

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

**Project Title: Lot 5256**

DWSP Harvest Permit Number: 5256

DWSP Proposal ID: WA-15-139

DCR Forest Cutting Plan File Number: 039-7701-16

***Site Information***

Watershed: Wachusett

Town(s): Boylston

Acres: 43

Nearest Road: Main Street (Rt. 70)

Natural Heritage Atlas overlap?: Yes

Public Drinking Water Supply Watershed?: Yes

Forest Types: White pine-oak/ Mixed oak

Area of Critical Environmental Concern (ACEC)?: No

Soils: The Hinckley sandy loam, an excessively drained soil of outwash origin

Wetland Resources: There are no wetlands.

Vernal Pools: None known.

***Harvest Information***

Harvest Start Date: 10/1/2015

Harvest End Date: 12/1/2017

Number of Wetland Crossings: None

Number of Stream Crossings: None

***Best Management Practices Applied***

Stream Crossings: There are no stream crossings.

Filter Strips: No trees are marked within the filter strip.

Wetland Crossings: There are no wetland crossings.

Harvesting in Wetlands: There are no 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 area is located in Boylston on Sawyer's Bluff inside Gate 8 off of Main Street (Rt. 70). This is typical dry site, mixed oak and white pine forest. An early MDC map from about 1900 describes this area as "Burned-over sproutland: chestnut and oak" and "thick stand of red oak and chestnut, 2" to 6" . The entire area was interplanted with white pine seedlings in 1931. Much of this pine survives today. As is typical for stands of oak and pine growing on gravel soils, the pine is of good quality and vigor and is noticeably taller than the much slower growing and often, carpenter ant infested oaks. Most of the oak here is black oak although red and white oaks are present along with some red maple and the occasional hemlock. There is an excellent understory of regeneration due, in large part, to a harvest operation in 1993 in the area. The focus of this operation was to remove the poorest quality oaks while benefitting the white pines with the goal of establishing white pine 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 selected for management because both within the forest of these 43 acres as well as in the forest of the much larger area from which water flows into the Wachusett Reservoir, there are too few acres of young forest. There is no young forest in this area and only 10% of the forest in this subwatershed, of which the DCR owns 1,086 manageable acres, is comprised of young trees less than 20 years old. The ideal protection forest would have closer to 1/3rd of the area growing young trees.

### ***Silvicultural Objectives***

Given the excellent advance regeneration throughout this area, openings will be made in the overstory thereby releasing the young trees from the shade of the older and taller trees and creating a more diverse forest. Given the superior quality and growth rates of white pine compared to oaks on this site, the focus will be to create these openings where the pine regeneration is best. Throughout this area, 16 openings have been marked totaling 14.1 acres, ranging in size from 0.2 to 1.7 acres with an average size of 0.9 acres. These openings are well distributed with adequate spacing between the patches to allow for future patches of a similar range of sizes. Standards regarding green retention (live trees left within patches for structure and seed) have been followed.

### ***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 Native American resources by the DCR Archeologist.

### ***Rare or Endangered Species***

This treatment area falls within a NHESP Priority Habitat of Rare Species due to the presence of nesting loons and eagles at Wachusett Reservoir. Review of the planned operation by the NHESP program has determined that no negative impact to these species will occur.

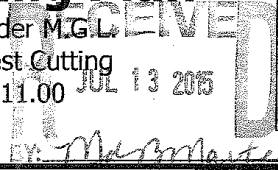
### **Figures**

- 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)



### For DCR Use Only:

File Number 039-TD-16 Case No. \_\_\_\_\_  
 Date Rec'd 7/13/2015 Nat. Hert. yes  
 Earliest Start 7/29/2015 Nat. Hert. Imp. no  
 River Basin NASWA Pub. Dr. Wat. yes  
 Gen. Obj. LT ACEC \_\_\_\_\_

Site Information

### Location

Town Boylston Lot 5256  
 Road Route 70 - Gate 8 (Sawyer Bluff)  
 Acres 43 Proposed Start Date 08/01/15  
 Vol. MBF 70.9 Vol. Cds. 170 Vol. Tons 59

### 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				
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)				

### 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

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

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

Forest Products

Products to be Harvested\*

Table with 4 columns: Species, Mb/Cds, and Mb/Cds. Rows include White Pine, Red Pine, Pitch Pine, Hemlock, Spruce, Other Sftwd., White Ash, Beech, White Birch, B & Y Birch, and Black Cherry.

\*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. Mb/Cds = thousand board feet.

Stand Treatment

Cutting Standards

Table with 5 columns: Indicate location on map, ST-1, ST-2, ST-3, ST-4. Rows include Forest Type, Acres, Landowner Objective, Designation of Trees, Type of Cut, and Source of Regeneration.

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.

[X] 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.

Handwritten signature of landowner(s)

7/13/15 Date

Service Forester

Determination and Status

Form with checkboxes for Approved, Disapproved, Expires, Extension, and Amendment. Includes handwritten signature of Laura Orley and date 7/13/15.

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

Codes

Table with 6 columns: Forest Types, Designation of Trees, Type of Cut, and Source of Regeneration. Lists various codes and their corresponding tree types or methods.

