

**rwikiMassachusetts 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:</b> 5270
<b>DCR Forest Cutting Plan File Number:</b> 039-8994-18

**Site Information**

<b>Watershed:</b> Wachusett	<b>Town(s):</b> Boylston
<b>Acres:</b> 55.5	<b>Nearest Road:</b> Diamond Hill Ave
<b>Natural Heritage Atlas overlap?:</b> Yes	<b>Public Drinking Water Supply Watershed?:</b> Yes
<b>Forest Types:</b> White pine/oak, Northern red oak	<b>ACEC?:</b> No
<b>Soils:</b> Chatfield-Hollis-Rock outcrop complex & Merrimac and Hinckley sandy loams	
<b>Wetland Resources:</b> Malagasco Brook is along the southern end of this sale area and flows directly into the Wachusett Reservoir. A wetland forms the northern boundary of the area.	
<b>Vernal Pools:</b> There is a vernal pool just south of the Gate 16 road.	

**Harvest Information**

<b>DWSP Permit Start Date:</b> 09/20/17	<b>DWSP Permit End Date:</b> 12/6/19
<b>Number of Wetland Crossings:</b> 0	<b>Number of Stream Crossings:</b> 0

**Best Management Practices Applied**

<b>Stream Crossings</b>	There are no streams crossings.
<b>Filter Strips</b>	Some oak trees will be cut in the filter strip along the reservoir in an effort to maintain the arborvitae and white pine hedge which screens hardwood leaves from going into the reservoir.
<b>Wetland Crossings</b>	There are no wetland crossings.
<b>Harvesting in Wetlands</b>	No harvesting in wetlands will occur.

<b>DWSP Forester supervising this harvest</b>
<b>Name:</b> Russell Wilmot
<b>Forester License #:</b> 426
<b>Phone #:</b> 978-792-7806 x318

## **NARRATIVES**

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

This property was acquired in the original takings in 1900 from John Flagg. At the time the land was mostly woodland with some sprout land and pasture which was planted with white pine shortly thereafter. In 1938 a major hurricane damaged this working unit and as a result was partially cleared and replanted with white pine in some areas. A handful of Asian longhorned beetle infested trees found a few years ago were removed. Currently this forest is comprised primarily of red oak and white pine along with sugar maple, red maple, eastern hophornbeam, black birch, red pine, American beech, white oak, white ash and hickory. The understory within this mature forest is variable depending on location. The red and white pine stands in the southern end have very good white pine and oak regeneration. In the middle of the unit the red oak stand has a marginal mix of eastern hophornbeam, sugar maple, and red maple. The white pine and oak stands have good oak regeneration.

### **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 55 acres as well as the 1,337 acres of DCR-owned land that drains into the Wachusett Reservoir.

### **Silvicultural Objectives:**

With good advance regeneration throughout much of this sale area, this operation will remove portions of the overstory in order to release these young trees. This will result in the establishment of a new age class in this currently even-aged forest. Fifteen openings in the forest are being created covering 12.1 acres. These openings range in size from 0.2 to 2 acres with an average of 0.8 acres. These are well distributed throughout the area taking advantage of where the regeneration is most numerous and diverse. Another 6.5 acres is being lightly thinned, removing the trees of poorest quality and vigor.

### **Cultural Resources:**

There are no known or documented significant historic or archeological resources in this area. This area has been determined to be "Not Sensitive" for the possible presence of archaeological features by the DCR Archeologist.

There is a group of old foundations on the south side of the Gate 16 road (formerly Diamond Hill Road). Logging equipment will not be allowed in this area.

### **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-B**

**Figure 5. Post-Harvest Photographs A-B**

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)

AUG 29 2017

## For DCR Use Only:

File Number 25-2950-0 Case No. 25-2950-0  
Date Rec'd 8/15/17 Nat. Hert. YES 19TH  
Earliest Start 9/15/17 Nat. Hert. Imp. no impact  
River Basin Nashua Pub. Dr. Wat. yes  
Gen. Obj. CT ACBC ALB AREA

Site Information

## Location

Town Boylston Lot 5270  
Road Diamond Hill Road  
Acres 59.5 Proposed Start Date 9/17  
Vol. MBF 134.7 Vol. Cds. 166 Vol. Tons 101

## Plan Preparer

Name Gregory S. Buzzell  
Address 180 Beaman Rd.  
Town, State, Zip West Boylston, MA, 01583  
Phone 508-792-7806 Ext 317  
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				
Existing Structure				
Type of Bottom				
Bank Height (ft)				
Stabilization				

## 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

Timber Harvester Is/ will  
need ALB compliance  
training.

