

Plant Enhancement Activity – PLT26 – Forest stand improvement to treat understory vegetation to minimize the risk of damaging wildfires, and/or manipulate the density and composition of tree species to improve wildlife habitat and forest health



Enhancement Description

This enhancement is to manage the understory vegetation in a forested area with mechanical, chemical or manual methods to reduce the fuel load to lessen the risk of a wildfire, improve the plant species mix to benefit wildlife or to improve the health of the residual trees.

Land Use Applicability

Forestland

Benefits

Managing understory vegetation improves the overall health of residual trees and the plant community available for wildlife. However, many forests are not being maximally managed regarding quality wood production or wildlife habitat. On average, undesirable or cull trees occupy one-third of the total growing space in pine-hardwood and hardwood stands. To improve forest management, forest stand improvement (FSI) activities can be used to remove trees of undesirable form, quality, condition, growth rate, or species. Consequently, the quantity and quality of forest for wildlife and/or timber production will increase by manipulating stand density and structure. FSI is also used to reduce wildfire hazards, improve forest health, restore natural plant communities, achieve or maintain a desired native understory plant community for wildlife, grazing, and/or browsing.

Conditions Where Enhancement Applies

This enhancement applies to all forest land use acres.

Criteria

Implement the following:

1. Apply to sites which have a dense understory of shrubs and small trees, continuous “ladder-like” vegetation such as vines and small trees that allow fires to climb, a hazardous buildup of vegetative fuel and a lack of firebreaks throughout the property.
2. Develop a forest management plan in consultation with NRCS personnel and a professional forester, wildlife biologist or consultant to direct the management of the property.
3. The acres planned must have an “acceptable growing stock” level of 50 basal area or higher.
4. Vegetation may be treated by chemical methods such as spraying or single stem treatments or mechanical methods like mulching, mowing, chainsaws or small dozer methods.
5. Acres targeted for understory control must contain desirable species, residual trees to be left after the treatment.



6. This enhancement requires implementation of one or more of the following measures:
 - a. Excessive volatile live vegetation pretreatment –When volatile, live grasses and shrubs are present in the area where this enhancement applies then a reduction of these fuels may be accomplished by shredding, cutting, chipping, mulching, crushing, scattering, removing from the site or any combination of these methods.
 - b. Excessive debris and dead fuels –When excessive amounts of debris and dead fuel exist in the area where this enhancement applies, remove the material from the area by chipping, crushing, shredding, scattering or any combination of these methods.
 - c. Closed canopy – When the trees within the area where this enhancement applies form a continuous, closed canopy, thin the stand to allow for heat escape and to improve the health of the residual trees. Reduce the canopy by cutting or deadening selected trees to allow sunlight to reach the forest floor. Reduce slash from the cut trees by cutting off the limbs or by crushing or chipping. An alternative is to use single tree injections to reduce poor quality trees and open up the canopy.
 - d. Ladder fuels – When ladder fuels form connections between the ground and the higher levels of the canopy in the area where this enhancement applies that make it possible for a fire to spread into the upper canopy, break the continuity of fuel between the ground and the upper canopy position by cutting or breaking the continuity. Complete removal is not required as long as the continuity is disrupted.
 - e. Undesirable Vegetation – Control measures to reduce or eliminate undesirable vegetation and favor vegetation beneficial for wildlife.
7. Residual trees must have damage minimized when the treatments are being conducted.
8. If machinery is being used, operate under good conditions and not when the machinery will cause rutting and soil compaction.
9. Do not utilize this enhancement for normal thinning practices. .

Adoption Requirements

The enhancement is considered adopted when forest understory has been treated or the canopy has been reduced on the land use acre.

Documentation Requirements

1. Site suitability (from WebSoil Survey) and acceptable growing stock left on the site (from a field inventory)
2. Map delineating the treated areas, dates completed and their size
3. The method utilized
4. Evidence to support the treatment activities were completed, including representative photos, receipt from contractor etc. Location of representative photos must be indicated on the map required in #2.

References

Bardon, R. and R. Carter. 2011. Minimizing Wildfire Risk – a landowner’s guide. North Carolina State University Extension Publication –AG 616.



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Rathfon, R., M.R. Saunders, and D. Stump. 2009. Forest improvement handbook. Dept. of Forestry and Natural Resources, Purdue University and the Indiana Dept. of Natural Resources, Division of Forestry. FNR-IDNR-414.