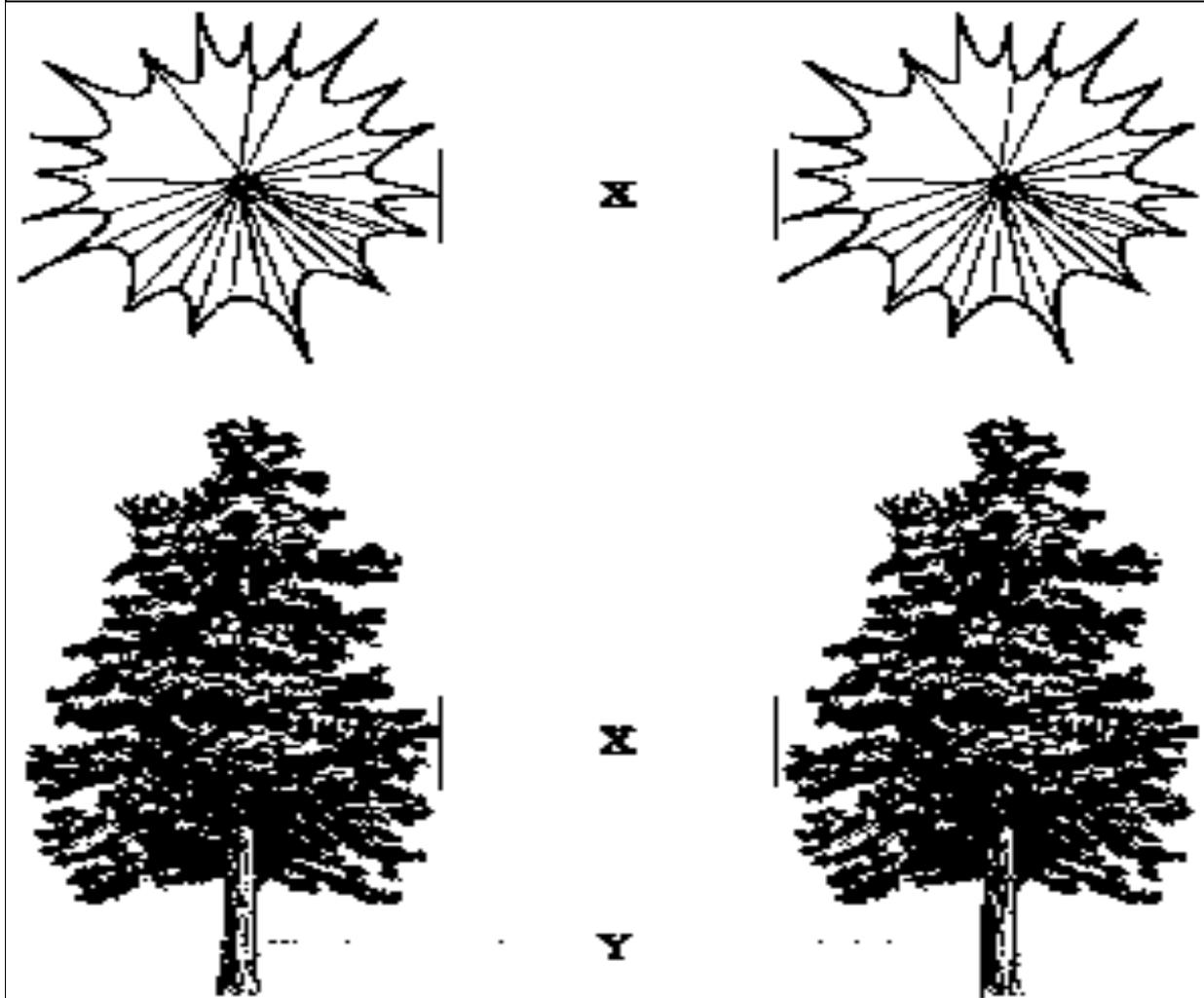
The intent of these standards is to reduce the potential for a catastrophic crown fire within the Village while preserving the forested appearance of the Village. The goal is to retain a forest environment with a 40 square foot per acre minimum basal area density of mature trees. This translates to forty 14 inch diameter trees per acre. When computing minimum required basal area, trees smaller than 14 inch diameter will be projected to grow to 14 inch diameter.

