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: 5266	
DCR Forest Cutting Plan File Number: 321-8692-17	

Site Information

Watershed: Wachusett	Town(s): West Boylston		
Acres: 29	Nearest Road: River Road		
Natural Heritage Atlas overlap?: Yes	Public Drinking Water Supply Watershed?: Yes		
Forest Types: Northern red oak, white pine/oak	ACEC?: No		
Soils: Merrimac fine sandy loam, Canton fine sandy loam			
Wetland Resources: There are no wetlands within the sale area.			
Vernal Pools: There are no vernal pools.			

Harvest Information

DWSP Permit Start Date: 04/12/17	DWSP Permit End Date: 06/28/19
Number of Wetland Crossings: 0	Number of Stream Crossings: 0

Best Management Practices Applied

best Withing ement I fuertees hippineu			
Stream Crossings	There are no stream crossing.		
Filter Strips No trees are marked in the filter strip along the stream that form			
	southern boundary of this sale area.		
Wetland Crossings There are no wetland crossings.			
Harvesting in Wetlands No harvesting in wetlands will occur.			

DWSP Forester supervising this harvest		
Name: Greg Buzzell		
Forester License #: 025		
Phone #: 978-792-7806 x317		

NARRATIVES

General Description/Forest Composition/History:

Red oak and white pine are the two dominant species in this working unit along with far less amounts of white oak and red maple. A few hemlock can be found in the far south end on the steep slope near the stream and in the far northwest corner on the steep north-facing slope above River Road. There's a small pocket of very large red oak, sugar maple and white ash in the rather large borrow-pit just inside the Gate WB25 at River Road.

Two prior timber sales have taken place in this working unit. One sale in 1979 took place on just a few acres in the farthest northwest corner of this area. This sale focused on cutting oak with the goal of establishing oak regeneration. Unfortunately, this is now where mountain laurel forms a very thick understory. The vast majority of this area, especially the steeply slope, kettle-hole riddled eastern portion, has received no prior treatment nor suffered significant natural disturbance. The result is a lack of advance regeneration with witch-hazel the primary understory plant. The red oaks in this area are large, single-stemmed and of good quality especially on the lower slopes. The white pines in this section are also of good quality with many reaching 110 feet in height. There's also the scattered beech colony.

The red oak in the northern section of this area, are generally smaller in diameter and are multi-stemmed. Given the long-time presence of an MDC labor yard right across River Road at Shaft 1, it is likely that firewood harvesting occurred in this area throughout the past. The small openings in the overstory in this area are occupied by saplings of black birch and red maple along with eastern hophornbeam and striped maple.

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 of the lack of age diversity both in these 29 acres as well as the 2,112 acres that the DCR owns that flows into the Quinapoxet River.

Silvicultural Objectives:

The primary objective of this operation will be to begin the establishment of a young forest beneath this otherwise even-aged forest. Both white pine and red oak do very well on this site and so a mix of oak and pine regeneration will be the goal. Stocking will be reduced to variable levels throughout the area with the greatest decreases needing to occur in the red oak dominated stands in order to get red oak established rather than merely encouraging the further dominance of the witch-hazel understory.

Cultural Resources:

There are no known significant historic or archaeological recourses in this sale area. The area around the Myron W. Houghton house, barn and well, on the top of the slope inside Gate WB25 will be flagged in order to prevent damage from logging equipment.

Wildlife/Rare or Endangered Species:

A small portion of this area intersects with NHESP Priority Habitat polygon for known species along the Quinapoxet River. NHESP review of this timber sale has determined that no negative impact to this habitat or directly to the species themselves will occur.

