

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

Project Title: Enfield Road
DWSP Harvest Permit Number: 2050
DWSP Proposal ID: PE-16-12
DCR Forest Cutting Plan File Number: 272-8969-18

Site Information

Watershed: Quabbin
Town(s): Shutesbury
Acres: 25.6
Nearest Road: Route 202
Natural Heritage Atlas overlap?: No
Public Drinking Water Supply Watershed?: Yes
Forest Types: white pine, white pine/hardwood
Area of Critical Environmental Concern (ACEC)?: No
Soils: Hinkley Sandy Loam, Chatfield-Hollis complex, and Windsor and Merrimac soils
Wetland Resources: A small portion of wetland feeding an intermittent is in the harvest boundary. No cutting within the wetland is planned.
Vernal Pools: none known

Harvest Information

Harvest Start Date: 11/1/2017
Harvest End Date: 11/17/2017
Number of Wetland Crossings: one
Number of Stream Crossings: none

Best Management Practices Applied

Stream Crossings: A single intermittent stream is crossed by a DWSP road with an existing culvert.
Filter Strips: Variable width filter strips of an intermittent stream bisecting the lot west to east, an intermittent stream east of the lot, and the Quabbin Reservoir.
Wetland Crossings: none
Harvesting in Wetlands: none

DWSP Forester supervising this harvest

Name: Richard G MacLean & Helen Johnson
Forester License number: 383 (Johnson)
Phone number: 413-323-6921 ext. 553
Email: Richard.maclean@state.ma.us

Narrative

General Description/Forest Composition/History

Lot 2050 is located inside DCR-DWSP Gate 15 along Enfield Rd., south of the intersection with Gate 15 Rd. The main forest types in the harvest area are White Pine, and White Pine/Hardwood with most of the cutting to occur in areas where a dense white pine canopy is shading out potential advanced regeneration.

The goals for the harvest are to increase the age and species diversity of the forest through group selection with retention. Areas targeted for cutting have dense white pine over inadequate regeneration, or are overtopping areas of white pine regeneration which have stagnated and are dying under the heavy shade. Oaks and other species of hardwoods were retained as seed sources in order to encourage a more diverse regeneration response. There was also a small patch of red pine which is being removed before the stand is killed by the red pine scale which has devastated other red pine stands around Quabbin.

There is a single intermittent stream which bisects the lot west to east in the northern section. The dominant soil types are Hinkley Sandy Loam, Chatfield-Hollis complex, and Windsor and Merrimac soils. These soils are excessively drained and should provide easy operating conditions. There is some slope towards the southern end of the lot, existing old cart roads and corduroy will be used to reduce equipment effects on the slope soil.

Site Selection

This harvest is intended to help improve species and age diversity of the forest to achieve DWSP goals for forest age class and species diversity. Historically, intense browse reduced the species diversity of tree regeneration for several decades within the Quabbin, where hunting was not allowed and natural predators were absent. Deer, and more recently moose, preferentially browsed some species (such as oaks and maples) while leaving others (primarily white pine and black birch), resulting in low understory species diversity, as is the case in this lot. This harvest is a first step in reversing that process and restoring native biodiversity.

Silvicultural Objectives

This harvest will open up new regeneration opportunities, both by stimulating seed production and by providing light for new and existing seedlings and saplings to grow. In order to increase species diversity, individuals of the most common species (white pine and black birch) have been prioritized for removal, while locally uncommon hardwood species have been prioritized for retention. Maximum opening size is 2 acres, large enough to allow regeneration of even shade intolerant species such as black cherry. Some areas of white pine will be thinned to promote growth in the healthiest and best formed individuals. Groups have been located where overstory trees have poor form and vigor and understory diversity is low. Advance regeneration is being retained and protected wherever possible.

Cultural Resources

This lot contains stone walls both in the interior and along the lot boundaries. Additionally there is an old stone-lined well located adjacent to the lot, but outside of any area of harvest activity. 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 to walls.

Rare or Endangered Species

This lot contains no known rare or endangered species.

