

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

Project Title: Whitney Hill Salvage South
DWSP Harvest Permit Number: S10SQ
DWSP Proposal ID: PT-19-04&05S
DCR Forest Cutting Plan File Number: 234.9567.19

Site Information

Watershed: Quabbin
Town(s): Petersham
Acres: 41.7
Nearest Road: Whitney Hill Road
Natural Heritage Atlas overlap?: No
Public Drinking Water Supply Watershed?: Yes
Forest Types: Northern red oak
Area of Critical Environmental Concern (ACEC)?: NO
Soils: The dominant soil types are: Montauk-Canton, Charlton-Chatfield-Hollis association and Montauk-Scituate-Canton association
Wetland Resources: none present
Vernal Pools: none known

Harvest Information

Harvest Start Date: 9/16/2020
Harvest End Date: 10/27/2020
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 is required to be poled and bridged with the approaches protected with corduroy.
Filter Strips: All filter strips are variable width and determined by slope, as directed by Massachusetts Best Management Practices.
Wetland Crossings: no wetlands
Harvesting in Wetlands: no wetlands

DWSP Forester supervising this harvest

Name: Richard MacLean & Herm Eck
Forester License number: 63
Phone number: (Eck)
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.

The forest composition in this harvest is comprised of mostly northern red oak with dry site mixed oak along the northwest slopes and Whitney Hill road western slope. There are other mixed hardwood species throughout mostly comprised of pole to small saw log sized red maple (*Acer rubra*), black birch (*Betula lenta*), and yellow birch (*Betula alleghaniensis*). The red oak had been thinned in the 1980's and today is mostly larger saw logs (> 20'). There is a wet drainage to the west surrounding the intermittent that has been excluded from harvest. Mortality is present in large pockets or strips; there will be surviving oak and other mixed hardwoods present after salvage of the dead oak.

Site Selection

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 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. Stone walls east of Whitney Hill Rd. will present some challenges to operation so a forwarder has been required to better protect walls. There are no known foundations within the harvest area. 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: 3/15/16) *Final (10/20)*

Site Information

Location	<i>"Lot S10SQ"</i>	
Town	Petersham	
Road	Hardwick Rd. (Rte. 32A)	
Acres	42	Proposed Start Date 12/19/2018
Vol. MBF	100,400	Vol. Cds. 109 Vol. Tons 0
Plan Preparer		
Name	Herm Eck	
Address	485 Ware Rd	
Town, State, Zip	Belchertown MA 01007	
Phone	413-213-7949	
Type of Preparer	LF	
*Mass. Forester License #	63	

*Required for land under Ch61, Ch61A or Forest Stewardship

Best Management Practices

Stream Crossings				
Indicate location on map	SC-1	SC-2	SC-3	SC-4
Type of Crossing	BR			
Existing Structure	No			
Type of Bottom	MU			
Bank Height (ft)	0.50			
Stabilization	CO			
Wetland 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			

Codes

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

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

pg. |

For DCR Use Only:			
File Number	234,9567,19	Case No.	N/A
Date Rec'd	11/02/2018	Nat. Hert.	False
Earliest Start	11/20/2018	Pub. Dr. Wat.	No
River Basin	Chicopee	ACEC	False
Gen. Obj.	LT	<i>Nat Hert Imp: N/A</i>	

Landowner

Name	DCR-DWSP Quabbin Forestry	
Mailing Address	485 Ware Rd	
Town, State, Zip	Belchertown	MA 01007
Phone	413-213-7950	
Ch61	61A	61B
Stew	*Case #	
FSC	CR	CR Holder

Licensed Timber Harvester**

Name	<i>James Harrington</i>
Address	<i>4 East St</i>
Town, State, Zip	<i>Petersham MA 01366</i>
Phone	<i>978-724-3472</i>
Mass. Lic. Harvester #	<i>2021-402</i>

**This information may be supplied after the plan is approved, but before 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%?)				

Service Forester Comments

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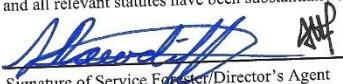
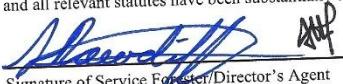
Figure 1a: Forest Cutting Plan pg. 1.

Products to be Harvested*			
Species	Mbf/Cds		Mbf/Cds
White Pine		Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	81.300
Hemlock		Black Oak	13.400
Spruce		White Oak	5.000
Other Sftwd.		Other Hdwd.	0.600
White Ash		Total Mbf	100.300
Beech		Cordwood (Cds)	109.000
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.