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

Forest Cutting Plan 21-8692-/Case No. File Number Nat. Hert. and Notice of Intent under M.G.L. Date Rec'd 13/17 Earliest Start Nat. Hert. Imp. Chapter 132 - The Forest Cutting MASHUA Pub. Dr. Wat. VES-WACHIGETT River Basin Practices Act, 304 CMR 11.00 Gen. Obj. MAR 0 3 2017 (Effective Date: 1/1/04) Location Landowner West Boylston Lot 5266 Name DCR/DWSP/OWM Wachusett/Sudbury Town River Road Mailing Address 180 Beaman St. Proposed Start Date 4/17 Acres 29 Vol. MBF 62.1 Vol. Cds. 149 Vol. Tons 39 Town, State, Zip West Boylston, MA 01583 608-792-7806 Ch61 Ch61A Stew *Case # Plan Preparer Est. Stumpage Value Gregory S. Buzzell Name Licensed Timber Harvester** Address 180 Beaman Rd. To be supplied when known. Town, State, Zip West Boyslton, MA, 01583 Address Town, State, Zip _ 508-792-7806 Ext 317 Phone Type of Preparer Mass. Licensed Forester Mass. Lic. Harvester # *Mass. Forester License # 25 **This information may be supplied after the plan is approved, but before *Required for land under Ch61, Ch61A or Forest Stewardship Harvesting in Wetlands Stream Crossings Indicate location on map Indicate location on map SC-1 SC-2 SC-4 HW-1 HW-2 Forest Type (see pg 2) Type of Crossing Acres to be Harvested **Existing Structure** Resid. Basal Area Type of Bottom (>50%?) Bank Height (ft) Stabilization Managemen **Service Forester Comments** Wetland Crossings * BLL SLID READS/TRAILS ARE GUSTING WC-4 Indicate location on map WC-1 WC-2 WC-3 *PLEASE SE PATRICUED NHESP LETTER (NO JOAPPOT) Length of Crossing *PLAN REVIEWED UNDER PROTISE SNOW CONCIDENT Mitigation Stabilization **Filter Strips** Indicate location on map FS-1 FS-2 FS-4 VA Width (50', 100', or VA) #AMENDMENT -> LANDING ACCED Type of Bottom LE Ledge Type of Crossing CU Culvert Type of Preparer Stabilization Mitigation Applicant must provide DCR with all relevant information before plan may be approved and cutting may begin. LF Mass. Lic. For. TH Lic. Tim. Har CU Culvert BR Bridge Ledge Stony

FR Frozen

OT Other

MU Mulch

CO Corduroy ST Stone

Hay Bales Other

Timber Buyer

Landowner

Ford

Poled

OT Other ST Stony MU Mud

Gravel

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

For DCR Use Only:

Foresti Producis

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine	28.0	Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	27.0
Hemlock		Black Oak	5.7
Spruce		White Oak	1.3
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	61.1
Beech		Cordwood (Cds)	149
White Birch	***************************************	SW Pulp (Tons)	39
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.

ST-2

WO II LT CT SH na ST-3

ST-4

Cutting Standards

Indicate location on map	ST-
Forest Type	OR
Acres	18
Landowner Objective	LT
Designation of Trees	CT
Type of Cut	SH
Source of Regeneration	па

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.

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.

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.

- (Mall	2/a/17
Signature of landowner(s)	Date /

Determination and Status		Final Report and Comments		
Cutting Plan	**	spires 3-2019	I hereby certify that the afore described F and all relevant statutes have been substan	
N X X XX Signature of Sc	rvice Forester/Director's Agent	14-3-17 Date	Signature of Service Forester/Director's A	agent Date
Extension	1 2 Expires /	Ser. For. Ints.		
Amendment	App 1 Dis 1 App 2 Dis 2	4-4-14 MD: /		
Forest Types WP White Pine WK WP/Hern WH WP/Hdwd WO WP/Oak RP Red Pine SR Red Spruce	HK Hemlock OM Mixed Oak HH Hem/Hdwd RM Red Maple BC Blek Cherry BE Beech BB Bee/Bir/Map SF Spruce/Fir OH Oak/Hdwd SM Sugar Maple OR N Red Oak 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 CT Commercial Thin Non-Standard Systems:* Nou-Standard Systems:* DL Diameter Limit* OT Other*	Source of Regeneration AD Advanced SE Natural Seed PL Plant CO Coppice DS Direct Seed OT Other

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.

Town: Self Roy Stori
File Number: 321-8692-17

There are no stream or wetland crossings in this lot. The main objective of this operation is to begin the establishment of a new cohort in this even-aged forest by encouraging the establishment of an understory of seedlings. In the long run, this will allow us to diversify the age structure of the forest by one day removing portions of the overstory. The haul trail has not been flagged. As this lot will be open to both skidders and forwarders, adjustments to the road may occur after the bid is awarded.

