

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

**Project Title: Lot 5278**

DWSP Harvest Permit Number: 5278

DWSP Proposal ID: WA-18-122

DCR Forest Cutting Plan File Number: 241-9728-19

***Site Information***

Watershed: Wachusett

Town(s): Sterling

Acres: 54

Nearest Road: Gleason Road

Natural Heritage Atlas overlap?: Yes

Public Drinking Water Supply Watershed?: Yes

Forest Types: White pine, White pine-hardwood

Area of Critical Environmental Concern (ACEC)?: No

Soils: Montauk-Scituate-Canton association and the Charlton-Chatfield-Hollis association. Both are well drained and extremely stony.

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 asphalt shingled roof which has collapsed into the well.

Vernal Pools: None known.

***Harvest Information***

Harvest Start Date: 3/27/2019

Harvest End Date: 6/30/2021

Number of Wetland Crossings:

Number of Stream Crossings:

***Best Management Practices Applied***

Stream Crossings: 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.

Filter Strips: No trees are marked in the filter strips

Wetland Crossings: 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.

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***

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.

### ***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. 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)

JAN 18 2019

Attn: Greg Buzzell

**For DCR Use Only:**

File Number MA-9782-11 Case No. \_\_\_\_\_  
 Date Rec'd 1-18-19 Not. Hrt. YES  
 Earliest Start 2-5-19 Nat. Herl. Imp. NO  
 River Basin WASHWA Pub. Dr. Wat. WASHWA/ETT  
 Gen. Obj. LT ACFC NO

Site Information

**Location**

Town Princeton Lot 3278  
 Road Glenora Road  
 Acres .34 Proposed Start Date 02/01/19  
 Vol. MBF 158.2 Vol. Cds. .35 Vol. Tons 34

**Plan Preparer**

Name Russell Wilmet  
 Address 130 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

**Landowner**

Name DCR/DWSP/DWM Wachusett/Sudbury  
 Mailing Address 186 Beaman St.  
 Town, State, Zip West Boylston, MA 01581  
 Phone 774-261-1840  
 ChG1  ChG1A  Stew  \*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.

Best Management Practices

**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'		
Stabilization	CO	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	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**

\* Will send reports/photos and existing  
 \* Please see attached NHPSP Determination  
 (NO IMPACT)  
 \* Plans reviewed under snow conditions

Codes

Type of Feature	Type of Crossing	Stabilization	Mitigation	Type of Bottom	Notes
LF Mass. Lic. For.	CU Culvert	SP Seed	FR Frazzle	LF Lodge	Applicant must provide DCR with all relevant information before plan may be approved and cutting may begin
TH Lic. Tim Har	PO Bridge	MU Mulch	DR Dry	ST Stone	Some forestry activities, such as pile burning and pesticide or herbicide application may require additional permits.
TR Timber Buyer	PO Road	CO Contour	OT Other	ML Mud	Consult MA Forestry BMP Manual for further information.
LO Landowner	PO Paved	ST Stone		GR Gravel	
OT Other	OT Other	HB Hay Bales		OT Other	

Forest Products

**Products to be Harvested\***

Species	MBF/Cds	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>		158.2
Beech	Conceded (Cds)		35
White Birch	SW Pulp (Tons)		34
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.

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 (Cds 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 harbor agent if the final figures differ from those reported.

Signature of landowner(s)

Date

Service Forester

**Determination and Status** 241-9428-19

Approved  Disapproved  Expires 1-18-2021

Cutting Plan

Signature of Service Forester/Director's Agent [Signature] Date 2-1-2019

Extension  Expires  Sec. For. Ints. 1

Amendment  App 1  Dis 1  App 2  Dis 2

**Final Report and Comments**

I hereby certify that the aforesaid 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	OM	Mixed Oak	Designation of Trees	SH	Sustainable	Intermediate Harvest	Source of Regeneration
WP White Pine	HK	Hemlock	OM	Mixed Oak	CT Cut Tree	SH	Sustainable	Intermediate Harvest	AD Advanced
WR White Birch	HI	Hemlock	RM	Red Maple	LT Live Tree	ST	Short Term	Commercial Thin	SE Natural Seed
WH White Hardwood	BC	Black Cherry	BL	Beech	SB Stand Boundary	CC	Clear Cut	New Com Thin	PL Plant
WP White Pine	BD	Black Birch	SP	Spruce Fir	OT Other	SE	Seedling	Non-Standard System*	CO Coppice
RP Red Pine	OH	Other Hardwood	SM	Sugar Maple	Landowner Objective	SA	Salvage	Highgrade*	DS Direct Seed
SR Red Spruce	OR	Other Red Oak	PP	Pitch Pine	LT Long-term Mgt.	SN	Sustainable	DL Damaged Lumber*	OT Other
					ST Short-term Har.			OT Other*	

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

# 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: DOR. 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>

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

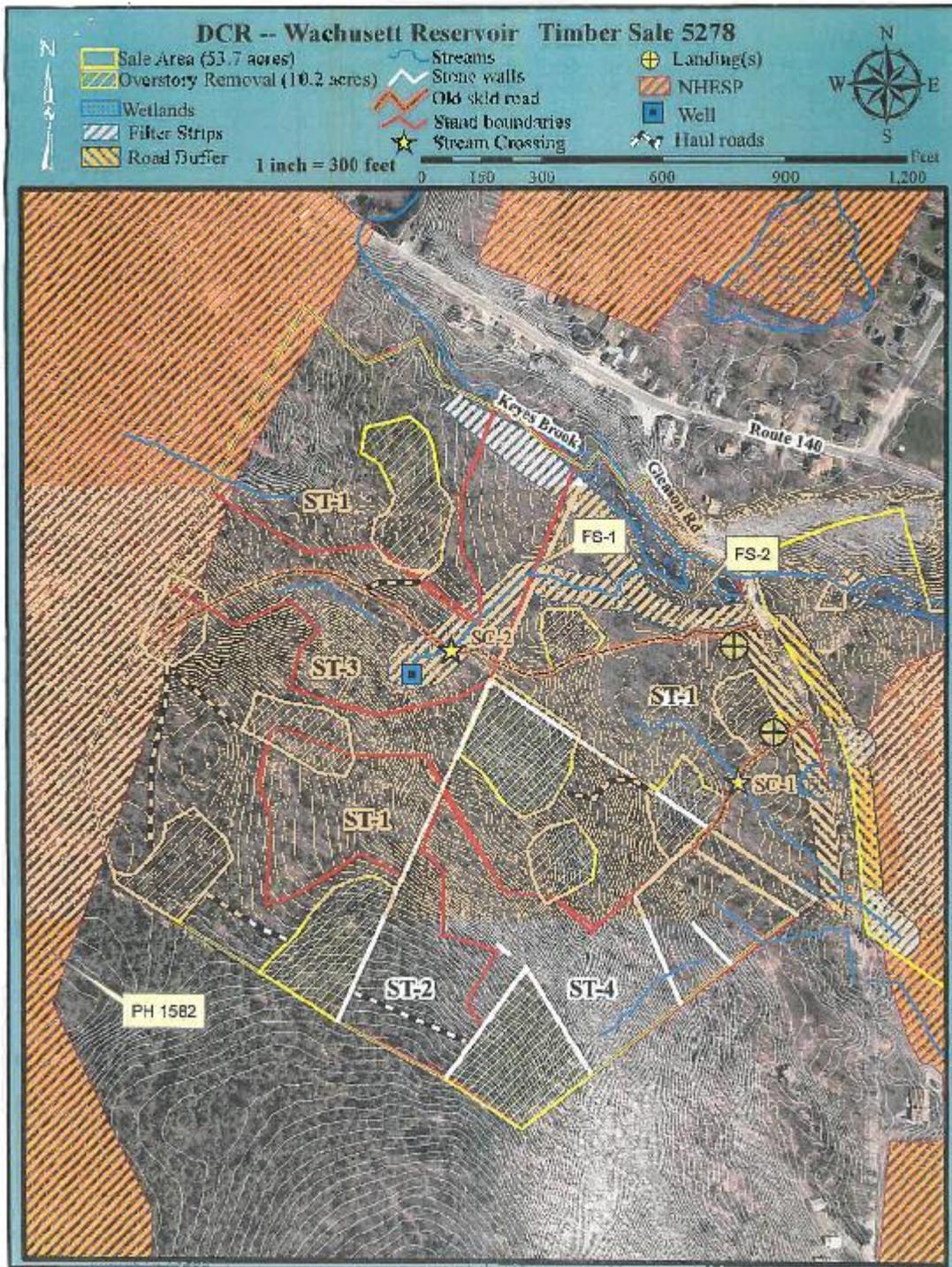