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) (1/1/04)

forest cutting
MR 11.00
(FINAL REPORT)

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)

(1/17) (FINAL REPORT)

For DCR Use Only:		
File Number	272-8969-18	Case No.
Date Rec'd	8/17/17	Nat. Hert.
Earliest Start	9/1/17	Nat. Hert. Imp.
River Basin	Quabbin	Pub. Dr. Wat.
Gen. Obj.	LT	ACEC

Location

Town Shutesbury | Lot 2050
 Road Enfield Rd. | Quabbin Gate 15
 Acres 25.6 Proposed Start Date Fall 2017
 Vol. MBF 79.1 Vol. Cds. 16 Vol. Tons 32

Landowner

Name DCR-DWSP Quabbin Section
 Mailing Address 485 Ware Road
Richard.MacLean@state.ma.us Helen.Johnson@state.ma.us
 Town, State, Zip Belchertown, MA 01007
 Phone (413) 323-6921 x553 (978) 544-6343
Ch61 61A 61B Stew *Case #
CR CR Holder

Plan Preparer

Name Richard MacLean & Helen Johnson
 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 # 383
 *Required for land under Ch61, Ch61A or Forest Stewardship

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

Indicate location on map	SC-1	SC-2	SC-3	SC-4
Type of Crossing	CU			
Existing Structure	Y			
Type of Bottom	MU			
Bank Height (ft)	2			
Stabilization	HB			

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%)				

Wetland Crossings

No Crossings

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

Service Forester Comments

Filter Strips

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

Service Forester Comments

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

Figure 1a. Massachusetts Forest Cutting Plan page one.

Forest Products

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine	73.8	Red Maple	
Red Pine	3.4	Sugar Maple	
Pitch Pine		Red Oak	
Hemlock		Black Oak	
Spruce		White Oak	
Other Hdwd.		Other Hdwd.	1.9
White Ash		Total Mbf	79.1
Beech		Cordwood (Cds)	16
White Birch		SW Pulp (Tons)	32
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.

Landowner

Cutting Standards

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	WH	WP		
Acres	17.8	7.8		
Landowner Objective	LT	LT		
Designation of Trees	CT	CT		
Type of Cut	SE	SE		
Source of Regeneration	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

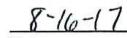
Harvest of trees with the main intention of producing short-term income with minimal consideration given to improving the future forest condition, which often results in a forest dominated by poor quality and low value species.

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.

Date

Signature of landowner(s)

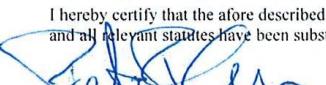
Service Forester

Determination and Status 272-896A-18

Final Report and Comments

Approved	Disapproved	Expires
<input checked="" type="checkbox"/>	<input type="checkbox"/>	8/17/19
		8/28/2017
Signature of Service Forester/Director's Agent		Date
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"/>	/

I hereby certify that the afore described Forest Cutting Plan and all relevant statutes have been substantially complied with.




Date

Codes

Forest Types	HK	Hemlock	OM	Mixed Oak	Designation of Trees	Type of Cut	Intermediate Harvests:	Source of Regeneration
WP White Pine	HK	Hemlock	OM	Mixed Oak	CT Cut Tree	SH Shelterwood	CT Commercial Thin	AD Advanced
WK WP/Hem	HK	Hem/Hdwd	RM	Red Maple	LT Leave Tree	ST Seed Tree	NT Non Com Thin	SE Natural Seed
WH WP/Hdwd	BC	Bick Cherry	BE	Beech	SB Stand Boundary	CC Clear Cut	PL Plant	
WO WP/Oak	BB	Bee/Bir/Map	SF	Spruce/Fir	OT Other	SE Selection	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

pg 4 of 5

Figure 1b. Massachusetts Forest Cutting Plan page two with final approval signature from Service Forestry.

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 Shutesbury | Lot 2050

File Number 272-8969-18

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 "Do Not Cut" = trees to be protected | Blue = skid road | Orange = Edge of opening

BLUE PAINT: Dot = cordwood or pulp | Three vertical dots = edge of stand. | Horizontal line = sawlog

Vertical line = TSI | "X" = cull

SC-1 is an existing road and culvert flagged with pink in the field. SB = straw bales

No cutting is proposed within NHESP Habitat

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

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	

Figure 1c. Massachusetts Forest Cutting Plan page three.

dcr



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

FILE # 272-8669-18

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 BELCHERTOWN in accordance with the
(Name of Owner) (Address)

provision of M.G.L. Chapter 132, Section 40-46, filed in AMHERST with the Dept. of Conservation
and Recreation, Division of State Parks and Recreation, a Notice of Intent to cut forest products upon the
Lot 2050 lot.

