

NATURAL RESOURCES CONSERVATION SERVICE  
MONTANA CONSERVATION PRACTICE SPECIFICATION

## FIREBREAK (FEET)

### CODE 394

**DEFINITION:** A permanent or temporary strip of bare or vegetated land to retard fire.

**PURPOSE:**

- To reduce the spread of wildfire
- To contain prescribed burns

**SCOPE:** This practice applies on all land uses where protection from wildfire is needed or prescribed burning is applied.

**FIREBREAK SPECIFICATION(S):**

Specification(s) for applying this practice shall be prepared for each site and recorded using approved specification(s) sheets, job sheets, and narrative statements in the conservation plan, or other acceptable documentation.

Where wind erosion could be a problem and the "I" factor for the soil is greater than "86", refer to the Field Office Technical Guide (FOTG), Section IV, Practice Standards and Specifications, Cross Wind Trap Strips (Code 589C) for strip width.

For areas where water erosion could be a problem, dispose of runoff water by rolling the grade, outsloping or contouring the firebreak, or installing waterbars based on the slope and rock fragments. Use TABLE 1 and DIAGRAM 4 to determine the spacing and design requirements for waterbars.

Vegetated firebreaks may be low-growing and/or fire-retarding annual or perennial vegetation, or managed as such by irrigating, mowing, grazing, burning, or chemically killing the strips annually. Refer to TABLE 2 for species to plant. Keep vegetation 5 inches or less in height during hazardous conditions. The vegetation is to be removed, or dispersed and laid flat.

**TEMPORARY FIREBREAKS FOR PRESCRIBED BURNS:**

Refer to FOTG, Section IV, Practice Standards and Specifications, Prescribed Burning (Code 338).

**IDLE CROPLAND FIREBREAKS (Including Other Areas of Non-Use):**

Idle cropland fields need wider than normal firebreaks due to the buildup and height of dead matter (fuel).

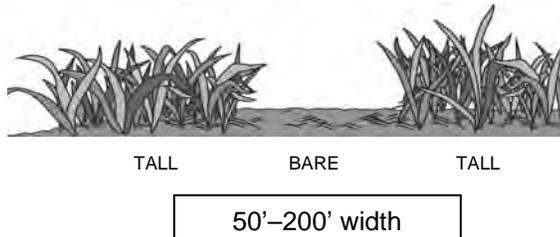
Firebreaks in idle croplands will be:

1. Single bare ground strip (DIAGRAM 1) or...
2. One or two bare ground strips combined with one vegetated strip (DIAGRAM'S 2 and 3). This strip of annual or perennial vegetation could be mowed, burned, or planted to low-growing or fire-retarding vegetation (TABLE 2).

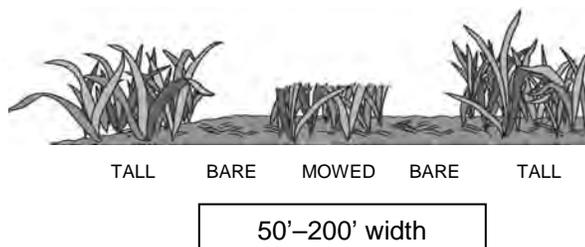
## Specification MT394-2

If two bare ground strips are used, the mowed strip will separate them (DIAGRAM 2). If one bare ground strip is used, it will be located between the mowed strip and the idle cropland field (DIAGRAM 3). Vegetated strips are at least 10 feet wide and no more than 33 percent of the total firebreak width.

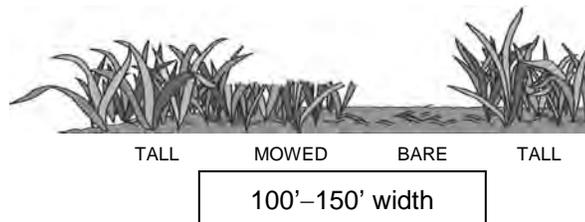
**DIAGRAM 1.**  
**A single bare ground strip.**



**DIAGRAM 2.**  
**Two bare ground strips combined with a mowed strip.**



**DIAGRAM 3.**  
**One bare ground strip combined with a mowed strip.**



The firebreak width using a single bare ground strip will be a minimum of 50 feet and a maximum of 200 feet.

The firebreak width using two bare ground strips with a mowed strip in between will be a minimum of 50 feet and a maximum of 200 feet.

The firebreak width using one bare ground strip and a mowed strip will be a minimum of 100 feet and a maximum of 150 feet.

To add an extra margin of safety, idle cropland firebreaks immediately adjacent to homes, barns, buildings, etc., will be approximately 250 feet wide.

