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

Project Title: Lot 5292

DWSP Harvest Permit Number: 5292 DWSP Proposal ID: WA-20-215 DCR Forest Cutting Plan File Number: 134-32172-21

Site Information

Watershed: Wachusett Town(s): West Boylston Acres: 68 Nearest Road: Malden Street Natural Heritage Atlas overlap?: Yes Public Drinking Water Supply Watershed?: Yes Forest Types: Mixed oak ACEC?: No Soils: Chatfield-Hollis-Rock outcrop complex Wetland Resources: There are two small wetlands near the top of the hill that are connected by an intermittent stream. Vernal Pools: The two wetlands each have a vernal pool.

Harvest Information

Harvest Start Date: 6/23/2021 Harvest End Date: 6/30/2023 Number of Wetland Crossings: None Number of Stream Crossings: Three

Best Management Practices Applied

Stream Crossings: All three intermittent streams will be crossed with poles if they are dry or with bridges if they are flowing. Filter Strips: No cutting will occur in the filter strips. Wetland Crossings: No wetlands will be crossed.

Harvesting in Wetlands: There is no harvesting in the wetlands.

DWSP Forester supervising this harvest

Name: Greg Buzzell Forester License #: 025 Phone #: 774-261-1841 Email: greg.buzzell@mass.gov

NARRATIVES

General Description/Forest Composition/History:

The working unit was proposed, marked, sold and cut in 2010. At that time, there was no advance regeneration in the mixed oak stand while there was decent regeneration in the white pine-oak stand on the top of the hill. While the proposal in 2010 call for the creation of some overstory openings in the white pine-oak stand, in the end, the decision was made to not make any openings. The white pine-oak stand was treated essentially the same as the mixed oak stand. Overall stocking was decreased by roughly 30% while every white pine in the overstory was daylighted by removing all trees from their immediate vicinity. All of this was done to encourage the establishment of white pine regeneration on this very dry site. This operation was successful and today there is excellent advance regeneration of white pine throughout this area.

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 adequate advance regeneration now present throughout this working unit as a result of the harvest in 2010, openings will be made on up to 20.6 acres thereby achieving the goal of creating a new age class on 1/3rd of this area. This will be accomplished by the removal of the overstory in patches that average about 1 acre with a maximum size of about 2 acres. These will be well distributed throughout the proposed area taking advantage of where the white pine regeneration is best.

Any partial cutting that may occur between the openings on up to 1/3rd of the area will be focused on benefiting white pine.

Cultural Resources:

Each of the two small wetlands has a small concrete weir with a v-notch that in the past would have allowed more water to be held in the wetlands. This was done to provide water for steam engines used in the quarrying activities that took place in the granite outcrops on this hilltop. The weirs to not currently effect the water flow out of the wetlands.

Wildlife/Rare or Endangered Species:

As a result of the proposal of this working unit in 2010, the two vernal pools (#129 & 130) have been verified.

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-C

Figure 1. Forest Cutting Plan

Site Information

Best Management Practices

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)

	Jse Only:		-
File Number	134-32172-21		
Date Rec'd	12-16-2020	Nat. Hert.	VES /
Earliest Start	1-4-2021	Nat. Hert. Imp.	VES
River Basin	NASHUA	Pub. Dr. Wat.	
Gen. Obj.	LT	ACEC	NO

