

**Massachusetts Department of Conservation and Recreation
Division of Water Supply Protection, Office of Watershed Management
*Forest Management Project Summary***

Project Title: Lot 5288

DWSP Harvest Permit Number: 5288

DWSP Proposal ID: WA-19-238

DCR Forest Cutting Plan File Number: 282-27833-20

Site Information

Watershed: Wachusett

Town(s): Sterling

Acres: 62

Nearest Road: Justice Hill Road and Upper North Row Road

Natural Heritage Atlas overlap?:

Public Drinking Water Supply Watershed?: Yes

Forest Types: White pine/oak, Mixed oak, Hemlock-hardwood

Area of Critical Environmental Concern (ACEC)?: No

Soils: Chatfield-Hollis-Rock outcrop complex, Paxton and Woodbridge fine sandy loams.

Wetland Resources: An intermittent stream originates from a wetland within this area and flows to the southeast. There is another intermittent stream in the northeast corner of this area. Rocky Brook forms the far western boundary of this area.

Vernal Pools: There is a vernal pool in the far northeast corner of this area.

Harvest Information

Harvest Start Date: 6/17/2020

Harvest End Date: 6/30/2023

Number of Wetland Crossings: None

Number of Stream Crossings: Two

Best Management Practices Applied

Stream Crossings: The southern stream crossing will require a temporary bridge in the form of a timber bridge or swamp mat. The northerly crossing will occur at an existing culvert.

Filter Strips: No trees will be cut in the filter strips.

Wetland Crossings: No wetlands will be crossed.

Harvesting in Wetlands: No harvesting in wetlands will occur.

DWSP Forester supervising this harvest

Name: Greg Buzzell

Forester License number: 025

Phone number: 774-261-1841

Email: greg.buzzell@mass.gov

Narrative

General Description/Forest Composition/History

The area is comprised of three properties purchased by DCR since 2016. The far western parcel shows no signs of having been logged within the past few decades. The primary species in the overstory is red oak along with white oak, black birch, red maple and scattered, large, dominant white pines. Nearer to Rocky Brook there is more yellow birch and white ash. This area is extremely rocky with a decent amount of advance regeneration, which due to the higher stocking of the overstory is far less well developed compared to the rest of the proposed area. The understory is comprised of maple-leaved viburnum, highbush blueberry and striped maple. The far eastern parcel was logged about twenty years ago prior to DCR acquisition. There is excellent advance regeneration beneath most of the white pine, red oak, white oak and red maple overstory. Many of the white pine, especially in the northern end, are very large, bully white pines.

The majority of the proposed sale area is the middle parcel that was purchased in 2017. This area was also logged about 20 years and, as a result, has an excellent understory of advance regeneration comprised of red oak, white pine, red maple, black birch, hickory, sassafras and hemlock. In the higher elevations to the north, there is also a significant component of chestnut oak in the understory. The overstory on the south facing slope is very diverse, comprised of red oak, white oak, chestnut oak, white pine, hemlock, black birch red maple, hickory and sassafras. Understory shrubs present are maple-leaved viburnum (very tall), lowbush and high bush blueberry, mountain laurel and arrowwood. There is black gum in the wetland at the base of the slope along with red maple, yellow birch and hemlock. On the hill in the southern, narrow part of the sale area, the overstory is dominated by hemlock, red oak, red maple and white pine. Hemlock wooly adelgid is present in this forest and is having a noticeable impact on the health of the hemlock.

Site Selection

The ideal watershed protection forest is one which best serves the function of the land as a producer of high-quality drinking water in both short- and long-term. This forest must be vigorous and diverse in tree species and ages, be actively accumulating biomass and actively regenerating. Such a forest will be ideally suited to be resilient to and quickly recover from small- and large-scale disturbances such as diseases, insect infestations, ice storms and hurricanes.

Silvicultural Objectives

Given the diverse and plentiful advance regeneration, there was no problem in finding places to make openings in the overstory in this sale area. In total, 15 openings totaling 16.8 acres were marked. They range in size from 0.5 to 2.0 acres and they average 1.1 acres in size. Given the relative scarcity of chestnut oak on DCR property in the Wachusett watershed, special attention was paid to ensuring that chestnut oak is well represented in this new age class.

