

Tree/Shrub Site Preparation

Conservation Practice Job Sheet

490-WA-JS

Natural Resources Conservation Service, Washington

January 2007

Client:



Definition

Treatment of areas to improve site conditions for establishing trees and/or shrubs.

Purposes

- Encourage natural regeneration of desirable woody plants
- Permit artificial establishment of woody plants

Where used

On all lands where establishment of woody plants (trees, shrubs, vines, etc.) is desired

Conservation Management Systems

Tree/Shrub Site Preparation is a practice that is part of a conservation management system for any lands desiring to establish woody plants. The practice is used to make ready an area for the establishment and growth of woody plants for future harvest, improved ecological conditions, watershed enhancement, aesthetics, etc. A thorough investigation and understanding of competing vegetation and soils is the key to the successful

establishment of woody plants. Controlling the re-growth of competing vegetation is also part of the conservation management system. A post treatment controlling competing vegetation that is inhibiting tree/shrub growth is usually needed to allow seedlings to develop a robust root system and to grow at an un-impeded growth rate. Use Exclusion (472) may be needed to protect trees or shrubs from domestic livestock, people or vehicles.

Plans and Specifications

Plans and specifications shall include the required vegetation control and acceptable site preparation methods; timing of application; deep ripping or discing; and any erosion control measures needed. Instructions will be prepared for each site and purpose and recorded using approved specification sheets.

Operation and Maintenance

Repair erosion control measures as necessary to ensure proper function. Access by vehicles during site preparation or after should be controlled to minimize erosion problems, compaction and other impacts to the site.

Monitor and control undesirable vegetation in treated areas. On forestland use Forest Stand Improvement (666), on other lands use Brush Management (314) to plan any follow-up treatment of any undesirable vegetation.

All chemicals will be applied in accordance with label guidelines; Washington State Forest Practices Act; and will comply with federal, state, and local laws and regulations during the installation, operation and maintenance.

TREE/SHRUB SITE PREPARATION SPECIFICATION SHEET **Site Preparation on Pasture or Crop Land**

Site preparation on pasture or cropland shall include: 1) deep ripping to break up any compacted layer(s), and 2) discing or spraying chemicals (see below) to kill any growing vegetation. Deep ripping shall be completed, at a minimum, in the late summer of the year PRIOR to seedling establishment. Disc to smooth, as soon as possible. Vegetation re-growth will be treated at the time most beneficial to killing unwanted vegetation. Perform final discing to smooth planting site and/or kill competing vegetation, PRIOR to seedling establishment. When soil erosion is a concern, establish a temporary cover in the area of concern using Critical Area Planting specification # 342.

Additional Information:

 Site Preparation on Forest/Grazed Forest Land

Site preparation can be accomplished by hand, heavy equipment, or chemicals (see below). Hand site preparation can be accomplished with a chainsaw, brush cutter, or machete to cut down brush or small trees. A hoe, shovel, pulaski, etc., can be used when removing brush, grasses or forbs. The spot to be planted will have an area no smaller than 4 feet in diameter cleared. All competing plants will be severed from their roots. Re-growth of competing vegetation, after seedling establishment, will be controlled, for a minimum of 2 years after seedling establishment.

Limit the use of heavy equipment to slopes less than 30 percent. To minimize soil compaction limit equipment use to when soil moisture is low (mid-summer to early fall). A brush rake shall be used when piling or windrowing trees/brush. Attach brush rake to, or in place of regular blade. Slash material can be chopped or crushed in place. After treatment, slash material shall be no larger than 6 inches in diameter and no longer than 4 feet.

Hand piled slash will not exceed 6' x 6' x 6', when leave trees are present. Mechanically piled windrows will be no more and 10 feet high, 20 feet wide, at the base, and placed on the contour. When soil erosion is a concern, establish a temporary cover in the area of concern using Critical Area Planting specification # 342.

Additional Information:

 Site Preparation on Grazed Range Land

Site preparation can be accomplished by hand, heavy equipment, or chemicals (see below). Hand site preparation can be accomplished with a chainsaw, brush cutter, or machete to cut down brush or small trees. A hoe, shovel, or pulaski, etc., can be used when removing brush, grasses or forbs. The spot to be planted will have an area at least 4 feet in diameter cleared. All competing vegetation in the plating area will severed from their roots. Re-growth of competing vegetation, after seedling establishment, will be controlled, for a minimum of 2 years after seedling establishment.

Limit the use of heavy equipment to slopes less than 30 percent. To minimize soil compaction limit equipment use to when soil moisture is low(mid-summer to early fall).

Slash material can be chopped or crushed in place. After treatment, slash material shall be no larger than 6 inches in diameter and no longer than 4 feet.

When soil erosion is a concern, establish a temporary cover in the area of concern using Critical Area Planting specification # 342.

Additional Information:

TREE/SHRUB SITE PREPARATION SPECIFICATION SHEET **Chemical Site Preparation for All Landuses**

Herbicides shall be applied according to federal, state, local regulations and label directions. Herbicides shall be registered for the current landuse. All herbicides shall be evaluated by running WIN-PST. WIN-PST will be used to evaluate potential human and water resource concerns. A WIN-PST hazard rating of Intermediate or higher requires mitigation. Required mitigation shall consist of:

- **Aerial/Ground**

Buffer strips shall be establish around streams, riparian zones, wetlands, residential areas, orchards and crop fields. Buffer strips shall comply with State or local regulations.

- **Backpack sprayer**

For small or irregularly shaped areas a backpack sprayer may be used. Do not use a backpack sprayer on vegetation over 5 feet tall. Use backpack sprayers for basal treatment application. Buffer strips shall be established and comply with State or local regulations.

- **Injection**

Hard to kill species can be controlled by herbicide injection. Herbicides can be injected by a "hypo-hatchet", or applied with the "hack and squirt" method. A hypo-hatchet injects a metered amount, depending upon the herbicide and tree specie being controlled. Hack and squirt requires one to spray herbicide from a squirt bottle into the opened wound create by a hatchet. Label directions will be followed.

- **Timing**

Timing of application is critical, and will depend upon the vegetation being treated. Consult with a licensed applicator, WA DNR forester, or extension agent for recommended dates. Follow all label directions. Re-apply as necessary.

SAFETY -- When applying herbicides, do the following: 1) Wear protective clothing and safety devices (safety glasses, air filtering mask, etc.) as recommended on the label. Bathe after each use; 2) Read and follow all label directions closely, even if you have read them before; 3) Be cautious when applying herbicides. Know your legal responsibility as a pesticide applicator. You may be liable for any and all injury or damage resulting from pesticide application.

Additional Information:

Site Preparation on Wildlife Land – See Pasture/Crop, Forest/Grazed Forest, or Grazed Range depending upon types of vegetation present.

Information on Burning Piles (NRCS will not provide planning, design, and application assistance for burning)

Slash and brush piles can be burned. To burn slash, allow to dry over a summer. Cover a portion of slash with plastic, waterproof paper, etc. to allow for ignition in the winter. Clear a 1-2 foot area, around slash pile, of materials that will allow fire to escape when burned. ALL BURNING MUST MEET ALL LOCAL AND STATE BURNING REGULATIONS. *Landowner to contact WA State Dept. of Natural Resources prior to any burning*

Additional Requirements:

Operation and Maintenance Information:

Practice Specifications Approval and Completion Certification
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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 _____.

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:	