

Forest Stand Improvement

Maine Conservation Practice Job Sheet

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.

Forest Stand Improvement – Job Sheet – Pre-treatment Inventory Worksheet

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

Existing (Condit	ions: Summary Inventory Informati	ion Refe	r to 666 St	andard an	d Specifica	tion Guide Sheet to c	complete.
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
							Carbon Stock	
			-					
Total								
Average								
1DDU - 1):	ter at Breast Height ² Spacing in	h a true a m	mlanta ta		/	Trans/2272 - 42	500 (#21)

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.

Forest Stand Improvement – Job Sheet – Specifications Sheet

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For:				County:	Town:			
Field(s): Tot. Acres: Designed By Lic #::			Farm #:	Tract #:				
Design	ed By	•	Lic #::	Approved By:				
				Signature: Lic. #:				
Date:			Date:					
Purpose	(checl	k all that apply) Refer to 666	Standard and Specifi	cation Guide Sheet to com	plete.			
		the quantity and quality of fore	st products	☐ Harvest forest produce				
		dlife habitat			el of crop tree stocking			
		er conservation and yield		□ Increase carbon storage in selected crop trees				
 ☐ Improve aesthetic, recreation, and open space values ☐ Initiate forest stand regeneration 			 □ Restore natural plant communities □ Achieve a desired understory plant community 					
		potential of damage from wildfi	re nests and	□ Achieve a desired un	derstory plant commun	nty		
	ure str		ire, pesis, and					
				10/1	: I (D 000 t)			
		eneral soil moisture regime is _	DryMoist		ined (see Pg 666-4)			
		eration Strategy (check one M	igt System on first lin		•			
		n-aged Management System		□ Even-aged Mana	· · · · · · · · · · · · · · · · · · ·			
		tree selection, group selection,			ree, shelterwood, copp			
Type of I	Forest	Stand Improvement (check	one and write in type,	i.e. hand, chemical, mecha				
□ Precommercial thinning of sapling stands (pg 666-2, Spec) □ Crop Tree Type: Acres: □ Crop Tree Type: Acres:			Release (pg 666-3 Spec) Precommercial thinning of sapling stands for wildlife cover and upland wildlife habitat (pg 666-4, Spec) Type: Ac.:					
	Mact T	ree Release (pg 666-6,	□ Sanitation	Cutting in Infected/	7.			
	Spec)			Cutting in Infected/ Stands (pg 666-7, Spec) □ Removal of Invasive Plant Species (pg 666-9, Spec)				
Туре		Ac.:	Type:	Ac.:	Type:	Ac.:		
□ Type	Storage (pg 666-9, Spec) Regeneration							
		Ac.: Improvement will be done durir	Type:	Ac.:	to			
Forest	Stand	Improvement will be done during Forest Operations Notification	ng the following time	period (specify dates):	toto nd management roads,	and/or establish		
Forest NOTE: water o	Stand Maine crossing	Improvement will be done durin Forest Operations Notification gs is required for a commercial	ng the following time pof intent to harvest for harvest. Notification	period (specify dates): prest products, construct lar No Complete	nd management roads,	, and/or establish		
Forest NOTE: water of	Stand Maine crossing Forest	Improvement will be done during Forest Operations Notification as is required for a commercial Condition - Refer to ME Special	ng the following time post intent to harvest for harvest. Notification Guide Sheet	period (specify dates): prest products, construct lar No Complete DESIGN	nd management roads, ed by: ED/PRESCRIBED			
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Questions or changes regarding this practice should be directed to [name of technical specialist], at [phone number].

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. ____ ft. (NA indicates sketch not to scale: grid size=1/2" by 1/2") **Additional Specifications and Notes:**

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Forest Stand Improvement – Job Sheet