

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

**Project Title:**

<b>DWSP Harvest Permit Number: 5278</b>
<b>DCR Forest Cutting Plan File Number:241-9728-19</b>

**Site Information**

<b>Watershed: Wachusett</b>	<b>Town(s): Sterling</b>
<b>Acres: 54</b>	<b>Nearest Road:Gleason Road</b>
<b>Natural Heritage Atlas overlap?:Yes</b>	<b>Public Drinking Water Supply Watershed?: Yes</b>
<b>Forest Types: White pine, White pine-hardwood</b>	<b>ACEC?: No</b>
<b>Soils: Montauk-Scituate-Canton association and the Charlton-Chatfield-Hollis association. Both are well drained and extremely stony.</b>	
<b>Wetland Resources: There is an interesting well house that was built into what must have been a seep that flows into Keyes Brook. It's made of concrete and brick and is about 10'X10'. It had an asfalt shingled roof which has collapsed into the well.</b>	
<b>Vernal Pools: None known</b>	

**Harvest Information**

<b>DWSP Permit Start Date: 3/27/19</b>	<b>DWSP Permit End Date:6/30/21</b>
<b>Number of Wetland Crossings: 0</b>	<b>Number of Stream Crossings: 2</b>

**Best Management Practices Applied**

<b>Stream Crossings</b>	The very small intermittent brook will be crossed using the existing cart path. Depending on conditions at the time, bridging, pole ford or corduroy will be used. Tops may be used to armor the approaches. There is another stream that has a culvert that will be utilized near the landing.
<b>Filter Strips</b>	No trees are marked in the filter strips.
<b>Wetland Crossings</b>	These very narrow wetland crossings will ideally occur when conditions are dry or frozen or they will be protected with adequate tree tops or corduroy.
<b>Harvesting in Wetlands</b>	No harvesting in wetlands will occur.

<b>DWSP Forester supervising this harvest</b>
<b>Name: Greg Buzzell</b>
<b>Forester License #: 25</b>
<b>Phone #: 774-261-1841</b>

## **NARRATIVES**

### **General Description/Forest Composition/History:**

This working unit was acquired through 5 acquisitions dating from 1993 to 2013. The piece to the east of Gleason Road is primarily an oak/hardwood that is extremely stony. Along with red oak there is red maple, black birch, beech, white pine and white ash in the overstory. The portion to the west of Gleason Road is dominated by white pine/hardwood, predominantly comprised of white pine, red maple, white ash, black birch, red oak and white oak. Most of this area, the former Mosher parcel, was heavily logged in about 1988. Where most of the overstory was removed, we now have a 29 year old cohort on 11.5 acres. These are either small pole-sized white pine/hardwood stands comprised of white pine, black birch, red oak, red maple, paper birch and white oak or oak/hardwood stands comprised of red oak, red maple, black birch, white oak, sugar maple and sassafras. The remaining older white pine/hardwood forest is comprised of white pine, red maple, white ash, red oak, black birch. Due to the intensity of the logging, there is excellent large advance regeneration in these stands with a good diversity of species. The former Graves parcel which directly abuts the Mosher parcel, was not logged but has a very similar species composition as well as good advance regeneration although it is smaller in size.

### **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:**

Sampling found adequate regeneration in 60% of the plots with marginally adequate regeneration on another 20%. Oak was present on 58% of the plots. The regeneration is very diverse with black birch, red maple, red oak, white pine, black oak, white oak, yellow birch, white ash, sugar maple, paper birch, black cherry and eastern hophornbeam.

With excellent advance regeneration and a second age class already established in 18% of the forest, this is an excellent opportunity to create a third age class. No work will occur on the east side of Gleason Road due to the small acreage, the extreme rockiness and the remains of the mill.

The usual equipment requirements will be employed due to the presence of advance regeneration. An additional challenge to this job will be due to the extreme rockiness of this site.

### **Cultural Resources:**

The remains of the Temple-Stuart Chair Company mill are on this property. This mill was operated from 1841 until it burned in 1910 when the company moved its operation to Baldwinville. All stone walls on DCR property are valued as a cultural resource, so the stone walls on this property will be protected from damage to the extent possible.

