

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

**Project Title:** Birch Drive

<b>DWSP Harvest Permit Number:</b> 3167
<b>DWSP Proposal ID:</b> PT-17-14
<b>DCR Forest Cutting Plan File Number:</b> 234-32393-21

**Site Information**

<b>Watershed:</b> Quabbin	<b>Town(s):</b> Petersham
<b>Acres:</b> 34.7	<b>Nearest Road:</b> Birch Drive
<b>Public Drinking Water Supply Watershed?:</b> Yes	<b>Natural Heritage Atlas overlap?:</b> No
<b>Forest Types:</b> red oak, hemlock-hardwood	<b>ACEC?:</b> No
<b>Soils:</b> Most of the harvest area has Montauk-Canton association soils, which are extremely stony and well drained. They're rated as having slopes of 15-45%, but slopes above 20% have been excluded from the cutting and operations areas. In addition, along the southern edge of the lot there are about 3.2 acres of Woodbridge-Paxton association soils, very stony, moderately well drained, with 3-15 % slopes.	
<b>Wetland Resources:</b> A wetland traverses the lot from south to north, ending in an intermittent stream.	
<b>Vernal Pools:</b> none	

**Harvest Information**

<b>Harvest Start Date:</b> 1/23/2022	<b>Harvest End Date:</b> 1/5/2023
<b>Number of Wetland Crossings:</b> none	<b>Number of Stream Crossings:</b> one

**Best Management Practices Applied**

<b>Stream Crossings</b>	Temporary bridge on intermittent stream.
<b>Filter Strips</b>	Variable width filter strip on the stream and associated wetland.
<b>Wetland Crossings</b>	The wetland crossing option on the cutting plan was not used.
<b>Harvesting in Wetlands</b>	none

**DWSP Forester supervising this harvest**

<b>Name:</b> Helen Johnson
<b>Forester License #:</b> 383
<b>Phone #:</b> 617-733-2937
<b>Email:</b> <a href="mailto:Helen.Johnson@mass.gov">Helen.Johnson@mass.gov</a>

## **NARRATIVE**

### **General Description/Forest Composition/History:**

Lot 3167 is located on the northwest side of Birch Drive in Petersham, east of Monson Turnpike. The terrain is highest to the south, sloping gradually to the north within the lot and steeply towards Monson Turnpike outside the west harvest boundary.

In the lower northwest corner there's an eight acre hemlock-hardwood stand dominated by hemlocks that are in decline due to infestation by hemlock wooly adelgid. There is little advance regeneration in this stand to hold the soil at the top of the steep slope to the west, should a large portion of the overstory die or get blown over.

The remainder of the harvest area is a more diverse mix of red oaks, black birch, paper birch and hemlock, with occasional white pine, white oak, yellow birch, beech, and white ash. Here too forest health is declining due to spongy moth, nectria canker and beech bark disease.

### **Site Selection:**

The primary goal of harvesting on the watershed is to create and maintain a forest that is resilient to and can quickly recover from small and large scale disturbances, including diseases, insect infestations, ice storms, microbursts, and hurricanes. The ideal way to achieve such resiliency is to foster a forest of diverse species at various stages of development (seedlings through large legacy trees) that are actively growing and regenerating. This combination of structural and species diversity builds resistance and resilience into the forest.

This site was chosen for harvesting because of its inadequate resistance and resilience to disturbance due to inadequate regeneration, especially in the hemlock-hardwood stand, and widespread forest health issues.

### **Silvicultural Objectives:**

The primary silvicultural objective for this lot is to work towards DWSP's goal of promoting forest resilience by increasing age class diversity through small group/patch selection. This is being done by creating openings where clusters of trees are diseased, declining, or have poor stem structure. Declining hemlock and nectria-infected birch are particularly being targeted for removal. Trees on the perimeter of openings have large, healthy crowns (hence strong seed bearing potential), stable stem structure, and are either vertical or leaning away from the openings so that they are less likely to damage regeneration in the opening if they fall in the future.

Selective improvement cutting between groups is also being done for the purpose of increasing tree vigor and seed production, especially of oaks, and improving overall forest health. The healthiest, most

vigorous individual trees of all species are being retained in order to maintain existing biodiversity. Den trees, potential den trees, snags, large logs, trees with stick nests, and potential nest trees (those with 3-way forks or similar canopy structures) are being retained to the greatest degree possible as valuable wildlife habitat.

