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: 5289
DCR Forest Cutting Plan File Number: 134-28893-20

Site Information

Watershed: Wachusett	Town(s): Holden			
Acres: 72	Nearest Road: Princeton Street			
Natural Heritage Atlas overlap?: Yes	Public Drinking Water Supply Watershed?: Yes			
Forest Types: Mixed oak	ACEC?: No			
Soils: Hinckley and Merrimac fine sandy loam				
Wetland Resources: Bear Swamp forms the western bo	undary of this area.			
Vernal Pools: There is a verified vernal pool at the bottom of a steep-sided knoll in the eastern part of this				
area.				

Harvest Information

DWSP Permit Start Date: 9/9/20	DWSP Permit End Date:12/15/22
Number of Wetland Crossings: None	Number of Stream Crossings: None

Best Management Practices Applied

Stream Crossings	There are no stream crossings.
Filter Strips	There are no filter strips.
Wetland Crossings	There are no wetland crossings.
Harvesting in Wetlands	There is no harvesting in wetlands.

DWSP Forester supervising this harvest
Name: Greg Buzzell
Forester License #:025
Phone #: : (774) 261-1841

NARRATIVES

General Description/Forest Composition/History:

This is a typical dry-site mixed oak stand with black oak, red oak and white oak in the overstory along with far fewer red maple and white pine. Black oak predominates on the higher and drier portions with red oak taking its place on the lower, slightly damper sections. There's a light scattering of paper birch especially in the eastern half; perhaps a vestige of the fires that were probably more common when the railroad was active. There's a small pocket of large bigtooth aspen in the northeast corner of the area near the railroad bed which are nearing the end of their lifespan. Unexpectedly, there are two small red pine plantations. The northerly one dates to 1966. The other one was planted a little bit earlier in 1959. This one however is mostly blown over in what appears to have been a microburst in about 2010.

There is excellent advance regeneration through much of this area. Where there isn't advance regeneration, mountain laurel is prevalent and at clearly interferring levels. This is especially so on the west slopes overlooking Bear Swamp. In the eastern part of the area, mountain laurel is also interferring along with witch-hazel in the lower, damper areas. Other common shrubs present are huckleberry, lowbush blueberry and sheep-laurel. Maple-leaved viburnum is present and seems to be pretty well restricted to the Canton till soil in the southwestern part of this area as is sassafras.

The age structure of this working unit is as follows; 0%, 0-20 years old; 0%21-40 years, 3%, 41-60 years; 0%, 61-80 years; 2%, 81-100 years; 95%, >100 years old. Most of this forest originated in about 1917. The oldest stands originated in about 1914, making them about 106 years old.

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:

With an excellent layer of young trees in this area, openings in the older forest will be made on 20 acres thereby achieving the goal of creating a new young forest on close to 1/3rd of this area. This will be accomplished by the removal of the older forest in 19 patches that average 1 acre with the largest of about 2 acres. These are well distributed throughout the proposed area taking advantage of where the regeneration is best. Given the dry character of this area, openings have been located in order to take advantage of where white pine regeneration is present. Large trees are being retained in most of these openings that are larger than ½ acre both singly and in small clusters. These trees provide valuable structural diversity to these openings and it is expected that most of these retained trees will be allowed to grow indefinitely into the future. In this area, these retained trees are primarily white pines, which are better suited to growing and regenerating on this dry site. Active den/nest trees and exceptional individuals of all species present are being retained for habitat and/or diversity.

Cultural Resources:

This lot was reviewed by the DCR archaeologist and all recommendations will be followed. There is no known cultural significance to this area, either historically or pre-European contact.

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

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)

Town Holden		Lot	5289	Name DCR/DWSP	OWM Wach	usett/Sudbur	ry	
Road Princeton Stre	eet			Mailing Address 180 Beaman St.				
Acres <u>72</u>	Proposed	d Start Date_	9/20	Town, State, Zip West Boylston, MA 01583 Phone 608-792-7806				
Vol. MBF_42.1 Vol	l. Cds. 369	Vol. Tor	IS					
	÷.							
Plan Preparer				Ch61 Ch61A	Ch61 Ch61A Stew *Case #			
CONTRACTOR OF THE OWNER OF THE OWNER				Est. Stumpage Value _				
Name Gregory S.	Buzzell			Linemand Timbon	Unment	o mik ik		
Address 180 Beama	n Rd.	-	Licensed Timber	Harvest	BLAA	-		
				Name To be supp	plied when kn	iown.		
Town, State, Zip West	Boyslton, M.	A, 01583		Address		1		
Phone	61-1841			Town, State, Zip				
Type of Preparer Mass.	Licensed Fo	rester		Phone	-			
*Mass. Forester License	# 25			Mass, Lic. Harvester #		1 .		
*Required for land under	c Ch61, Ch61	A or Forest S	tewardship	" This information may be so work begins	upplied after the	pian is approved	a, but befor	
Indicate location on map	SC-1 S	C-2 SC-3	SC-4	Indicate location on map	HW-1 H	W-2 HW-3	3 HW	
Type of Crossing				Forest Type (see pg 2)				
Existing Structure				Acres to be Harvested				
Type of Bottom			-	Resid. Basal Area				
Donk Haight (f)				(~50/6:)	-			
Baik Height (II)								
Stabilization						2		
Stabilization Wetland Crossing	js			Service Fores	ter Comn	nents		
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For DCR Use Only:

River Basin

Gen. Obj.