- (a) All properties shall meet the following requirements for each particular Zone. Upon determination by the Village that a property is in compliance, the Village will issue a letter to the property owner. Initial thinning should normally last a period of 10 years before ladder fuels and tree growth are sufficient to require a maintenance thinning. Maintenance activities such as pine needle raking and ladder fuel removal shall be conducted on a yearly basis. However, circumstances such as drought and bark beetle mortality can cause a property to deviate from these standards and become non-compliant. Should a property not be maintained or otherwise become non-compliant, the property owner will be notified to correct the problem and be given a timeframe for coming back into compliance. Should compliance not be obtained in the established timeframe, the property shall be designated non-compliant and the landowner of record will be assessed a fine, increase in billing, or other penalties that are in effect until such time as the property is again in compliance.
- (1) *Zone 1 Structure Protection (0 to 10 feet from structure or deck).* This Zone should be devoid of flammable vegetation as much as possible. Trees within this Zone shall be considered a part of the structure and the Zone extended accordingly.
- a. Remove all non-decomposing pine needles, flammable ground materials and activity slash. Pine needles are to be raked and placed appropriately for Village removal.
 - b. Remove all ladder fuels including shrubs beneath the crown of conifers.
 - c. Separation between crowns is per chart 42-80 #2.
 - d. Maximum of 5 similar sized trees with overlapping crowns then there must be separation as per chart 42-80 #2.
 - e. Prune all species at least 15 feet above ground and, if tree height permits, 10 feet above structure eave.
 - f. Ornamental sprue and planted tree-form conifers that can't be trimmed to structure eave shall be removed or modified through mitigation measures as approved by the Village of Ruidoso such as xeriscaping or vertical and horizontal spacing to reduce ignition risk.
 - g. Removal of any live tree greater than 20 DBH requires a permit.
 - h. No wood chips allowed except in planting beds.
 - i. No firewood stored unless covered by approved fire retardant cover.
 - j. No flammable construction material stored unless covered by fire retardant cover.
 - k. No standing dead trees allowed.
 - l. Grass and common weeds shall be trimmed low to ground or eliminated.
 - m. Planted vegetation shall be fire resistant and low growing.

- n. There shall be no low growing flammable vegetation such as juniper (including ornamental juniper).
 - o. Roofs and gutters shall be kept free of pine needles and other debris.
- (2) *Zone 2 Defensible Space (greater than 10 feet up to 200 feet from structure or deck as dictated by slope chart 42-80 #3).* The intent of this zone is to reduce the threat to a structure from an advancing wildfire.
- a. Remove all non-decomposing pine needles, flammable ground materials and activity slash within 30 feet of a structure,
 - b. Remove all ladder fuels including brush beneath crowns.
 - c. Minimum crowns separation of trees or "clumps" (maximum 5 similar sized trees per clump) as per chart 42-80 #2.
 - d. Separation of brush species shall be as per chart 42-80 #2.
 - e. Pine needles and grasses on vacant properties adjacent to residences and within residential areas shall be removed on a yearly basis so as not to provide a continuous fuel source in the event of a wildfire..
 - f. Prune all species a minimum of 10 feet from ground within 30 feet of structure or one third of tree height, whichever is less. Ornamental conifers such as Blue Spruce may be left untrimmed providing spacing and low ground fuels are maintained to minimize ignition potential.
 - g. Minimum 10 feet recommended between planting beds.
 - h. Removal of any live tree greater than 20 inches DBH requires a permit.
 - i. No wood chips allowed except in planting beds within 30 feet of structure.
 - j. No firewood stacked within 20 feet of structures unless under approved fire retardant cover. All firewood must comply with the beetle habitat reduction requirements contained in section 54-133(c)(5)c. Firewood must be stacked with no more than two cords per stack.
 - k. No flammable conifers less than eave height within 20 feet of vents, windows or doors.
 - l. No standing dead trees within 60 feet of structure
- (3) *Zone 3 Forest Woodlands (from the end of Zone 2 to the edge of the property).* This zone includes vacant lots and properties less than 5 acres in size. Where the property is within the defensible space of another property, Zone 2 standards shall apply. This Zone shall maintain an open forested appearance with well-spaced trees and openings. The zone should contain a variety of tree species of various ages. Groups of trees should be of similar ages and heights. Different groups will provide the multiple age structure and size structure.
- a. Remove all ladder fuels.
 - b. Separation shall be as per chart 42-80 #2.
 - c. Every effort shall be made to remove and utilize bole wood over 6 inches in diameter.
 - d. Trim all species to 6 feet or 1/3 the height of the tree, whichever is less, measuring from the uphill side of the tree. Insure that shorter tree groups are upwind of taller tree groups (acts as ladder fuel).
 - e. Except when the property has a fuels management plan approved by the director of forestry, removal of any live tree greater than 20 DBH requires a permit.
 - f. Mastication and chipping of slash are allowed for slash disposal. Wood depth shall not exceed 2 inches. Bole wood over 6 inches in diameter shall be removed.

