

**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> 1054
<b>DCR Forest Cutting Plan File Number:</b> 234-9313-18

**Site Information**

<b>Watershed:</b> Quabbin Reservoir	<b>Town(s):</b> Petersham
<b>Acres:</b> 30	<b>Nearest Road:</b> route 32A (Hardwick Rd.)
<b>Natural Heritage Atlas overlap?:</b> No	<b>Public Drinking Water Supply Watershed?:</b> Quabbin
<b>Forest Types:</b> red pine, white pine hardwood, w. pine-hemlock	<b>ACEC?:</b> No
<b>Soils:</b> Charlton-Chatfield-Hollis association (925E,C), Charlton-Paxton association (902E), Woodbridge-Paxton (910C)	
<b>Wetland Resources:</b> Wetlands, streams and intermittent streams are present on or near lot.	
<b>Vernal Pools present or within 200 feet of harvest:</b> One within 200'.	

**Harvest Information**

<b>Harvest Start Date:</b> Sept. 2018	<b>Harvest End Date:</b> TBD
<b>Number of Wetland Crossings:</b> One	<b>Number of Stream Crossings:</b> 2

**Best Management Practices Applied**

<b>Stream Crossings</b>	Two stream crossings have portable bridge required and banks will be poled and seeded.
<b>Filter Strips</b>	Variable filter strips used with less than 50% of basal area cut if any was cut at all.
<b>Wetland Crossings</b>	Wetland crossing is on an old road which will be bridged, poled or reinforced with stone.
<b>Harvesting in Wetlands</b>	No harvesting in wetlands.

**DWSP Forester supervising this harvest**

<b>Name:</b> Steven J. Wood
<b>Forester License #:</b> 257
<b>Phone #:</b> (413) 213-7944
<b>Email:</b> steven.wood@state.ma.us

## **NARRATIVE**

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

The area to be harvested is located in the southern part of Petersham, on the west side of 32A. Access to the northern landing is through gate 41 which leads to a bay of Pottapaug Pond which abuts lot to the northwest.

The stone walls on this lot attest to its history of being cleared for agriculture, most likely for pasture. When the farmland was abandoned, probably in the late 19<sup>th</sup> or early 20<sup>th</sup> century, it reverted to forest. There are 2 areas that were planted to red pine in the 40's. These stands were thinned in the 80's (as was most of the lot) and the red pine has declined from a non-native insect the red pine scale and root rot is most likely also present. Sapling to pole sized white and black birch are common in the understory with some white pine and red maple mixed in. Seedlings of most native trees are scattered throughout, though there is not much oak present.

The rest of the harvest is in white/hardwood or white pine/hemlock stands which had also been previously thinned with a few openings up to about 1/10<sup>th</sup> acre created. These stands regenerated similarly to the red pine but most areas were cut again around 2000 and came back to mainly white pine, black birch and red maple with a fair amount of hemlock in some areas. Some of the white pine in overstory is quite large and especially on western side of lot is declining, possibly from one of the needle funguses that have been common recently. Dead snags of white and red pine (numerous), along with some hardwoods are scattered throughout and will be left standing, as much as possible, during the harvest.

The primary tree species present in overstory are white pine and hemlock with black birch, red maple and mixed oaks (predominately red oak). Other hardwoods include paper birch, aspen, ash, sugar maple and black cherry. On the areas with red pine it is the predominate species with most of the other species above scattered throughout the stand.

The soils on this lot are primarily Charlton-Chatfield-Hollis association (925E,C), Charlton-Paxton association (902E) and Woodbridge-Paxton (910C).

### **Site Selection:**

The primary goal of the watershed forest management program is to create and maintain a forest that provides high quality drinking water to current users and future generations. In order to achieve this, DWSP has determined that the forest should contain a diversity of species in various stages of development (seedlings through large legacy trees). In addition, the forest should be vigorous; actively growing and regenerating. A forest in this condition is resilient to and can quickly recover from small and large scale disturbances such as diseases, insect infestations, ice storms and hurricanes.

This site was chosen since the stands overstory is predominately even-aged and the red pine in particular was declining. Also there is healthy, vigorous and somewhat diverse regeneration present that wouldn't stay in that condition much longer. The hemlock component in particular is one we are trying to retain as in recent years it has declined across the watershed due to insect infestations.

