

Firebreak (Feet) 394

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DEFINITION

A permanent or temporary strip of bare or vegetated land planned to retard fire.

PURPOSE

- Reduce the spread of wildfire.
- Contain prescribed burns.

CONDITIONS WHERE PRACTICE APPLIES

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

CRITERIA

General Criteria Applicable To All Purposes

- Firebreaks may be temporary or permanent and shall consist of fire-resistant vegetation, non-flammable materials, bare ground, or a combination of these.
- Firebreaks will be of sufficient width and length to contain the fire. *Firebreaks should be at least 15 feet wide or three times the height of the available fuel, whichever is greater.*
- Firebreaks shall be located to minimize risk to the resources being protected.
- Plant species selected for vegetated firebreaks will be non-invasive, capable of retarding fire, and easy to maintain.
- Erosion control measures shall prevent sediment from leaving the site.
- Comply with applicable laws and regulations, including the best management practices listed in

Criteria for Sod Firebreaks

- Develop and maintain natural or planted herbaceous firebreaks by planting, fertilizing, mowing, watering, or grazing strips (legumes, grasses, clover, field rye, or wheat). To establish new vegetation, *refer to NRCS Practice Standards Conservation Cover (327) or Critical Area Planting (342).*
- Use clearing and cutting or an application of approved herbicide to control woody plants.
- *Use native species where practicable in order to: reduce the introduction of invasive plant species; provide management of existing invasive species; and minimize the economic, ecological, and human health impacts that invasive species may cause.*
- *Do not use known invasive species. Refer to the Michigan Field Office Technical Guide, Section I, Invasive Plant Species, for plant materials identified as invasive species.*

Criteria for Bare Ground or Mineral Soil Firebreaks

- Develop non-vegetated barriers on the contour or on short and gentle slopes that will keep erosion below the allowable soil loss.
- The strips should be prepared and maintained by plowing and/or periodic disking.
- Tilled barriers developed to prevent the spread of a controlled burn or wildfire shall be regenerated if there is no further need for the firebreak. See Michigan NRCS Standard Critical Area Planting (342).

Criteria for Burned (Black Line) Firebreaks

A common type of firebreak is a black-line strip that is burned to remove most fuels prior to burning.

- Burned strips shall be a minimum of 15 feet wide and sufficient to control a high intensity head fire. This width will be determined by

local conditions dependent on topography, fuel type, and uses to be protected.

CONSIDERATIONS

- Use barriers such as streams, lakes, ponds, rock outcrops, cliffs, field borders, skid trails, landings, drainage canals, railroads, roads, cultivated land, or other areas as existing firebreaks.
- Locate firebreaks near crests and valley bottoms and on the contour, where practicable, to minimize risk of soil erosion.
- *Consider using firebreaks to divide prescribed burning areas into manageable units of no more than one third of the field.*
- If winds are predictable, firebreaks should be located perpendicular to the wind and on the windward side of the area to be protected.
- Consider the selection of plant species that will enhance the needs of wildlife in the area.
- *Maintenance (mowing, disking, or grazing) treatments should be timed to minimize impacts to nesting wildlife. Refer to eFOTG, Section IV, Folder F. Ecological Science Specifications, Grasslands Activity Dates Specification Sheet.*
- *Using electric line right-of-ways as firebreaks can be hazardous as heavy smoke may conduct electricity.*
- **CHEMICAL AND FOAM RETARDANTS** - Chemical and foam retardants are usually applied to the fireline just prior to initiation. A drawback is the need for a second crew and for special equipment. In addition, the cost of material can be expensive.
- **WETLINES** - Wetlines are similar to applying chemical and foam retardants, except that the water can be applied at lower cost and with simpler equipment. Unlike retardants, wetlines can evaporate quickly, requiring more caution and frequent wetting to remain effective.
- Design and layout should include multiple uses.

- Consider cultural resources when planning this practice. This practice may adversely affect cultural resources and should comply with USDA-NRCS General Manual, Section 420, Part 401, during planning, prior to installation, and during maintenance.

- *Consider the effects of this practice on threatened and endangered species, natural areas, riparian areas and wetlands.*

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, technical notes, and narrative statements in the conservation plan and the burn plan, or other acceptable documentation.

If firebreak is to be burned, a burn plan will be approved with all needed permits obtained and carried out under the direction and/or concurrence of the appropriate local or state authorities prior to proceeding. Refer to Michigan NRCS Standard Prescribed Burning (338) and Michigan Conservation Sheet Prescribed Burning (338) for further details.

Specifications will include, but are not be limited to, the following items:

- The planned width of the firebreak.
- The method of working ground if firebreak is to be bare ground.
- Identification of any erosion control measures needed for implementation and operation of the firebreak.
- Identification of vegetation to be planted if firebreak is to be vegetated; site preparation; method(s) of planting; the seeding, mulching, and fertilization rates required; and timing of the planting.

OPERATION AND MAINTENANCE

Mow, disk, or graze vegetative firebreaks to avoid a build-up of dead litter and to control weeds.

Inspect for and remove woody materials such as dead limbs and blown down trees from firebreak.

Inspect at least annually and rework bare ground firebreaks as necessary to keep them void of flammable vegetation.

Repair or reapply erosion control measures as necessary to ensure proper function.

Control access by vehicles or people to prevent damage to the firebreak. *Refer to NRCS Practice Standard Access Control (472).*

Stabilize bare ground firebreaks which are no longer needed. Refer to NRCS Practice Standard Critical Area Planting (342).

REFERENCES

Higgins, K.F.; Kruse, A.D.; Piehl, J.L. 1989. Prescribed Burning Guidelines in the Northern Great Plains. U.S. Fish and Wildlife Service. Cooperative Extension Service-SDSU. USDA EC 760.

MDNR and MDEQ. 2009. Sustainable Soil and Water Quality Practices on Forest Land. Michigan Department of Natural Resources and Michigan Department of Environmental Quality. IC4011.