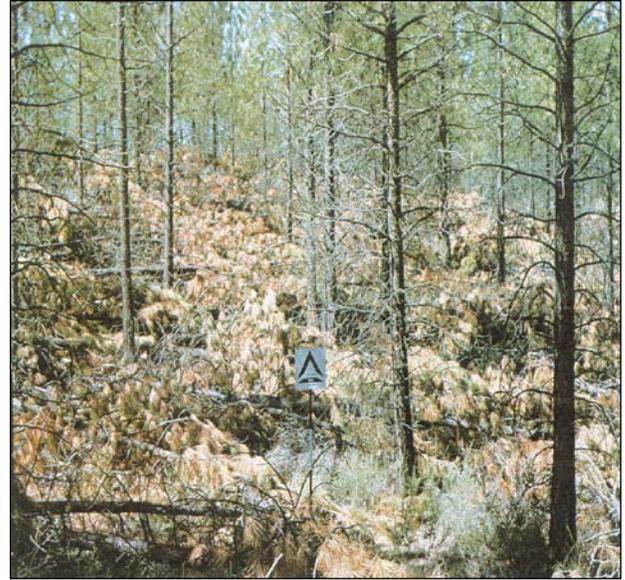


Woody Residue Treatment

Conservation Practice Job Sheet

AK-384



Definition

Treating woody plant residues created during forestry, agroforestry and horticultural activities to achieve management objectives.

Purpose

- Reduce hazardous fuels
- Reduce the risk of harmful insects and disease
- Protect/maintain air quality by reducing the risk of wildfire
- Improve access to forage for grazing and browsing animals (includes 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.

Where Used

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

Conservation/Forest Management Planning

Typical slash treatment (woody residue treatment) is often accomplished during the implementation of forest management practices. Activities such as harvesting results in slash but this is normally not a resource concern since slash naturally breaks down after a few seasons. This practice is to be planned where additional treatment is needed to meet a resource concern or where a specific level of slash treatment is required during a silvicultural operation and documentation of the performance standard is desired. Planning for slash treatment before a harvest or silvicultural activity and to occur during the treatment is often times the most economical method of implementation. This practice should not be used as a substitute for poor logging or forest treatment implementation but should be used to improve the level of treatment.

Successful Practice Implementation

Woody residue treatment is successfully implemented when the planner and implementer use the natural break down process as well as mechanical actions both with currently occurring operation or actions as well as additional treatments if needed to meet the intended purposes and landowner objectives.

Considerations

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

Consider retaining 10 to 20 pieces of woody debris greater than 9 inches in diameter over each acre as a source of downed logs for specific plant, insect and animal habitat.

Consider wildlife needs when performing and timing treatment.

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

Guidelines for Operation and Maintenance

Monitor populations and the potential of damage to site resources by harmful pests and take controlling actions as necessary. Comply with Pest Management - 595.



Figure 1. Total slash accumulation after a block harvest is 38.2 tons/acre (8.1 tons/acre for size class 1.1-3.0 inches in diameter; 6.3 tons/acre for 3.1-9.0 inches; 17.2 tons/acre for 9.1-20.0 inches and 6.6 tons/acre for 20.1+ inches). Slash treatment could involve piling and burning, broadcast burning, and/or chipping followed by removal, or removal. To achieve a 9 ton/acre criteria, approximately 30 tons/acre of slash is considered excess.



Figure 2. Total slash accumulation after a precommercial thinning is 23.0 tons/acre (6.7 tons/acre for size class 1.1-3.0 inches in diameter; 12.8 tons/acre for 3.1-9.0 inches; and 3.5 tons/acre for 20.1+ inches). Slash treatment could involve piling and burning, and/or chipping followed by removal, or removal. To achieve a 9 ton/acre criteria, approximately 14 tons/acre of slash is considered excess.



Figure 3. Total slash accumulation after a partial harvest is 6.3 tons/acre (3.4 tons/acre for size class 1.1-3.0 inches in diameter; 2.9 tons/acre for 3.1-9.0 inches). Because slash is less than the 9 tons/acre criteria, slash treatment could consist of lopping and scattering to meet the less than 2-foot height criteria.