- g. Where possible all slash shall be removed, masticated or chipped. On steep slopes or where access is limited, alternative fuels management slash treatments may be approved by the director of forestry.
 - h. Green wood retained for firewood shall be treated for beetle habitat per Sec. 54-133(c)(5)c.
 - i. Up to three 12 inch DBH or larger non-hazardous standing dead trees may be retained per acre for wildlife habitat. Recent beetle killed trees must be harvested and removed or treated as per Sec. 54-133(c)(5)c.
 - j. All non-decomposing ground debris greater than 5 inches in diameter shall be removed, except up to 5 downed logs per acre greater than 12 inches in diameter may be retained for wildlife habitat.
- (4) *Large tracts (more than 5 acres with or without structures).* A fuels reduction plan shall be prepared and/or approved on a case by case basis by the director of forestry. Where structures are involved they shall be treated as in zones 1 and 2. The zone shall have an open forested appearance. These properties shall be treated with the intent to keep a wildfire on the ground to minimize spotting potential. The goal of treatment is to prevent a stand replacing crown fire. Some untreated areas may remain to meet agreed upon objectives providing there is sufficient treated area surrounding the untreated areas to mitigate crown fire spread.
- a. Treated areas of the properties shall have no ladder fuels.
 - b. Separation of trees shall be as per chart 42-80 #2 as near as possible. Modification of this Separation may be approved by the director of forestry to meet specific objectives.
 - c. Perimeter thinning shall be of sufficient width to prevent a sustainable crown fire from advancing to an adjacent property.
 - d. Every effort shall be made to remove and utilize bole wood over 5 inches in diameter. Bole wood not removed shall be felled along the contour or otherwise treated upon direction of the director of forestry.
 - e. Except when the property has a fuels management plan approved by the director of forestry, removal of any live tree greater than 20 DBH requires a permit.
 - f. Where possible, slash shall be treated with full removal, mastication or chipping. Lop and scatter may be used as a less desirable alternative.
 - g. If lop and scatter is allowed, slash shall be lopped and scattered to less than 2 feet in depth to accelerate decomposition. Lopped and scattered slash shall not be placed under the drip line of residual trees.
 - h. No standing dead trees are allowed within 150 feet of the property perimeter.
 - i. Trees shall be pruned where appropriate to meet objectives but may be left un-pruned if Separation is adequate to prevent fire movement from tree to tree.
 - j. If a Zone 4 property is used for a commercial purpose, a fuels management plan shall be developed in partnership with the landowner to meet the commercial objectives and manage fuels on the site. The signed plan will be an agreement between the director of forestry and the landowner for the certification period. If the director of forestry and the landowner cannot come to agreement, the matter will be presented to the planning and zoning commission for resolution.