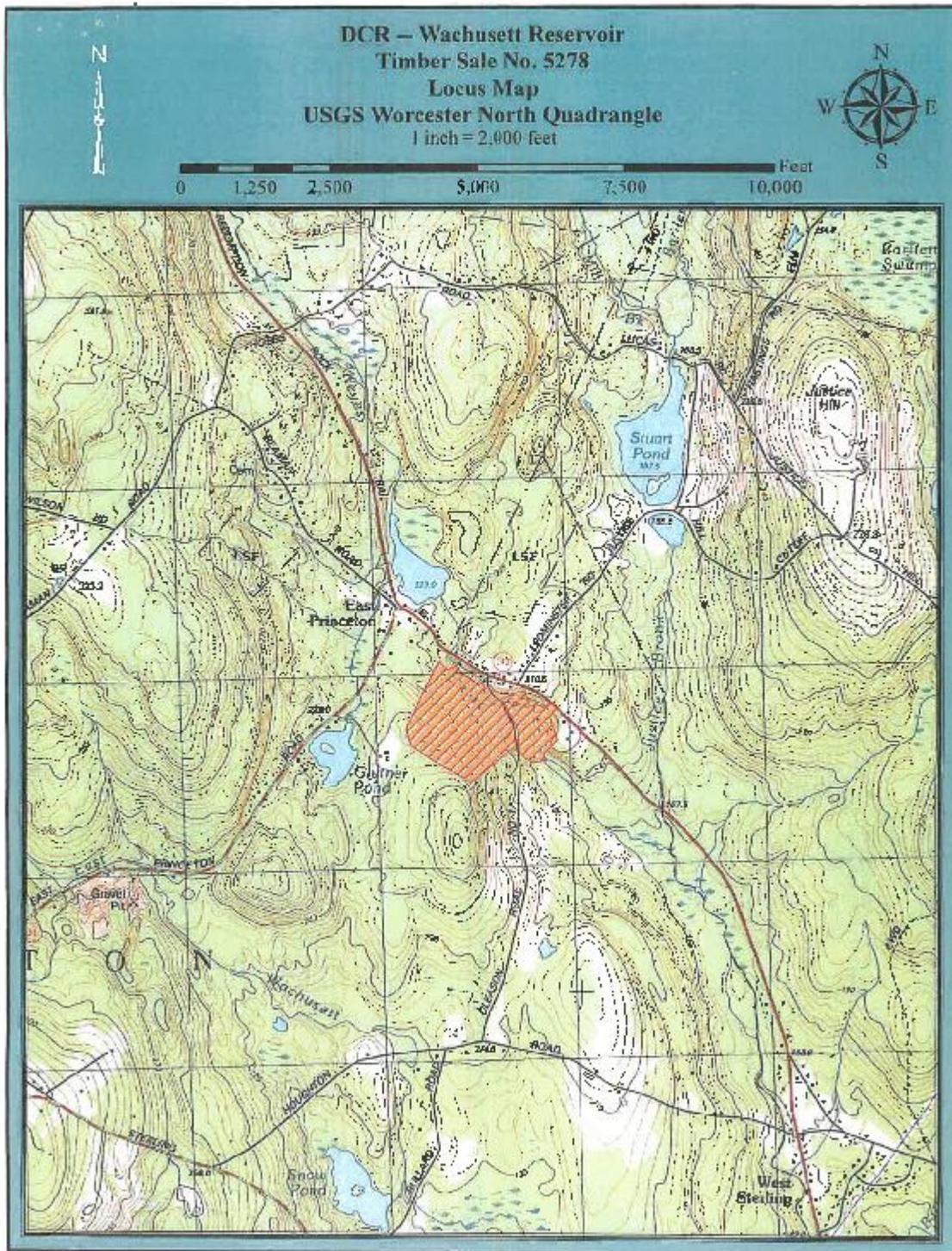


Figure 3. General locus map showing the location of the proposed timber harvest



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



**A. 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.