### **Silvicultural Objectives:**

A goal of this harvest is to build on the success of the work started in 1980 by continuing the process of establishing new tree seedlings and providing space for existing regeneration to expand and grow. The diversity of native species present is being maintained. This combination of structural and species diversity builds resistance and resilience into the forest.

Guided by the principles stated above, the primary purpose of this harvest is the establishment of a new age class by harvesting part of the overstory in small groups, up to 3/4 acre in size, in order to foster regeneration. Groups were placed according to our guidelines. Areas where there were clusters of trees that were declining or had weak stem form, often due to insects, diseases, or storm damage, were specifically targeted. Where there were groups of regeneration created from the previous cut these were expanded upon by cutting a new abutting group. The red pine stands were already regenerated and well stocked with hardwood poles up to about 9" diameter so these areas are having the remainder of the red pine overstory cut. The larger area is about 5 acres and has scattered white pine and hardwood stems from the original overstory retained.

Wherever possible wildlife habitat features were maintained and protected, such as snags (dead trees) and trees with cavities or nests. Exceptional individuals of all species present were retained in the stand for seed and to enhance diversity.

### **Cultural Resources:**

Stone walls are numerous throughout this area. There are many breaks and barways in these walls and they can be used to avoid and protect the stone walls during the upcoming harvest. This is in keeping with DWSP's standard practice, which dictates that every effort is made to keep existing stone walls intact. Otherwise, this area has been determined not to be culturally or archeologically sensitive based on a review by the DCR Archaeologist.

### **Wildlife/Rare or Endangered Species:**

The lot contains no critical habitats or known rare or endangered species, and no vernal pools. There is a large, deep vernal pool, which has been buffered, abutting the northwestern corner of the lot. The uplands are home to a variety of wildlife including deer, turkey, coyote and moose. Deer in particular seem to like this area in winter.

### **FIGURES**

Figure 1. Forest Cutting Plan

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 234.9313-18 Case No. \_\_\_\_\_  
 Date Rec'd 3/5/18 Nat. Hert. NO  
 Earliest Start 3/26/18 Nat. Hert. Imp. \_\_\_\_\_  
 River Basin Chicopee Pub. Dr. Wat. YES  
 Gen. Obj. LT ACEC \_\_\_\_\_

Site Information

### Location

Town Petersham Quabbin Lot 1054  
 Road Hardwick Rd. 32A  
 Acres 30 Proposed Start Date tbd  
 Vol. MBF 216.7 Vol. Cds. 88 Vol. Tons 390

### Plan Preparer

Name Steven J. Wood  
 Address DCR, Division of Water Supply Protection  
485 Ware Rd.  
 Town, State, Zip Belchertown, MA 01007  
 Phone (413) 323-6921 ext. 156  
 Type of Preparer Mass. Licensed Forester  
 \*Mass. Forester License # 257  
 \*Required for land under Ch61, Ch61A or Forest Stewardship

### Landowner

Name DCR, Division of Water Supply Protection  
 Mailing Address 485 Ware Rd.  
 Town, State, Zip Belchertown, MA 01007  
 Phone (413) 323-6921  
 Ch61  Ch61A  Stew  \*Case # \_\_\_\_\_  
 Est. Stumpage Value \$22,000

### Licensed Timber Harvester\*\*

Name Tim Robinson  
 Address PO Box 58  
 Town, State, Zip Barre MA 01005  
 Phone 508-310-1071  
 Mass. Lic. Harvester # 2018-719

\*\*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	BR*	BR*		
Existing Structure	No	No		
Type of Bottom	GR	ST		
Bank Height (ft)	0.5'	0.5'		
Stabilization	SE/CO	SE/CO		

### Wetland Crossings

Indicate location on map	WC-1	WC-2	WC-3	WC-4
Length of Crossing	50'			
Mitigation	DR/FR			
Stabilization	CO/ST			

### Filter Strips

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

50% Basal area retention will be maintained in all filter and buffer strips.