Crown Separation Measurement Diagram
Chart 42-80 #1

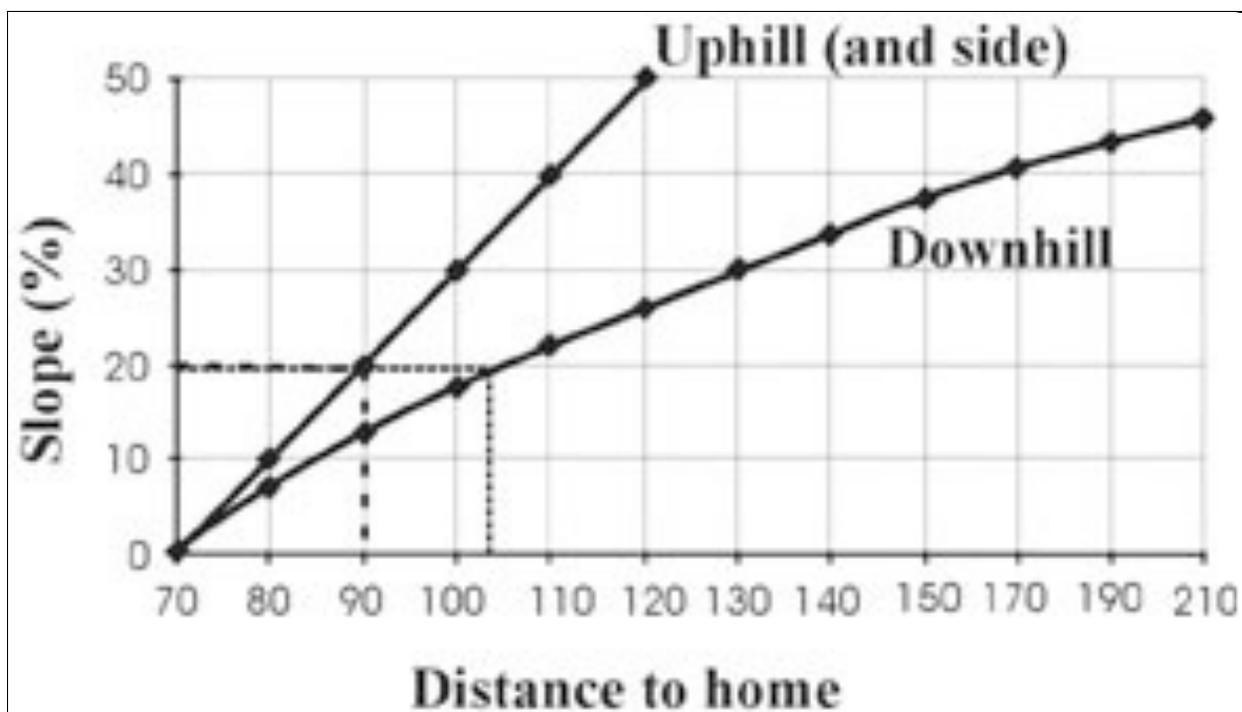


Measure Crown Separation (X) from the outside of the crown of one tree or clump of trees to the outside of the crown of the next tree.

Minimum Tree Crown and Shrub Clump Separation
Chart 42-80 #2

Percent (%) Slope	Individual Tree Crown Separation	Tree Group Crown Separation	Brush and Shrub Clump Separation in feet
0-10 %	10'	15'	2 1/2 times Shrub Height
11-20%	15'	20'	3 times Shrub Height
21-40%	20'	25'	4 times Shrub Height
40%	30'	35'	6 times Shrub Height

Zone 2 Defensible Space Outer Edge Measurement based on Slope
Chart 42-80 #3



This chart indicates the minimum recommended dimensions for defensible space from the home to the outer edge of Zone 2. For Example: if the 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.

- (1) *Property Owners Responsibilities.* Every property owner within the Village limits shall maintain their property in accordance with Section 42-80 of this Code. If a property owner places green waste on the public right-of-way for grapple pick-up, the property owner shall separate the green waste into two categories: 1) 6 inches or greater in diameter; or 2) less than 6 inches in diameter. Any green waste that the property owner places on the public right-of-way for grapple pick-up shall be no greater than 6 feet in length. Any green wood on the property shall be kept in accordance with Section 42-80 of this Code and shall be covered with six ml (minimum thickness) clear/translucent plastic for a minimum of ten months to minimize bark beetle habitat and infestation.