



**Natural Resources Conservation Service**  
**CONSERVATION PRACTICE STANDARD**  
**WOODY RESIDUE TREATMENT**

**CODE 384**

**(Ac.)**

**DEFINITION**

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

**PURPOSE**

This practice may be applied for one or more of the following purposes:

- 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**

**General Criteria Applicable to All Purposes**

The condition and extent of residual woody material shall determine the treatment method selected, based on the purpose(s) of the practice.

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.

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

Care shall be taken to minimize injury to or function of the 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 Maryland conservation practice standard for Prescribed Burning (338).

Any residual woody material 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 planned management activities.

**Additional Criteria Applicable to Reduce Hazardous Fuels**

Reduce the amount of fuels to an acceptable level by controlling height, size, amount and distribution of flammable materials.

**Additional Criteria to Reduce the Risk of Harmful Insects and Disease**

The degree, intensity and timing of treatment shall consider the characteristics of harmful insects or diseases 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 PM2.5 emissions, ozone precursors (NOx and VOCs), as well as smoke and fugitive dust, and state and local permit requirements.

**Additional Criteria to Improve Access to Forage for Livestock and Wildlife**

Woody material shall be piled, contour windrowed, or removed sufficiently to allow access by livestock and wildlife, and to maximize forage growth. To the extent practical, avoid piling and windrowing material in wetlands.

**Additional Criteria to Develop Renewable Energy Systems**

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 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 measures specified in the Maryland conservation practice standard for Tree/Shrub Site Preparation (490).

*Note: Specific programs may dictate criteria in addition to, or more restrictive than, those specified in this standard.*

### **CONSIDERATIONS**

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

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

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

Consider wildlife habitat needs (e.g., large downed wood, snags, brush piles, etc.) when planning the timing and method of 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 beneficial and other effects on cultural resources, and threatened and endangered species, natural areas, and wetlands.

### **PLANS AND SPECIFICATIONS**

Plans and specifications for this practice shall be prepared in accordance with the previously listed criteria. Plans and specifications shall contain sufficient detail to ensure successful implementation of this practice, and may be recorded in narrative form in a forest management plan, on Implementation Requirements (IR) sheets, or other approved forms.

A forest management plan and/or completed 384 IR sheet can serve as the plan and specifications for this practice.

The following items shall be addressed, as appropriate:

- Purpose(s) of woody residue treatment;
- Method(s) of treatment to be used;
- Timing of application;
- Identify any environmentally sensitive areas (e.g., water courses, water bodies, wetlands) present on or bordering the project, and any treatment setbacks and/or other water quality buffers, if applicable;
- Erosion and sediment control measures (Best Management Practices), special requirements, and mitigation measures, if applicable.

### **Supporting Data and Documentation**

The following is a list of the minimum data and documentation to be recorded in the case file:

- Extent of practice in acres, field number where the practice is located, and the location of the practice marked on the conservation plan map;
- Assistance notes. The notes shall include dates of site visits, name or initials of the person who made the visit, specifics as to alternatives discussed, decisions made, and by whom;
- Completed IR sheet, and copy of the forest management plan (if applicable).

### **OPERATION AND MAINTENANCE**

An Operation and Management (O&M) plan shall be prepared and is the responsibility of the client to implement. A forest management plan and/or IR sheet may serve as the management plan, as well as supporting documentation, and shall be reviewed with and provided to the client.

At a minimum, the following components shall be addressed in the O&M plan, as applicable:

- Inspect and maintain erosion and sediment control measures, as necessary;
- For safety purposes during treatment, control access to the site by vehicles or people, to the extent feasible;
- Monitor populations of harmful pests and the potential of damage to site resources, and take controlling actions if necessary;
- Monitor vegetation growth. Unwanted vegetation or excessive re-growth may occur, requiring treatment.

### **REFERENCES**

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

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

USDA, Natural Resources Conservation Service. *Conservation Practice Standards*. Maryland Field Office Technical Guide, Section IV.