Cultural Resources

There are no known historic and archaeological resources associated with this site. If any features are uncovered before or during the harvest, they will be protected according to guidelines set forth in the Comprehensive Land Management Plan.

Rare or Endangered Species

There none known.

Figures

- Figure 1. Forest Cutting Plan
- Figure 2. Maps of harvest area showing approximate boundary, proposed openings and other features
- Figure 3. General locus map showing the location of the proposed timber harvest
- Figure 4. Pre-Harvest Photographs, A-D
- Figure 5. Post-Harvest Photographs, A-C

Figure 1. Forest Cutting Plan

Forest Cutting Plan

and Notice of Intent under M.G.L.
Chapter 132 – The Forest Cutting
Practices Act, 304 CMR 11.00
(Effective Date: 1/1/04)

For DCR Use Only:

File Number	782-27833-20	Case No.	/
Date Rec'd	5-11-2020	Nat. Hert.	NO /
Earliest Start	5-25-2020	Nat. Hert. Imp.	NO
River Basin	NASNA	Pub. Dr. Wat.	Wachusett
Gen. Obj.	LT	ACEC	NO

Site Information

Location

Town Sterling Lot 5288
Road Justice Hill Road/Upper North Row Road
Acres 62 Proposed Start Date 6/20
Vol. MBF 63.0 Vol. Cds. 264 Vol. Tons 70

Plan Preparer

Name Gregory S. Buzzell
Address 180 Beaman Rd.

Town, State, Zip West Boylston, MA, 01583

Phone 774-261-1841

Type of Preparer Mass. Licensed Forester

*Mass. Forester License # 25

*Required for land under Ch61, Ch61A or Forest Stewardship

Landowner

Name DCR/DWSP/OWM Wachusett/Sudbury
Mailing Address 180 Beaman St.

Town, State, Zip West Boylston, MA 01583

Phone 608-792-7806

Ch61 Ch61A Stew *Case # _____

Est. Stumpage Value _____

Licensed Timber Harvester**

Name To be supplied when known.

Address _____

Town, State, Zip _____

Phone _____

Mass. Lic. Harvester # _____

**This information may be supplied after the plan is approved, but before work begins.

Best Management Practices

Stream Crossings

Indicate location on map	SC-1	SC-2	SC-3	SC-4
Type of Crossing	BR	CU		
Existing Structure	No	YES		
Type of Bottom	ST	ST		
Bank Height (ft)	1	2'		
Stabilization	CO	culm		

Harvesting in Wetlands

Indicate location on map	HW-1	HW-2	HW-3	HW-4
Forest Type (see pg 2)				
Acres to be Harvested				
Resid. Basal Area (>50%?)				

Codes

Indicate location on map	FS-1	FS-2	FS-3	FS-4
Width (50', 100', or VA)	VA			

Note:

Applicant must provide DCR with all relevant information before plan may be approved and cutting may begin. Some forestry activities, such as prescribed burning and pesticide or fertilizer application may require additional permits. Consult MA Forestry BMP Manual for further information.

If Other (OT) is used in any category an explanation must be given on an attached narrative page

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Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine	22.2	Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	36.2
Hemlock		Black Oak	4.5
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	63.0
Beech		Cordwood (Cds)	264
White Birch		SW Pulp (Tons)	70
B & Y Birch		HW Pulp (Tons)	
Black Cherry		Chips (Tons)	

*Note: Volumes and values indicated in the Plan are as reported by the plan preparer and have not been independently verified by the service forester upon approval. Mbf = thousand board feet.

Cutting Standards

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	OR	WH	WK	WO
Acres	31.1	12.6	10.3	8.0
Landowner Objective	LT	LT	LT	LT
Designation of Trees	CT	CT	CT	CT
Type of Cut	SH	SH	SH	SH
Source of Regeneration	AD	AD	AD	AD

Landowner Signature

The most important information on a cutting plan is the Landowner's objective, as this will determine which trees will be harvested and which will remain; this decision will also determine the future condition of the forest for decades to come. After having read the Massachusetts Forest Cutting Plan Information Sheet on page one, indicate your objective by checking the appropriate box below.

