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: Lot 5281
DCR Forest Cutting Plan File Number:134-10879-19

Site Information

Watershed: Wachusett	Town(s): Holden
Acres: 44	Nearest Road: River Street
Natural Heritage Atlas overlap?:Yes	Public Drinking Water Supply Watershed?: Yes
Forest Types:White pine-oak; northern red oak	ACEC?: No
Soils: The excessively drained soils are the Merrimac an	d Hinckley sandy loams. The poorly drained soil is the
Limerick silt loam which is on the low areas near the Qu	iinapoxet River.
Wetland Resources: Three small intermittent tributaries	s to the Quinapoxet river will need to be crossed.
Vernal Pools: None known	

Harvest Information

DWSP Permit Start Date: 6/19/19	DWSP Permit End Date: 6/29/20
Number of Wetland Crossings: None	Number of Stream Crossings: 3

Best Management Practices Applied

Stream Crossings	There are 3 stream crossings, all on the pre-existing B road and each
	has a culvert.
Filter Strips	There is no cutting in the 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:

The overstory is primarily comprised of red oak, white pine, white oak, black oak, red maple. There is also some hemlock scattered throughout with more on the slopes nearer to the Quinapoxet River. The hemlock is infested with the hemlock wooly adelgid and there is some mortality as a result. Most of this area was previously harvested in 1996 with the goal of encouraging the establishment of regeneration. This was largely successful. A regeneration survey shows that there is adequate regeneration in 52% of the plots along with marginal regeneration on another 22%. This advance regeneration is comprised primarily of white pine, red oak and black birch along with hemlock and red maple. Interfering levels of mountain laurel and witch-hazel were found in 7% of the plots.

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:

Openings in the overstory are being made in order to release the advance regeneration. Given that the advance regeneration is well distributed throughout this area, openings are well distributed accordingly. These openings 8 openings total 8 acres and range from 0.5 to 1.8 acres in size. Opportunities were sought where good regeneration coincides with hemlock that is infested with HWA.

Cultural Resources:

None known.

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.

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-C

Figure 5. Post-Harvest Photographs, A-C

Forest Cutting Plan

and Notice of Intent under M.G.L. Chapter 132 - The Forest Cutting Practices Act, 304 CMR 11.00 MAY 1 7 2019 (Effective Date: 1/1/04)

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Site Information

Town	Holden	Lot 5281
Road	Mannii	ng Street/River Street
Acres	44	Proposed Start Date 05/22/19
Vol. ME	3F 88.3	Vol. Cds. 64 Vol. Tons 11
Plan I	Prepare	

Name	Russell Wilmot	9	
Address	180 Beaman St.		

Town, State, Zip	West Boylston,	MA, 01583
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774-261-1840 Phone

Type of Preparer Mass. Licensed Forester

*Mass. Forester License # 426

*Required for land under Ch61, Ch61A or Forest Stewardship

Indicate location on map	SC-1	SC-2	SC-3
Type of Crossing	CU	CU	CU
Existing Structure	Yes	Yes	Yes
Type of Bottom	MU	MU	MU
Bank Height (ft)	1'	1'	1'
	And the second	And and a second s	the second se
Stabilization Wetland Crossir	ST 1 gs	ST	ST
Stabilization Wetland Crossir	ST 1 gs	ST	ST
Stabilization Wetland Crossir Indicate location on map	ST Igs WC-1	ST WC-2	ST WC-3
Stabilization Wetland Crossin Indicate location on map Length of Crossing	ST 195 WC-1	ST WC-2	ST WC-3
Stabilization Wetland Crossin Indicate location on map Length of Crossing Mitigation	ST 195 WC-1	ST WC-2	ST WC-3

Wetland Crossings

Indicate location on map	WC-1	WC-2	WC-3	WC-4
Length of Crossing		*		
Mitigation				a.
Stabilization		2.1		

Filter Strips

Type of PreparerLFMass. Lic. For.THLic. Tim. HarTBTimber BuyerLOLandownerOTOther

odes

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

Type of Crossing CU Culvert BR Bridge FO Ford

PO Poled OT Other Stabilization SE Seed MU Mulch

Corduroy

Hay Bales

Stone

CO ST

HB

OT Other

For DCR U	lse Only:		
File Number	134-10879-19	Case No.	
Date Rec'd	5.17.19	Nat. Hert.	VES /
Earliest Start	6.4.19	Nat. Hert. Imp	NO
River Basin	NASHUA	Pub. Dr. Wat.	WACHUSETT
Gen. Obj.	LT	ACEC	NO

ALB AREA

Landowner

Name <u>DCR/</u>	DWSP/OWM Wachusett/Sudbury
Mailing Address	180 Beaman St.
Town, State, Zip	West Boylston, MA 01583
Ch61 Ch61 Est. Stumpage Va	A Stew *Case #
Licensed Tir	nber Harvester**

Name	will be provided	i when known	
Address	×		
Town, Sta	ite, Zip		
Phone		4.	
Mass. Lic	. Harvester #	4	
**This info	rmation may be supplied	after the plan is ap	proved, but befor

fore work begins.

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%?)			1	8

Service Forester Comments

1	ESKID TLAILS (MORDS ARE EXISTING
د ا	SEE ATTACHED NHESP LETTERS "NO INFROT"
1	KALB Compliance RESULTEN (see ATTOCHED)
	•
_	
Type of Botton LE Ledge ST Stony	<u>Note</u> : Applicant must provide DCR with all relevant information before plan may be approved and cutting may begin.