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	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.
TH Lic. Tim. Har	BR Bridge	MU Mulch	DR Dry	ST Stony	
TB Timber Buyer	FO Ford	CO Corduroy	OT Other	MU Mud	
LQ 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

Forest Products

**Products to be Harvested\***

Species	Mbf/Cds		Mbf/Cds
White Pine	94.1 M	Red Maple	2.8 M
Red Pine	82.6 M	Sugar Maple	0.6 M
Pitch Pine		Red Oak	6.4 M
Hemlock	23.8 M	Black Oak	1.0 M
Spruce		White Oak	0.5 M
Other Sitwd.		Other Hdwd.	
White Ash	1.3 M	<b>Total Mbf</b>	216.7 M
Beech		<b>Cordwood (Cds)</b>	88
White Birch		<b>SW Pulp (Tons)</b>	390
B & Y Birch	3.5 M	<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

**Cutting Standards**

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type	RP	WH	WK	
Acres	6	15	9	
Landowner Objective	LT	LT	LT	
Designation of Trees	CT	CT	CT	
Type of Cut	SH	SE	SE	
Source of Regeneration	AD/SE	AD/SE	AD/SE	

Landowner

**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.

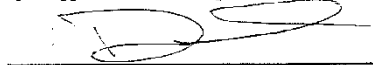
**LT - Long-term Forest Management**

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)

2-23-18  
Date

Service Forester

**Determination and Status** 234-9313-18

Approved  Disapproved  Expires 3/5/20

Cutting Plan

Sean Libbey 4/3/18  
Signature of Service Forester/Director's Agent Date

Extension 1  2  Expires 1 Ser. For. Ints. 1

Amendment App 1  Dis 1  App 2  Dis 2  1

**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 Date

Codes

<b>Forest Types</b>	<b>Designation of Trees</b>	<b>Type of Cut</b>	<b>Source of Regeneration</b>
WP White Pine	CT Cut Tree	SH Shelterwood	AD Advanced
WK WP/Hem	LT Leave Tree	ST Seed Tree	SE Natural Seed
WH WP/Hdwd	SB Stand Boundary	CC Clear Cut	PL Plant
WO WP/Oak	OT Other	SE Selection	CO Coppice
RP Red Pine	<b>Landowner Objective</b>	SA Salvage	DS Direct Seed
SR Red Spruce	LT Long-term Mgt	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

Landowner DCR, DWSP

Narrative Page (Effective Date: 1/1/04)

Town Petersham

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

File Number 234-9313-18

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.

\*Portable bridge required at SC1, 2 if wet otherwise poled. WC-J portable bridge and poles or stone for approach. Where skid trail enters woods from gate 41 access road bank across from Pottapaug Pond needs to be excavated to lessen grade, hay bales will placed on south side of road across drainag (drains west towards Pottapaug). Cut trees are marked with blue paint, edge of openings and save trees with orange. Existing skid trail along west edge of wetland on north end of lot will not be used. Lot has been cut multiple times over last 30 years. ST-1 is having a final overstory harvest of a shelter wood, ST-2 WH is mostly thinned with advance regen released and 1/10<sup>th</sup>- 3/4 acre openings. ST-3 WK is thinned with 1/10-1/4 acre openings.

