

Forest Stand Improvement

Maine Implementation Requirement

666



Definition

Forest Stand Improvement is the manipulation of species composition, stand structure, and stocking by cutting or killing selected trees and other vegetation. Generally it may include intermediate treatments such as weeding, releasing, and thinning in young (between 5 and 30 years old) forest stands over time. Thinning can be pre-commercial or commercial.

Purpose

The primary purpose of forest stand improvement is to enhance health and vigor of the stands, or to modify stand species composition. Such stands offer more abundant wildlife habitat, more diverse plant communities, and more resilient forests with reduced potential for damage by wildfire, pests, and moisture stress. At the same time, forest stand improvement may also be used to initiate stand regeneration and restore native plant communities, including desired understory plants. Other purposes include improving recreation, aesthetic and open space values, water quality protection, water conservation and yield. Forest stand improvement aids in the management of carbon storage and uptake. Another purpose of this practice is to increase the future quantity and quality of forest products. Harvesting forest products is often a secondary benefit of forest stand improvement.

Where used

This practice is used on forest land where improvement of forest conditions is needed. For

example, forest stands affected by a severe pest outbreak, lacking in vigor, or requiring modifications to composition or stand structure/stocking may need forest stand improvement.

Operation and maintenance

Periodic inspections during treatment activities are necessary to ensure that objectives are achieved and resource damage is minimized. Follow-up and ongoing management activities will be needed to monitor and ensure desired results.

Considerations

Silvicultural objectives and harvest-regeneration strategies may change over time and may be limited by prior management. Successful development of desired structures or species composition is often dependent upon timely application of forest stand improvement.

Adjust the extent, timing, size of treatment area, or the intensity of the practice to minimize the cumulative effects (on-site and off-site), e.g., habitat fragmentation, nutrient cycling, biodiversity, and visual resources. Such adjustments are especially important when working in forests that provide or are adjacent to habitats for endangered and threatened species. Time the practice so it minimally affects seasonal wildlife activities and retains essential wildlife habitat requirements such as large dead standing and downed trees.

Comply with all applicable federal, state and local laws and regulations during the installation, operation and maintenance of this practice, including the Federal Endangered Species Act (ESA) especially in Canada Lynx and Atlantic salmon habitat areas, ME Natural Resources Protection Act, ME Pesticide application regulations, and ME Forest Practices Act including the Forest Operations Notification requirement (commercial harvests only).

Specifications

Site-specific requirements are listed on the specifications sheet. Inventory information is listed on the Pre-treatment Inventory Worksheet. Additional provisions are entered on the job sketch sheet. Specifications are prepared in accordance with the ME NRCS Field Office Technical Guide. See practice standard and specification guide sheets for Forest Stand Improvement, Code 666 for specific requirements.

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<i>Name:</i>		<i>County:</i>	<i>Town:</i>
<i>Field(s):</i>	<i>Tot. Acres:</i>	<i>Farm #:</i>	<i>Tract #:</i>
<i>Designed By</i>	<i>Lic #:</i>	<i>Approved By:</i>	<i>Lic #:</i>
		<i>Signature:</i>	
<i>Date:</i>		<i>Date:</i>	

Existing Conditions: Summary Inventory Information Refer to 666 Standard and Specification Guide Sheet to complete.								
PRE-TREATMENT STOCKING RATES								
Field/ Stand	Ac	Plant Species (common name)	Suit. ⁴	Size Class ³ :	Ave. DBH ¹	Basal Area	Trees per acre, tally of trees, or carbon stock	Avg. Spacing ² : Ft X Ft
Total								
Average								

¹DBH = Diameter at Breast Height. ²Spacing in between plants to achieve trees/acre. Trees/acre = 43,560 (ft²/ac) ÷ [Between-Row Spacing (ft) X In-Row Spacing (ft)]. ³Size Class = sapling/seedling, pole, sawlog. ⁴ 1 = Preferred, 2 = Acceptable, 3 = Weed species.

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<i>For:</i>		<i>County:</i>	<i>Town:</i>
<i>Field(s):</i>	<i>Tot. Acres:</i>	<i>Farm #:</i>	<i>Tract #:</i>
<i>Designed By</i>		<i>Lic #:</i>	<i>Approved By:</i>
			<i>Lic. #:</i>
<i>Date:</i>		<i>Signature:</i>	
<i>Date:</i>		<i>Date:</i>	
Purpose (check all that apply) Refer to 666 Standard and Specification Guide Sheet to complete.			
Improve and sustain forest health and productivity		Reduce damage from pests and moisture stress	
Initiate forest stand regeneration		Reduce fire risk and hazard and facilitate prescribed burning	
Restore or maintain natural plant communities		Improve wildlife and pollinator habitat	
Alter quantity, quality, and timing of water yield		Increase or maintain carbon storage	

Project site general soil moisture regime is Dry Moist Wet or poorly-drained (see Pg 666-4)

Harvest Regeneration Strategy (check one Mgt System on first line and circle specific system on second line)		
Uneven-aged Management System		Even-aged Management System
Single-tree selection, group selection, coppice		Clear-cut, seed-tree, shelterwood, coppice
Type of Forest Stand Improvement (check one and write in type, i.e. hand, chemical, mechanical, other-specify, and acres)		
Pre-commercial Thinning – Hardwood Hand tools Type: Acres:	Thinning for Wildlife and Forest Health Type: Acres:	Pre-commercial Thinning – Softwood Hand tools Type: Acres:
Competition Control-Mechanical Type: Acres:	Crop / Mast Tree Release Type: Acres:	Patch Cut Type: Acres:
Basal Stem Treatment Type: Acres:	Weeding Sapling - Mechanical Type: Acres:	

Forest Stand Improvement will be done during the following time period (specify dates): _____ to _____.

NOTE: Maine Forest Operations Notification of intent to harvest forest products, construct land management roads, and/or establish water crossings *is required for a commercial harvest*. Notification No. _____ Completed by: _____

Desired Forest Condition - Refer to ME Specification Guide Sheet Identify preferred species by using an asterisk (*) by the name.				DESIGNED/PREScribed POST-TREATMENT STOCKING RATE		
Field/ Stand	Ac	Plant Species (common name)	Size Class	D+X Spacing or Carbon Stock	Avg. Spacing Ft X Ft	Trees per Acre or tally of Trees
Tot.						

NEPA requirements met, including ESA assessment? Permits required? Permit No. (if Yes)

Additional Remarks (Include information on salable or usable products, other values and considerations):

COMPLETION/CHECKOUT CERTIFICATION

I have job approval authority and certify this practice as applied meets NRCS Standards and Specifications:

NRCS Representative name and title (type or print):			
NRCS Representative Signature:			Date:
As-Built Notes (include date completed by client, treated acres and describe any changes to original design):			

Questions or changes regarding this practice should be directed to Gerald Barnes, at (207)990-9580

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If needed, an aerial view of the practice location can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

Scale 1"= _____ ft. (NA indicates sketch not to scale: grid size=1/2" by 1/2")

Additional Specifications and Notes:

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LANDOWNER/OPERATOR ACKNOWLEDGES:

- a. They have received a copy of the specifications and understand the contents including the scope and location of the practice.
- b. They have obtained all necessary permits and/or rights in advance of practice application, and will comply with all ordinances and laws pertaining to the application of this practice.
- c. No changes will be made in the installation of the job without prior concurrence of the NRCS.
- d. Maintenance of the installed work is necessary for proper performance during the life of the practice.
The practice life is _____.

I have reviewed all specifications and agree to install as specified:

Landowner/operator name and title (type or print):		
Landowner/operator Signature:		Date: