NATURAL RESOURCES CONSERVATION SERVICE
MONTANA CONSERVATION PRACTICE SPECIFICATION

FUEL BREAK (ACRE)

CODE 383B – STRUCTURES

DEFINITION: A strip or block of land on which the vegetation, debris and detritus have been reduced and/or modified to control or diminish the risk of spread of fire crossing the strip or block of land.

PURPOSE: Control and reduce the risk of the spread of fire by treating, removing or modifying vegetation debris and detritus.

SCOPE: This practice applies on all land where protection from wildfire is needed.

FUEL BREAK SPECIFICATIONS: Specifications for applying this practice shall be prepared for each site and recorded using approved specifications sheets, job sheets, narrative statements in the conservation plan, or other acceptable documentation.

Fuel Breaks/Hazardous Fuel Reduction Next to Structures:

The size of a defensible and survivable space area varies depending on the type of vegetation and the steepness of the terrain. Chart 1 gives the defensible and survivable space distances in the area between a house–or other outbuildings–and an oncoming wildfire where the vegetation has been modified to reduce the wildfire threat. Defensible space distances are used if there is an opportunity for firefighters to effectively defend the house. Survivable space distances are used if there is no time to defend against fire or firefighting resources are limited.

Dead vegetation should be removed from the defensible space area. Chart 2 contains the practices needed for each type of dead vegetation.

Break up the continuous dense cover of shrubs or trees within the defensible space area. Chart 3 contains the separation distances needed for shrubs, small trees, and Rocky Mountain junipers. Chart 4 contains the separation distances for trees.

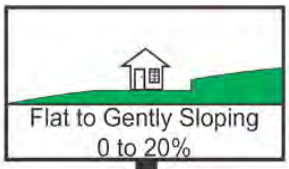
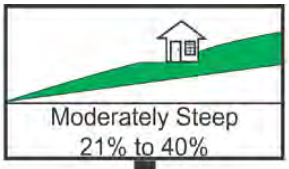
Reduce ladder fuels present. Chart 5 contains the vertical separation distances needed between fuel layers.

Create a "Lean, Clean, and Green" space of at least 30 feet surrounding the house. The vegetation should be kept lean, clean, and green.

Where opportunities exist for establishing fire-retarding vegetation, plant an adapted species of grass or other vegetation which produce low volumes of herbage (see Table 1). When using fire-retarding vegetation, tree overstory and snags must be cleared as indicated above. Mowing or grazing can be used to avoid a build-up of dead litter.

Annually maintain the vegetation and practice within the defensible space area.

Chart 1. DEFENSIBLE AND SURVIVABLE SPACE RECOMMENDED DISTANCES

VEGETATION TYPE	 Flat to Gently Sloping 0 to 20%	 Moderately Steep 21% to 40%	 Very Steep +41%
 Grass Wildland grasses, weeds, and widely scattered shrubs with grass understory.	30 Feet Defensible 50 Feet Survivable	100 Feet Defensible 200 Feet Survivable	100 Feet Defensible 200 Feet Survivable
 Shrubs Includes shrub dominant areas (such as sagebrush and Rocky Mountain juniper.	100 Feet Defensible 200 Feet Survivable	200 Feet Defensible 400 Feet Survivable	200 Feet Defensible 400 Feet Survivable
 Trees Includes forested areas. If substantial grass or shrub understory is present, use those values shown above.	30 Feet Defensible 60 Feet Survivable	100 Feet Defensible 200 Feet Survivable	200 Feet Defensible 400 Feet Survivable

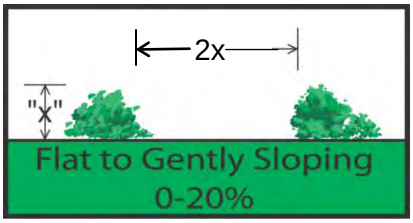
1) Choose the level of protection needed: defensible or survivable
2) Find the percent slope which best describes your property.
3) Find the type of vegetation which best describes the wildland plants growing on or near your property. If more than one type, use most hazardous one.
4) Locate the number in feet corresponding to your slope and vegetation.
5) This is your recommended defensible/survivable space distance.