LT - Long-term Forest Management

Planned management of the forest to achieve one or more of the following objectives: produce immediate and maximize long-term income, enhance wildlife habitat, improve recreational opportunities, protect soil and water quality, or produce forest specialty products.

ST - Short-term Harvest

Harvest of trees with the main intention of producing short-term income with minimal consideration given to improving the future forest condition, which often result in a forest dominated by poor quality and low value spec

I (we) have read the Massachusetts Cutting Plan Information Sheet, and am aware of my (our) management options.

I (we) hereby certify that I (we) have the legal authority to carry out the operation described above.

I (we) certify that I (we) have notified the Conservation Commission in the town in which the operation is to take place and the abutters of record within two hundred feet of the area to be harvested.

I (we) understand that the volumes and values (Ch61 only) in this plan have not been independently verified by the service forester upon approval and will report final values and volumes to the Director or his/her agent if the final figures differ from those reported.

JNL 5/6/2020

Date

Signature of landowner(s)

Determination and Status #282-27833-20

Approved Disapproved Expires

5-11-2022

Cutting Plan

5-22-2020

Date

M. L. D. D. Signature of Service Forester/Director's Agent

Final Report and Comments

I hereby certify that the afore described Forest Cutting Plan and all relevant statutes have been substantially complied with.

Signature of Service Forester/Director's Agent

Date

Extension 1 2 Expires / Ser. For. Ints. /

Amendment App 1 Dis 1 App 2 Dis 2 /

Forest Types	HK	Hemlock	OM	Mixed Oak	Designation of Trees	Type of Cut	Intermediate Harvests:	Non-Standard Systems:	Source of Regeneration
WP White Pine	HK	Hemlock	OM	Mixed Oak	CT Cut Tree	SH Shelterwood	CT Commercial Thin	AD Advanced	
WK WP/Hem	HH	Hem/Hdwd	RM	Red Maple	LT Leave Tree	ST Seed Tree	NT Non Com Thin	SE Natural Seed	
WH WP/Hdwd	BC	Blek Cherry	BT	Beech	SB Stand Boundary	CC Clear Cut	PL Plant	PL Plant	
WO WP/Oak	BB	Bee/Bir/Map	SF	Spruce/Fir	OT Other	SE Selection	CO Coppice	CO Coppice	
RP Red Pine	OH	Oak/Hdwd	SM	Sugar Maple	Landowner Objective	SA Salvage	HG Highgrade*	DS Direct Seed	
SR Red Spruce	OR	N Red Oak	PP	Pitch Pine	LT Long-term Mgt.	SN Sanitation	DL Diameter Limit*	OT Other	
					ST Short-term Har.	OT Other*			

Forest Cutting Plan

Narrative Page

Use only if further explanation is required of information on pages one or two or if "other" was used in any category.

Landowner: DCR/DUSE/OWNR

Town: Sterling

File Number: 282-27833-20

BMPS	<p><u>The forwarder trails have been flagged as shown on the map.</u></p> <p><u>No trees are being cut in FS-1</u></p>
Silviculture	<p><u>In order to release advance regeneration, 15 openings in the overstory are being created, covering 16.8 acres. These openings range from 0.5 to 2.0 acres in size with an average of 1.1 acre. They are well distributed throughout the sale area focusing on where the advance regeneration is well established.</u></p>
Objectives	<p><u>The main objective of this operation is to diversify the age structure of the forest by removing the overstory in patches thereby releasing the advance regeneration. The current age structure is limited with an insufficient component of young forest.</u></p>
Other	<p><u>The forwarder haul roads have been laid so that either or both landings may be used.</u></p> <p><u>The small wetland in the far northeast corner of the sale is not mapped accurately. The haul road does not go through a wetland.</u></p>

Figure 2. Maps of harvest area showing approximate boundary, proposed openings and other features

