

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

Project Title: Lot 5274

DWSP Harvest Permit Number: 5274

DWSP Proposal ID: WA-18-323

DCR Forest Cutting Plan File Number: 134-9072-18

Site Information

Watershed: Wachusett

Town(s): Princeton

Acres: 65

Nearest Road: Coal Kiln Road

Natural Heritage Atlas overlap?: No

Public Drinking Water Supply Watershed?: Yes

Forest Types: White pine//hardwood, white pine/oak

Area of Critical Environmental Concern (ACEC)?: No

Soils: Moderately well drained Woodbridge-Paxton soils make up 89% of this working unit.

Poorly drained Ridgebury-Whitman makes up 10%, with Well drained thick Montauk-Scituate-Canton at 2%.

Wetland Resources: There is a stream that originates from a wetland under the power lines in the northern corner of the working unit and bisects the middle of the working unit until it meets another wetland towards the southern corner of the working unit.

Vernal Pools: There is a beautiful little isolated vernal pool with high bush blueberry and surrounded by mountain laurel in the eastern corner of the working unit.

Harvest Information

Harvest Start Date: 6/12/2018

Harvest End Date: 5/25/2020

Number of Wetland Crossings: None

Number of Stream Crossings: One

Best Management Practices Applied

Stream Crossings: The stream will be bridged.

Filter Strips: No trees are marked in the filter strips.

Wetland Crossings: There are no wetland crossings.

Harvesting in Wetlands: There is no harvesting in wetlands.

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

This working unit is dominated by white pine and red oak. In smaller quantities red maple, black birch, black oak, sassafras, American chestnut and white oak exist. The "Israel" parcel was acquired in 2010 and was previously cut around 2000. The past cutting practices created very small openings and thinned areas which now have interfering levels of mountain laurel on the western half and a good amount of white pine and black birch regeneration in the eastern half. Regeneration sampling shows that adequate regeneration is present on 41% of 131 plots taken and are mainly distributed in the eastern half of the unit. Marginal advance regeneration was found on 5% of the plots, while oak regeneration is present on 19% of the plots. Mountain Laurel and some witch-hazel are interfering with regeneration on 53% of the plots. Regeneration is made up of white pine, red oak, white oak, sassafras, red maple, black birch, American chestnut and black oak.

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.

This area was chosen due to the lack of age diversity both in these 65 acres as well as the 2,400 acres of DCR-owned land that flows into both Trout Brook and Wachusett Brook.

Silvicultural Objectives

The working unit can be divided in half when it comes to advance regeneration. The eastern half has good advance regeneration spread throughout, including oak in a decent (19%) amount of the plots. The western half of the working unit is mostly covered in interfering levels of mt. laurel. Both areas are the result of past cutting practices, which for the most part have left a lower stocking throughout. Even though the western half has interfering mt. laurel, the stocking is low enough at this point where a site preparation and prep cut are not practical. As a result, in the western half defined openings should be made with the goal of damaging mt. laurel as much as possible to encourage regeneration. The eastern half will have openings made that target the good advance regeneration that is present.

Cultural Resources

There are no known historic and archaeological resources associated with the Israel 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

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-C
- 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) **MAY 25 2018**

For DCR Use Only:

File Number 2017-00418 Case No. _____
Date Rec'd 5/15/18 Nat. Hert. NO
Earliest Start 6/15/18 Nat. Hert. Imp. NO
River Basin Norwalk Pub. Dr. Wat. YES - Norwalk
Gen. Obj. LT ACEC NO

Site Information

Location

Town Princeton Lot 5274
Road Coal Kiln Rd
Acres 65 Proposed Start Date 6/07/18
Vol. MBF 129 Vol. Cds. 245 Vol. Tons 105

Plan Preparer

Name Russell Wilmot
Address 180 Beaman St.
Town, State, Zip West Boylston, MA, 01583
Phone 508-792-7806 Ext 318
Type of Preparer Mass. Licensed Forester
*Mass. Forester License # 426
*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			
Existing Structure	NO			
Type of Bottom	ST			
Bank Height (ft)	2'			
Stabilization	CO			

Wetland Crossings

Indicate location on map	WC-1	WC-2	WC-3	WC-4
Length of Crossing				
Mitigation				
Stabilization				

Filter Strips

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

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%)				

Service Forester Comments

ALL SIDC ROAD/TRAWS ARE EXISTING
*SEE ATTACHED VERNAL POOL DATA.

