



Natural Resources Conservation Service
Minnesota

Client/Operating Unit: Farm # Tract #

Farm Location: Field # Program:

Specifications Date: Planned Installation Date:

Other identifying data:

Installation shall be in accordance with the specifications, drawings, and other requirements. NO CHANGES ARE TO BE MADE IN THE SPECIFICATIONS WITHOUT PRIOR APPROVAL BY AN AGENCY REPRESENTATIVE.

General Specifications

Slash treatment and the condition and extent of residual slash shall comply with the following items, any additional specifications based on purpose(s), and requirements listed for applicable slash treatment techniques.

1. All activities associated with applying this practice shall comply with state, tribal and local forestry and related laws and regulations. It is the landowner's responsibility to obtain appropriate permits and/or applications prior to commencing an activity.
2. Soils, site factors, and timing of application must be suitable for any ground-based equipment utilized for slash treatment to avoid excessive compaction, rutting, or damage to the soil surface layer. Attach required Rating reports from the Web Soil Survey for suitability or limitations. For safety purposes and to protect site resources including residual trees, treatment methods involving ground-based heavy equipment are generally not applied on slopes exceeding 20 percent.
3. Woody residue removed will be in compliance with current federal, state, and local wetland regulations in relation to vegetation removal. Woody residue left on-site will not be placed in streams or piled in streamside or riparian management zones. Large woody debris left on-site for aquatic habitat improvement planned for the site is allowed.
4. Infested wood should be treated on-site or precautions taken to prevent spread during transport. Prompt harvest after weather events can prevent further damage from insects and disease.

Additional Specifications by Practice Purpose

(Check all that apply and record all on-site requirements.)

<input type="checkbox"/>	<p><u>Reduce hazardous fuels and/or Protect/maintain air quality by reducing the risk of wildfire.</u> Woody residue is treated so concentrations of 1 inch size materials and larger do not create hazardous fuel loads or wildfire risk while retaining a minimum of 1/3 woody debris on the site. A wildfire risk analysis using methodology adopted by a federal, state or local wildfire control authority may be used to modify the thresholds listed above on a site-by-site basis and documented in the clients NRCS casefile. Woody residue treatments must be coordinated with and complement Firebreak (394) if scheduled concurrently. Schedule supporting practices as needed.</p> <p>Other requirements:</p>
<input type="checkbox"/>	<p><u>Reduce the risk of harmful insects and disease.</u> Based on the characteristics and life cycles of existing and anticipated pest species (http://www.fs.fed.us/r6/nr/fid/wid.shtml), treat and/or dispose of woody residue in a way to minimize harm and infestation to the residual trees and adjacent stands/areas. Reduce woody residue to chips of less than 1 cubic inch if not using prescribed burning. Chips may be scattered on-site if the scattered level does not exceed 3 inches; remove excess chips if more than 3 inches deep. If possible, remove woody residues created while ground is frozen. If not removed treat these residues before insects or diseases emerge in spring. Prescribed Burning (338) will be used if bark beetles or borers are present. Do not remove large woody debris used to create wildlife habitats, do not sell slash as firewood; debark slash if possible; masticate or chip woody residue to less than 1 cubic inch if not using prescribed burning. Or if bark beetles are present/possible, limit operation to Sept 1 – January 30 only.</p> <p>Other requirements:</p>
<input type="checkbox"/>	<p><u>To Improve access for management purposes, Improve forage for livestock and wildlife, Reduce the risk of harm to humans and livestock, and Enhance aesthetics.</u> A Prescribed Grazing Plan (528) and/or wildlife specific management plan (644, 645 or 647 or another suitable wildlife practice) will be developed and followed as per established criteria. Use Forest Stand Improvement (666) under the Additional Criteria To Improve Wildlife Habitat Section if using downed woody residue for wildlife habitats. Avoid activities that produce woody residue during peak recreational use of the site. Notify recreational users that burning or heavy equipment will be in use for a specific period of time. Use Access Control (472) as a facilitating practice if necessary. Woody residue left on site in view or near public trails or roads should be a minimum of 50 feet away from the viewshed or chopped and scattered to less than 4 feet in height over the site if possible taking risk of insect and diseases into account.</p> <p>Other requirements:</p>

Additional Specifications by Practice Purpose

(Check all that apply and record all on-site requirements.)

