

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

**Project Title:**

<b>DWSP Harvest Permit Number:</b> 2050
<b>DWSP Proposal ID:</b> PE-16-12
<b>DCR Forest Cutting Plan File Number:</b> 272-8969-18

**Site Information**

<b>Watershed:</b> Quabbin	<b>Town(s):</b> Shutesbury
<b>Acres:</b> 25.6	<b>Nearest Road:</b> Rte. 202
<b>Natural Heritage Atlas overlap?:</b> No	<b>Public Drinking Water Supply Watershed?:</b> Yes
<b>Forest Types:</b> White Pine   White Pine/Hardwood	<b>ACEC?:</b> No
<b>Soils:</b> Hinkley Samndy Loam, Chatfield-Hollis complex, and Windsor and Merrimac soils.	
<b>Wetland Resources:</b> A small portion of wetland feeding an intermittent is in the harvest boundary. No cutting within the wetland is planned.	
<b>Vernal Pools:</b> none	

**Harvest Information**

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

**Best Management Practices Applied**

<b>Stream Crossings</b>	A single intermittent stream is crossed by a DWSP road with an existing culvert.
<b>Filter Strips</b>	Single filter strip of an intermittent stream bisecting the lot west to east.
<b>Wetland Crossings</b>	none
<b>Harvesting in Wetlands</b>	none

<b>DWSP Forester supervising this harvest</b>
<b>Name:</b> Richard G MacLean   Helen Johnson
<b>Forester License #:</b> 383 (Johnson)
<b>Phone #:</b> 413.323.6921 ext 553   <b>978.544.6343</b>
<b>Email:</b> richard.maclea@state.ma.us   helen.johnson@state.ma.us

## **NARRATIVE**

### **General Description / Forest Composition and 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)

## For DCR Use Only:

File Number 222-8969-18 Case No. \_\_\_\_\_  
Date Rec'd 8/17/17 Nat. Hert. NO  
Earliest Start 9/1/17 Nat. Hert. Imp N/A  
River Basin Chicopee Pub. Dr. Wat. Quabbin  
Gen. Obj. LT ACEC NO

Site Information

### 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

### 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

### 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 \_\_\_\_\_

### 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

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			

### 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	VA	VA	

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
		OT Other		

### 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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Notes

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	73.8	Red Maple	
Red Pine	3.4	Sugar Maple	
Pitch Pine		Red Oak	
Hemlock		Black Oak	
Spruce		White Oak	
Other Shwd.		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.

## 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.

*Signature of landowner(s)*

*8-16-17*  
Date

Determination and Status *272-8919-18*

Approved ☒ Disapproved ☐ Expires *8/17/19*  
*Signature of Service Forester/Director's Agent* *8/25/2017*  
Signature of Service Forester/Director's Agent Date

## 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* *11/17/17*  
Signature of Service Forester/Director's Agent Date

Forest Types				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	HH Hem/Hdwd	RM Red Maple	LT Leave Tree	ST Seed Tree	NT Non Com Thin	SE Natural Seed	
WH WP/Hdwd	BC Black Cherry	BE Beech	SB Stand Boundary	CC Clear Cut	SE Selection	PL Plant	
WO WP/Oak	BB Bee/Bir/Map	SF Spruce/Fir	OT Other	SA Salvage	DL Diameter Limit*	CO Coppice	
RP Red Pine	OH Oak/Hdwd	SM Sugar Maple	Landowner Objective	SN Sanitation	OT Other*	DS Direct Seed	
SR Red Spruce	OR N Red Oak	PP Pitch Pine	LT Long-term Mgt			OT Other	
			ST Short-term Har				

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

# 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	



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

FILE # 272-8869-18

## FOREST CUTTING PLAN CERTIFICATE

Post this in a conspicuous place within the area in which the harvesting operation is to take place.