### **OPEN AREA FIREBREAKS:**

For open area firebreaks (rangeland, pastureland, cropland) the minimum width for a bare ground firebreak is 5 feet and the maximum width will not exceed 30 feet. Expose mineral soil for a width of at least 5 times the height of the uncut vegetation along the windward side of the firebreak. Kill any vegetation growing in the bare ground strips.

For a firebreak with a single bare ground strip and a vegetated strip, the minimum width is 30 feet and the maximum width shall not exceed 100 feet. The vegetated strip is at least 10 feet wide but no more than 33 percent of the total firebreak width.

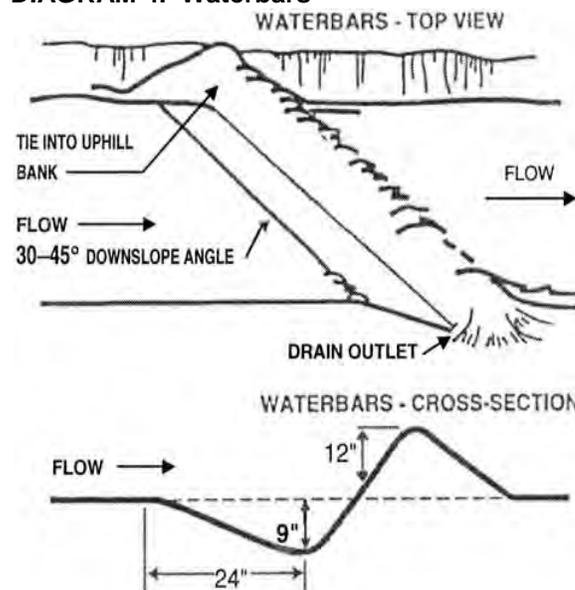
Wider firebreaks can be established by creating two parallel strips of bare soil with a vegetated strip in between, and then each year mowing, grazing or burning the vegetation. The minimum width is 50 feet and

the maximum width shall not exceed 100 feet. The vegetated strip is at least 10 feet wide but no more than 33 percent of the total firebreak width.

**TABLE 1. Waterbars Spacing**

Rock Fragments (12" of Soil)			
Slope	< 35%	35-60%	> 60%
< 30%	100'	200'	as needed
> 30%	50'	100'	as needed

**DIAGRAM 4. Waterbars**



**TABLE 2. Selected Species for Establishing Fire-Retarding Vegetative Firebreaks**

Species <sup>1/</sup>	Cultivar	Seeding Rate <sup>3/</sup> Pure Live Seed/Acre		Seeds Per Pound	Precipitation Requirements (Inches)
		Broadcast <sup>4/</sup>	Drilled <sup>4/</sup>		
Sheep Fescue	<i>Covar</i>	5	3	680,000	6-14
Hard Fescue	<i>Durar</i>	6	3	565,000	14-20
Canada Bluegrass <sup>2/</sup>	<i>Rueben, Foothills</i>	3	3	1,600,000	12-22
Common White Clover		4.5	3	800,000	16 +
Red Clover	<i>Kenland, Lakeland</i>	13	6.5	272,000	16 +
Birdsfoot Trefoil	<i>Empire, Leo</i>	8	4	418,000	14 +
Orchardgrass <sup>2/</sup>	<i>Potomac, Latar</i>	7	3.5	464,000	16 +
Alfalfa		15	7.5	225,000	14 +
Tall Fescue	<i>Alta, Fawn</i>	14	7	242,000	16 +
Forage Kochia <sup>5/</sup>	<i>'Immigrant'</i>	9	4.5	400,000	12 +
Russian Wildrye	<i>'Bozoisky'-Select</i>	20	10	170,000	10 +
Crested Wheatgrass <sup>6/</sup>	<i>'Fairway'</i>	18	9	200,000	10 +
Western Wheatgrass	<i>'Rosana'</i>	38	19	93,000	12 +
Streambank Wheatgrass	<i>'Sodar'</i>	21	11	152,000	10 +
Yarrow		3	3	4,500,000	9 +

<sup>1/</sup> See FOTG, Standards and Specifications, Forage and Biomass Planting (Code 512) for additional information on soil, site, and climatic adaptation for each species. See Plant Materials Technical Note MT-46 for recommended cultivars.

<sup>2/</sup> Recommended for high elevation forest sites only.

<sup>3/</sup> Recommended rate is about 80 seeds/square feet for broadcast – 40 seeds/square feet for drilled.

<sup>4/</sup> Minimum rate at 3 lbs. seed/acre due to equipment and seed physics.

<sup>5/</sup> Seed must be planted within 6 months of harvest of annual crop.

<sup>6/</sup> *Fairway* cultivar only because of its unique, low-growing habit – no substitutions.