Codes

Type of Preparer	Type of Crossing	Stabilization	Mitigation -	Type of Bottom	Note:
LF Mass. Lic. For.	CU Culvert	SE Seed	FR Frozen	LE Ledge	Applicant must provide DCR with all relevant information before plan may be approved and cutting may begin.
TH Lic. Tim. Har	BR Bridge	MU Mulch	DR Dry	ST Stony	Some forestry activities, such as prescribed burning and pesticide or fertilizer application may require additional permits.
TB Timber Buyer	FO Ford	CO Corduroy	OT Other	MU Mud	Consult MA Forestry BMP Manual for further information.
LO Landowner	PO Poled	ST Stone		GR Gravel	
OT Other	OT Other	HB Hay Bales		OT Other	

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

## Products to be Harvested\*

Species	Mbf/Cds		Mbf/Cds
White Pine	86.9	Red Maple	
Red Pine	2.7	Sugar Maple	
Pitch Pine		Red Oak	21.9
Hemlock		Black Oak	17.3
Spruce		White Oak	6.0
Other Sfrwd.		Other Hdwd.	
White Ash		<b>Total Mbf</b>	134.7
Beech		<b>Cordwood (Cds)</b>	166
White Birch		<b>SW Pulp (Tons)</b>	101
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.

## Cutting Standards

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	WO	OR		
Acres	33.5	6.0		
Landowner Objective	LT	LT		
Designation of Trees	CT	CT		
Type of Cut	SH	SH		
Source of Regeneration	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 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.

Signature of landowner(s)

8/25/17  
Date

## Determination and Status

Approved ☒ Disapproved ☐ Expires 8-29-19

Cutting Plan ☒

Signature of Service Forester/Director's Agent 9-26-17 Date

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

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				Designation of Trees	Type of Cut	Intermediate Harvests:	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 Black Cherry	BE Beech	SB Stand Boundary	CC Clear Cut	SE Selection	PL Plant	
WO WP/Oak	BB Bee/Bir/Map	SF Spruce/Fir	OT Other	SA Salvage	DL Diameter Limit*	CO Coppice	
RP Red Pine	OH Oak/Hdwd	SM Sugar Maple	Landowner Objective	SN Sanitation	OT Other*	DS Direct Seed	
SR Red Spruce	OR N Red Oak	PP Pitch Pine	LT Long-term Mgt.			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:

Town:

File Number:

DCR/DWSP

Boylston

039-8994-18

BMPs	<p><u>There are no stream or wetland crossings in this lot.</u> ✓</p> <p><u>In the portions of the overstory removal areas that are adjacent to the shoreline and are within the variable-width filter strip, a significant number of overstory white pines are being retained. In addition, no trees that comprise the hedge are being cut. These trees are both arborvitae and white pine that were planted in the first quarter of the 20<sup>th</sup> Century.</u></p>
Silviculture	<p><u>In order to release advance regeneration, 15 openings in the overstory are being created, covering 12.1 acres. These openings range from 0.2 acres to 2 acres in size with an average of 0.8 acres. They are well distributed throughout the sale area taking advantage of the advance regeneration comprised of white pine, oaks and other hardwoods.</u></p> <p><u>6.5 acres are being lightly thinned in order to remove the poorest quality trees. In a small stretch near the shoreline south of Diamond Hill Road insided of Gate 16, trees are being removed for the benefit of the reservoir shoreline arborvitae hedge.</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	



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-B**



- A. This primarily red oak overstory is being removed to give the more diverse understory of white pine, oaks and red maple the space and light they need to continue to grow.



- B. While the majority of the trees in this 2 acre patch will be removed to give the young trees space and light, some trees, such as the large white pine in the middle of the photo will be retained. This provides valuable structural diversity as well as wildlife habitat and a long-term source of white pine seeds into this area.



**Figure 5. Post-Harvest Photographs A-B**



A. Hardwood stand removed with white pine retention and regeneration released.



B. Overstory removed with white pine retention and mixed hardwood and softwood regeneration released.