



Natural Resources Conservation Service
WASHINGTON

PLT17 – Creating forest openings to improve hardwood stands

CSP Enhancement Washington State Supplement

Land Use Applicability: Cropland, Pastureland

January 2014

Client/Operating Unit:

Tract Number:

Farm/Ranch Location:

Farm Number:

Specifications Date:

Field Number(s):

Planned Installation Date:

Proposed Treatment Acres:

Enhancement Description:

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Creating forest openings or patches is a silvicultural practice used to naturally regenerate over-mature and/or degraded hardwood stands while providing added cover and browse for several game and non-game species of wildlife.

Conditions Where Enhancement Applies

This enhancement applies to forest land use acres with hardwoods or mixed stands that have a forest management plan that recommends thinning within the next 3 years.

Benefits

Years of harvesting high quality hardwood trees have left many forested acres with degraded, low quality trees. Creating a forest opening promotes the regeneration of a new, younger stand of desirable tree species by removing all standing trees in selected areas (patches) within the forest. Patch areas are chosen based on their lack of acceptable growing stock (AGS), presence of desirable trees to regenerate the stand and presence of advanced regeneration. Wildlife habitat is increased by the amount of edge, cover and diversity of the tract created during the clearing.

Criteria for creating forest openings to improve hardwood stands

1. Forested acres must be cleared during the contract period.
2. Forested acres that meet the "Conditions Where Enhancement Applies" must have an "acceptable growing stock" level below 50 sq. ft. of basal area per acre.

50 sq. ft of basal area is equal to about 92, 10" dbh trees or 258 6" dbh trees.

3. Site condition must be of medium or higher quality.
4. Forested acres targeted for patch development must contain species for regeneration from the NRCS state list. Species on this list were selected based on their abilities to regenerate from seed, sprouts or other natural regeneration sources.
5. For oaks, advance regeneration must be present or developed prior to the timber removal in order to be competitive with other faster growing species.

6. Size of patches to be treated can vary from 1 to 10 acres, be distributed throughout the forest and cannot total more than 50% of the acres meeting Criteria 2.
7. Trees removed during patch development having marketable quality can be sold.
8. Slash and cull trees must be managed to allow for natural regeneration to occur. This can be accomplished by:
 - a. Windrowing
 - b. Wildlife piles
 - c. Chipping
 - d. Cutting for firewood
9. Burning of slash is prohibited.

This enhancement is not for normal thinning or other forest stand improvement activities conducted on non-degraded sites.

Layout Sketch & Drawing (Provide sketch, drawings, maps, and/or aerial photographs.)

- Geo-referenced field map with all delineated treatment areas where CSP Enhancement PLT17 is to be applied.

Adoption Requirements

This enhancement is considered adopted when forest openings have been created that meet the nine above criteria.

Documentation Requirements

1. Site suitability and acceptable growing stock evaluation for each patch,
2. Identify the desired species to be regenerated and evidence they are present,
3. Map show where patches are located, and
4. Documentation that patch cut activities were completed, e.g. photo's, sale receipt.

References*:

Healy, W. 2011. Central Hardwood Notes - Wildlife Openings. U.S. Forest Service. North Central Forest Experiment Station. Amherst, MA.

http://www.ncrs.fs.fed.us/pubs/ch/ch_9_11.pdf

Leak, W.B., 2003. Regeneration of Patch Harvests in Even-Aged Northern Hardwoods in New England. Northern Journal of Applied Forestry. 20(4):188-189.

http://www.fs.fed.us/ne/newtown_square/publications/other_publishers/OCR/ne_2003_leak001.pdf

Tubbs, C.H., L.J. Verme and R.M. Godman. 2001. Northern Hardwood Notes -Making Wildlife Openings. U.S. Forest Service. North Central Forest Experiment Station.

http://www.ncrs.fs.fed.us/pubs/nh/nh_8_01.pdf

Field Office Technical Guide:

[eFOTG, http://www.nrcs.usda.gov/technical/efotg/](http://www.nrcs.usda.gov/technical/efotg/)

Web Soil Survey (USDA Natural Resources Conservation Service)

<http://websoilsurvey.nrcs.usda.gov/>

USDA Plants Database

<http://plants.usda.gov/>

Silvics of North America (USDA Forest Service)

http://www.na.fs.fed.us/Spfo/pubs/silvics_manual/table_of_contents.htm

Vesely, D., Tucker, G., OKeefe, R.. *A Landowner's Guide for Restoring and Managing Oregon White Oak Habitats*. October 2004. USDI Bureau of Land Management.