# Forest Cutting Plan

Narrative Page

Landowner: \_\_\_\_\_

Town: \_\_\_\_\_

File Number: \_\_\_\_\_

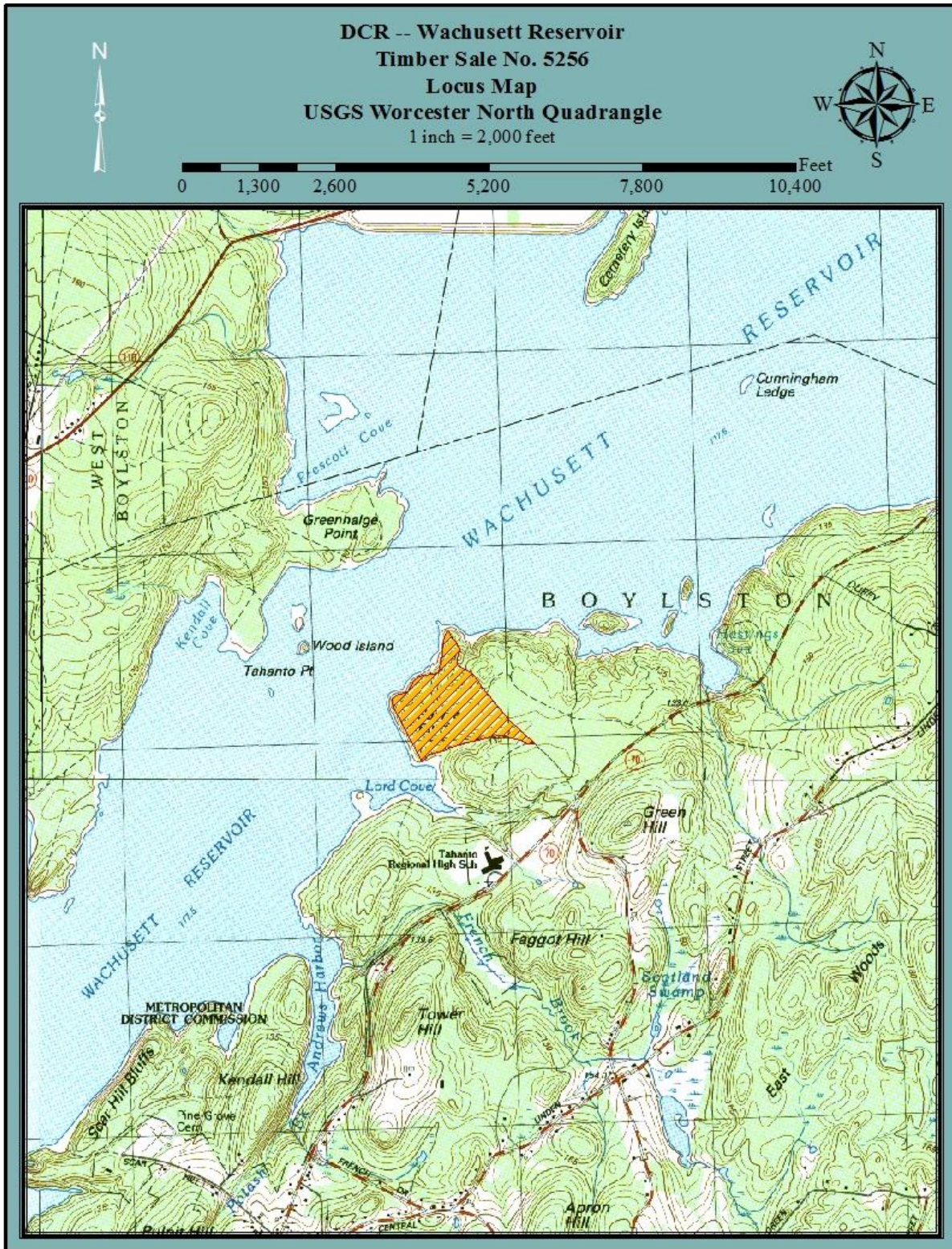
Use only if further explanation is required of information on pages one or two or if "other" was used in any category.

BMPs	<p><u>There are no streams or wetlands on this excessively drained site. The landing(s) will be accessed by the excellent forest road frontage that is throughout this site.</u></p> <p><u>While the sale area intersects with the filter strip of the Wachusett Reservoir, there are no trees marked within the necessary distance from the reservoir to necessitate the establishment of a filter strip.</u></p>
Silviculture	<p><u>In order to release advance regeneration, 16 openings in the overstory are being created, covering 14.1 acres. These openings range from less than a 0.2 acres to 1.7 acres in size with an average of 0.9 acres. They are well distributed throughout the area taking advantage of the excellent advance regeneration comprised of white pine, oaks and other hardwoods. One area of thinning (1.3 acres) will occur on the northern side of the western block that will remove some oaks in order to daylight some pole size pine trees.</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 # 779) approximately 500 feet all along the shoreline. This layer encompasses the entire reservoir and is due, at least in part, to the presence of nesting loons and eagles.</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 lot will be accessed through Gate 8 on Main St. (Rt. 70) in Boylston.



B. The white pine and oak overstory is being removed to release this thick understory which is dominated by young white pine saplings.



C. Another view of the thick white pine regeneration which will be released with the removal of this portion of the overstory. The larger white pine in the center-right of the photo is being retained in order to provide a more diverse structure to the forest.

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



A. This was the primary landing location inside Gate 8.



B. This oak and white pine were left in this opening to provide valuable structure in this new patch of young forest.



C. Another opening where the primary goal was to release young white pine on this very dry site. White pine is better adapted to growing vigorously and with good form than is oak on such sites. A variety of older pines were retained in this opening as well.