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


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


dc



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

FILE # 234-9313-18

**W**


# FOREST CUTTING PLAN CERTIFICATE

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

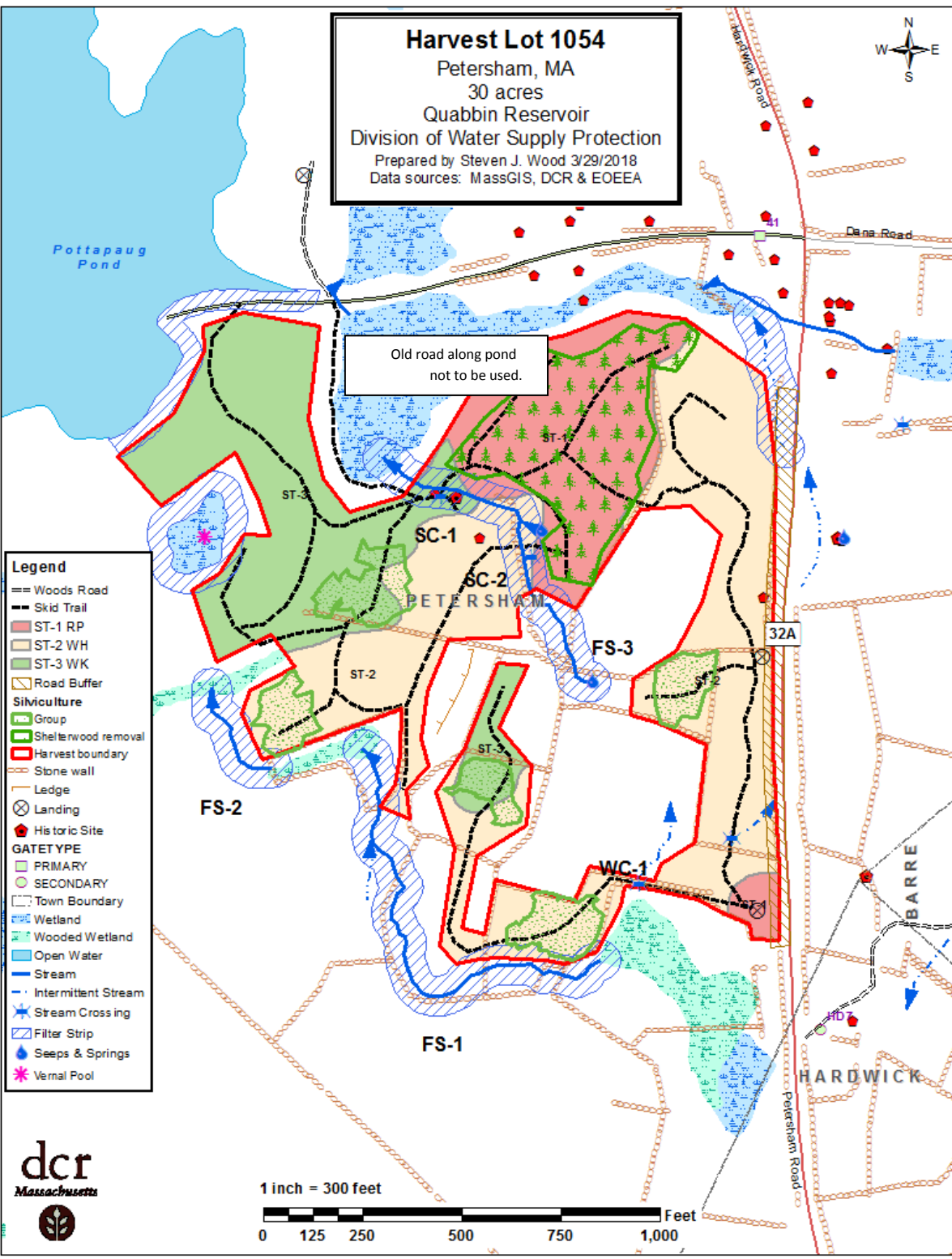
This certifies that DCR-DWSP 485 WARE RD  
(Name of Owner) (Address) BELCHERTOWN in accordance with the

provision of M.G.L. Chapter 132, Section 40-46, filed in Amherst Field Office with the Dept. of Conservation  
and Recreation, Division of State Parks and Recreation, a Notice of Intent to cut forest products upon the  
LOT 1054 lot.

Approval Date 4-3-2018  
Director's Agent SEAN LIBBEY  
DCR Phone No. 413-545-4539

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

**Harvest Lot 1054**  
 Petersham, MA  
 30 acres  
 Quabbin Reservoir  
 Division of Water Supply Protection  
 Prepared by Steven J. Wood 3/29/2018  
 Data sources: MassGIS, DCR & EOEAA



Old road along pond  
not to be used.

- Legend**
- == Woods Road
  - - - Skid Trail
  - ST-1 RP
  - ST-2 WH
  - ST-3 WK
  - ▭ Road Buffer
  - Silviculture**
  - Group
  - Shelterwood removal
  - Harvest boundary
  - Stone wall
  - Ledge
  - Landing
  - Historic Site
  - GATETYPE**
  - PRIMARY
  - SECONDARY
  - Town Boundary
  - Wetland
  - Wooded Wetland
  - Open Water
  - Stream
  - Intermittent Stream
  - Stream Crossing
  - Filter Strip
  - Seeps & Springs
  - Vernal Pool





**Harvest Lot 1054**  
Petersham, MA  
30 acres  
Quabbin Reservoir  
Division of Water Supply Protection  
Prepared by Steven J. Wood 2/23/2018  
Data sources: MassGIS, DCR & EOEEA

