NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

WOODY RESIDUE TREATMENT

(Ac.)

CODE 384

DEFINITION

The treatment or residual woody material that is created due to management activities or natural disturbances.

PURPOSE

This practice is used to achieve one or more of the following purpose(s):

- Reduce hazardous fuels.
- Reduce the risk of harmful insects and disease.
- Protect/maintain air quality by reducing the risk of wildfire.
- Improve access for management purposes.
- Improve access to forage for livestock and wildlife.
- Develop renewable energy systems.
- Enhance aesthetics.
- Reduce the risk of harm to humans and livestock.
- Improve the soil organic matter.
- Improve the site for natural or artificial regeneration.

CONDITIONS WHERE PRACTICE APPLIES

On all lands, except active cropland, where woody residue requires treatment.

CRITERIA

Use the following criteria in planning and applying this practice. The general criteria apply to all tree/shrub site preparation. Additional listed criteria apply based on the intended purpose(s) of the practice.

General Criteria Applicable to All Purposes

The condition and extent of residual woody material shall determine the treatment method selected based on the operator's purpose.

Treatment methods (i.e. piling, burning, chipping/masticating, lop and scatter, off-site removal, crushing) will achieve landowner objectives while adequately protecting land and water resources.

Care shall be taken to minimize injury to or function of residual plant communities.

Timing of treatment shall coincide with intended purpose(s) and minimize impact on other resources.

Any broadcast burning activities shall comply with the Prescribed Burning – NC Practice Standard 338.

Woody debris left on the site after treatment will not present an unacceptable fire, safety, environmental, or pest hazard. Such remaining material will not interfere with the intended purpose or other management activities.

Additional Criteria Applicable to Reduce Hazardous Fuels

Reduce the amount of woody residue fuel to an acceptable level by controlling height, size, amount and distribution.

Additional Criteria to Reduce the Risk of Harmful Insects and Disease

The degree, intensity and timing of treatment shall take full advantage of harmful insect or disease characteristics to enhance the effectiveness of control.

Additional Criteria to Protect/Maintain Air Quality by Reducing the Risk of Wildfire

Activities will be consistent with established regulations and guidelines for PM10 and PM 2.5 emissions, ozone precursors (NOx and VOCs), as well as smoke and fugitive dust, and state and local permit requirements.

When feasible, use chipping, shredding, off-site disposal, bio-fuel composting, or other technique in lieu of burning.

Additional Criteria to Improve Access for Management Purposes

Woody material shall be piled, contour windrowed, shipped, shredded, burned or otherwise removed sufficiently to an acceptable level (height, size, amount, distribution) to allow access for planned management activities.

Additional Criteria to Improve Access to Forage for Grazing and Browsing Animals

Removal of woody material shall not be detrimental to the site and will adequately protect soil and water resources. Adequate woody material will be left to maintain or improve nutrient and organic matter cycling.

Additional Criteria to Develop Renewable Energy Systems

Woody material left on the site that is scattered, piled or windrowed will be further treated to meet client objectives and any state or local requirements for aesthetics and visual resources.

Additional Criteria to Enhance Aesthetics

Woody material left on the site that is scattered, piled or windrowed will be further treated to meet client objectives and any state or local requirements for aesthetics and visual resources.

Additional Criteria to Reduce the Risk of Harm to Humans and Livestock

Woody material left on the site that is scattered, piled or windrowed will be further treated to meet client objectives and any state or local requirements for safe use of the area.

Additional Criteria to Improve Soil Organic Matter

Woody material will be of a size and closeness to soil to accelerate in decomposition.

Additional Criteria to Improve the Site for Natural or Artificial Regeneration

Woody material will be treated to complement treatments specified in Tree/Shrub Site Preparation – NC Practice Standard 490.

CONSIDERATIONS

When feasible, consider chipping, shredding, off-site disposal, bio-fuel composting, or other techniques in lieu or burning.

When determining method and timing of woody material treatment consider air quality regulations, burning requirements, available resources, ability to use woody biomass and regeneration needs.

Consider effects on soil carbon when off-site removal of woody material is to occur.

Consider wildlife habitat needs for debris (e.g. large downed wood, snags, brush piles, etc.) when planning the timing and performing of woody residue treatment.

Consider establishing artificial habitat (e.g. bat boxes, nesting platforms, rock piles, etc.) where needed.

Consider pollinator needs when planning and performing treatment.

Consider the effects on cultural resources, threatened and endangered species, wetland and other natural and unique areas.

PLANS AND SPECIFICATIONS

Plans will address purpose and method of slash reduction; and desired outcome.

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, or other acceptable documentation.

Minimum documentation will include:

- Map showing fields or areas where woody residue treatment will be done; additionally the map should delineate:
  - Streams and water bodies.
  - Additional sensitive areas such as critical areas or cultural resources that need to be considered during slash reduction activities.
- Method(s) of woody residue treatment and equipment to be used; and, expected timetable of activities.
- Forest management plan (including woody residue treatment details) prepared by a registered forester when available.
- Statement requiring compliance with all federal, state and local laws.
- Required operation and maintenance instructions.

OPERATION AND MAINTENANCE

Generally woody residue treatment is a temporal practice. When woody residues have been treated, practice function is considered complete until another forestry, agroforestry or horticultural activity creates residues again. The following actions shall be carried out to insure that this practice functions as intended. These actions include normal repetitive activities in the application and use of the practice (operation), and repair and upkeep of the practice (maintenance).

- Monitor populations and the potential of damage by harmful pests and take controlling actions as necessary. Comply with INTEGRATED PEST MANAGMENT – NC Practice Standard 595.
- Control vehicle access during slash treatment for safety. Refer to ACCESS CONTROL – NC Practice Standard 472.
- Monitor vegetation growth/regrowth. Unwanted vegetation may occur requiring treatment.

REFERENCES

Ecological Restoration Institute 2010. Treating Slash. Northern Arizona University. Flagstaff, Arizona. http://www.eri.nau.edu/en/information-for-practitioners/treating-slash

Bennett, M. and Fitzgerald, S., 2008. Reducing Hazardous Fuels on Woodland Property: Disposing of Woody Material. Oregon State Extension publication EC-1574-E.