

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

Project Title: Whitney Hill Salvage North East

DWSP Harvest Permit Number: S9NQ
DWSP Proposal ID: PT-19-04-S
DCR Forest Cutting Plan File Number: 234-9497-19

Site Information

Watershed: Quabbin	Town(s): Petersham
Acres: 52.3	Nearest Road: Whitney Hill. Rd.
Natural Heritage Atlas overlap?: No	Public Drinking Water Supply Watershed?: Yes
Forest Types: Northern Red Oak, Mixed Oak	ACEC?: No
Soils: The dominant soil types are: Montauk-Scituate-Canton, Charlton-Chatfield-Hollis, and Montauk-Canton association	
Wetland Resources: None present.	
Vernal Pools: None known	

Harvest Information

Harvest Start Date: 7/16/2019	Harvest End Date: 7/16/2020
Number of Wetland Crossings: none	Number of Stream Crossings: 1

Best Management Practices Applied

Stream Crossings	1 stream crossing of an intermittent stream, the crossing will be required to be poled and bridged with the approaches poled if crossing is used.
Filter Strips	All filter strips are variable width, and determined by slope as directed by Massachusetts Best Management Practices. Where the stream is within 100 ft of the landing hay bales will be used to reduce possible silting.
Wetland Crossings	None
Harvesting in Wetlands	None

DWSP Forester supervising this harvest

Name: Richard MacLean & Herm Eck
Forester License #: 63 (Eck)
Phone #: 413-213-7950
Email: richard.maclean@mass.gov

NARRATIVE

General Description/Forest Composition/History:

Gypsy moth defoliation of oak has occurred at Quabbin for a number of successive years. In 2017, DWSP foresters began seeing pockets of dead and dying oaks in some of the areas with the longest history of infestation. Now in 2018 it is clear that the damage is getting worse, as the forest is experiencing extensive acreage with partial to full oak mortality. Ware River, Wachusett, and Sudbury forests are also seeing significant defoliation events. Researchers remain uncertain regarding the ultimate duration of this outbreak, but we fear that we will lose many more trees before this is over.

Oak, especially red oak, is probably the most economically valuable timber resource growing on these lands. It is the intent of DWSP to harvest at least a portion of the most valuable and most accessible of these resources before that value is lost forever. As trees stand dead, decay sets in quickly and wood value is steeply reduced as wood boring insects begin to tunnel through. Quabbin and Ware River foresters are currently working almost exclusively on preparing salvage harvests in a race against the clock to minimize loss of value.

The forest composition in this harvest is comprised of dry site mixed oak in sections 1 and 3 and oak/mixed hardwood and northern red oak dominated stands in section 2. Section 1 is primarily mixed white (*Quercus alba*) and black oak (*Quercus velutina*) with some red maple (*Acer rubrum*) and black and paper birches (*Betula lenta* and *papyrifera*). The oaks are mostly small saw log sized with a few larger individuals. Mortality in the oaks here was extensive and the white oak appears to have been dead longer than the black oak or red oak in other sections, or is deteriorating faster. Section 2 is mostly composed of northern red oak (*Quercus rubra*) in the north with more mixed hardwoods to pine moving south. The red oak in the north of this section had been previously thinned and is mostly larger saw logs (> 20'). Mortality is present in large pockets or strips, there will be surviving oak and other mixed hardwood present after salvage of the dead oak. Section three is a mix of red and black oak with red maple and black birch present in the understory. Oak mortality was extensive in this section.

Site Selection:

The primary goal of this harvest is to minimize the loss of value of oaks killed by the combination of drought and gypsy moth stress, and following secondary pathogens (such as fungus and boring beetles). These stands have had previous thinning where the oaks were tended and allowed to grow to become large valuable timber, this harvest will help recover some of that value. This site in particular was chosen because it presented a site with concentrations of dead and dying oak, with good working conditions. While there may be other locations with higher value oaks, those sites often require multiple stream or wetland crossings, or are located on steep slopes which diminishes the net benefit of harvesting those oaks to the watershed.