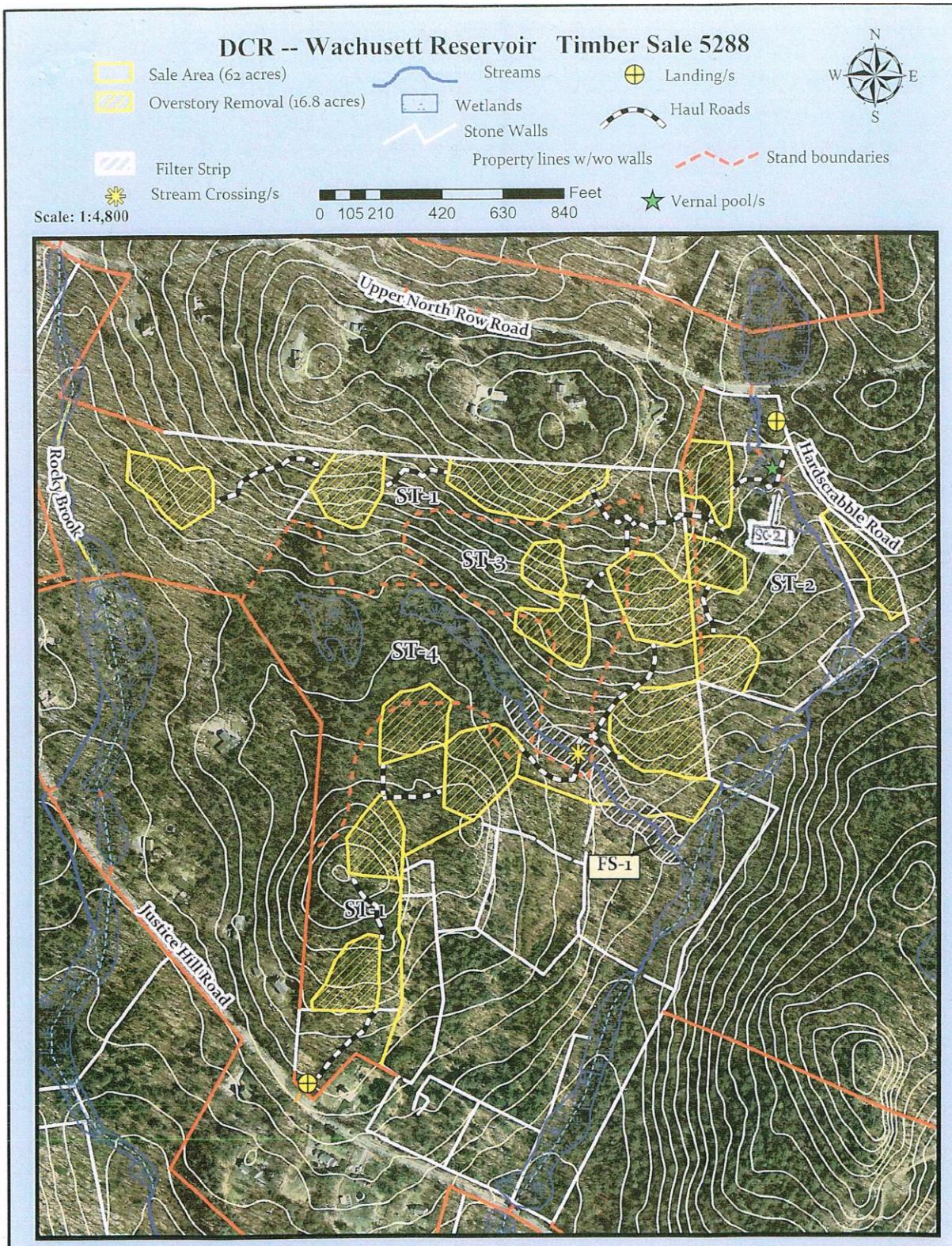


Figure 3. General locus map showing the location of the proposed timber harvest

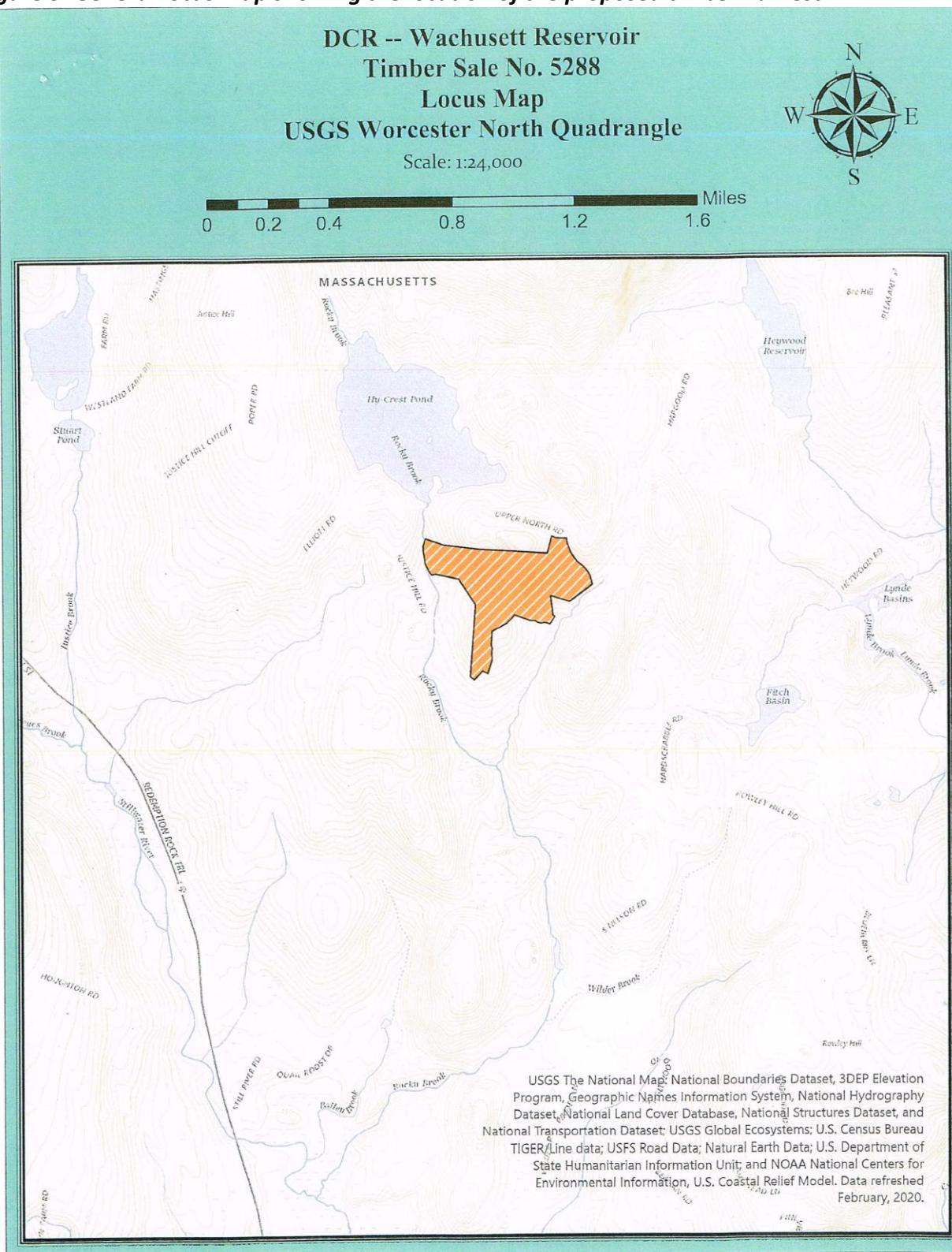


Figure 4. Pre-Harvest Photographs, A-D



A. The northern landing off Hardscrabble Road.



B. The southern landing on Justice Hill Road.



C. The overstory is being removed to release the excellent understory. The white oak in the foreground is being retained to provide important structural diversity within what will be a patch of young forest.



D. Another area of overstory removal. The chestnut oak in the right foreground is being retained and is a good example of the excellent chestnut oak which is not common on DWSP in the Wachusett watershed.

Figure 5. Post-Harvest Photographs, A-C



A. The northern landing off of Hardscrabble Road.



B. An area of overstory removal. The chestnut oak in the left-foreground was retained.



C. Another area of overstory removal. The smaller white pines and hemlock were retained to provide structural diversity.