Codes

Type of Preparer	Type of Crossing	Stabilization	Mitigation	Type of Bottom
LF Mass. Lic. For.	CU Culvert	SE Seed	FR Frozen	LE Ledge
TH Lic. Tim. Har	BR Bridge	MU Mulch	DR Dry	ST Stony
TB Timber Buyer	FO Ford	CO Corduroy	OT Other	MU Mud
LO Landowner	PO Poled	ST Stone		GR Gravel
OT Other	OT Other	HB Hay Bales		OT Other
		OT Other		

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	106.5	Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	9.2
Hemlock		Black Oak	6.1
Spruce		White Oak	7.8
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	129.5
Beech		Cordwood (Cds)	208
White Birch		SW Pulp (Tons)	105
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	WH	WP	WO	
Acres	41	9	19	
Landowner Objective	LT	LT	LT	
Designation of Trees	CT	CT	CT	
Type of Cut	SH	SH	SH	
Source of Regeneration	AD/SE	AD/SE	AD/SE	

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 results in a forest dominated by poor quality and low value species.

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.

Patricia E. Austin

Signature of landowner(s)

5-22-18

Date

Determination and Status 241-9404-18

Approved Disapproved Expires

Cutting Plan



5-25-2020

Signature of Service Forester/Director's Agent

Date

Extension

1 ☐

2 ☐

Expires

6-1-2018

Ser. For. Ints.

Amendment

App 1

Dis 1

App 2

Dis 2

1

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

Forest Types

WP White Pine HK Hemlock OM Mixed Oak
WK WP/Hem HH Hem/Hdwd RM Red Maple
WH WP/Hdwd BC Black Cherry BE Beech
WO WP/Oak BB Bee/Bir/Map SF Spruce/Fir
RP Red Pine OH Oak/Hdwd SM Sugar Maple
SR Red Spruce OR N Red Oak PP Pitch Pine

Designation of Trees

CT Cut Tree
LT Leave Tree
SB Stand Boundary
OT Other
Landowner Objective
LT Long-term Mgt.
ST Short-term Har.

Type of Cut

SH Shelterwood
ST Seed Tree
CC Clear Cut
SE Selection
SA Salvage
SN Sanitation

Intermediate Harvests:

CT Commercial Thin
NT Non Com Thin
Non-Standard Systems:
HG Highgrade*
DL Diameter Limit*
OT Other*

Source of Regeneration

AD Advanced
SE Natural Seed
PL Plant
CO Coppice
DS Direct Seed
OT Other

*If Other (OT) or a non-standard system is used an explanation must be given on attached narrative page

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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: John J. [unclear]

Town: Lincoln

File Number: 391-9404-18

BMPs	<p><u>FS-1 stream flows southerly and connects to a large wetland system.</u></p> <p><u>One stream crossing will be needed on this site. The stream in this area is perfect for a crossing with high banks and big stone present.</u></p> <p><u>The landing will be accessed from the power line road off of Coal kiln road.</u></p>
Silviculture	<p><u>The primary operation will be to establish openings in a sale area that was cut by previous owners. The previous cut responded with great white pine and hardwood regeneration on the eastern half of the lot and perhaps the thickest mountain laurel you can imagine on the western half of the lot. Because of the lower stocking in the mountain laurel area openings will be made to define new age classes with the goal of destroying the thick mountain laurel areas while retaining the veins of regeneration where they occur. On the eastern half openings will be made to release the great regeneration that exists. Openings will total about 18 acres.</u></p>
Objectives	<p><u>To create defined openings and take another step in the process of creating three age classes overall. The current age structure is limited with an insufficient component of young forest.</u></p>
Other	

