

Animal Enhancement Activity – ANM15 -Forest Stand Improvement for Habitat and Soil Quality



A recent thinning creates downed wood and opens the stand which will increase forest understory growth and diversity. Two to 3 live trees per acre will be girdled to create snags based on community phase data in the Ecological Site Description. About 1 to 2 snags per acre are already present. Den/cavity trees have been retained throughout the thinned area.

Forest Stand Improvement - Habitat and Soil Quality

This enhancement consists of the creation of snags, den trees, and coarse woody debris on the forest floor to a level optimum for native wildlife usage and long-term forest soil health. It may be implemented during thinning or harvesting or it can be implemented separately.

Land Use Applicability

This enhancement is applicable on forestland.

Benefits

The natural abundance and distribution of snags, den trees (trees with cavities) and coarse forest floor wood have been altered by decades of land conversion, fire suppression, and timber and firewood harvest. Creating an optimum level of such materials provides nesting and hiding cover and substrate for bird, mammal, reptile, and amphibian species while also providing the insects and detritus on which they feed. Downed wood is a preferred growing medium for various species of bryophytes, lichens, and fungi. Rotting wood found on the forest floor and later integrated in the soil surface layer by decomposition provides seedbeds for a variety of tree, shrub, and herbaceous species as well a rooting medium that retains moisture during dry periods.

Criteria for Forest Stand Improvement - Habitat and Soil Quality

This enhancement requires:

- Creation of snags
- Downed wood
- Suitable den/cavity trees distributed throughout the area being treated.

The levels and distribution of materials must be equal to levels found in similar natural community phases indicated in the correlated Ecological Site Description (ESD).

If a suitable ESD has not been developed, NRCS State Offices will develop an example site description that defines the number of snags, the amount of downed wood and number of den trees expected per acre.



This enhancement is implemented mainly by managing existing live trees, dead snags and woody debris. It may be implemented during thinning or harvesting operations or may be undertaken separately. Refer to Conservation Practice Standard Forest Stand Improvement-666 for criteria on the creation of snags, den/cavity trees, and downed wood.

Documentation Requirements for Forest Stand Improvement - Habitat and Soil Quality

Following implementation of this activity, the landowner must document:

- The average number of snags per acre
- An estimate of percentage of the forest floor covered by downed wood.
- The average number of den/cavity trees per acre
- Delineations on a map or aerial photo of the areas having the distribution of snags per acre, percent cover downed wood, and/or den/cavity trees per acre
- Representative digital pictures of snags, downed wood, and den/cavity trees

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State Criteria

Forestland consists of areas not routinely grazed by livestock and managed for forest products with a minimum of 25% canopy cover of tree species.

General Elements (required for all forest stand improvement plans):

1. Create and maintain snags (standing dead trees) that are > 6 feet tall and 6 inches DBH to provide habitat for cavity-nesting species. At least 3 snags per acre are needed (on average) with at least one snag > 10 inches DBH.
2. Manage downed wood to create/maintain brush piles or scattered slash as described below.
 - Provide one brush pile or more per acre on 25% to 75% of the total forest area. Each brush pile should be a minimum of 15 feet in diameter and 5 feet tall.
 - Scatter additional slash material in loose patches throughout the stand on 25% to 75% of the total forest area. These loose patches can also be positioned to protect desired seedlings and saplings from damage caused by deer browsing and livestock trampling.
3. Allow a select number (approximately 1-2 per acre, on average) of older cull trees to remain as wildlife den trees or roost trees. These trees often provide either hollow trunks and/or an open limb structure.

Optional Elements (may be selected for use by the cooperator and NRCS planner):

1. Create an edge or border between the forest and open field that is irregular, rather than straight. A 50 foot strip could be left untreated on the edge of the stand or edge feathering could be accomplished within this zone. Edge feathering involves cutting and leaving a portion of the larger trees along the forest edge to increase sunlight penetration and stimulate growth of understory woody and herbaceous cover.
2. Develop small forest openings within the forest stand varying in size from 0.5 acre to 5 acres and comprising 10% to 25% of the total area. Consider the needs of any area-sensitive forest wildlife species in relation to the total size of the stand prior to implementing this type of management.
3. Plant native vegetation (by Vegetative Zone) within the stand to increase diversity of species composition and/or structure. A priority should be placed on mast-producing trees, shrubs, and vines as well as forbs within the herbaceous understory community.

Considerations:

1. Remove trees, shrubs, and vines considered invasive, or that provide low wildlife value, in favor of beneficial woody species. This removal may facilitate establishing snags, brush piles, edge feathering, or forest openings as described below.
2. Leave beneficial trees, shrubs, and vines throughout the stand when they are not interfering with the growth of trees with commercial value. Understory structure is important to many wildlife species to serve as escape/hiding cover, nesting/fawning cover, and other uses.
3. Utilize management strategies that result in multiple age classes comprised of multiple species of woody vegetation to provide a diversity of structure and species composition to benefit a wider array of wildlife species.



United States Department of Agriculture
 Natural Resources Conservation Service

The following activities are allowed for operation/maintenance and management:

No haying or grazing is allowed within any zone planted to trees and shrubs.

Haying is permitted on herbaceous areas (“openings” within the forest) up to once per three year period (following establishment) provided it is conducted after July 15th and prior to September 1st.

Grazing is permitted on larger herbaceous areas up to once per three year period (following establishment) provided it is conducted after July 15th and does not exceed a 30 day period during the growing season OR a 60 day period during the dormant season.

Specific management practices approved by NRCS and intended to improve plant diversity and vigor are allowed on larger herbaceous areas but are not required during the CSP contract period. These activities include prescribed burning, tillage and interseeding, and site-specific herbicide treatments to accommodate interseeding desired grasses, forbs, or legumes.

Documentation Requirements

- Estimates of 1) number of snags per acre (on average); 2) % of forest floor (in acres) which contain brush piles and scattered slash material; 3) number of den/roost trees per acre (on average).
- Digital photograph of a representative example of each of the three items listed above.
- Approved haying/grazing or management activities noted in table below intended to improve plant diversity and vigor within the forest, when applicable
- Estimates of acres of “edge feathering” and “forest openings” created and maintained in the forest.
- Tree Planting Job Sheet (NE-CPA-15) providing documentation of site preparation, planting method, and composition of species planted to meet requirements (if applicable).
- Grass Seeding Job Sheet (NE-CPA-8) providing documentation of site preparation, seeding method, and composition of species planted or inter-seeded to meet requirements (if applicable).
- Map with forest stand improvement area clearly identified (highlighted, outlined, etc.).

Tract	Field	Acres	Proposed Activity	Approximate Timeframe
100	W4	6.0	Spot Spraying of Garlic Mustard	June 2010

I certify that the following information meets specifications and has been provided to NRCS:

1. Site-specific maintenance/management plan (attached to this document) for invasive species control and associated invoices, receipts for implementation of the plan, as required.
2. Digital photographs of one snag, one brush pile/scattered slash, and one den/roost tree.
3. Written documentation consisting of a completed NE-CPA-15 Tree Planting Job Sheet and associated invoices, as required.
4. Written documentation consisting of a completed NE-CPA-8 Grass Seeding Job Sheet and associated seed tags, copies of dated receipts, as required.
5. Map with forest stand improvement area clearly identified (highlighted, outlined, etc.).

Certified by: _____ **Date:** _____