### **Cultural Resources:**

The DCR Archeologist identified this lot as Not Sensitive, with the only known cultural resources being stone walls that border DWSP property near Birch Drive. If additional cultural resources are located in the course of the harvest they will be protected, mapped, photographed, and reported to the DCR Archeologist.

### **Rare or Endangered Species:**

NHESP has not identified any rare or endangered species in this area.

## **FIGURES**

**Figure 1. Forest Cutting Plan**

**Figure 2a: Photo Point 1, before harvest**

Figure 1: Forest Cutting Plan

06-08-21P03:48 RCVD

## 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 (10/22)*

**For DCR Use Only:**

File Number <u>234-32893-21</u>	Case No. <u>N/A</u>
Date Rec'd <u>6-8-21</u>	Nat. Hert. <u>NO</u>
Earliest Start <u>6-23-21</u>	Pub. Dr. Wat. <u>NO</u>
River Basin <u>Chicopee</u>	ACEC <u>NO</u>
Gen. Obj. <u>LT</u>	

Site Information

**Location**

Town Petersham QUABBIN LOT 3167

Road Birch Drive

Acres 34.7 Proposed Start Date 5/22/2020

Vol. MBF 65 Vol. Cds. 180 Vol. Tons 77

**Landowner**

Name DCR-DWSP, Quabbin Section (ATTN: Forestry)

Mailing Address 485 Ware Road

Town, State, Zip Belchertown, MA 01007

Phone 617-733-2937

Ch61 ☐ 61A ☐ 61B ☐ Stew ☐ \*Case #         

FSC ☐ CR ☐ CR Holder

**Plan Preparer**

Name Helen Johnson, Watershed Forester

Address DCR-DWSP Quabbin Section

485 Ware Road

Town, State, Zip Belchertown, MA 01007

Phone 617-733-2937

Type of Preparer LF

\*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.

Best Management Practices

**Stream Crossings**

Indicate location on map	SC-1	SC-2	SC-3	SC-4
Type of Crossing	PO			
Existing Structure	NO			
Type of Bottom	ST			
Bank Height (ft)	<1'			
Stabilization	CO			

**Wetland Crossings**

Indicate location on map	WC-1	WC-2	WC-3	WC-4
Length of Crossing	125'			
Mitigation	FR/DR			
Stabilization	OT			

**Filter Strips**

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

**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**

Codes

Type of Preparer	Type of Crossing	Stabilization	Mitigation	Type of Bottom	Note:
LF Mass. Lic. For.	CU Culvert	SE Seed	FR Frozen	LE Ledge	<small>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.</small>
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			

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	1.5	Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	21.1
Hemlock	11.8	Black Oak	2.0
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	4.3
White Ash		Total Mbf	40.7
Beech		Cordwood (Cds)	110
White Birch		SW Pulp (Tons)	51
B & Y Birch		HW Pulp (Tons)	
Black Cherry		Chips (Tons)	

\*Note: Volumes 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		OR	HH	
Acres		23.8	10.9	
Landowner Objective		LT	LT	
Designation of Trees		CT	CT	
Type of Cut		SE	SE	
Source of Regeneration		SE	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 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.

Dan Clark

Digitally signed by Dan Clark  
Date: 2021.06.08 07:20:50  
+0400'

Signature of landowner(s)

6/8/2021

Date

## Determination and Status

Approved	Disapproved	Expires	
Cutting Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6/8/23
Signature of Service Forester/Director's Agent			6-17-21
Extension	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Expires
Amendment	App 1 <input type="checkbox"/>	Dis 1 <input type="checkbox"/>	App 2 <input type="checkbox"/>
		Dis 2 <input type="checkbox"/>	Ser. For. Ints.

## 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

10/21/22  
Date

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 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*	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

# 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 DCR-DWSP

Town Petersham

File Number \_\_\_\_\_

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.

Only one of the crossings will be used. If SC-1, it will be bridged if flowing. If WC-1, stabilization will be corduroy (CO) or bridge panels/mats.

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.