 File Number
 134-288 93-20Case No.

 Date Rec'd
 0-30-30
 Nat. Hert.

 Earliest Start
 7.10-30
 Nat. Hert. Imp.

LT

MASHUA Pub. Dr. Wat. WACHUSET

ACEC

NO

Species	Mbf/Cds		Mbf/Cds
White Pine		Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	30.0
Hemlock		Black Oak	11.7
Spruce		White Oak	0.4
Other Sftwd.		Other Hdwd.	-
White Ash		Total Mbf	42.1
Beech		Cordwood (Cds)	369
White Birch		SW Pulp (Tons)	
B & Y Birch		HW Pulp (Tons)	
Black Cherry		Chins (Tons)	1

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*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.

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	OM	RP		
Acres	71 .	1		
Landowner Objective	LT	LT		
Designation of Trees	CT	OT		
Type of Cut	SH	n/a		
Source of Regeneration	AD	OT		

Landowner Signature

Forest Products

andowner

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.

61512020

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.

	Determin	ation	and St	atus)	34-28	393-20	Fir	al Repo	rt and Commen	its
	Cutting Plan	Approv	ed Disar	pproved	Expires	.022	I her and	eby certify th all relevant st	at the afore described For atutes have been substant	rest Cutting Plan ially complied with.
	Signature of Ser	rvice For	rester/Direct	or's Agen	$\frac{1}{t}$	6.2020 ate	Sigr	ature of Servi	ice Forester/Director's Ag	gent Da
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00000	Extension Amendment Forest Types WP White Pine WK WP/Hem WH WP/Hdwd WO WP/Oak RP Red Pine	1 Д Арр I НК НН ВС ВВ ОН	2[Dis 1 Hemlock Hem/Hdwd Blck Cherry Bee/Bir/Map Oak/Hdwd	App 2 OM Mixe RM Red BE Beec SF Spru SM Sug	Dis 2 Dis 2 d Oak CT Maple LT th SB cce/Fir OT Maple Lar	ignation of Trees Cut Tree Leave Tree Stand Boundary Other	Type SH ST CC SE SA	of Cut Shelterwood Seed Tree Clear Cut Selection Salvage	Intermediate Harvests: CT Commercial Thin NT Non Con Thin Non-Standard Systems:* HG Highgrade*	Source of Regeneration AD Advanced SE Natural Seed PL Plant CO Coppice DS Direct Seed

Forest Cutting Plan Narrative Page

Landowner	DOR-DWSP
Town:	Holden
File Numbe	r: 134-28893-20

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

	Vernal pool BMPs will be followed.
A P s	No trees are being cut within the NHESP Priority Habitat of Rare Species bubble that is associated with Asnebumskit Brook.
BN	
ture	In order to release advance regeneration, 19 openings in the overstory are being created, covering 20.0 acres. These openings range from 0.5 to 2.0 acres in size with an average of 1.0 acre. They are well distributed throughout the sale area focusing on where the advance regeneration is well established.
vieul	No trees are being cut in ST-2.
Sil	
ives	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.
Object	
	The forwarder haul roads have not been flagged so that either or both landings may be used. Existing roads and trails can be used.
Other	

provision of M.G.L. Chapter 132, Section 40-46, filed in and Recreation, Division of State Parks and Recreation, a Not PLINCETON lot. DT 5289 Approval Date 1.16.2020 Director's Agent MICHAREC DOLONEY DCR Phone No. 978-368-0126	This certifies that DCR DwSP Own (Name of Owner)	Post this in a conspicuous place within the area in which the	FOREST CUTTING PLAN CI	dcr COMMONWEALTH OF MASSACHU Department of Conservation and Recrea Division of State Parks and Recreation
Line with the Dept. of Conservation ice of Intent to cut forest products upon the ISSUED BY: Interval Priscilla E. Geigis, Director Division of State Parks and Recreation	(Address)	harvesting operation is to take place.	ERTIFICATE	SETTS FILE # 134-28893-20



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. Most of the trees in this area are being removed to make room for this excellent understory of young white pine and hardwood sapling.



B. The white pine in the foreground is being retained while the rest of the older trees are being removed to give the white pine and hardwood saplings the space and light they need to continue to thrive.

Silvicultural Achievements:

19 openings were created in the overstory covering 20 acres. Openings were made in a variety of sizes from 0.5 acre to 2 acres in size. They are well distributed throughout the area and took advantage of advance regeneration comprised of oaks, maples, birches, white pine and other hardwoods.





Photograph A. Opening with hardwood and pine regeneration released.



Photograph B. Opening completed with diverse regeneration released.