



FUEL BREAK

Conservation Practice Specification/Job Sheet 383

JANUARY 2007

| | | | | | |
|------------------------|--|----------------------------|--|-----------|--|
| Client/Operating Unit: | | Tract: | | Farm No.: | |
| Farm/Ranch Location: | | Field No.: | | Program: | |
| Specifications Date: | | Planned Installation Date: | | | |
| Other Identifying Data | | | | | |

Installation shall be in accordance with the following specifications, drawings, and other requirements. NO CHANGES ARE TO BE MADE IN THE SPECIFICATIONS WITHOUT PRIOR APPROVAL BY AN AGENCY REPRESENTATIVE.

Fuel Break Purpose – (check purpose(s) below)

Structures/public roads/railroads/public areas _____ See appendix for Specifications

Forested Area _____ See appendix for Specifications

1. Location, Plan Map, and/or attached Drawings, No. _____
2. Associated Practices: _____

Special Implementation Requirements:

3. Fuel Break: _____ Acres Width and Length _____ Slope % _____ Feet by Feet Tree Spacing _____

Overstory Tree Species _____

4. Understory Fuels, Species _____

Shrub Spacing: _____ Ft. _____ X Ft. _____

Grass Strip Species seeded: _____

Vertical Separation Between Fuel Layers (ladder fuels) Distance between fuel layers _____
 Pruning height _____ (See Tree/Shrub Pruning – 660)

Slash Disposal Method: See Forest Slash Treatment 384

5. Maintenance Requirements:

6. Fuel Break Inspection Interval:

7. Special Maintenance Requirements:

DESIGN AND INSTALLATION/LAYOUT APPROVAL:

I have job approval authority and certify this practice has been designed with specifications to meet the conservation practice standard and that the client has been advised of installation and layout elements:

| | | | |
|---|--|-------|--|
| NRCS Representative name and title (type or print): | | | |
| NRCS Representative Signature: | | Date: | |

LANDOWNER/OPERATOR ACKNOWLEDGES:

- a. They have received a copy of the specifications and understand the contents including the scope and location of the practice.
- b. They have obtained all necessary permits and/or rights in advance of practice application, and will comply with all ordinances and laws pertaining to the application of this practice.
- c. No changes will be made in the installation of the job without prior concurrence of the NRCS.
- d. Maintenance of the installed work is necessary for proper performance during the life of the practice. The practice life is _____.

I have reviewed all specifications and agree to install as specified:

| | | | |
|--|--|-------|--|
| Landowner/operator name and title (type or print): | | | |
| Landowner/operator Signature: | | Date: | |

RECORD OF COMPLETION AND CHECK OUT CERTIFICATION:

| Units (____) | Date Completed by Client: | Date Certified: | Approver's Initials: |
|--------------|---------------------------|-----------------|----------------------|
| | | | |
| | | | |
| | | | |

I have job approval authority and certify this practice has been applied and meets design specifications:

| | | | |
|---|--|-------|--|
| NRCS Representative name and title (type or print): | | | |
| NRCS Representative Signature: | | Date: | |

Specifications

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 FOR STRUCTURES

| 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 |
| 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 | |

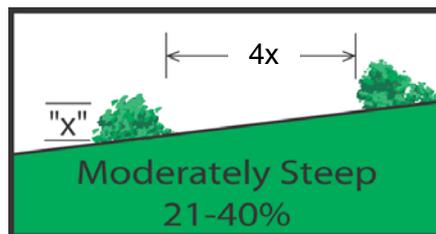
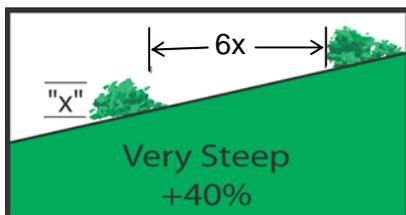
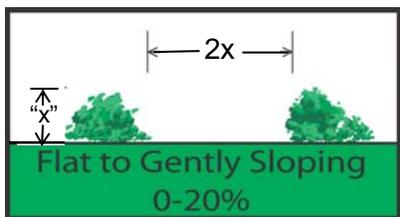
- 1) Choose the level of protection needed: defensible or survivable
- 2) Find the percent slope which best describes your property.
- 3) Find the type of vegetation which best describes the wildland plants growing on or near your property. If more than one type, use most hazardous one.
- 4) Locate the 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 suggestions 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 (Structures and Forested Area)