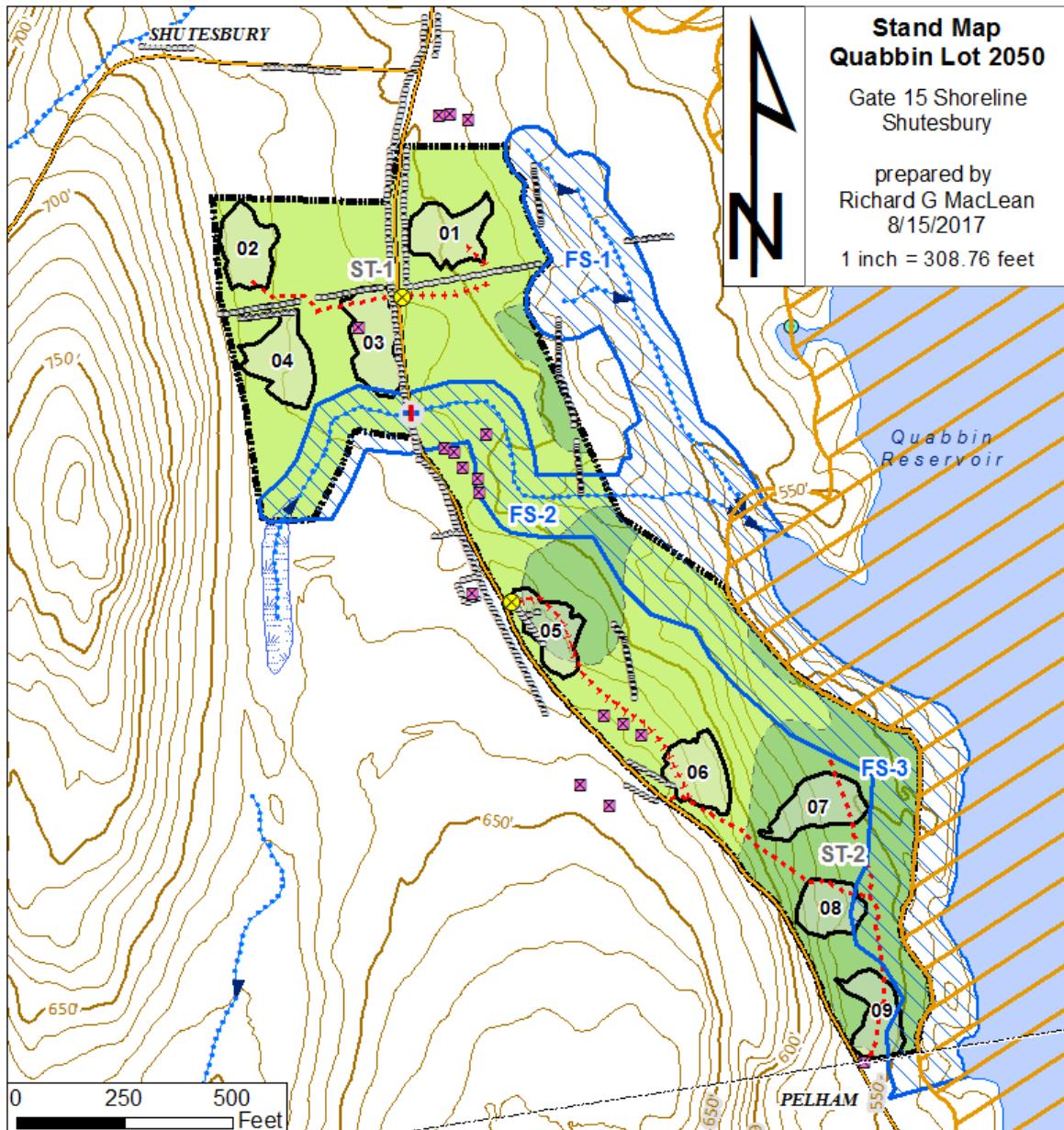
Approval Date 8/28/2017

ISSUED BY:

Director's Agent FLETCHER CLARK
DCR Phone No. 413-262-2367


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

Figure 1d. Massachusetts Forest Cutting Plan Certificate.