**Wildlife/Rare or Endangered Species:**

NHESP has determined that certain state-listed sensitive species or habitats may exist within the lot proposal area. To protect them from unnecessary disturbance, detailed information regarding affected species and their locations is not included in this report. DWSP will coordinate with NHESP and follow recommendations to protect these species during the proposed activity. DWSP's Conservation Management Practices regarding vernal pools are being followed.

**FIGURES**

**Figure 1. Forest Cutting Plan**

**Figure 2. Map 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)

JAN 18 2019

Attn: Greg Buzzell

**For DCR Use Only:**

File Number	11-9788-11	Case No.	
Date Rec'd	1-18-19	Not. Hrt.	YES /
Earliest Start	2-15-19	Nat. Hrt. Imp.	NO
River Basin	WIRSHAW	Pl. b. Dr. Wat.	WIRSHAW
Gen. Obj.	LT	ACFC	NO

Site Information

**Location**

Town Princeton Loc 5278

Road Gleason Road

Acres 54 Proposed Start Date 02/01/19

Vol. MBF 158.2 Vol. Cds. 35 Vol. Tons 34

**Plan Preparer**

Name Russell Wilmes

Address 180 Beaman St.

Town, State, Zip West Boylston, MA 01581

Phone 774-261-1840

Type of Preparer Mass. Licensed Forester

\*Mass. Forester License # 426

\*\*Required for land under ChG1, ChG1A or Forest Stewardship

Best Management Practices

**Landowner**

Name DCR/USP/OWM Wachusett/Sudbury

Mailing Address 180 Beaman St.

Town, State, Zip West Boylston, MA 01581

Phone 774-261-1840

ChG1 ☐ ChG1A ☐ Sew ☐ \*Case #

Est. Stumpage Value

**Licensed Timber Harvester\*\***

Name Will be provided when known

Address

Town, State, Zip

Phone

Mass. Lic. Harvester #

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

Codes

**Stream Crossings**

Indicate location on map	SC-1	SC-2	SC-3	SC-4
Type of Crossing	CU	PO		
Existing Structure	Yes	No		
Type of Bottom	ST	ST		
Bank Height (ft)	2'	1'		
Sedimentation	CO	CO		

**Wetland Crossings**

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

**Filter Strips**

Indicate location on map	FS-1	FS-2	FS-3	FS-4
Width (40', 100', or VA)	VA	VA		

Harvesting In Wetlands

**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 (>30%2)				

**Service Forester Comments**

\*DCR and Forests/PLANS are existing

\*PLEASE SEE ATTACHED WETLAND DETERMINATION (NO IMPACT)

\*PLAN REVIEWED UNDER SEVERE CONDITIONS

**Notes:**

Applicant must provide DCR with all relevant information before plan may be approved and cutting may begin.

Some forestry activities such as pile burning and pesticide or fertilizer application may require additional permits. Consult MA Forestry BMP Manual for further information.

Forest Products

## Products to be Harvested\*

Species	MBF/Cds		MBF/Cds
White Pine	156.6	Red Maple	0.5
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	1.0
Hemlock		Black Oak	0.2
Spruce		White Oak	
Other Silv.		Other Hdw.	
White Ash		<b>Total MBF</b>	<b>158.2</b>
Beech		<b>Cordwood (Cds)</b>	<b>33</b>
White Birch		<b>SW Pulp (Tons)</b>	<b>34</b>
B & Y Birch		<b>HW Pulp (Tons)</b>	
Black Cherry		<b>Chips (Tons)</b>	

\*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.

Stand Treatment

## Cutting Standards

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	WH	WP	OH	MH
Acres	21	20	7	6
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

## 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 (CMBF 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.

Signature of Landowner's

Date

Service Forester

## Determination and Status

241-9728-19

	Approved	Disapproved	Expires
Cutting Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-18-2021
Signature of Service Forester/Director's Agent	Date		
	2-1-2019		

Extension	<input type="checkbox"/>	<input type="checkbox"/>	Expires	Set For Int.
Amendment	App 1	Dis 1	App 2	Dis 2
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Final Report and Comments