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	OM	OH	WH	OH
Acres	26.500	7.600	2.700	2,400
Landowner Objective	LT	LT	LT	LT
Designation of Trees	CT	CT	CT	CT
Type of Cut	SA	SA	SA	SA
Source of Regeneration	D,CO,S	D,CO,S	D,CO,S	D,CO,S

Landowner Signature			
Landowner	<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>		
	<input checked="" type="checkbox"/> LT - Long-term Forest Management	<input type="checkbox"/> ST - Short-term Harvest	
<p>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>I (we) have read the Massachusetts Cutting Plan Information Sheet, and am aware of my (our) management options.</p> <p>I (we) hereby certify that I (we) have the legal authority to carry out the operation described above.</p> <p>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.</p> <p>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>			
See next pg		Date	
Signature of landowner(s)			

Determination and Status																																																			
Approved	Disapproved	Expires																																																	
Cutting Plan		<input checked="" type="checkbox"/>	<input type="checkbox"/> 11/02/2020																																																
																																																			
Extension		<input type="checkbox"/> 1 <input type="checkbox"/> 2	Expires _____ Ser. For. Ints. _____																																																
Amendment		<input type="checkbox"/> App 1 <input type="checkbox"/> Dis 1 <input type="checkbox"/> App 2 <input type="checkbox"/> Dis 2	_____ / _____																																																
																																																			
Final Report and Comments																																																			
<p>I hereby certify that the afore described Forest Cutting Plan and all relevant statutes have been substantially complied with.</p> <p> 10-7-20</p>																																																			
Signature of Service Forester/Director's Agent Date																																																			
<table border="1"> <tr> <td>Forest Types</td> <td>Designation of Trees</td> <td>Type of Cut</td> <td>Source of Regeneration</td> </tr> <tr> <td>WP White Pine</td> <td>HK Hemlock OM Mixed Oak</td> <td>CT Cut Tree</td> <td>AD Advanced</td> </tr> <tr> <td>WK WP/Hem</td> <td>HH Hem/Hdwd RM Red Maple</td> <td>LT Leave Tree</td> <td>SE Natural Seed</td> </tr> <tr> <td>WH WP/Hdwd</td> <td>BC Blck Cherry BE Beech</td> <td>SB Stand Boundary</td> <td>CT Commercial Thin</td> </tr> <tr> <td>WO WP/Oak</td> <td>BB Bee/Bir/Map SF Spruce/Fir</td> <td>OT Other</td> <td>CC Clear Cut</td> </tr> <tr> <td>RP Red Pine</td> <td>OH Oak/Hdwd SM Sugar Maple</td> <td>Landowner Objective</td> <td>NT Non Com Thin</td> </tr> <tr> <td>SR Red Spruce</td> <td>OR N Red Oak PP Pitch Pine</td> <td>SA Salvage</td> <td>CO Coppice</td> </tr> <tr> <td></td> <td></td> <td>LT Long-term Mgt.</td> <td>HG Highgrade*</td> </tr> <tr> <td></td> <td></td> <td>ST Short-term Har.</td> <td>DS Direct Seed</td> </tr> <tr> <td></td> <td></td> <td>SN Sanitation</td> <td>OT Other</td> </tr> <tr> <td></td> <td></td> <td>DL Diameter Limit*</td> <td></td> </tr> <tr> <td></td> <td></td> <td>OT Other*</td> <td></td> </tr> </table>				Forest Types	Designation of Trees	Type of Cut	Source of Regeneration	WP White Pine	HK Hemlock OM Mixed Oak	CT Cut Tree	AD Advanced	WK WP/Hem	HH Hem/Hdwd RM Red Maple	LT Leave Tree	SE Natural Seed	WH WP/Hdwd	BC Blck Cherry BE Beech	SB Stand Boundary	CT Commercial Thin	WO WP/Oak	BB Bee/Bir/Map SF Spruce/Fir	OT Other	CC Clear Cut	RP Red Pine	OH Oak/Hdwd SM Sugar Maple	Landowner Objective	NT Non Com Thin	SR Red Spruce	OR N Red Oak PP Pitch Pine	SA Salvage	CO Coppice			LT Long-term Mgt.	HG Highgrade*			ST Short-term Har.	DS Direct Seed			SN Sanitation	OT Other			DL Diameter Limit*				OT Other*	
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*If Other (OT) or a non-standard system is used an explanation must be given on attached narrative page

pg 2

Figure 1b: Forest Cutting Plan pg. 2.