Figure 4. Total slash accumulation after a precommercial thinning is 7.8 tons/acre (5.5 tons/acre for size class 1.1-3.0 inches in diameter; 2.3 tons/acre for 3.1-9.0 inches). Because slash is less than the 9 tons/acre criteria, slash treatment could consist of lopping and scattering to meet the less than 2-foot height criteria.

Source of images: Photo Series for Quantifying Forest Residues, USDA-Forest Service General Technical Report PNW-52 1976, W. Maxwell and F. Ward)

Treatment of Woody Residue

Land user _____
 Assisted by _____

Field _____
 Date _____

Land use: (forest) (wildlife) (grazing) (Other _____)

PURPOSE (Check all that apply)	
Reduce hazardous fuels <input type="checkbox"/>	Enhance aesthetics <input type="checkbox"/>
Reduce the risk of harmful insects and disease <input type="checkbox"/>	Reduce the risk of harm to humans and livestock <input type="checkbox"/>
Protect/maintain air quality by reducing the risk of wildfire <input type="checkbox"/>	Improve the soil organic matter <input type="checkbox"/>
Improve the site for natural or artificial regeneration. <input type="checkbox"/>	Improve access to forage for grazing and browsing animals (including wildlife) <input type="checkbox"/>
Develop renewable energy systems <input type="checkbox"/>	

General treatment (applies to all the specific applications below)

All slash and woody debris will be cuts so that it does not exceed 4.5 feet in height. Slash and woody debris will not cover/shade over 50% of the forest surface/floor. Slash and woody debris 50 feet above a culvert, bridge water control structure will be treated or removed so that is could not potentially block the water passage structure.

_additional requirements or clarifications _____

- Reduction of hazardous Fuels and Air Quality purposes – 90% of materials (slash) greater than 3 inches in diameter will be treated. Material treated will be in contact with the ground once every 8 feet or closer. Ninety percent of all material 3 inches or greater will be within 2 feet of the ground.

_additional requirements or clarifications _____

- Reduction of harmful insect and disease risk – All material greater than 4 inches in diameter will treat the specification for reduction of hazardous fuels or will be debarked and meet the requirements of a pest management plan

_additional requirements or clarifications _____

- Treatment for Forage, Grazing and Browsing –A minimum of 75 percent of the treatment area will be free from large woody debris (4 inches or greater in diameter) that prevents access for travel and feeding by identified species. A minimum of 50% of the area will be open to allow sunlight to allow for the growth and development of forage and browsing plant species.

_additional requirements or clarifications_____

- Treatment for reduction of safety hazards for Humans and Livestock- all material will be laid down to a height of 2 feet and all branches, limbs, stems, and boles will be cut at an angel of greater than 45 degrees.

_additional requirements or clarifications_____

- Treatment for the improvement of soil organic matter- all material will be of a size and placement as detailed

