

**NATURAL RESOURCES CONSERVATION SERVICE
MICHIGAN CONSERVATION PRACTICE STANDARD**

FUEL BREAK

(Ac.)

CODE 383

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 the 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.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on all lands where protection from wildfire is needed.

CRITERIA

General Criteria Applicable to All Purposes

Fuel break strips or blocks will be of sufficient width and length to meet the intended purpose(s).

Fuel breaks shall be located to minimize risk to the resources and structures being protected.

Thin the overstory stand sufficiently to reduce tree crown-to-crown contact and the potential of a crown fire.

Maintain vertical separation between fuel layers to remove "ladder" fuels, i.e., lowest layers of flammable vegetation do not connect to upper layers so that a fire cannot "step up" to higher canopies.

Treat or remove all woody material sufficiently and at a time to minimize fuel loadings to acceptable fire risk levels and reduce incidence of harmful insects and disease. Refer to the Woody Residue Treatment (384) Conservation Practice Standard.

Break the continuity of fine fuels by managing the amount and location of brush, grasses and forbs.

Do not conduct tree cutting in forest stands that contain oak and elm species during period of April 1 to July 31, to reduce chance of infection to the residual stand by oak wilt disease (*Ophiostoma fagacearum*) and Dutch Elm Disease (*O. ulmi*, *O. himal ulmi*, and *O. novo-ulmi*).

Install, operate and maintain fuel break in such a way as to minimize soil erosion; compaction; rutting; and damage to remaining vegetation, hydrologic conditions, and other site resources.

Take measures to mitigate invasion and spread of invasive species. Comply with federal and state NRCS policy on invasive species (see Invasive Plant Species List in Section II of eFOTG).

Comply with Michigan's Best Management Practices (BMPs) for forestland contained in "Sustainable Soil and Water Quality Practices on Forest Land," published by the Michigan Department of Natural Resources, 2009.

CONSIDERATIONS

Attempt to locate fuel breaks near ridge crests and valley bottoms. If winds are predictable, fuel breaks can be located perpendicular to the wind and on the windward side of the area to be protected.

Prescribed Grazing (528) may be used as a management tool to reduce understory fine fuels.

Woody residue produced in the establishment of a fuel break that is not removed from the site may be treated or arranged to enhance wildlife

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service [State Office](#), or download it from the [Field Office Technical Guide](#) for your state.

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habitat.

Select plant species that will enhance the needs of desired wildlife in the area.

Establish fire-resistant vegetation to further decrease the risk of the spread of fire. See "Wildfire Resistant Landscape Plants for Michigan" (MSUE).

Design and layout should include enhancement of multiple uses.

Where fuel breaks are installed to protect structures, consider pairing the fuel break with mitigation measures immediately surrounding the structure to increase the performance of both measures. Fuel breaks alone may not be sufficient to protect structures in high hazard fuel types that can produce long-range spotting.

Consider beneficial and other effects of installation of the fuel break on cultural resources and threatened and endangered species, natural areas, and wetlands.

Limit tree cutting activities to the dormant seasons, October 1 through March 1, to reduce chance of infection to the residual stand insects and diseases.

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded using Michigan NRCS Fuel Break (383) Job Sheet or narrative statements in the conservation plan or forest management plan.

Specifications will include, but are not limited to:

- Map indicating location of practice
- Acres treated
- Width and length, for linear fuel break
- Pre- and Post-treatment forest overstory stocking/spacing, if applicable
- Treatment of intermediate strata, including ladder fuels, if applicable
- Treatment of fine fuels (grass and forbs), if applicable
- Extent, method and timing of slash treatment (in compliance with the Woody Residue Treatment (384) Conservation Practice Standard)

- Establishment of fire-resistant vegetation, if applicable
- The method, timing, and type of equipment to be used
- Mitigation measures necessary, e.g., slash and debris disposal to reduce pest hazards
- Operation and Maintenance requirements

OPERATION AND MAINTENANCE

Treat or graze vegetative fuel breaks to avoid a build-up of excess litter and to control noxious and invasive plants. Refer to Prescribed Grazing (538), Herbaceous Weed Control (315), Brush Management (314) or other applicable Conservation Practice Standards for additional guidance.

Inspect all fuel breaks for woody materials such as dead limbs or blown down trees and remove or treat as necessary to maintain the desired level of fire spread risk.

Inspect fuel breaks at frequencies to assure that the desired level of fire spread risk is maintained.

Maintain the functionality of the original design throughout the life of the practice.

REFERENCES

Hanson, Mark S., R.T. Fernandez, and M.R. Penskar. 2010. Wildfire-Resistant Landscape Plants for Michigan. Michigan State University Extension. East Lansing, MI. Extension Bulletin E-2948.

<http://firewise.msu.edu/uploads/files/E2948.pdf>

Heiligmann, Randall B. 1997. Controlling Undesirable Trees, Shrubs, and Vines in your Woodland. Ohio State University Extension Publication F-45. Columbus, OH.

<http://ohioline.osu.edu/for-fact/0045.html>

Michigan Department of Natural Resource and Michigan Department of Environmental Quality. 2009. Sustainable Soil and Water Quality Practices on Forest Land. Lansing, MI.

http://www.michigan.gov/documents/dnr/IC4011_SustainableSoilAndWaterQualityPracticesOnForestLand_268417_7.pdf

Michigan Society of American Foresters. 2008.
Forest Management Guidelines for Michigan:
Silvicultural Systems.
[http://michigansaf.org/Business/MSAFguide/Silv
Systems.htm](http://michigansaf.org/Business/MSAFguide/SilvSystems.htm)

National Fire Protection Association. 2014.
Firewise. <http://firewise.org>

Sargent, M.S. and K.S. Carter, ed. 1999.
Managing Michigan's Wildlife: A Landowners
Guide. Michigan United Conservation Clubs,
East Lansing, Michigan.
[http://www.michigandnr.com/publications/pdfs/h
untingwildlifehabitat/Landowners_Guide/index.ht
m](http://www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/Landowners_Guide/index.htm)

Wenger, K.F., ed. 1984. Forestry Handbook,
Second Edition. Society of American Foresters
publication Number SAF 84-11. John Wiley and
Sons, Inc. New York, NY.