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666 – NH Forest Stand Improvement Implementation Requirements (10 year lifespan) WEEDING AND THINNING

Purpose characterize forest stands in NH that are appropriate for NRCS financial assistance programs. Requirements and considerations for financial assistance in NH are on page 2 of this sheet.

Areas needing Timber Stand Improvement (TSI): TSI is effectively weeding a young stand of trees to release pole sized (or smaller) desirable trees from adjacent or over-topping (poor quality) competition for space and light. These are pre-commercial sites with potential to grow quality stems for the future.

Suitable sites for TSI

- *Even-aged forest stands*, typically pole-sized or smaller (<10" DBH), typically mean stand diameter is 4-6". Focus is on releasing desirable stems from competition to regulate species composition, improve forest health, and increase growth rates.
    - Cut trees are typically hand-cut and left.
    - No revenue is generated from sale of forest products.
    - For felling or removing undesired trees in favor of desired species.
- In *two-aged forest stands* larger trees may need to be treated where undesirable overtopping stems are shading desirable understory regeneration.
- Tune up a site after a commercial harvest-often the remaining trees need weeding/thinning.
- In uneven aged forest stands, trees of all sizes may need to be removed to release desirables.

This site has been marked for a Timber Stand Improvement to release growing space for desirable stems (*Matt Larkin/NRCS*)

Examples seen in NH

- A shelterwood has grown in with the second age class of small pine trees.
- A stand is heavy to beech but also contains desirable trees that need to be released from that competition.
- A 6" dbh stand of oak/pine is starting to become crowded.

Desirable stems exist in this stand but need growing space. Trees to be cut will be less than 10 inches DBH, most will be smaller.

Sites not suited to Timber Stand Improvement

- Where cut trees are over 10" dbh (see above).
- Where commercial trees will be cut as part of the harvest.

Requirements for financial assistance

(*all factors need to apply)*

- Current forest management plan approved by NRCS and/or UNH Cooperative Extension.
- Stands to be treated are described and mapped (with acreages) in forest management plan or another approved document. A stand prescription must describe the silvicultural practice(s) to be utilized and the desired future stand condition.
- Trees marked by a Licensed NH Forester.
- The ratio of Acceptable Growing Stock (AGS) to Unacceptable Growing Stock (UGS) in the stand is greatly improved after the cut.

Considerations for financial assistance

(*note: several of these should apply but some may be omitted by professional judgement*)

- Mean Stand Diameter is often 10" or less. However, timber stand improvement is frequently needed in stands comprised of larger trees, especially to liberate desirable regeneration.
- No commercial forest products are produced. For economically marginal improvement harvests, use *Stand Rehabilitation Guidelines* (666).
- May be used as a post-harvest treatment to promote or enhance desirable regeneration.
- Silvicultural prescriptions may include, but are not limited to, clear cut, patch cut, crown thinning, crop tree release, girdling, cleaning, weeding, inter-sapling release, liberation of regeneration, scarification, and pruning.
- To control undesirable vegetation *within forest stands* with herbicides, use *Brush Management* (314).
- Use this activity on Productive Soils. Important Forest Soil Groups IA and 1B for hardwoods. IC soils for white pine. IIB soils where where ledge is > 40" from surface. Site Index > 50 for desired species.

Distinguishing financial assistance scenarios for Timber Stand Improvement

*Only one of these scenarios can be offered within 10 year lifespan on a footprint.

- **Marking**-per acre must be done by a NH licensed forester on stands with limited commercial value to improve regeneration and acceptable growing stock.
- **Thinning for Wildlife and Forest Health**-per acre for any non-commercial thinning practice used to improve the growth of desirable trees or used for mechanized harvesting within the above guidelines. This scenario includes the cost of marking and trees must be marked prior to cutting.

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Producer:		**Contract/App:**	
Location:		**County:**	
Forester:		**Tract Number:**	
Forest Management Plan Date:			

Definition

The manipulation of species composition, stand structure, or stand density by cutting or killing selected trees or understory vegetation to achieve desired forest conditions or obtain ecosystem services.