___Maximum Size, Length and or Volume of Woody Residue=_____

___Distance from Ground=_____

_additional requirements or clarifications_____

- Improvement for artificial or natural regeneration of an identified species

___Species =_____

___Width, diameter and or percent of treated ground=_____

___Desired Treatment=_____

_additional requirements or clarifications_____

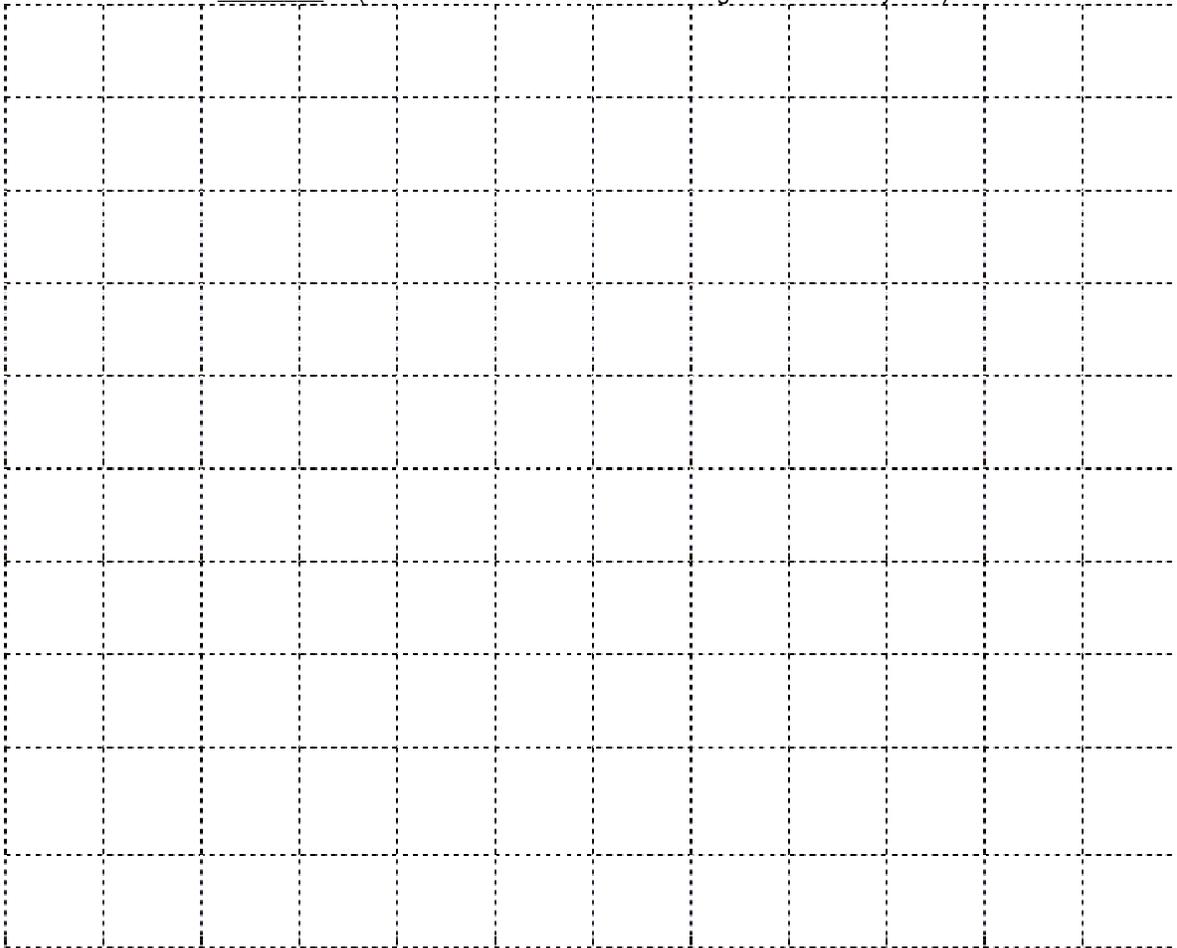
- Treatment for aesthetics_____
- _____

_additional requirements or clarifications_____

Woody Residue Treatment – Job Sketch

Draw or sketch the field, showing any sensitive areas and required setback zones. Inside each sketched field, enter total field acres and net application acres. Other relevant information, such as complementary practices or adjacent field or tract conditions may be included.

Scale 1"= _____ ft. (NA indicates sketch not to scale: grid size=1/2" by 1/2")



Perform the following operations and maintenance:
Inspect residual plants periodically and protect from adverse impacts such as insects, diseases or competing vegetation,
Additional specifications and notes:

This plan was developed based on the requirements of the current NRCS standard and any applicable Federal, state, or local regulations or policies. Changes in any of these regulations may necessitate a revision of the plan.

Design Certification

I certify that the above design meets NRCS standards and specifications:

Permits required ? Yes _____ No _____ (attach copy if applicable)

Acres Planned _____ Linear Feet Planned _____

Planner _____ Date _____

I have reviewed this plan and agree to install as designed.

Cooperator _____ Date _____

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APPLICATION / CERTIFICATION

Acres Planned _____ **Acres Applied** _____

Linear Ft. Planned _____ **Linear Ft. Applied** _____

Program _____ **Contract #** _____

I certify that the above installation meets NRCS standards and specifications indicated in the attached AK-384 Job sheet:

YES

No

Planner _____ **Date** _____

Recommendations and Comments:

Operation & Maintenance

Periodic monitoring of this practice is essential to determine 1) if production and ecological goals are being met, 2) if facilitating practices are installed, maintained, and adequate, and 3) if modifications are needed.