Forest Cutting Plan

Narrative Page (Effective Date: 3/15/16)

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

Landowner Quabbin Forestry
 Town Petersham
 File Number 234.9567.19

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/stay out | Blue = skid road. **PAINT COLOR:** BLUE - Cut tree | ORAGE - Leave tree. **PAINT SYMBOL:** Double horizontal band - equipment restricted beyond | Triple Dot - end of sale | Horizontal line - sawlog | Dot - cord/pulp wood | slash - TSI | slash on large dead oak - logger's choice (see below) | "X" - cull. SC-1 will be poled and bridged when in use. Skid road will be armored with tops or corduroy where soft. This is a salvage of dead and dying oak following gypsy moth defoliation and borer infestation, above volumes are predominately dead. Sawlog/cordwood sized logs which were dead but of questionable soundness were marked with a slash and it will be the logger choice whether to cut the tree, it

BMPs

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. Additional narrative description may be added on a separate page.

Describe Trees to be Cut				Describe Trees to be Left			% BA/AC	
Stand No.	Species	Size	Quality	Species	Size	Quality	Cut	Left

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

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 & undergrowth

Figure 1c: Forest Cutting Plan pg 3.

Quabbin Lot S9SQ Locus Map

Gate 40, Rte. 32A
Petersham, MA

prepared by:
Richard G MacLean
MADCR DWSP,
Quabbin/Ware River Forestry
11/1/2018

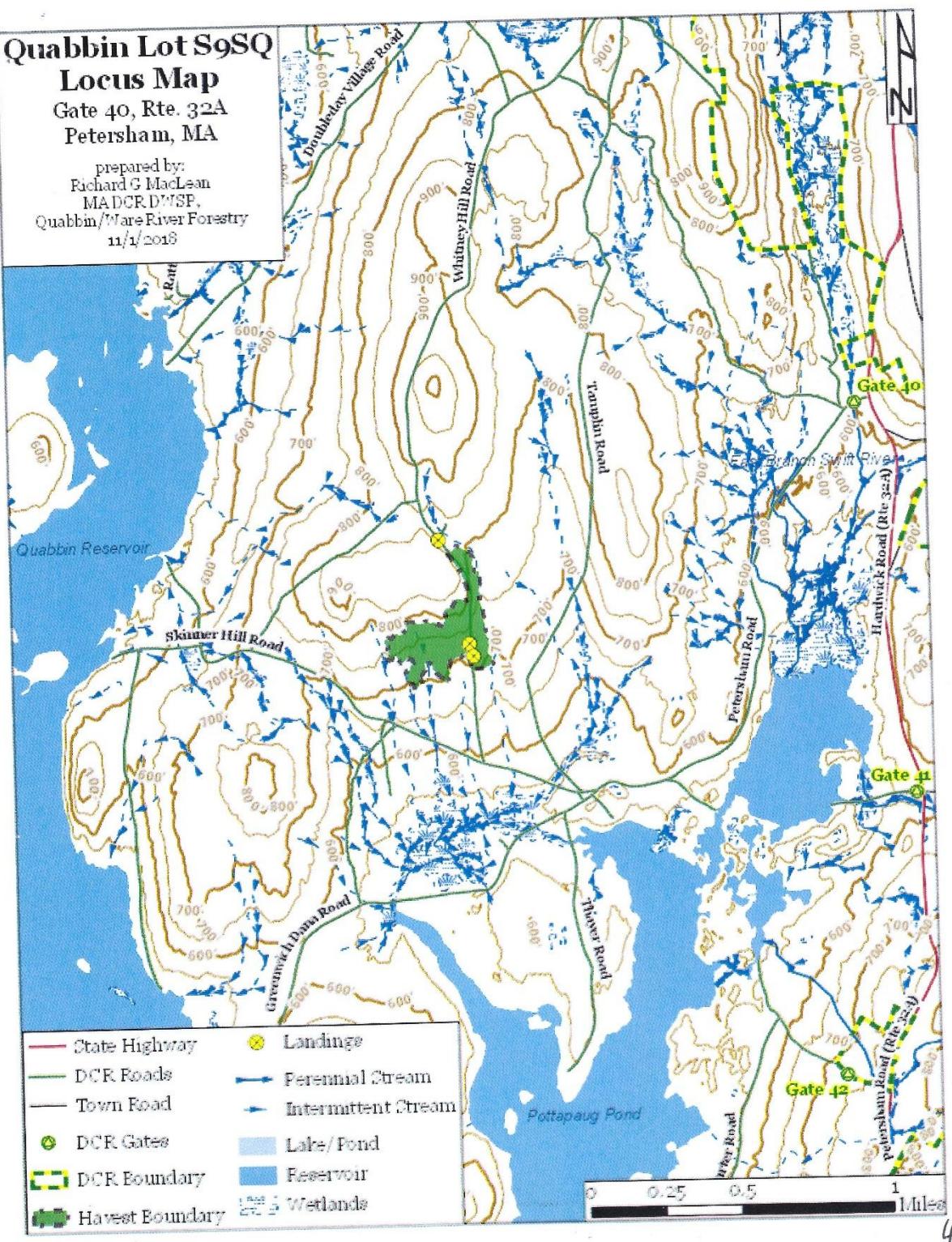


Figure 1d: Forest Cutting Plan pg. 5.