<input type="checkbox"/>	<p><u>Develop renewable energy systems.</u> For erosion or sedimentation hazards or threats to water quality use soil conserving practices such as Conservation Cover (327), Critical Area Planting (342), Diversion (362), Forest Trails and Landings (655) or other suitable practices. Woody residue left after treatment will retain a minimum of 30% woody debris scattered throughout the site to maintain soil health and productivity.</p> <p>Other requirements:</p>
<input type="checkbox"/>	<p><u>Improve the soil organic matter.</u> Woody residue will be treated to minimize its size to an average of 1 cubic inch and maximize its contact with the forest floor to accelerate decomposition. Where chips are produced in sufficient quantities to uniformly cover the ground surface, depth shall not exceed 3 inches. To provide a source for organic matter cycling, residual woody residue left <u>after</u> treatment will be as evenly distributed as possible. Where feasible, let fine debris (needles and twigs) weather and/or fall from woody residue before it is burned or removed from the site.</p> <p>Other requirements:</p>
<input type="checkbox"/>	<p><u>Improve the site for natural or artificial regeneration.</u> Woody residue will be treated to minimize its impact to seed germination or seedling growth and development. Schedule a light broadcast Prescribed Burning (338) as necessary. Woody residue treatment operations will complement site-specific implementation of Tree/Shrub Site Preparation (490) and Tree/Shrub Establishment (612).</p> <p>Other requirements:</p>

Slash Treatment Methods and Requirements

(Check all that apply and describe pertinent precautions during application. For additional detail on methods and equipment, refer to the *Understory biomass reduction methods and equipment catalog*, <http://www.fs.fed.us/forestmanagement/WoodyBiomassUtilization/tools/mtdc-catalog/index.shtml>).

<input type="checkbox"/>	<p><u>Windrowing*, and Windrowing and Burning:</u> These methods are suited to areas with adequate spacing between residual trees or areas with few or no residual trees. Windrows that will be burned later may be “teepeed” to shed water or, if small in size, temporarily covered with water-resistant paper or plastic to allow material beneath to dry. Unburned windrows can serve as nesting and escape cover for wildlife if designed as such. When machine windrowing, a “brush rake” (blade with tines) will minimize pushing surface soil into woody residue accumulations. Do not create windrows near or against standing trees. Materials left on-site from forest operations such as old tires and petroleum products will not be incorporated in piles. Any burning will comply with Prescribed Burning (338) practice criteria and be conducted to minimize heat damage to residual trees and their roots and underlying soil. Other requirements: <u>All burning associated with woody residue removal must meet local and state burning regulations. NRCS will not be responsible for planning, design, and application of Prescribed Burning (338).</u></p> <p>*Also known as piling</p> <p>Other Requirements:</p>
<input type="checkbox"/>	<p><u>Broadcast Burning:</u> This method consumes and alters woody residue by prescribed fire to a point minimizing the risk of wildfire and is suited primarily to areas with few to no residual trees. Smoke management and production of air pollutants are a concern with this method. Any burning will comply with the Prescribed Burning (338) practice standard and be conducted to minimize heat damage to residual trees and their roots and underlying soil. <u>All burning associated with woody residue removal must meet all local and state burning regulations. NRCS will not be responsible for the planning, design, and application of Prescribed Burning (338).</u></p> <p>Other requirements:</p>

Slash Treatment Methods and Requirements

(Check all that apply and describe pertinent precautions during application. For additional detail on methods and equipment, refer to the *Understory biomass reduction methods and equipment catalog*, <http://www.fs.fed.us/forestmanagement/WoodyBiomassUtilization/tools/mtdc-catalog/index.shtml>).

<input type="checkbox"/>	<p><u>Chopping, masticating and crushing:</u> This method involves the use of heavy ground-based equipment that crush woody residue to a depth not exceeding 4 feet. The closer crushed material is to the forest floor, the quicker decomposition occurs and the less chance of fire reaching into the above canopy layers.</p> <p>Other requirements:</p>
<input type="checkbox"/>	<p><u>Lop and Scatter:</u> This method is suited to areas with lower woody residue accumulations and is effective for such accumulations in meeting height requirements, facilitating use of the treated area by humans and animals, improving aesthetics, and distributing material more uniformly and closer to the forest floor for faster decomposition. Comply with the federal, state and/or local laws as applicable.</p> <p>Other requirements:</p>
<input type="checkbox"/>	<p><u>Chipping:</u> This method includes the mechanical conversion of woody residue to chips not exceeding 1 cubic inch. For safety purposes, humans and animals must be excluded from areas being treated by equipment that flails and throws chips and chunks. Operate such machinery to minimize bark damage to the residual trees.</p> <p>Other requirements:</p>
<input type="checkbox"/>	<p><u>Removal:</u> Woody residue is removed from the site. This method is suited to areas with higher woody residue accumulations where other methods may not sufficiently reduce undesired materials. At least 30% of residues will be left on-site for soil health, water quality and erosion control.</p> <p>Other requirements:</p>

