Massachusetts Department of Conservation and Recreation

Division of Water Supply Protection, Office of Watershed Management

Forest Management Project Summary

Project Title:

DWSP Harvest Permit Number: 5256
DCR Forest Cutting Plan File Number:039-7701-16

Site Information

Watershed: Wachusett	**Town(s)**: **Boylston**
Acres: 43	**Nearest Road: Main St. (Rt. 70)**
Natural Heritage Atlas overlap?: Yes	**Public Drinking Water Supply Watershed?:** Yes
Forest Types: White pine-oak/ Mixed oak	**ACEC?: No**
Soils: The Hinckley sandy loam, an excessively drained soil of outwash origin	
Wetland Resources: There are none within the sale area.	
Vernal Pools: None	

Harvest Information

DWSP Permit Start Date: 10/01/15	**DWSP Permit End Date: 12/01/17**
Number of Wetland Crossings: 0	**Number of Stream Crossings: 0**

Best Management Practices Applied

Stream Crossings	There are no stream crossings.
Filter Strips	While the sale area is bordered by the Wachusett Reservoir, no trees are marked within the distance from the reservoir that would necessitate the establishment of a 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 #: 25
Phone #: 508-792-7806 x317

NARRATIVES

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 there are too few acres of young forest 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 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 a third 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.

Wildlife/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

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)

RECEIVED
JUL 13 2015

For DCR Use Only:

File Number	034-TM-16	Case No.	
Date Rec'd	7/13/2015	Nat. Hert.	Yes
Earliest Start	7/23/2015	Nat. Hert. Imp.	No
River Basin	Nashua	Pub. Dr. Wat.	Yes
Gen. Obj.	CT	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				

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%?)				

Wetland Crossings

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

Service Forester Comments

Filter Strips

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

Codes

Type of Preparer
LF Mass. Lic. For.
TH Lic. Tim. Har
TB Timber Buyer
LO Landowner
OT Other

Type of Crossing
CU Culvert
BR Bridge
FO Ford
PO Poled
OT Other

Stabilization
SE Seed
MU Mulch
CO Corduroy
ST Stone
HB Hay Bales
OT Other

Mitigation
FR Frozen
DR Dry
OT Other

Type of Bottom
LE Ledge
ST Stony
MU Mud
GR Gravel
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

Forest Products

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine	58.4	Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	6.0
Hemlock		Black Oak	4.1
Spruce		White Oak	2.5
Other Sftwd.		Other Hdwd.	
White Ash		**Total Mbf**	70.9
Beech		**Cordwood (Cds)**	170
White Birch		**SW Pulp (Tons)**	59
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	OM	WO		
Acres	13.8	27.4		
Landowner Objective	LT	LT		
Designation of Trees	CT	CT		
Type of Cut	SE	SE		
Source of Regeneration	AD/SE	AD/SE		

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 (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) — Date: 7/13/15

Service Forester

Determination and Status

	Approved	Disapproved	Expires
Cutting Plan	☒	☐	7/13/2017

Signature of Service Forester/Director's Agent — Date: 7/21/15

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

	App 1	Dis 1	App 2	Dis 2	
Amendment	☐	☐	☐	☐	/

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

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

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: _____

BMPs

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.

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.

Silviculture

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.

Objectives

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.

Other

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.

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

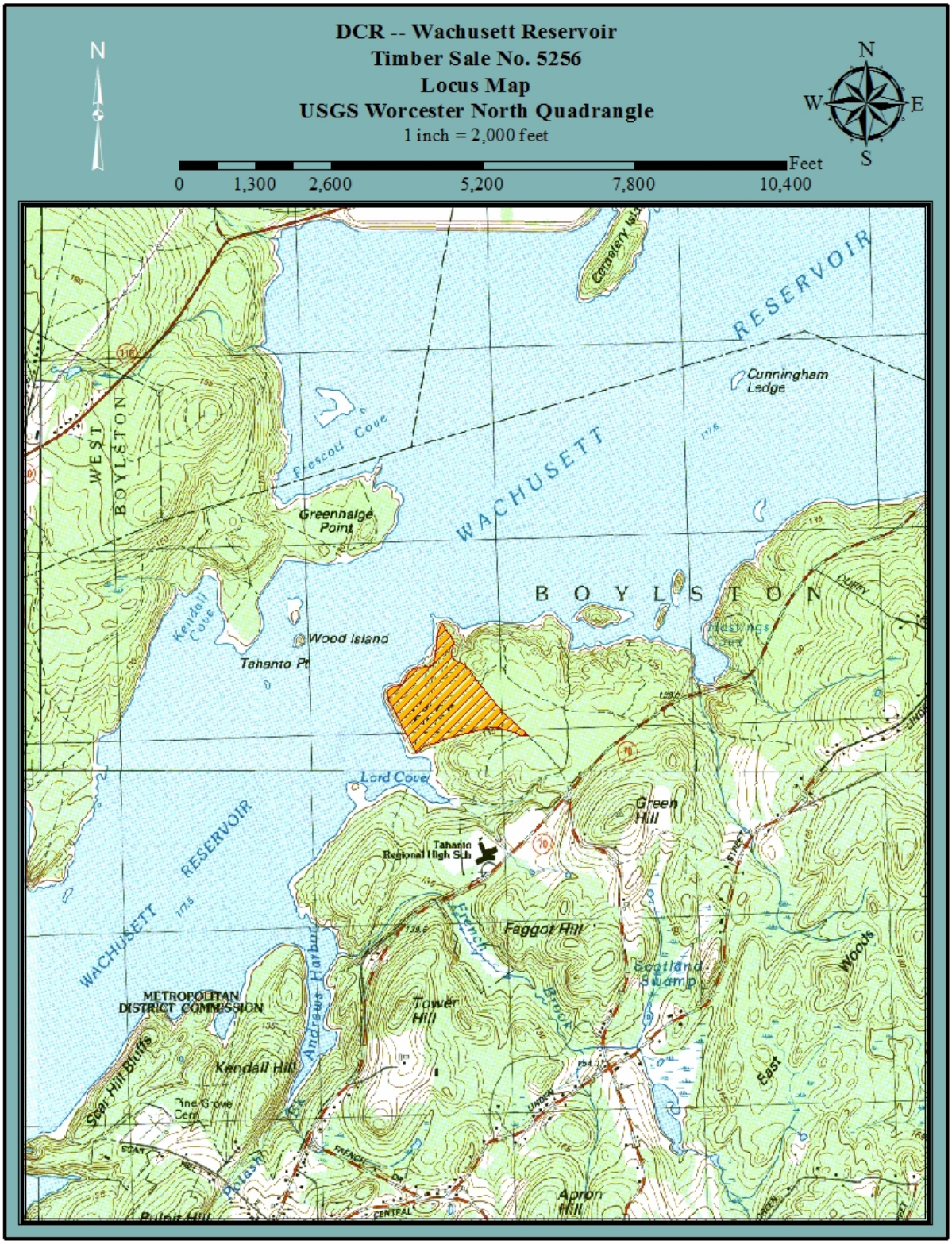

Figure 4. Pre-Harvest Photographs, A-C

A. The 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 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.