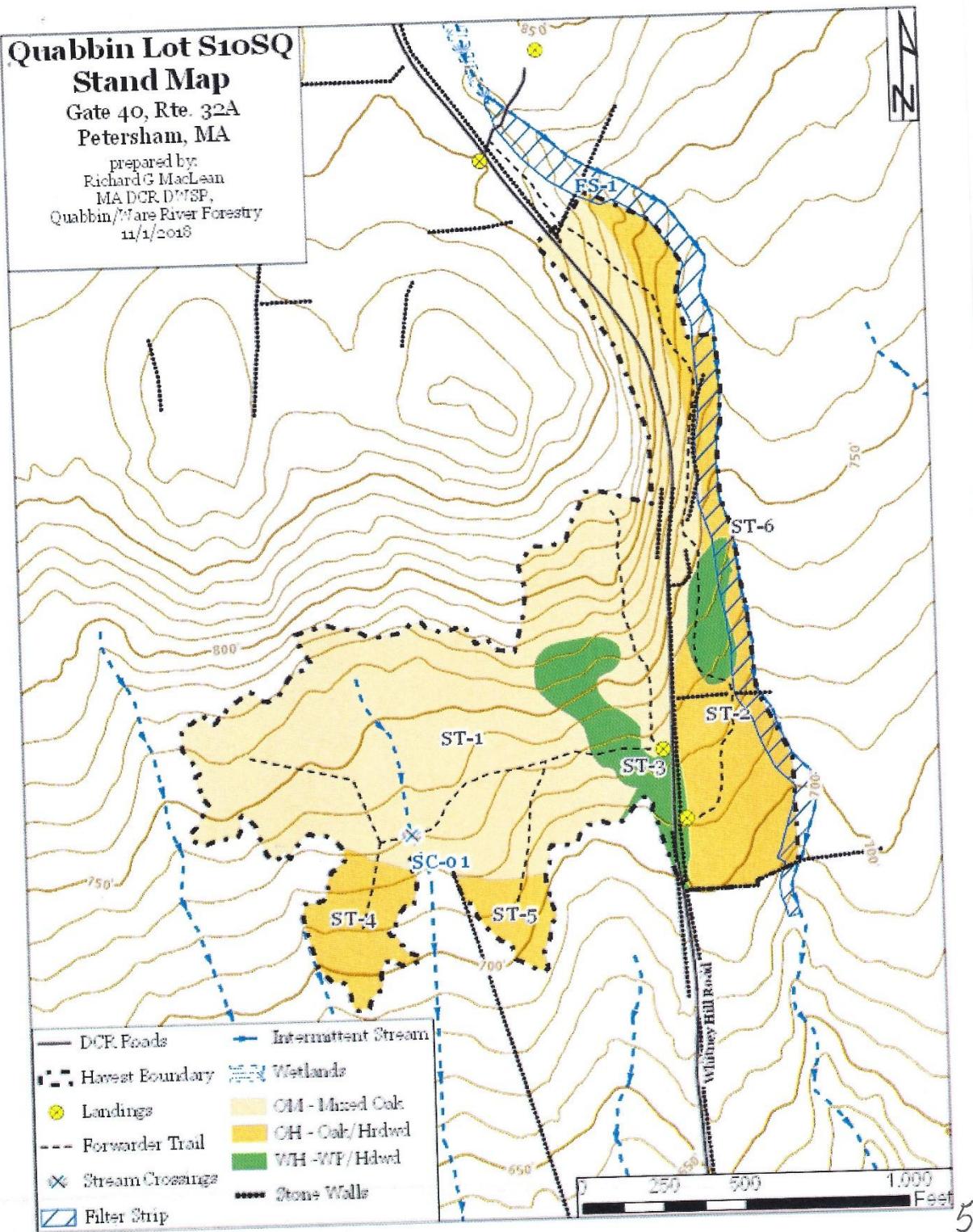


Figure 1e: Forest Cutting Plan pg. 6.



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

FILE # 234-9567-19

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

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

Hardwick Rd lot, Petersham

"S10SQ"

Approval Date 11/20/18

Director's Agent Andrew Rawcliffe

DCR Phone No. 413-617-549-1677

ISSUED BY:

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

Figure 1f: Forest Cutting Plan Certificate.