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

Signature of Service Forester/Director's Agent

Date

Codes

Forest Type	HK	Hemlock	OH	Mixed Oak	Designation of Trees	Type of Cut	Intermediate Harvests	Source of Regeneration
WP White Pine	HK	Hemlock	OH	Mixed Oak	CT Cut Tree	SH Strip and	Intermediate Harvests	AD Advanced
WR White Pine	HK	Hemlock	OH	Mixed Oak	LT Long Term	ST Strip and	Intermediate Harvests	SE Natural Seed
WH White Pine	HK	Hemlock	OH	Mixed Oak	SB Short Rotation	CC Clear Cut	Intermediate Harvests	PL Plant
WD White Pine	HK	Hemlock	OH	Mixed Oak	OT Other	SE Selection	Intermediate Harvests	CO Coppice
RP Red Pine	OH	White Oak	SM	Sugar Maple	Landowner Objective	SA Salvage	Intermediate Harvests	NS Natural Seed
SR Red Pine	OH	White Oak	PP	Pitch Pine	LT Long-term Mgt.	SN Selection	Intermediate Harvests	OT Other
					ST Short-term Har.			

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

pg 4 of 5

## 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: DNR DWSF

Town: Princeton

File Number: 241-9728-19

BMPs	<p><u>There are two stream crossings. SC-1 has a preexisting culvert protected by stone. SC-2 crosses a preexisting old skid road and is fed by a well upstream that flows down into Keyes brook. Keyes brook forms the northern boundary of the cut and has a filter strip with no cutting.</u></p> <p><u>There are two landings off of Gleason Road.</u></p>
Silviculture	<p><u>In order to release advance regeneration, 11 openings in the overstory are being created, covering 10 acres. These openings range from less than a 0.4 acre to 1.7 acres in size with an average of 0.9 acres. They are well distributed throughout the area taking advantage of the advance regeneration comprised of oaks, other hardwoods, and white pine. No thinning will occur between any of these openings.</u></p>
Objectives	<p><u>The 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 Natural Heritage GIS layer comes into the sale area (Priority Habitat # 1582) on the far western edge. A portion of one opening will have cutting and hauling in that specific area.</u></p>



## DIVISION OF FISHERIES & WILDLIFE

1 Revere Hill Road, Weymouth, MA 01981  
p: (508) 389-6300 | f: (508) 389-7800  
MASS.GOV/MASSWILDLIFE

Mike Downey  
355 West Boylston St.  
P.O. Box 155  
Clinton, MA 01510

Cutting Plan No.	241-9728-19
NHESP Tracking No.	1B-3799C
Town	Princeton
Road	Gleason Road
Landowner	DCI/DWSP/DWM Wachusett/Slabury
Preparer	Russell Wilbur
Date	January 24, 2019

Dear Mike,

The Natural Heritage and Endangered Species Program (NHESP) of the Massachusetts Division of Fisheries and Wildlife ("the Division") has reviewed the above-referenced Forest Cutting Plan ("the Plan") pursuant to the special approval procedures of the Forest Cutting Practices Regulations (324 CMR 12.04(G)). The Plan identifies 4 stands totaling 54 acres which will receive patch cuts to diversify the age classes of the forest. The entire harvest will take place to the west of Gleason Road, just south of SR 140.

Based on details of the Plan and information in the NHESP database, the Division does not expect activities proposed in the Plan to negatively impact Estimated Habitat or result in Take (as defined in 321 CMR 10.02) of plant or animal species protected under the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). Therefore, the Division does not require that the Plan be modified at this time. Should harvest to the east of Gleason Road be proposed, further consultation with the Division is required.

Please copy the Division on any proposed amendment, extension and on the approved Plan for the site. If you have any questions about this letter, please contact Rebekah Zimmerman at (508) 389-6354 or Rebekah.zimmerer@state.ma.us.