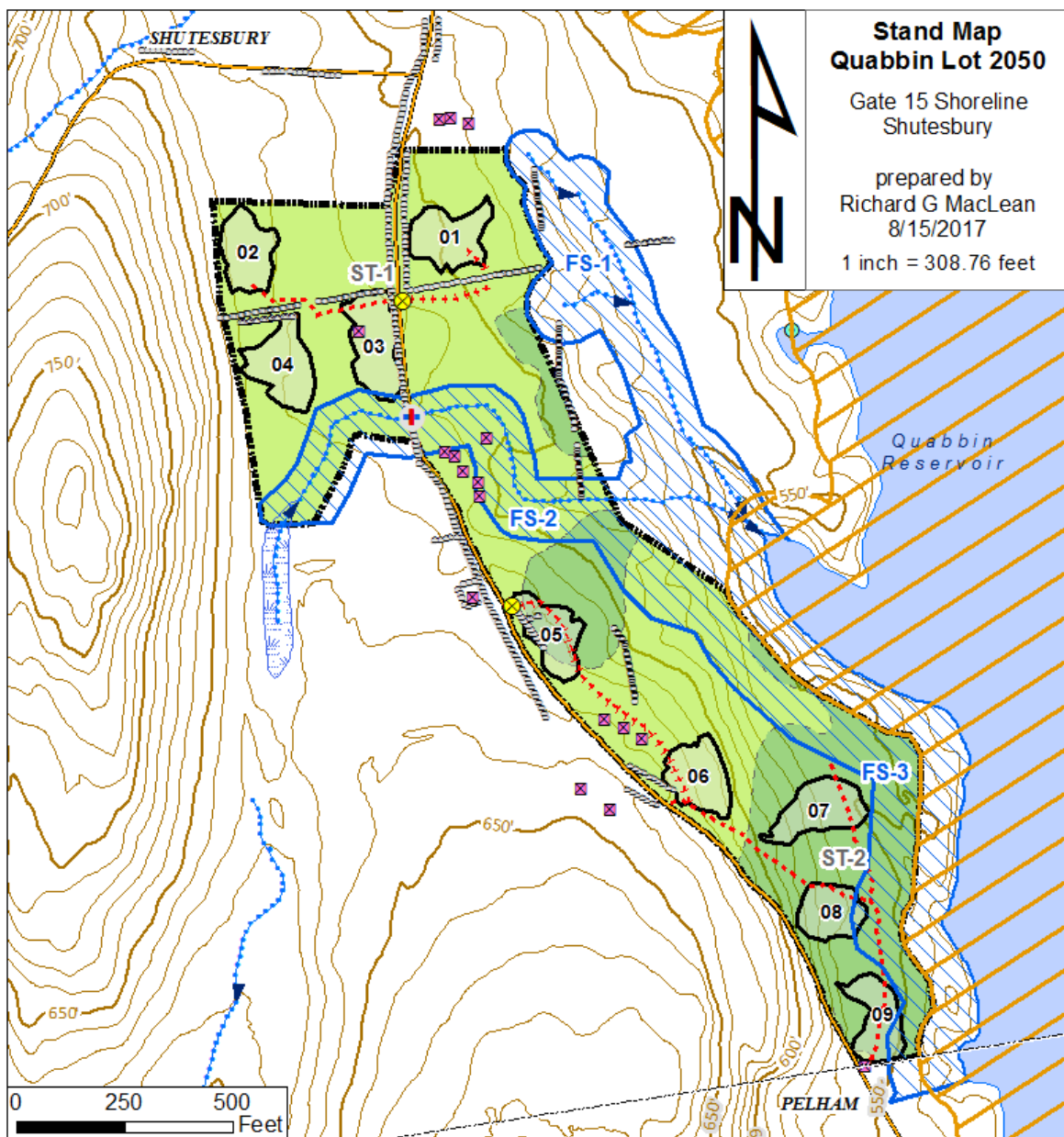
This certifies that DCR-DWSP BELCHERTOWN in accordance with the  
(Name of Owner) (Address)

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 8/29/2017  
Director's Agent FLETCHER CLARK  
DCR Phone No. 413-262-2367

ISSUED BY:

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



### 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     |

**Locus Map  
Quabbin Lot 2050**

Gate 15 Shoreline  
Shutesbury

prepared by  
Richard G MacLean  
8/14/2017  
1 inch = 800 feet