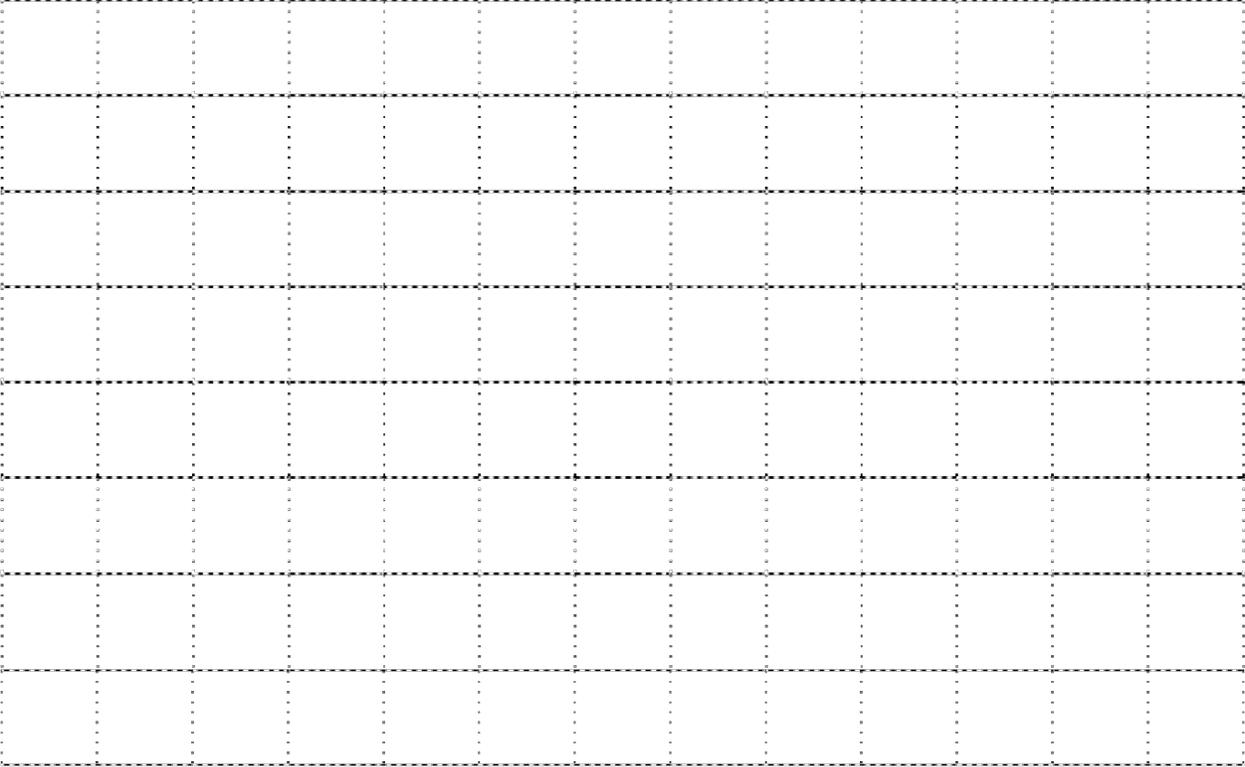
Slash Treatment Methods and Requirements

(Check all that apply and describe pertinent precautions during application. For additional detail on methods and equipment, refer to the *Understory biomass reduction methods and equipment catalog*, <http://www.fs.fed.us/forestmanagement/WoodyBiomassUtilization/tools/mtdc-catalog/index.shtml>).

Other clarifying notes:



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



Additional Clarifying Notes (technical, programmatic, etc.):

USDA is an equal opportunity provider and employer.

DESIGN AND INSTALLATION/LAYOUT APPROVAL:

I have job approval authority and certify this practice has been designed with specifications to meet the conservation practice standard and that the client has been advised of installation and layout elements:

NRCS Representative name and title (type or print):			
NRCS Representative Signature:		Date:	

LANDOWNER/OPERATOR ACKNOWLEDGES:

- a. They have received a copy of the specifications and understand the contents including the scope and location of the practice.
- b. They have obtained all necessary permits and/or rights in advance of practice application, and will comply with all ordinances and laws pertaining to the application of this practice.
- c. No changes will be made in the installation of the job without prior concurrence of the NRCS.
- d. Maintenance of the installed work is necessary for proper performance during the life of the practice. The practice life is 10 years.

I have reviewed all specifications and agree to install as specified:

Landowner/operator name and title (type or print):			
Landowner/operator Signature:		Date:	

RECORD OF COMPLETION AND CHECK OUT CERTIFICATION:

Units (____)	Date Completed by Client:	Date Certified:	Approver's Initials:

I have job approval authority and certify this practice has been applied and meets design specifications:

NRCS Representative name and title (type or print):			
NRCS Representative Signature:		Date:	