Sincerely,

Thomas W. French, Ph.D.  
Assistant Director

CC: Princeton Conservation Commission

MASSWILDLIFE



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

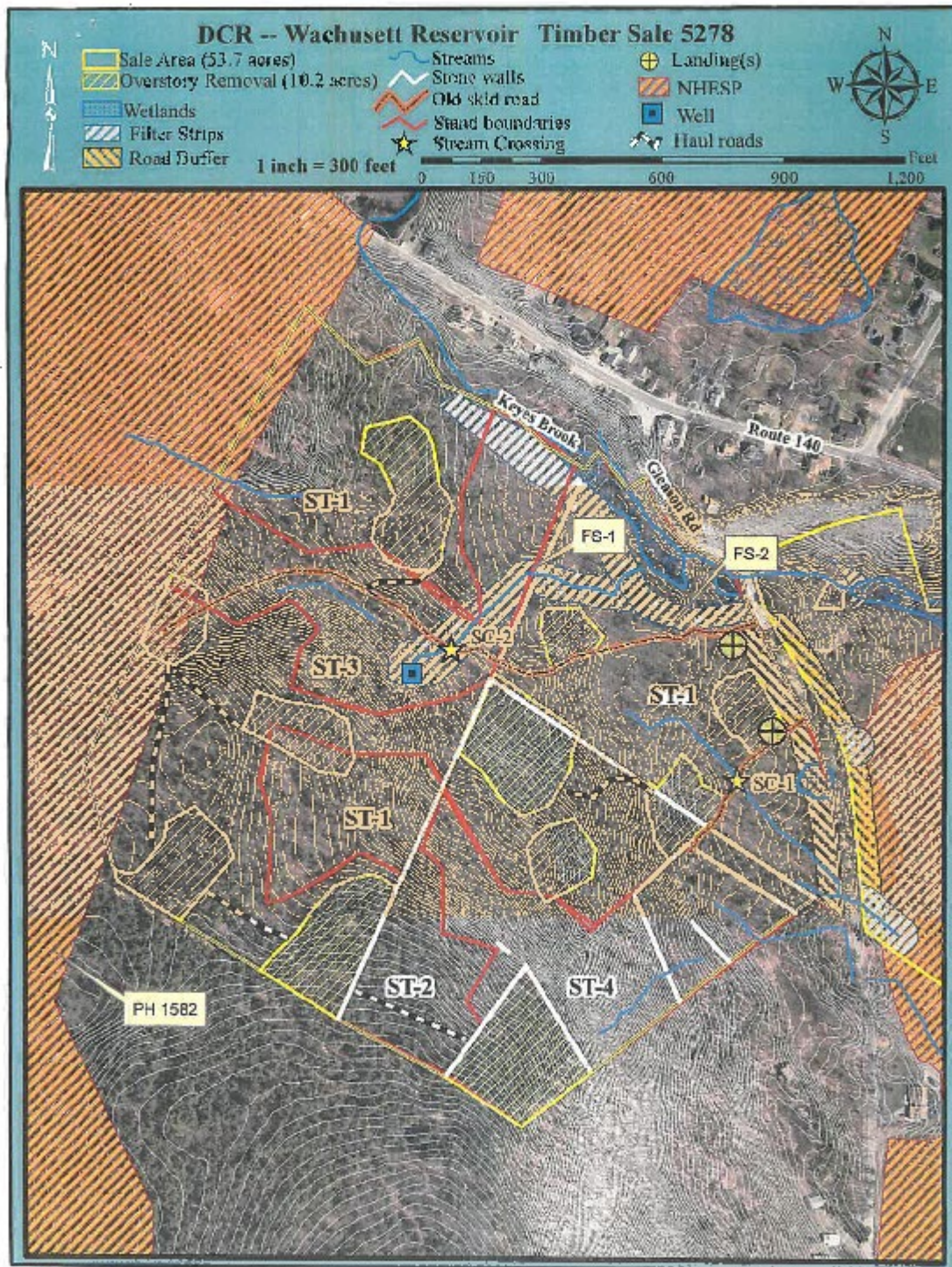




Figure 3. General locus map showing the location of the proposed timber harvest





**Figure 4. Pre-Harvest Photographs, A-C**

A. The landing location at near Keyes Brook.



B. White pine opening marked with thick oak regeneration to be released.





C. Boulder access point of main landing.





**Figure 5. Post-Harvest Photographs, A-C**



A. The landing on Gleason Road, now closed off to access with a row of boulders.



B. The overstory was removed from within and around these young hardwoods. They are now free to continue to grow and thrive.





C. These are all red oak seedlings that originated from the excellent acorn crop in 2019.