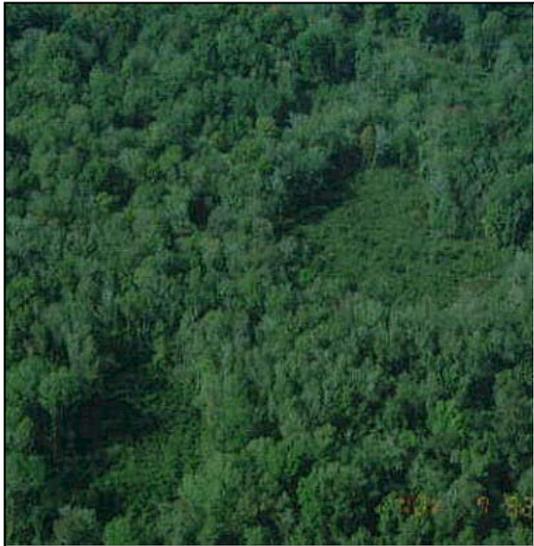


Plant Enhancement Activity – PLT17 – Creating forest openings to improve hardwood stands



Enhancement Description

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.

Land Use Applicability

Forestland

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.

Conditions Where Enhancement Applies

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

Criteria

1. Forested acres planned for this enhancement 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.
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:



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- 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.

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.

Michigan Supplement

PLT17

One or more of the following tree species should be present in adequate quantities and distribution to regenerate the created forest openings.

Tree Species	
<i>Platanus occidentalis</i>	American sycamore
<i>Acer saccharinum</i>	silver maple
<i>Pinus strobus</i>	eastern white pine
<i>Quercus rubra</i>	northern red oak
<i>Picea glauca</i>	white spruce
<i>Quercus bicolor</i>	swamp white oak
<i>Celtis occidentalis</i>	northern hackberry
<i>Betula allegheniensis</i>	yellow birch
<i>Quercus alba</i>	white oak
<i>Quercus macrocarpa</i>	bur oak
<i>Quercus prinus</i>	chestnut oak
<i>Quercus velutina</i>	black oak
<i>Thuja occidentalis</i>	Northern White-cedar
<i>Ulmus thomasii</i>	rock/cork elm
<i>Populus deltoides</i>	eastern cottonwood
<i>Liriodendron tulipifera</i>	tuliptree
<i>Populus heterophylla</i>	swamp cottonwood
<i>Salix nigra</i>	black willow
<i>Betula papyrifera</i>	white or paper birch
<i>Populus grandidentata</i>	big-tooth aspen
<i>Populus tremuloides</i>	quaking aspen
<i>Prunus serotina</i>	black cherry

Tree Species	
<i>Quercus palustris</i>	pin oak
<i>Gleditsia triacanthos</i>	honeylocust
<i>Juglans nigra</i>	black walnut
<i>Populus balsamifera</i>	balsam poplar
<i>Quercus ellipsoidalis</i>	northern pin oak
<i>Quercus shumardii</i>	Shumard's oak
<i>Carya cordiformis</i>	bitternut hickory
<i>Carya glabra</i>	pignut hickory
<i>Pinus banksiana</i>	Jack pine
<i>Pinus resinosa</i>	red pine
<i>Prunus nigra</i>	Canada plum
<i>Quercus coccinea</i>	scarlet oak
<i>Quercus imbricaria</i>	shingle oak
<i>Quercus muehlenbergii</i>	chinkapin oak
<i>Acer nigrum</i>	black maple
<i>Gymnocladus dioica</i>	Kentucky coffeetree
<i>Prunus pensylvanica</i>	pin cherry
<i>Prunus americana</i>	American plum
<i>Sassafras albidum</i>	sassafras
<i>Juglans cinerea</i>	butternut
<i>Larix laricina</i>	tamarack
<i>Carya ovata</i>	shagbark hickory
<i>Prunus virginiana</i>	chokecherry

These species have mid to low shade tolerance. As such, they require significant sunlight, such as that created by this enhancement, to regenerate. This enhancement is not to be used in shade tolerant forest types, e.g., northern hardwoods (mesic northern forest), or to regenerate shade tolerant species e.g., sugar maple, American beech.

For plants not listed here, contact the NRCS-Michigan State Forester for approval prior to plan development.

Confirm species-site compatibility using the Conservation Tree/Shrub Suitability Groups (CTSG) tool located in the eFOTG, Section II, Folder K. This enhancement must meet the NRCS-Michigan conservation practice standard Forest Stand Improvement (666) and all other applicable conservation practice standards in the eFOTG, Section IV.