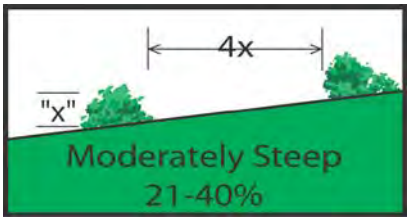
* Please note the recommendations presented in this chart are <u>suggestions</u> made by local firefighters experienced in protecting homes from wildfire. They are not requirements nor do they take precedence over local ordinances.

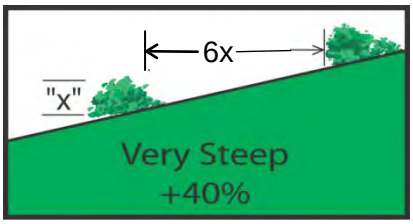
Chart 2. TYPES OF DEAD VEGETATION AND RECOMMENDED PRACTICE

	RECOMMENDED PRACTICE
STANDING DEAD TREE	Remove all standing dead trees from within the defensible space area.
DOWN DEAD TREE	Remove all down dead trees within the defensible space area if they have recently fallen and are not yet embedded into the ground. Downed trees that are embedded into soil and which cannot be removed without soil disturbance should be left in place. Remove all exposed branches from an embedded downed dead tree.
DEAD SHRUBS	Remove all dead shrubs from within the defensible space area.
DRIED GRASSES and WILDFLOWERS	Once grasses and wildflowers have dried out or "cured," cut down and remove from the defensible space area.
DEAD NEEDLES, LEAVES, BRANCHES, CONES (ON THE GROUND)	Reduce thick layers of pine needles to a depth of two inches. Do not remove all needles. Take care not to disturb the "duff" layer (dark area at the ground surface where needles are decomposing) if present. Remove dead leaves, twigs, cones, and branches.
DEAD NEEDLES, LEAVES, BRANCHES, AND TWIGS (OTHER THAN ON THE GROUND)	Remove all dead leaves, branches, twigs, and needles still attached to living trees and shrubs to a height of 15 feet above ground. Remove all debris which accumulates on the roof and in rain gutters on a routine basis--at least once annually.
FIREWOOD AND OTHER COMBUSTIBLE DEBRIS	Locate firewood and other combustible debris--wood scraps, grass clippings, leaf piles, etc.--at least 30 feet uphill from the house.