Legend

● Harvest Landings	■ ST-1 WH	□ Filter Strip
— Quabbin Roads	■ ST-2 WP	— Stream/River: Intermittent
···· Existing Skid Rd	···· Stone Walls	— Stream/River: Perennial
····· New Skid Rd	■ Stone Foundation	■ Reservoir
□ Regeneration Openings	● Vernal Pool	■ Swamp/Marsh
□ Harvest Boundary	● SC-1	■ NHESP Priority Habitat

Figure 1e. Massachusetts Forest Cutting Plan stand map.

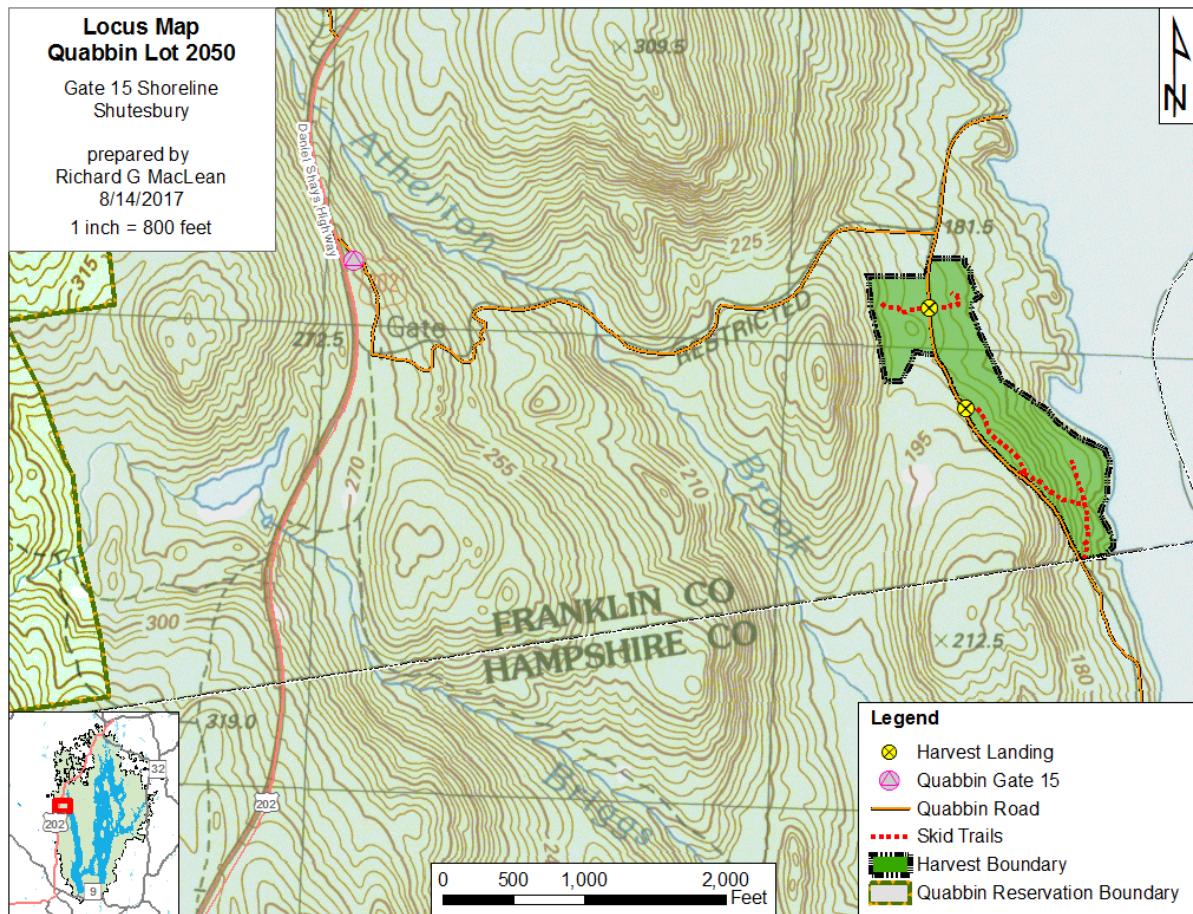


Figure 1a. Massachusetts Forest Cutting Plan locus map.