Practice Purpose

This practice is used to accomplish one or more of the following purposes (check all that apply):

- ☐ Improve and sustain forest health and productivity
- ☐ Improve wildlife and pollinator habitat
- ☐ Restore or maintain natural plant communities
- ☐ Increase/maintain carbon storage
- ☐ Initiate forest stand regeneration
- ☐ Reduce damage from pests

b l Requirements

- Meets general criteria in Conservation Practice Standard 666.
- Stand(s) with prescriptions must be included in current FMP or addendum.
- Trees must be marked prior to cutting, or in regenerative (e.g. patch) cuts, boundary marked.
- No cutting may occur in June or July to protect Northern Long Eared Bats.
- Follow NH Best Management Practices for Erosion Control on Timber Harvesting Operations (2016).
- Reviewed for State and Federal Threatened or Endangered Species and Cultural Resources

Additional Criteria/Considerations (select applicable to this plan)

- ☐ Retain snags, den trees, and downed wood for wildlife/to increase retention of carbon on-site.
- ☐ Increase quantity and quality of important mast (seeds, catkins, fruits, nuts) for wildlife.
- ☐ Shift to uneven aged management to improve carbon sequestration and increase complexity and resiliency.
- ☐ Protect vernal pools, wetlands, streams and other sensitive resources by minimizing water crossings, and leaving vegetated buffers to these resources.

Brief project description including any additional BMPs or Timing Considerations:

Plan meets Standards and Specs:

Designer Signature: _____ *Date* _____

Landowner agrees to install practice to specs in plan:

Landowner signature: _____ *Date* _____

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The Forest Management Plan (FMP) should contain a description of existing stand conditions and prescriptions. It should also contain information on basal area, DBH, stocking levels, targeted trees, desired future condition, and a schedule of operations.

Stand Specific Information (print more pages as needed)

☐ **Include Practice Location Map**: Attach map or sketch showing aerial view of where practice(s) is to be installed. Or confirm this map exists within plan.

Stand Number: Acres to be Treated: Year to be Completed:

Scenario	Pre-Cut Stocking Level	Crop Tree Species	Harvest Strategy	Cutting Method
☐ Thinning for Wildlife and Forest Health	☐ Overstocked	☐ White Pine	☐ Shelterwood	Hand crew:
☐ Patch Cuts	☐ Fully Stocked	☐ Red Oak	☐ Patch cut or clearcut	☐ Brush saw
☐ Marking only	☐ Understocked	☐ Birch spp.	☐ Pre-commercial thinning	☐ Chainsaw
		☐ Sugar Maple	☐ Group selection	Mechanized:
		☐ Red Spruce	☐ Seed Tree cut	☐ Conventional
Trees to be marked prior to cutting Yes ☐ No ☐ N/A ☐		☐	☐ Mast tree release (> 20/ac)	☐ Cut-to-length
*AGS to UGS ratio to be improved Yes ☐ No ☐ N/A ☐		☐	☐	☐ Whole-tree
		☐		

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		☐		

*AGS=Acceptable Growing Stock
UGS=Unacceptable Growing Stock

ADDITIONAL PRACTICES IN FMP

Forest Trails Needed:	☐ Yes	☐ No	*If **Yes,** refer to the appropriate practice standards and implementation requirements sheet for the respective practice(s).
Temp Stream Crossings Needed:	☐ Yes	☐ No	
Wetland Crossings Needed:	☐ Yes	☐ No	
Brush Management Needed:	☐ Yes	☐ No	
Access Road Needed:	☐ Yes	☐ No	
Access Control Needed:	☐ Yes	☐ No	
Wildlife Practices Recommended:	☐ Yes	☐ No	

NOTES:

CERTIFICATION **(NRCS Completes this section)**

Practice(s) were implemented as defined above: ☐ **Y** ☐ **N**

Before Pictures on File ☐ **Y** ☐ **N** ☐ As Built Map and Digital Photos Attached

GPS Points Collected ☐ **Y** ☐ **N** UNH Extension assisted to: ☐ Certify ☐ Plan ☐ Both

Certification Notes:

I certify that the installation meets NRCS standards and specifications.

Inspector

Date

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