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

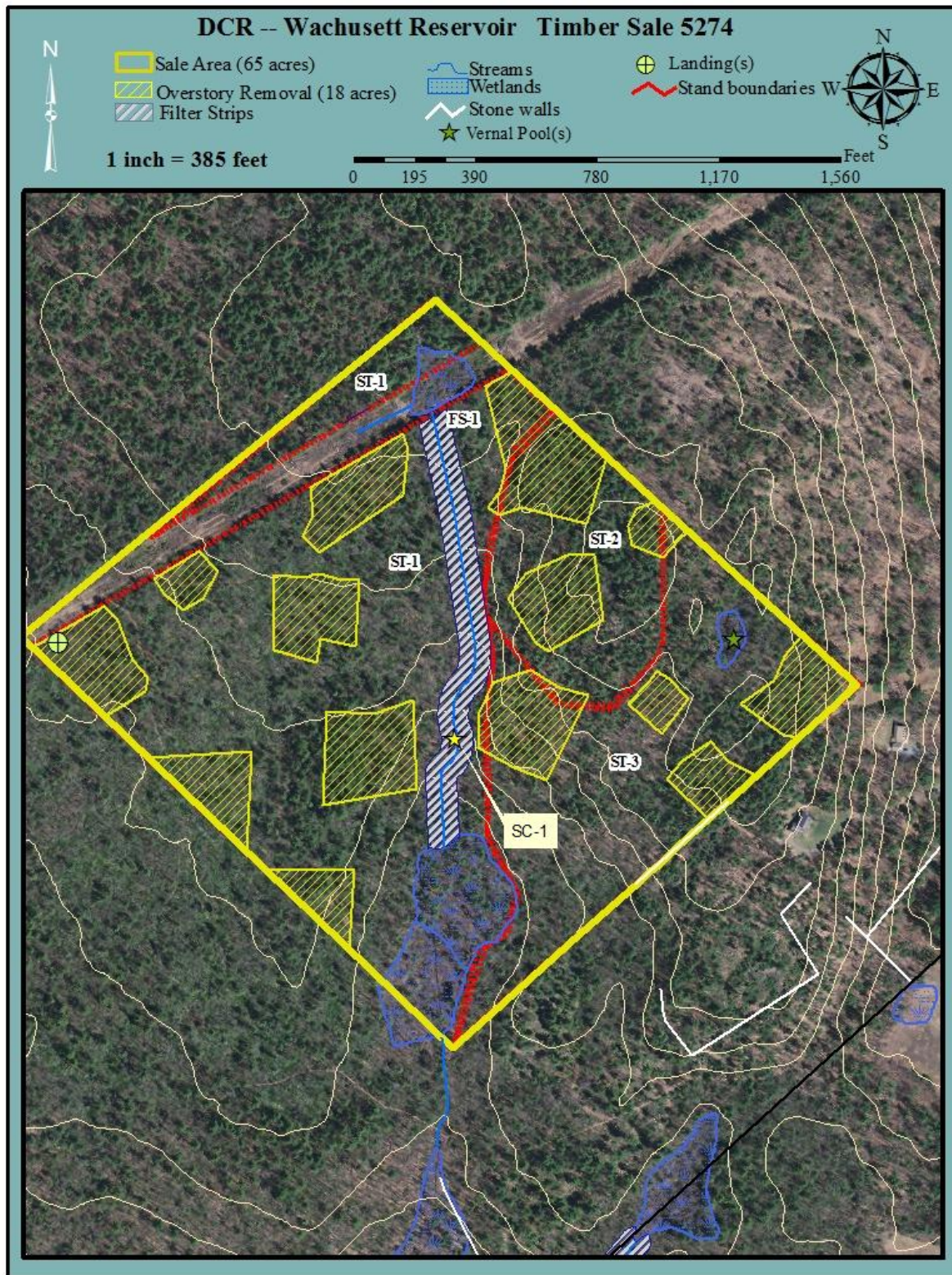


Figure 3. General locus map showing the location of the proposed timber harvest

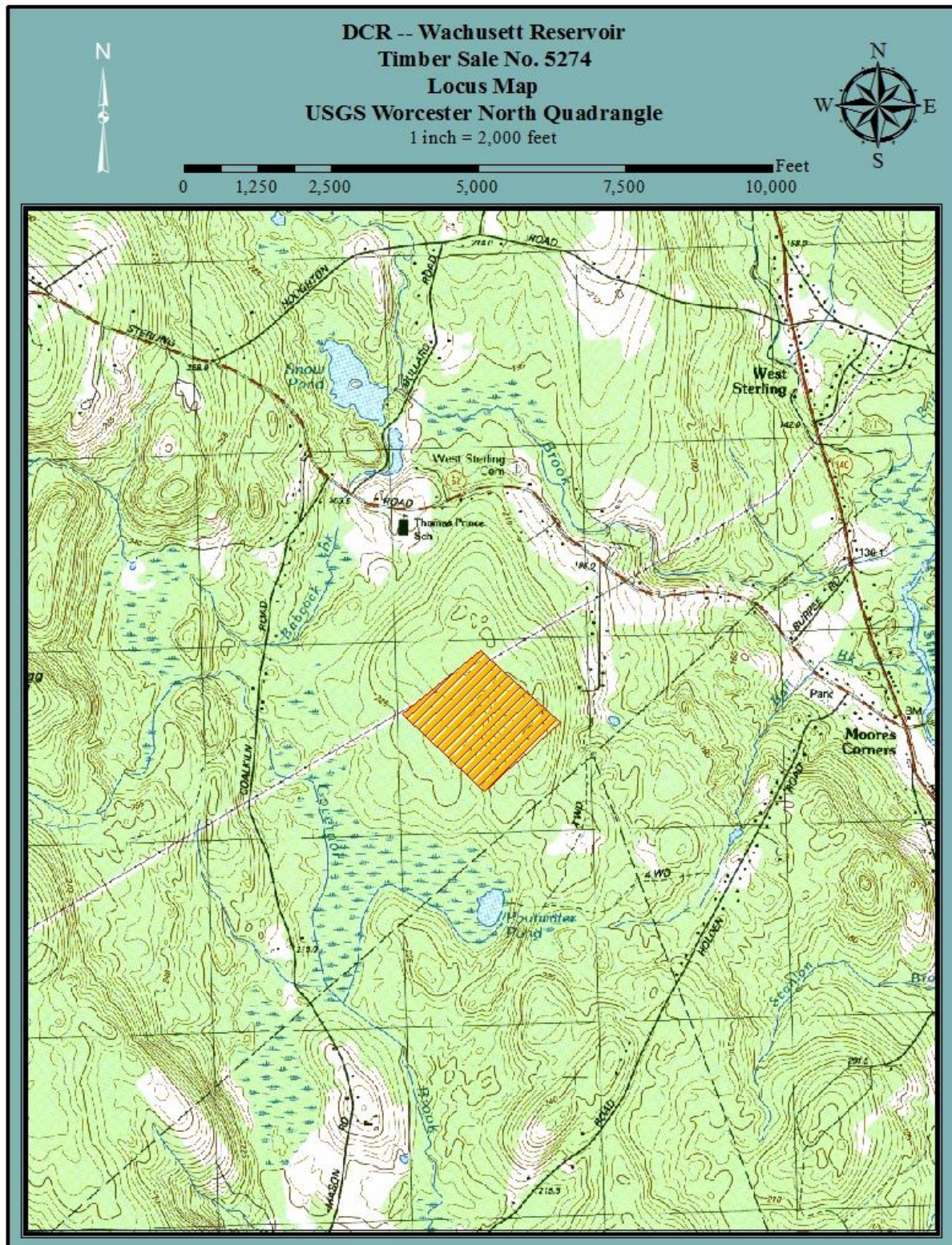


Figure 4. Pre-Harvest Photographs, A-C



A. There will be a landing at the same location as a previous sale.



B. One of the areas where the overstory trees are being removed in order to release this excellent understory of diverse hardwood and softwood species.



C. The oak tree in the foreground is being cut in this overstory removal area to provide sunlight and the removal process will provide disturbance to the mountain laurel.

Figure 5. Post-Harvest Photographs, A-C



A. The overstory was removed in this area giving the predominantly white pine understory the light and space it needs to continue to grow.



B. Another area where the overstory was removed. Note the large white pines that were retained within this area in order to provide valuable structure and diversity.



C. The understory in this area was dominated by very thick mountain laurel and lacked young trees. Now, with the level of damage that was intentionally done during the harvest process, a young forest can become established.