Silvicultural Objectives:

The main objective of this harvest is to recover the value of dead and dying oaks which have been managed and tended to for many decades. In addition, having a harvester on the site will allow some timber stand improvement to be performed. This may help improve future stand diversity and

quality as the current mid canopy and understory is released by the gypsy moth/drought/secondary killed oak.

Cultural Resources:

There are stone walls present in sections 1 and 2 as well as near the landings and along the main roads, no foundations were found in proximity of the harvest. All cultural features are being protected and avoided as much as possible. Existing barways (breaks in walls) are being utilized in order to minimize damage.

Rare or Endangered Species:

The lot contains no known rare or endangered species. It is in proximity of mapped vernal pools. Forwarder trails have been routed around the vernal pools to avoid disturbance and all Massachusetts Best Management Practices will be followed regarding vernal pool protection.

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)

For DCR Use Only:

File Number 234.9497-19 Case No.
Date Rec'd 8/23/18 Nat. Hert. NO
Earliest Start 9/10/18 Nat. Hert. Imp NO
River Basin Chicopee Pub. Dr. Wat. NO
Gen. Obj. LT ACEC NO

Site Information

Location

Town Petersham Lot S9NQ
Road Rte. 32A | DCR Quabbin Gate 40
Acres 52.2 Proposed Start Date Fall 2018
Vol. MBF 55.1 Vol. Cds. 57 Vol. Tons 0

Plan Preparer

Name Richard MacLean & Herm Eck
Address DCR-DWSP Quabbin Section
485 Ware Road
Town, State, Zip Belchertown, MA 01007
Phone 413-323-6921 x 553
Type of Preparer Mass. Licensed Forester
*Mass. Forester License # 63
*Required for land under Ch61, Ch61A or Forest Stewardship

Landowner

Name DCR-DWSP Quabbin Section
Mailing Address 485 Ware Road
Richard.MacLean@state.ma.us | HEck@state.ma.us
Town, State, Zip Belchertown, MA 01007
Phone (413) 213-7950 | (413) 213-7949
Ch61 ☐ 61A ☐ 61B ☐ Stew ☐ *Case #
CR ☐ CR Holder

Licensed Timber Harvester**

Name TBD
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 None

Indicate location on map	SC-1			
Type of Crossing	BR			
Existing Structure	No			
Type of Bottom	MU			
Bank Height (ft)	0.5			
Stabilization	CO			

Wetland Crossings No Crossings

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

Filter Strips

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

Harvesting in Wetlands None

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%)				

Service Forester Comments

Codes

Type of Preparer	Type of Crossing	Stabilization	Mitigation	Type of Bottom
LF Mass. Lic. For.	CU Culvert	SE Seed	FR Frozen	LE Ledge
TH Lic. Tim. Har	BR Bridge	MU Mulch	DR Dry	ST Stony
TB Timber Buyer	FO Ford	CO Corduroy	OT Other	MU Mud
LO Landowner	PO Poled	ST Stone		GR Gravel
OT Other	OT Other	HB Hay Bales		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

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Figure 1a: Forest Cutting Plan pg. 1.

Products to be Harvested*			
Species	Mbf/Cds		Mbf/Cds
White Pine		Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	36.2
Hemlock		Black Oak	14.3
Spruce		White Oak	4.6
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	55.1
Beech		Cordwood (Cds)	57
White Birch		SW Pulp (Tons)	0
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	
Forest Type	OM	OH	OR	
Acres	29.3	12.5	10.3	
Landowner Objective	LT	LT	LT	
Designation of Trees	CT	CT	CT	
Type of Cut	SA	SA	SA	
Source of Regeneration	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 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 8-16-18