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					Landowner				
Town West Boyls	ton/Holde	n	5	Lot 5292	NameDCR/DWSI	P/OW/M V	Vaahusati	/Cradhaam	
					Mailing Address 180 I			/Sudbury	/
Road Malden Stre	et in Wes	t Boylston	and Ho	den	Maning Address 1001	Seaman St			
Acres <u>68</u>				12/20	Town, State, Zip West	Povleton	MA 015	07	
Vol. MBF 10.4 V	-			and the second se		792-7806	WIA UIS	6.5	
Plan Preparer				and an an address of the second se	Ch61 Ch61A	the second s	* (~	se #	
	Land Sector Sector Sector Sector Sector		Contraction of the second		Est. Stumpage Value			ο υ π	
Name Russell W	Vilmot				cst. Stumpage value	****		and the second	
Address 180 Beam					Licensed Timber	r Harve	ster*	k	
				Statistic Among and a statistics	Name To be sup	plied whe	n known.		
Town, State, Zip Wes	t Boylstor	n, MA, 01	583		Address			The second s	
Phone <u>860</u>	-304-0655			Building and a state of the sta	Town, State, Zip				
Type of Preparer Mas	s. License	d Foreste	r						
*Mass. Forester Licens	e# <u>426</u>				Mass. Lic. Harvester #				
*Required for land und	er Ch61, C	Ch61A or	Forest St	ewardship	**This information may be s work begins.	upplied after	the plan is	approved,	but befor
ndicate location on map	SC-1	SC-2	SC-3	SC-4	Indicate location on map	HW-1	HW-2	HW-3	HW-
Type of Crossing	PO	PO	PO		Forest Type (see pg 2)				
Existing Structure	NO	NO	NO		Acres to be Harvested				
ype of Bottom	MU	MU	MU		Resid. Basal Area				
Bank Height (ft)	~1'	~1'	~1'		(>50%?)	1		1	
tabilization	CO	CO	СО						
	gs				Service Forest	ter Con	nment	S	
Vetland Crossin		1		-	ACCURATE AND ACCUR		2	20	nikolar
Metland Crossin	WC-1	WC-2	WC-3	WC-4	* skid Roads/Th	ous mu	C KAISTI	- Y	
	WC-1	WC-2	WC-3	WC-4					CTLON
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ndicate location on map ength of Crossing fitigation tabilization	WC-1	WC-2	WC-3	WC-4	* NO WOLL AN ZONE prior to SEE NHEEP LETTER	BOTAN E Fon D B Orcu Prior To	N PLAN LICOL S ETPICS L OLT D SURVE	IT FROTT	(REDUN

Codes	<u>Type of Preparer</u> LF Mass. Lic. For. TH Lic. Tim. Har TB Timber Buyer LO Landowner OT Other	Type of CrossingCUCulvertBRBridgeFOFordPOPoledOTOther	Stabilization SE Seed MU Mulch CO Corduroy ST Stone HB Hay Bales OT Other	<u>Mitigation</u> 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.	
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If Other (OT) is used in any category an explanation must be given on an attached narrative page

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine		Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	3.7
Hemlock		Black Oak	6.7
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	10.4
Beech		Cordwood (Cds)	239
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.

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Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	OM			
Acres	68			
Landowner Objective	LT			
Designation of Trees	CT			
Type of Cut	SH			
Source of Regeneration	AD			

Landowner Signature

Forest Products

andowne

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.

3/2020 13

	Signature of l	andowner(s)				Date	
	Determir	nation and	Status #13	4-32172-21	Final Repo	ort and Commen	ts
rester	Cutting Plan	Approved I		Expires -16-2022		that the afore described For statutes have been substanti	
vice Fo	Signature of Se	ervice Forester/Di	rector's Agent Expire	Date Ser. For. Ints.	Signature of Ser	vice Forester/Director's Ag	zent Date
en	Extension	1	2/	5 Set. For. Ints.			
<u></u>	Amendment	App 1 Dis 1	App 2 Dis 2	ouronnaonte hances anno 1			
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/Hd BC Blck Che BB Bee/Bir/ OH Oak/Hdv OR N Red O	wd RM Red Maple rry BE Beech Map SF Spruce/Fir rd SM Sugar Map	LT Leave Tree SB Stand Boundary OT Other	Type of Cut SH Shelterwood ST Seed Tree CC Clear Cut SE Selection SA Salvage SN Sanitation	Intermediate Harvests: CT Commercial 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 pg 4 of 5

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.