Deal, R. L., Harrington, C.A. *Red Alder: A State of Knowledge*. March 2006. Pacific Northwest Research Station. General Technical Report: PNW-GTR-669

* Some online documents may take several minutes to download.

State Supplemental Information

Washington State list for acceptable post harvest regeneration species.

West Side of the Cascades

Red Alder
Oregon White Oak
Big Leaf Maple
Black Cottonwood

East Side of the Cascades

Quaking Aspen
Oregon White Oak
Black Cottonwood
White Alder
Sitka Alder

Native conifers will also be acceptable when the openings are being created within a floodplain or river terrace hardwood stand, in order to reestablish the coniferous component for that community. Since these are naturally regenerated openings, then locate these openings where there are conifer seedlings/saplings or advanced regeneration already present. For these floodplain sites, the size of the patches to a maximum of 1 acre.

Documentation Form

Producer: Date:

Tracts: County:

Site Data (enter the information below for the area to be treated)

Site suitability and acceptable growing stock evaluation for each patch.

Soil Type: Slope: Percent
 Effective Rainfall: inches Slope Aspect:

Forest Productivity Soils Report (Common Trees):

Current average Trees/Acre for over-story
 hardwood stand:

Current average DBH (Diameter at Breast
 Height) for the overstory hardwood stand:

Basal Area (BA) for average DBH
 tree= 0.5454154 X Average DBH²:

Average BA/Ac=BA for the average sized tree
 (Ave.DBH) X Average TPA:

<50 BA/Ac? Yes
 No

2. Identify the desired species to be regenerated and evidence they are present,

Current average Trees/Acre for acceptable seedlings/sapling and advance regeneration
 (up to 5"DBH)by species:

Species or common name	Trees/Acre

Map show where patches are located, and

Documentation that patch cut activities were completed, e.g. photo's, sale receipt.

Site specific Operation and Maintenance Plan

Participant should inspect natural regeneration (seedlings/saplings and advanced regeneration) often to spot damage needing repair, weeds needing treatment, and/or insect, disease or other threats that may be developing. Early spring is a good time to spot many problems. Monthly inspection during the growing season is recommended.

Treating competing vegetation around the natural regenerations may be necessary for the survival and growth of the natural regeneration. Treatment can be mechanical (weedeating, brushcutting, mowing), chemical or by hand (hand pulling).

Use of Trees shelters or cages are encouraged if animal pests are likely to be a problem. 3-4" diameter solid plastic tubes or rigid plastic mesh tubes are commonly used for after planting protection against ungulate brows and small mammals. In extreme situations, a wire mesh cage built around the tree may be needed.

Client's Acknowledgement (To be signed before the Enhancement is applied.)

By signing below, I acknowledge that I:

- have reviewed and understand the site specific design, installation specifications and operation/maintenance requirements in this State Supplemental Sheet and have an understanding of the purpose(s) of this Enhancement;
- will install, operate, and maintain this Enhancement in accordance with the National Sheet, the Washington State Supplemental Sheet and the site specific specifications.
- will make no changes to the planned design and installation without prior written approval of the Natural Resources Conservation Service.
- will obtain all necessary permits and/or rights, and comply with all ordinances and laws pertaining to the installation, operation, and maintenance of this Enhancement, prior to the start of installation; and
- will assume responsibility for notifying all Utilities affected by the installation, operation and maintenance of this Enhancement.

Signature

Date

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