Determination and Status 234.9497.19

Approved ☒ Disapproved ☐ Expires 8/23/20

Cutting Plan ☒ ☐ 9-6-18

Signature of Service Forester/Director's Agent _____ Date _____

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

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

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				Designation of Trees		Type of Cut		Source of Regeneration						
WP	White Pine	HK	Hemlock	OM	Mixed Oak	CT	Cut Tree	SH	Shelterwood	Intermediate Harvests:	AD	Advanced		
WK	WP/Hem	HH	Hem/Hdwd	RM	Red Maple	LT	Leave Tree	ST	Seed Tree	CT	Commercial Thin	SE	Natural Seed	
WH	WP/Hdwd	BC	Black Cherry	BE	Beech	SB	Stand Boundary	CC	Clear Cut	NT	Non Corn Thin	PL	Plant	
WO	WP/Oak	BB	Bee/Bir/Map	SF	Spruce/Fir	OT	Other	SE	Selection	Non-Standard Systems:*			CO	Coppice
RP	Red Pine	OH	Oak/Hdwd	SM	Sugar Maple	Landowner Objective		SA	Salvage	HG	Highgrade*	DS	Direct Seed	
SR	Red Spruce	OR	N Red Oak	PP	Pitch Pine	LT	Long-term Mgt.	SN	Sanitation	DL	Diameter Limit*	OT	Other	
						ST	Short-term Har.			OT	Other*			

*If Other (OT) or a non-standard system is used an explanation must be given on attached narrative page

Figure 1b: Forest Cutting Plan pg. 2.

Forest Cutting Plan

Narrative Page (Effective Date: 1/1/04)

Use this page to provide further explanation or if Other (OT) was used in any category on pages 3 or 4.

Landowner DCR-DWSP Quabbin

Town Petersham | Lot S9NQ

File Number 234.9497.19

BMPs

Use this Section to provide further explanation or if Other (OT) was used in any category in the Best Management Practices Section on Page 3.

FLAGGING: Pink = warning/caution/ stay out | Blue = skid road | Orange & black = filter strip | Pink w/ Orange & black = no equipment FS

Pink 'DO NOT CUT' = tree to be protected. BLUE PAINT: Dot = cordwood or pulp | Three vertical dots = end of sale

Horizontal line = sawlog | Vertical slash = TSI | "X" = cull | Vertical line = skid road

SC-1 will be required to be bridged if used. Areas that appear to be soft will require stabilization as necessary.

This is a salvage of dead and dying oak following repeated gypsy moth defoliation.

Designation of Trees

Use this Section to describe the types of trees to be harvested and/or retained if Other (OT) was used for "Designation of Trees" in the Stand Treatment Section on page 4.

Stand No.	Species to be Cut	Size of Trees to be Cut	Quality of Trees to be Cut	% BA/Acre Removed
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Regeneration & Future Condition

Use this Section to describe how Chapter 132 requirements will be met if a non standard system (HG, DL, or OT) was used for the "Type of Cut" in the Cutting Standards Section on page 4.

Stand No.	Source of Regeneration (ex. AD, SE)	How will Regeneration be obtained/protected?
		If using AD - Describe the species present and how the regeneration will be protected If using SE - Describe the source of the seed and the number of seed trees/acre