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

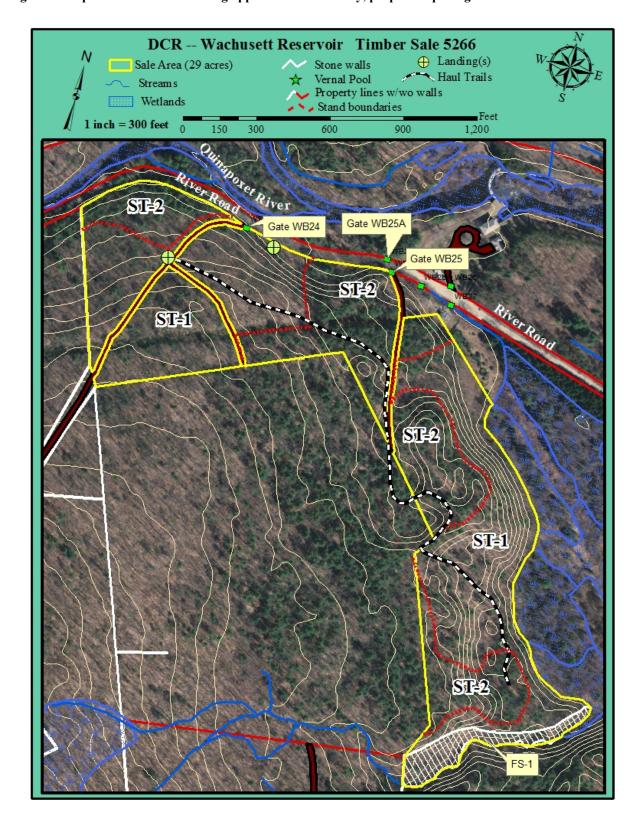


Figure 3. General locus map showing the location of the proposed timber harvest

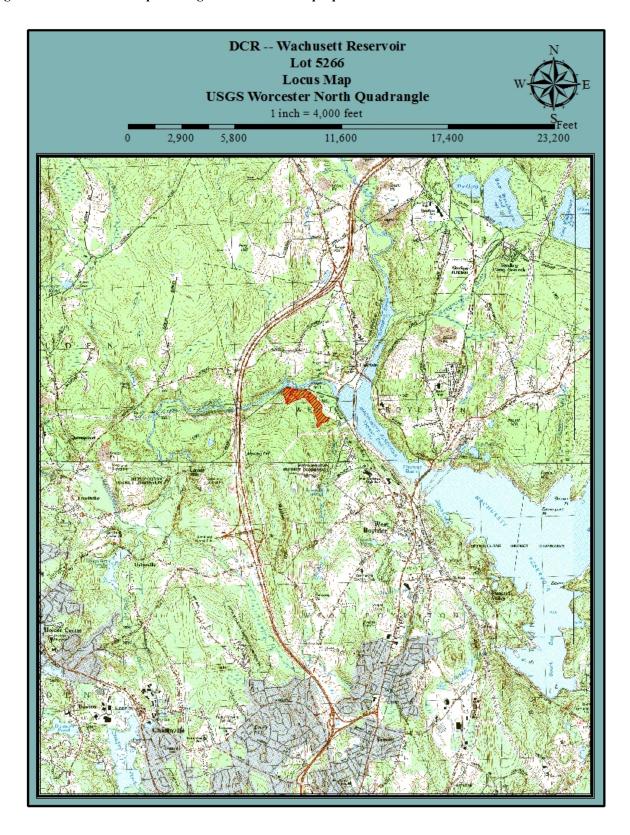


Figure 4. Pre-Harvest Photographs, A-B



A. The landing on River Road. Gate WB24 can be seen to the right.



B. Removing a portion of the overstory and damaging this mountain laurel and witchhazel understory should allow oak and pine regeneration to become established.

Figure 5. Post Harvest Photographs, A-B



A. Partial cutting leaving most of the white pines with the goal of encouraging white pine regeneration.



B. Partial cutting in an area of primarily red oaks with white pine nearby.