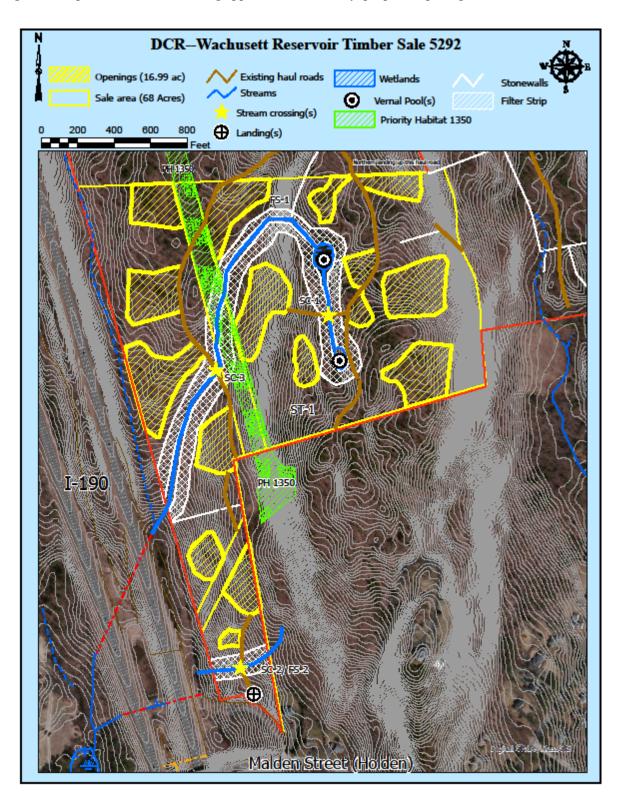
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Landown	er: DCP/D	SUSP/OWM
Town:	Holden	West Baylston
File Num	iber: <u>134</u> -	32172-21

1	The second
	There will be no cutting taking place within FS-1 and FS-2.
I P s	All stream crossings are at pre-existing locations. SC-2 in particular shows signs of past rutting on the uphill approach and so extra care will be taken to protect the approaches before hauling begins.
ΒM	<u>Two landings have been identified. The northern landing may be utilized for the openings on the top of the hill if the case arises where less soil/forwarder damage would occur by using it or if the equipment cannot make the climb from the southern landing.</u>
ulture	In order to release advance regeneration, 16 openings in the overstory are being created, covering 17 acres. <u>These openings range from 0.18 to 2.3 acres in size with an average of 1.0 acres. They are spread out</u> <u>throughout the sale area focusing on where the white pine advance regeneration is well established, or</u> <u>mature white pine is an immediate seed source.</u>
Silvicultur	There is no partial cutting on this sale.
Objectives	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.
Other	The southern landing has a concrete ditch at the roadside edge that will have to be protected and planked for truck use/access. All stream crossings must be bridged if streams are flowing.

TS FILE # <u>134-32172-21</u>	TIFICATE	esting operation is to take place.	(Address) Way STON in accordance with the	CLINTON with the Dept. of Conservation	State Parks and Recreation, a Notice of Intent to cut forest products upon the 8 - 2021 APEC DOWNEY 368-0126 Priscilla E. Geigis, Director Division of State Parks and Recreation
COMMONWEALTH OF MASSACHUSETTS Department of Conservation and Recreation Division of State Parks and Recreation	FOREST CUTTING PLAN CERTIFICATE	Post this in a conspicuous place within the area in which the harvesting operation is to take place.	This certifies that DCR DUSP OWN (Ac	provision of M.G.L. Chapter 132, Section 40-46, filed in <u>CC</u>	and Recreation, Division of State Parks and Recreation, a Notice of MALDEN lot. LGT 5292 1-8-2021 Approval Date 1-8-2021 Director's Agent MICHINEC DOWEY Director's Agent 078-368-0126