Chart 3. SEPARATION DISTANCES NEEDED FOR SHRUBS, JUNIPERS, AND SMALL TREES

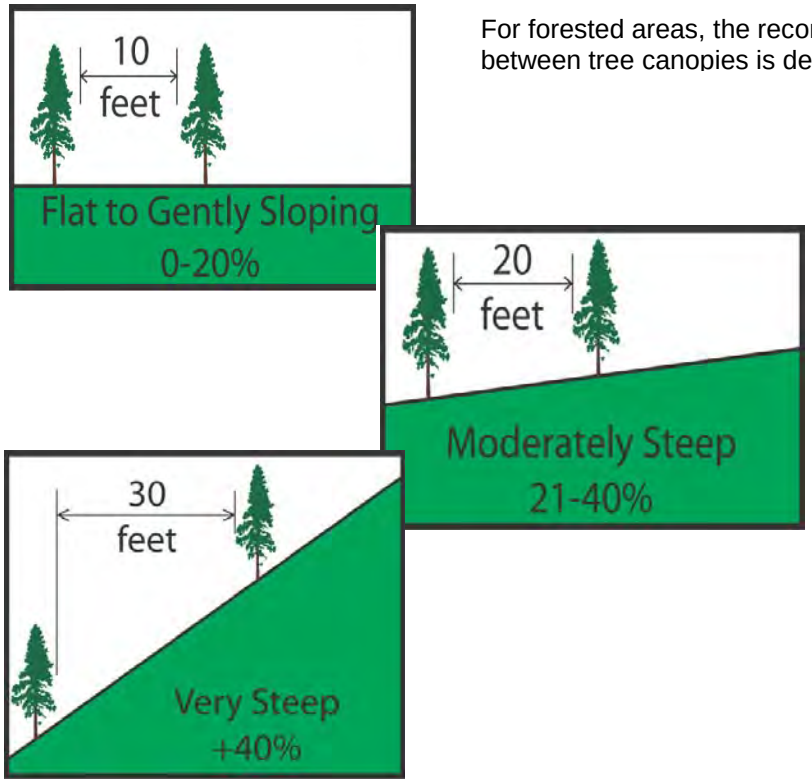






NOTE: Separation distances are measured between canopies (outermost branches) and not between trunks.

Chart 4. SEPARATION DISTANCES NEEDED BETWEEN TREE CANOPIES



For forested areas, the recommended amount of separation between tree canopies is determined by steepness of slope.

NOTE: Separation distances are measured between canopies (outermost branches) and not between trunks.

For example, if your house is situated on a 30% slope, the separation of tree canopies within your defensible space should be 20 feet. Creating separation between tree canopies can be accomplished through tree removal.

Chart 5. VERTICAL SEPARATION DISTANCES NEEDED BETWEEN FUEL LAYERS

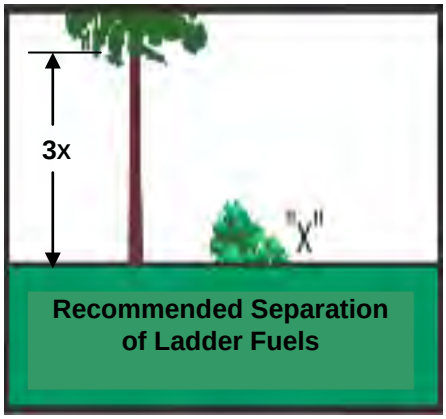


TABLE 1. Selected Species for Establishing Fire-Retarding Vegetative Fuel Breaks

SPECIES [1]	CULTIVAR	SEEDING RATE [3] PURE LIVE SEED / ACRE BROADCAST [4] (POUNDS)	DRILLED [4] (POUNDS)	SEEDS PER POUND	PRECIPITATION REQUIREMENTS (INCHES)
Sheep Fescue	*Covar*	5	3	680,000	6–14
Hard Fescue	*Durar*	6	3	565,000	14–20
Canada Bluegrass [2]	*Rueben, Foothills*	3	3	1,600,000	12–22
Common White Clover		4.5	3	800,000	16 +
Red Clover	*Kenland, Lakeland*	13	6.5	272,000	16 +
Birdsfoot Trefoil	*Empire, Leo*	8	4	418,000	14 +
Orchardgrass [2]	*Potomac, Latar*	7	3.5	464,000	16 +
Alfalfa		15	7.5	225,000	14 +
Tall Fescue	*Alta, Fawn*	14	7	242,000	16 +
Forage Kochia [5]	*'Immigrant'*	9	4.5	400,000	12 +
Russian Wildrye	*'Bozoisky'-Select*	20	10	170,000	10 +
Crested Wheatgrass [6]	*'Fairway'*	18	9	200,000	10 +
Western Wheatgrass	*'Rosana'*	38	19	93,000	12 +
Streambank Wheatgrass	*'Sodar'*	21	11	152,000	10 +
Yarrow		3	3	4,500,000	9 +

[1] See FOTG, Practice Standard and Specification for Pasture and Hay Planting (Code 512) for additional information on soil, site, and climatic adaptation for each species. See Plant Materials Technical Note 46 for recommended cultivars.

[2] Recommended for high elevation forest sites only.

[3] Recommended rate is about 80 seeds/square feet for broadcast–40 seeds/square feet for drilled.

[4] Minimum rate at 3 lbs. seed/acre due to equipment and seed physics.

[5] Seed must be planted within 6 months of harvest of annual crop.

[6] *Fairway* cultivar only because of its unique, low-growing habit–no substitutions.