



WCNRD's Hazardous Fuels Reduction Program Specifications & Standards

Providing leadership in conserving the natural resources in Weston County by providing information, education, and technical assistance to meet the needs of our users

Treatments for hazardous fuels reductions include Defensible Space, Fuel Treatment, or Fuel Break. All treatments must have a slash component, which includes Piling and Burning or Masticating. Conducting treatments when soil conditions are dry or frozen will reduce soil compaction and erosion. When possible, restrict thinning operations to early spring, late fall, or winter to reduce the chance of Ips infestation. Please contact the WCNRD or Wyoming State Forestry for additional information.

Defensible Space

Defensible space is the area between a house and an oncoming wildfire, where vegetation has been modified to reduce the wildfire threat and to provide an opportunity for firefighters to effectively defend the house. A good defensible space can be created by the elimination of many of the trees, brush, ladder fuels, and dead woody material. It is important to remove lower branches and dead limbs from the trees that are left, and to replace highly flammable plants with fire resistant species around the home. It is also helpful to use low growing herbaceous plants, including grass, flowers, and ground covers that are kept green during the fire season, or gravel, rock, and non-combustible hard surfaces (concrete sidewalks, brick patios, asphalt driveways.) The three zones required for defensible space treatments are listed below:

Zone 1: (minimum of 30-feet from structure). An area of at least 30-feet immediately surrounding the structure should be well kept (mowed) with green fire-resistant vegetation and hard surfaces that are non-combustible. Remove all pine, spruce, and juniper from this area. A favorite tree or two can be saved close to the house, but these trees should be considered part of the structure and a 30-foot space beyond that tree(s) should be cleared. Remove all dead woody vegetation. Cut stumps should be less than 6-inches in height on the uphill side. Tree branches must be pruned to a minimum height of 5-feet from the ground (unless approval is permitted in writing prior to commencing work).

Zone 2: (minimum of 60-feet from structure). An area from 30-feet to 60-feet (for flat to gentle slopes) to 100-feet (for steep slopes 40% or greater) surrounding the structures should be intensively thinned with the removal of all ladder fuels. Remove all ladder fuels (juniper, shrubs, and pine seedlings that are closer than 3-times their height to overhanging branches or trees). Thin trees to a 10-foot spacing between crowns (the tips of the branch not the trunks) on flat surfaces and 30-feet between crowns on slopes greater than 40% below the structure. Cut stumps should be less than 6-inches in height on the uphill side. Tree branches must be pruned to a minimum height of 5-feet from the ground (unless approval is permitted in writing prior to commencing work). Remove all dead woody material.

Zone 3: (minimum of 90-feet from structure). An area from 60-feet to 90-feet (for flat to gentle slopes) to 200-feet (for steep 40%+ slopes) should be thinned. Thin the trees to a distance of 4-feet between the crowns (the tree branches not the trunks) for gentle slopes, and 10-feet between the crowns for steep slopes below structures. Cut stumps should be less than 6-inches in height on the uphill side. Remove most of the ladder fuels and low-lying branches.

Fuel Treatment

Implementing a fuel treatment will greatly reduce fire danger. Trees will be thinned to a minimum distance of approximately 4-feet between tree crown branch tips, which usually correlates to 10- to 15- foot spacing between tree trunks. Cut stumps should be less than 6-inches in height on the uphill side. Leave trees must be pruned to a minimum height of 5-feet from the ground (unless approval is permitted in writing prior to commencing work) and all ladder and

dead fuels removed from the project unit. All slash and logs larger than 3-inches in diameter or 24-inches in length should be chipped or removed from the fuel treatment area, masticated chips may not exceed 3-inches in depth.

Fuel Break

A fuel break is a strip of land along roads, property perimeter, or other areas to break up the tree canopy to slow or stop a crown fire. Fuel breaks must be a minimum of 100-feet wide. A space of 6- to 10-feet between the tree crown branch tips should be attained and all ladder and dead fuels removed from the project unit. Cut stumps should be less than 6-inches in height on the uphill side. Live trees must be pruned to a minimum height of 5-feet from the ground (unless approval is permitted in writing prior to commencing work). Remove all dead woody material. All slash and logs larger than 3-inches in diameter or 24-inches in length should be chipped or removed from the fuel break area, masticated chips may not exceed 3-inches in depth.

Slash Treatment (Piling/Burning or Chipping/Masticating)

Piling and burning can be an effective way to treat large quantities of material, particularly when heavy equipment, such as skidders, are used in the operation. Slash that is piled should be placed in forest openings, positioned where winds will not carry flames into surrounding trees when piles are burned. All piles must be placed outside of the designated project unit, located a minimum distance of 25-feet from the nearest live tree, and shall not be placed in waterways or block roads and trails.

Best results for total combustion when burning piles occurs when needles have turned red and remain on branches. Piles should be burned only when there is heavy snow cover, cold temperatures, and low winds. Notify the County Fire Warden (307) 746-2031 before burning. Wyoming Department of Environmental Quality, Air Quality Division should be contacted for smoke management regulations at (307) 777-6993 if large piles or many small piles are to be burned at one time. After burning piles, the burned debris, ash, and soil should be worked up and mixed together, then planted with high quality seed to prevent thistle and other undesirable plants from becoming established.

Mechanized chipping or masticating of slash is another treatment alternative. This option tends to be the most expensive-yet has many benefits, which makes it a good option for certain situations (eg. when burning is problematic or prohibited or in high value areas such as adjacent to homes where aesthetics are a high priority). This treatment has the benefit of providing immediate visible reductions in slash residue without having to wait for suitable burn windows or decay processes to work. Chipping/masticating does not remove fuels from the site, just changes the form the fuel is in and how a fire would burn within that area. Deep layers of wood chips tend to smolder and burn for a long period of time and can be difficult to extinguish; this form of burn has been shown to result in high tree mortality where chips and debris accumulate at the base of live trees. Heavy concentrations of chips can also inhibit the growth of grasses, forbs, and young trees and can result in barren and unsightly areas. Concentration of chips should be scattered or hauled from the site as they can be used as animal bedding or mulch. All slash and logs larger than 3-inches in diameter or 24-inches in length should be chipped or removed from the project unit, masticated chips may not exceed 3-inches in depth.

Work Site Safety

It is recommended to have on the project site, shovels, pulaski's, water buckets, and fire extinguishers. Each piece of power equipment should have one chemical fire extinguisher rated by the Underwriters Laboratory as not less than 4-BC. Anyone using a chainsaw should have immediately available a fully charged operable fire extinguisher of at least eight-ounce capacity, and a functional round pointed shovel. Chainsaws, skidders, or any other machine with an internal combustion engine should have a properly functioning spark arrester

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