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

MU Mud GR Gravel

OT Other

Mitigation FR

OT Other

Frozen

Drv

pg 3 of 5

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine		Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	3.8
Hemlock		Black Oak	7.9
Spruce		White Oak	1.5
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	13.2
Beech		Cordwood (Cds)	135
White Birch		SW Pulp (Tons)	
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.

Cutting Standards

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	MO	OH	WO	RO
Acres	15	6	5	4
Landowner Objective	LT	LT	ĹT	LT
Designation of Trees	CT	CT	CT	CT
Type of Cut	SH	SH	SH	SH
Source of Regeneration	AD/SE	AD/SE	AD/SE	AD/SE

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	Harves

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.

chuba

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.

ndowner(s)		Date
ation and Status $ $	34-10879-19 Fi	nal Report and Comments
Approved Disapproved	Expires I he 5 • 17 • 202 (ereby certify that the afore described Forest Cutting Plan all relevant statutes have been substantially complied with.
vice Forester/Director's Agent	<u>6°3°2019</u> Sig Date	nature of Service Forester/Director's Agent Da
1 2 <u>E</u>	xpires Ser. For. Ints.	
App 1 Dis 1 App 2 1	Dis 2	
HK Hemlock OM Mixe HH Hem/Hdwd RM Red BC Blck Cherry BE Beec BB Bee/Bir/Map SF Spru OH Oak/Hdwd SM Suga OR N Red Oak PP Pitch	Designation of Trees Typ d Oak CT Cut Tree SH Maple LT Leave Tree ST n SB Stand Boundary CC re/Fir OT Other SE Viaple Landowner Objective SA Pine LT Long-term Mgt. SN	e of Cut Source of Regeneration Shelterwood Intermediate Harvests: AD Advanced Seed Tree CT Commercial Thin SE Natural Seed Clear Cut NT Non Com Thin PL Plant Selection Non-Standard Systems:* CO Coppice Salvage HG Highgrade* DS Direct Seed Sanitation DL Diameter Limit* OT Other
1 / r	Approved Disapproved Approved Disapproved Approved Disapproved Approved Approved Disapproved	Approved Disapproved Expires I he and Approved Disapproved Expires Generation of Sector 17 • 202.1 Approved Disapproved Expires Sec. For. Ints. I 2 I he and App 1 Dis 1 App 2 Dis 2 I he and HK Hemlock MM Mixed Oak Mixed Oak Type HK Hemlock MM Red Maple Designation of Trees SH Type BC Bick Cherry BE Bece/Bir/Map SF Spruce/Fir Spruce/Fir SB Stand Boundary SC SC OH Odk/Hdwd SS Stand Boundary SC Stand Boundary SC SE Stand Boundary SC SE OR N Red Oak PP Pitch Pine Lange-term Mgt. SN

Forest Cutting Plan

Landowner: DC Q-Wach Sudbuy
Town: Holden
File Number: 134-10879-19

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

B M P s	<u>There is a forest road that cuts through the middle of the sale and will be used for the three stream</u> <u>crossings. Otherwise the haul roads will be off the main forest road. The landing will be in the southern</u> <u>most opening near the River Street parking lot.</u>
Silviculture	In order to release advance regeneration 8 openings in the overstory are being created, covering 8 acres. These openings range from a 0.5 acre to 1.8 acres in size with an average of 1 acre. They are well distributed throughout the area taking advantage of the advance regeneration comprised of white pine, oaks, hemlock and other hardwoods. No thinning will occur between any of these openings.
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 # 1383) on the Quinapoxet River and the extreme south east corner of the lot. There will be no cutting or hauling in these specific areas.



DIVISION OF

1 Rabbit Hill Road, Westborough, MA 01581 p: (508) 389-6300 | f: (508) 389-7890 M A S S . G O V / M A S S WILDLIF E

Mike Downey MA DCR 355 West Boylston Street P. O. Box 155 Clinton, MA 01510

Cutting Plan No.		134-10879-19	
NHESP Tracking No		19-38665	
Town H		Holden	
Road	Manning Street & River Street		
Landowner	DCR/DWSP/OWM Wachusett /Sudbury		
Preparer	Russell Wilmot		
Date May 23, 2019		May 23, 2019	

Dear Mike,

The Natural Heritage and Endangered Species Program (NHESP) of the Massachusetts Division of Fisheries and Wildlife ("the Division") has reviewed the above-referenced Forest Cutting Plan ("the Plan") pursuant to the special approval procedures of the Forest Cutting Practices Regulations (304 CMR 11.04(6)). Based on details of the Plan and information in the NHESP database, the Division does not expect activities proposed in the Plan to negatively impact Estimated Habitat or result in Take (as defined in 321 CMR 10.02) of plant or animal species protected under the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). Therefore, the Division does not require that the Plan be modified at this time.

Please copy the Division on any proposed amendment, extension and on the approved Plan for the site. If you have any questions about this letter, please contact Rebekah Zimmerer at (508) 389-6354 or Rebekah.zimmerer@state.ma.us.

Sincerely,

Jonathan V. Regosin, Ph.D. Deputy Director

Cc: Holden Conservation Commission

MASSWILDLIFE



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. River street gate access.



B. Landing



C. Opening where existing forest road and new Wachusett Greenways trail will exist.



Figure 5. Post-Harvest Photographs, A-C



A. An opening in the overstory that was made immediately adjacent to a new stretch of the Central Mass Rail Trail that is under construction.



B. An overstory removal patch where much of the hardwood-dominated understory was preserved.



C. An opening in the overstory was made here to release the young hardwood forest beneath. Note the large white pine that was retained in order to provide for structural diversity as this now young forest continues to develop.