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



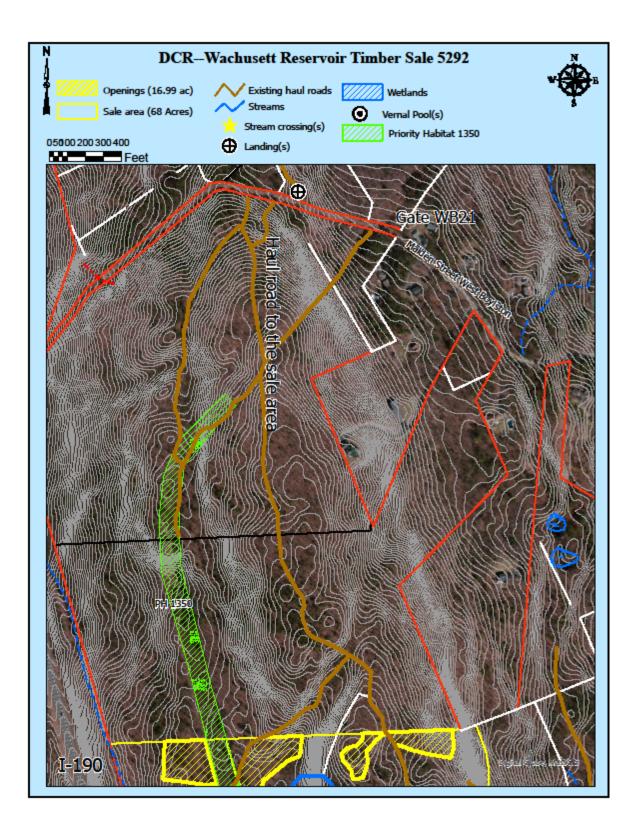


Figure 3. General locus map showing the location of the proposed timber harvest

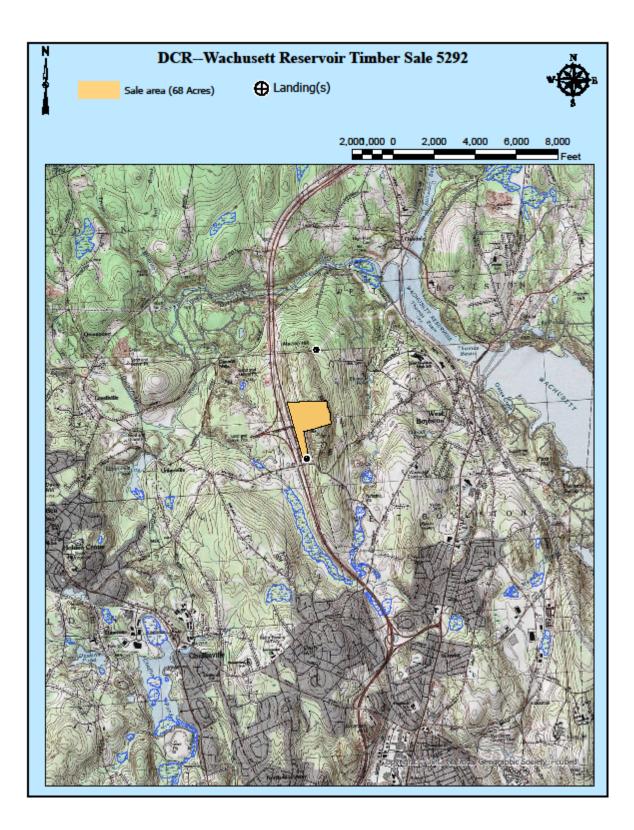


Figure 4. Pre-Harvest Photographs, A-B



A. Mature oaks marked for harvest which will release the better site situated white pine.



B. Marked oaks for harvest with mature white pine retention and a mix of hardwood and white pine regeneration.

Figure 5. Post-Harvest Photos, A-C



A. The landing as viewed from the paved road extension off of Malden Street.



B. An area of overstory removal where the younger white pines and hardwoods now have the room and light to continue to grow.



C. The pine in the foreground was retained to provide additional vertical structure in this area of overstory removal.