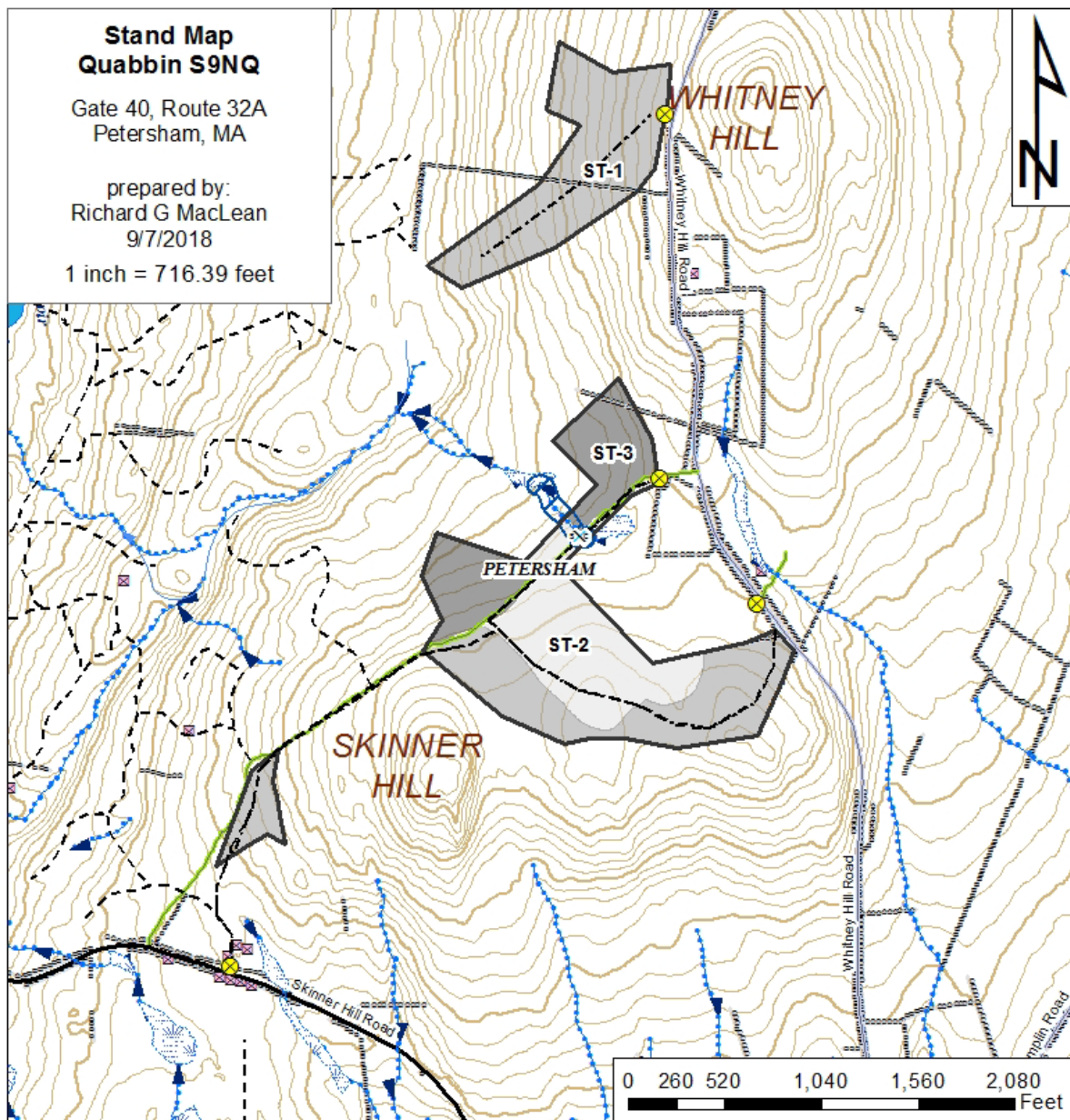
ST-1		
ST-2		
ST-3		
ST-4		

Stand No.	Desired Future Condition
	Describe what the stand is expected to look like five years from the harvest, including the condition of the overstory & understory

ST-1	
ST-2	
ST-3	
ST-4	

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Figure 1c: Forest Cutting Plan pg 3.



Legend


















	SC-1		All-Weather Road		Harvest Boundary		Historic Sites
	FS-1		Abandoned Cart Rd		ST-1: Mixed Oak		Stone Walls
	Coastline/Shoreline		Seasonal Road		ST-2: Oak/Hdw		
	Stream/River: Intermittent		Landings		ST-3: N Red Oak		
	Reservoir		Skid Trails				
	Swamp/Marsh						

Figure 1e: Forest Cutting Plan pg. 6.



COMMONWEALTH OF MASSACHUSETTS
Department of Conservation and Recreation
Division of State Parks and Recreation

FILE # 234.9497.19

W

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-DWSP Quabbin 485 Ware Rd, Belchertown, MA 01007 in accordance with the
(Name of Owner) (Address)

provision of M.G.L. Chapter 132, Section 40-46, filed in Amherst F.O. with the Dept. of Conservation
and Recreation, Division of State Parks and Recreation, a Notice of Intent to cut forest products upon the

S9NQ lot, Petersham, MA
(Quabbin Gate 40)

Approval Date 9/6/18

Director's Agent Andrew Rawcliffe

DCR Phone No. 617-548-1677

ISSUED BY:

Priscilla E. Geigis, Director
Division of State Parks and Recreation

Figure 1f: Forest Cutting Plan pg. 6.