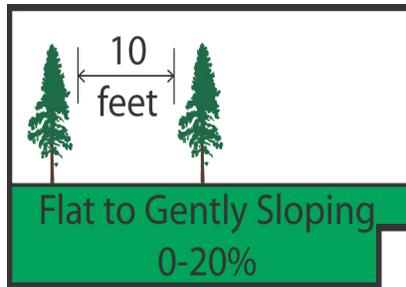
| RECOMMENDED PRACTICE | |
|---|--|
| STANDING DEAD TREE | Remove all standing dead trees from within the defensible space area. |
| DOWN DEAD TREE | Remove all down dead trees within the defensible space area if they have recently fallen and are not yet embedded into the ground. Downed trees that are 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 (Structures and Forested Areas)

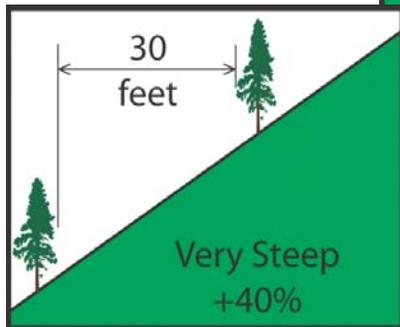
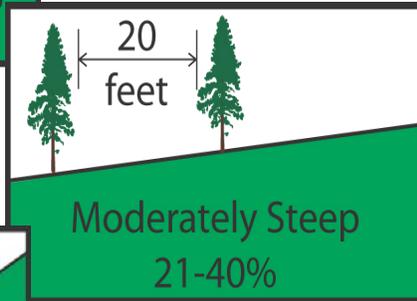


NOTE: Separation distances are measured between canopies (outermost branches) and not between trunks.

CHART 4. SEPARATION DISTANCES NEEDED BETWEEN TREE CANOPIES (Structures and Forested Areas)



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 (Structures and Forested Areas)

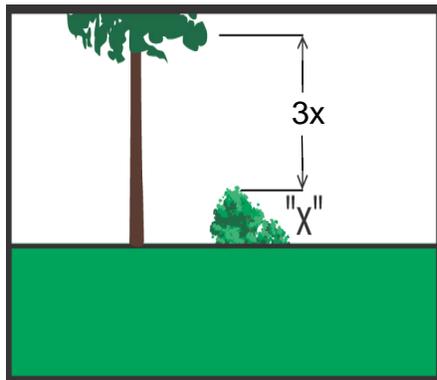


TABLE 1. Selected Species for Establishing Fire-Retarding Vegetative Fuel Breaks.

| PRECIPITATION SPECIES REQUIREMENTS | CULTIVAR | SEEDING RATE ^{3/} PURE LIVE SEED / ACRE | | SEEDS | |
|--|---------------------------------|---|-----------------------|-----------|----------|
| | | BROADCAST ^{4/} | DRILLED ^{4/} | PER | |
| | | (POUNDS) | | POUND | (INCHES) |
| Sheep Fescue | <i>Covar</i> | 8 | 4 | 680,000 | 10–14 |
| Hard Fescue | <i>Durar</i> | 8 | 4 | 565,000 | 14–20 |
| Canada Bluegrass ^{2/} | <i>Rueben, Foothills, Talon</i> | 3 | 3 | 1,600,000 | 18 + |
| Common White Clover | <i>Dutch</i> | 4 | 3 | 800,000 | 16 + |
| Red Clover | <i>Kenland, Lakeland</i> | 13 | 6.5 | 275,000 | 18 + |
| Birdsfoot Trefoil | <i>Empire, Leo</i> | 10 | 5 | 375,000 | 18 + |
| Orchardgrass ^{2/ 7/} | <i>Potomac, Latar</i> | 8 | 4 | 540,000 | 16 + |
| Alfalfa | | 10 | 5 | 225,000 | 14 + |
| Tall Fescue ^{7/} | <i>Alta, Fawn</i> | 8 | 4 | 205,000 | 18 + |
| Forage Kochia ^{5/} | <i>Immigrant</i> | 9 | 4.5 | 395,000 | 8 + |
| Russian Wildrye ^{7/} | <i>Bozoisky'-Select</i> | 12 | 6 | 170,000 | 8 + |
| Crested Wheatgrass ^{6/} | <i>Fairway</i> | 10 | 5 | 175,000 | 8 + |
| Streambank Wheatgrass | <i>Sodar</i> | 12 | 6 | 135,000 | 8 + |
| Yarrow | | 3 | 3 | 4,500,000 | 8 + |
| Small Burnett | <i>Delar</i> | 40 | 20 | 42,000 | 14 + |

^{1/} See EFOTG, Section I, Plant Materials Technical No. 1, "Washington Seeding/Planting Guide for additional information on soil, site, and climatic adaptation for each species, as well as 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.

^{7/} May require mowing to reduce tall seedheads.