

**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 Road

Natural Heritage Atlas overlap?: No

Public Drinking Water Supply Watershed?: Yes

Forest Types: Northern red oak, mixed oak

Area of Critical Environmental Concern (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: one

***Best Management Practices Applied***

Stream Crossings: one 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: no wetlands

Harvesting in Wetlands: no wetlands

***DWSP Forester supervising this harvest***

Name: Richard MacLean & Herm Eck

Forester License number: 63 (Eck)

Phone number: 413-21-7950

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.	1
Date Rec'd	8/23/18	Nat. Hert.	NO
Earliest Start	9/10/18	Nat. Hert. Imp	NO
River Basin	Quabbin	Pub. Dr. Wat.	NO
Gen. Obj.	LT	ACEC	NO

**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

**Site Information****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.

**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		

**Best Management Practices****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			

**Notes**

Type of Preparer	Type of Crossing	Stabilization	Mitigation	Type of Bottom	Note:
LF Mass. Lic. For.	CU Culvert	SE Seed	FR Frozen	LE Ledge	Applicant must provide DCR with all relevant information before plan may be approved and cutting may begin.
TH Lic. Tim. Har	BR Bridge	MU Mulch	DR Dry	ST Stony	Some forestry activities, such as prescribed burning and pesticide or fertilizer application may require additional permits.
TB Timber Buyer	FO Ford	CO Corduroy	OT Other	MU Mud	Consult MA Forestry BMP Manual for further information.
LO Landowner	PO Poled	ST Stone		GR Gravel	
OT Other	OT Other	HB Hay Bales		OT Other	
		OT Other			

If Other (OT) is used in any category an explanation must be given on an attached narrative page

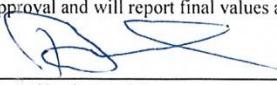
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Figure 1a: Forest Cutting Plan page 1.

<b>Products to be Harvested*</b>			
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		<b>Total Mbf</b>	55.1
Beech		<b>Cordwood (Cds)</b>	57
White Birch		<b>SW Pulp (Tons)</b>	0
B & Y Birch		<b>HW Pulp (Tons)</b>	
Black Cherry		<b>Chips (Tons)</b>	

\*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.

Stand Treatment	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	

<b>Landowner Signature</b>	
<p>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.</p>	
<p><input checked="" type="checkbox"/> <b>LT – Long-term Forest Management</b> 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.</p>	
<p><input type="checkbox"/> <b>ST - Short-term Harvest</b> 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</p>	
<p>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.</p>	
 <p>Signature of landowner(s)</p>	
<p style="text-align: right;">8-16-18</p> <p>Date</p>	

<b>Determination and Status</b> 231-9497-19				<b>Final Report and Comments</b>			
Approved	Disapproved	Expires		Approved	Disapproved	Expires	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	8/23/20		<input type="checkbox"/>	<input type="checkbox"/>	8-16-18	
 <p>Signature of Service Forester/Director's Agent</p>				 <p>Signature of Service Forester/Director's Agent</p>			
Extension	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Expires /	Ser. For. Ints.			
Amendment	App 1 <input type="checkbox"/>	Dis 1 <input type="checkbox"/>	App 2 <input type="checkbox"/>	Dis 2 <input type="checkbox"/>			

Forest Types	IHK	Hemlock	OM	Mixed Oak	CT	Cut Tree	SH	Shelterwood	Intermediate Harvests:	Source of Regeneration
WP White Pine	IHK	Hemlock	OM	Mixed Oak	CT	Cut Tree	SH	Shelterwood	AD Advanced	
WK WP/Item	IHH	Hem/Hdwd	RM	Red Maple	LT	Leave Tree	ST	Seed Tree	CT Commercial Thin	SE Natural Seed
WH WP/Hdwd	BC	Blck Cherry	BE	Beech	SB	Stand Boundary	CC	Clear Cut	NT Non Com Thin	PL Plant
WO WP/Oak	BB	Bee/Bir/Map	SF	Spruce/Fir	OT	Other	SE	Selection	Non-Standard Systems: <sup>*</sup>	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

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**Figure 1b:** Forest Cutting Plan page 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

Designation of Trees

Regeneration & Future Condition

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.

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

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.

