

NATURAL RESOURCES CONSERVATION SERVICE
VIRGINIA CONSERVATION PRACTICE STANDARD

LAND CLEARING

(Acre)

Code 460

DEFINITION

Removing trees, stumps, and other vegetation from wooded areas to achieve a conservation objective.

PURPOSE

Facilitate needed land use adjustments and improvements to an existing site in the interest of natural resource conservation.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to wooded areas for the removal of trees, stumps, brush, and other vegetation in order to implement a conservation objective.

CRITERIA

General. Clearing and disposal methods shall be in accordance with federal, state, and local laws. Methods must address the impacts to erosion control, air and water quality, and the safety of the public and property.

Limit disposal of cleared debris into standing or green timber. This will minimize the need for increased maintenance and re-clearing while reducing fire hazards. Ensure that debris piles are at least 100 feet from adjacent woodland, buildings, or roads.

Disposal of cleared debris shall be in accordance with NRCS Conservation Practice Standard *Woody Residue Treatment (Code 384)*; or if cleared debris disposed by burning, *NRCS*

Conservation Practice Standard Prescribed Burning (Code 338).

Cleared area shall be left in a condition that facilitates the planned use and treatment of the land.

Water Quality. An area 50-foot wide will be left undisturbed between the area being cleared and all wetlands, water bodies and watercourses.

Soil Quality. Clearing shall be performed when the soil moisture content is such that soil structure damage or compaction is minimized.

Temporary cover will be established as necessary to control sheet, rill and wind erosion on the cleared area until the planned land use is in place.

CONSIDERATIONS

General. When a salvage harvest is performed prior to land clearing, leaving taller stumps will facilitate final clearing and grubbing activities.

Land clearing should be conducted when disturbance to, and movement of, topsoil is minimized. Consideration should be given to land clearing during periods when the soil is frozen (in areas with minimal soil cover), during periods of dry summer conditions (in areas prone to water induced erosion), and during periods of low probability of high winds (in areas prone to wind-induced erosion).

Land clearing is generally more efficient for tree diameters less than 4 inches. For larger diameter trees, the root wad (or crown) should be removed during periods of low soil moisture.

NRCS, VA
October 2012

Moving debris during periods of high soil moisture can lead to deep rutting and burying of debris, complicating final cleanup.

Cultural Resources. Ground disturbing activities associated with this practice have the potential to affect cultural resources. Consideration should be given to using methods that minimize disturbance to the ground surface.

Fish and Wildlife Resources. Special attention should be given to maintaining habitat for fish and wildlife. Strip clearing, windrowing debris, and maintaining den and food trees can minimize impacts on wildlife.

Other Considerations. The orientation and layout of debris piles should be considered to promote proper curing of the debris and facilitate surface water drainage. Chained or pushed trees should be oriented so that they lay parallel to one another. Debris piles should follow ground contours and be high, narrow, compact and free of soil and snow. Debris piles, in general, should be between 15 to 25 feet wide, 10 to 15 feet high, and spaced 150 to 200 feet apart. As a minimum, debris piles should include an opening (within the debris pile) of approximately 30 feet at 200 foot intervals, and at other locations where routing of equipment, natural drainage, surface water runoff, and firebreaks may be needed.

Activities which minimize the spread or introduction of weeds on a newly cleared site should be considered. Additionally, the disposal of vegetation by burying, composting, or mulching debris will facilitate decomposition.

Consider the effects on the water budget, especially on volumes and rates of runoff, evaporation, and transpiration.

The impact of soil settling at varying rates in runoff immediately after clearing should be assessed.

Land clearing can increase the volume and rate of runoff. This is more pronounced on steeper land.

Effects on erosion and the movement of sediment, pathogens, and soluble and sediment-attached substances carried by runoff should be considered.

Consider the disposal of vegetation with regards to carbon sequestration. Burying, composting, or mulching the debris would limit the release of carbon.

PLANS AND SPECIFICATIONS

Plans and specifications for land clearing shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose. As a minimum plans and specifications shall include:

DESIGN DATA

Engineering plans, specifications, and reports shall include but not be limited to the following:

1. Completed Environmental Evaluation and subsequent requirements.
2. The Forestry Management Plan should be included with the case file information, as appropriate.
3. Plan view of site with existing and planned features, including dimensions, distances, etc.
4. The kinds of timber to be salvaged, lengths of logs, and location of stacking.
5. Disposal requirements for all materials not salvaged.
6. Orientation and layout of debris piles
7. Standard Cover Sheet (VA-SO-100A).
8. Materials and quantities needed.
9. Vegetation and/or ground cover requirements.
10. Identification of needed Erosion & Sediment Control measures. The plan shall provide for the measures necessary to protect the cleared area from erosion and adjacent areas from sediment, nutrients, and pesticides.
11. Virginia Conservation Practice Specifications (700 Series). Site specific specifications will describe the condition of the cleared area needed to facilitate the planned use and treatment of the land, including surface grading requirements if applicable.
12. Operation and Maintenance Plan

CHECK DATA

1. As-built plans including dimensions, types and quantities of materials installed, and variations from design. Include justification for variations.
2. Adequacy of vegetation and/or ground cover.
3. Complete as-built section of Cover Sheet.

OPERATION AND MAINTENANCE

An Operation and Maintenance plan shall be prepared for use by the client. The plan shall include specific instructions to ensure that this practice functions as intended throughout its expected life. Minimum requirements to be addressed in the plan are:

- A maintenance program to maintain vegetative cover while controlling undesired and exotic vegetation
- Protection of watercourses and water quality after land clearing
- Guidance on crossing cleared areas with heavy equipment when the ground is saturated
- Restrictions on the use of mechanical treatments, prescribed burning, pesticides and other chemicals that compromise the intended purpose.

REFERENCES

USDA-Natural Resources Conservation Service. Electronic Field Office Technical Guide (eFOTG), Section III, Resource Quality Criteria for RMS [Online]. Available at <http://www.nrcs.usda.gov/technical/eFOTG>

USDA-Natural Resources Conservation Service. General Manual-190, Part 410, Compliance with NEPA. Section 410.22-Endangered and Threatened Species of Plants and Animals and State Species of Concern [online]. Available at <http://policy.nrcs.usda.gov>, under General Manual.

Best Management Practices for Water Quality. Virginia Department of Forestry. 2002 [online].

<http://www.dof.virginia.gov/wq/index-bmp-guide.shtml>.

USDA-Natural Resources Conservation Service. General Manual-190, Part 410, Compliance with NEPA. Section 410.22-Endangered and Threatened Species of Plants and Animals and State Species of Concern [online]. Available at <http://policy.nrcs.usda.gov>, under General Manual.

USDA-Natural Resources Conservation Service. Electronic Field Office Technical Guide (eFOTG), Section II, Threatened and Endangered Species [Online]. Available at <http://www.nrcs.usda.gov/technical/eFOTG>

USDA-Natural Resources Conservation Service. Virginia 700 Series Construction Specifications. [On-line]. Available at <http://www.nrcs.usda.gov/technical/eFOTG>.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all of its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex (including gender identity and expression), marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotope, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).