Stand No.	Describe Trees to be Cut			Describe Trees to be Left			% BA/AC	
	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 & understory






department of Conservation and Recreation

# Quabbin Lot 3167 Locus Map

Petersham, MA

Prepared June 2021 by Helen Johnson

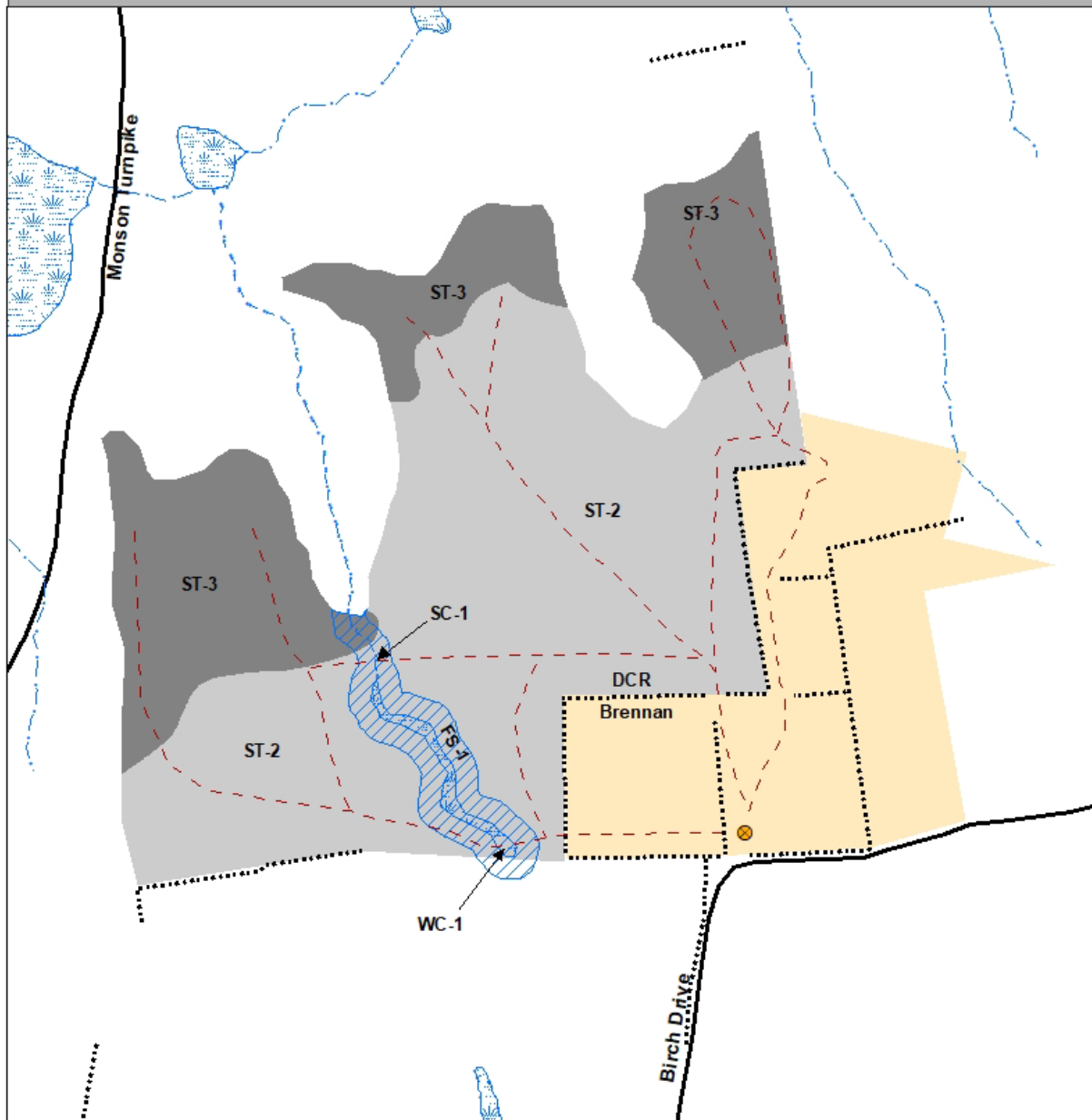




# Quabbin Lot 3167 Stand Map

Petersham, MA

1 inch = 300 feet



## Legend

- |            |              |                     |
|------------|--------------|---------------------|
| Landing    | Stream       | Property of Brennan |
| Skid Trail | Wetland      | ST-2                |
| Stone Wall | Filter Strip | ST-3                |



dc



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

FILE #

234. 32393.21

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 MA DCR-DWSP Quabbin 485 Ware Rd  
(Name of Owner) Belchertown, MA 01007 in accordance with the  
(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  
Quabbin 3167 lot, Petersham

Approval Date 6/17/21

Director's Agent Andrew Rawcliffe

DCR Phone No. 617. 549. 1677

ISSUED BY:

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



Figure 2: Photo Point 1

Before harvest (June 2022)



Immediately after harvest (January 2023)