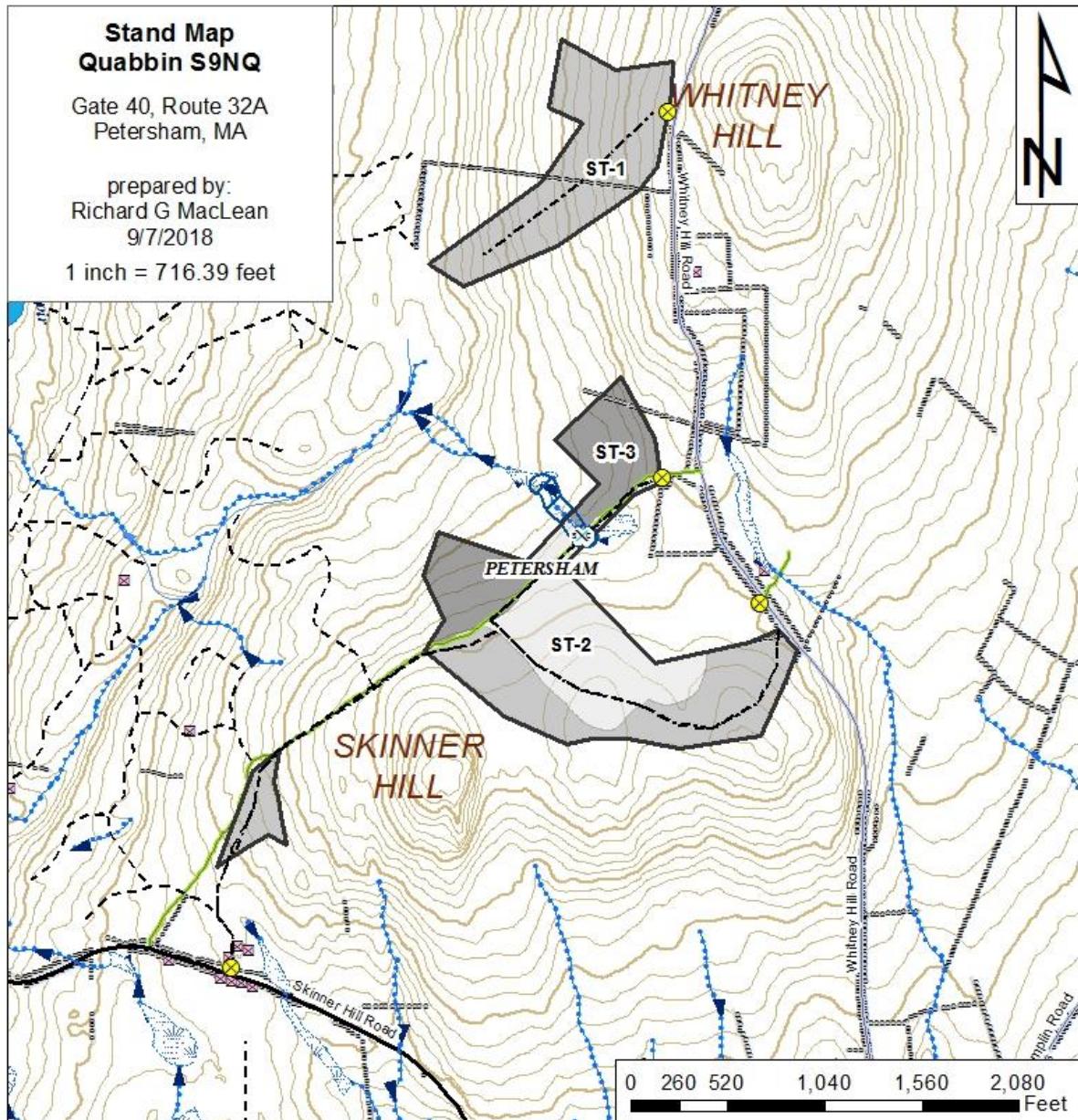
Stand No.	Source of Regeneration (ex. AD, SE )	How will Regeneration be obtained/protected? If using AD - Describe the species present and how the regeneration will be protected If using SE - Describe the source of the seed and the number of seed trees/acre
ST-1		
ST-2		
ST-3		
ST-4		

Stand No.	Desired Future Condition
ST-1	Describe what the stand is expected to look like five years from the harvest, including the condition of the overstory & understory
ST-2	
ST-3	
ST-4	

Figure 1c: Forest Cutting Plan pg 3.



**Figure 1d:** Forest Cutting Plan page 5.



### 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/Hdwd	
Stream/River: Intermittent	Landings	ST-3: N Red Oak	
Reservoir	Skid Trails		
Swamp/Marsh			

**Figure 1e: Forest Cutting Plan page 6.**

dcr



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 NR- 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

SQNQ lot, Petersham, MA  
(Quabbin Lot 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 page 6.