

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

**Project Title: Gate 18 North**

DWSP Harvest Permit Number: 3144

DWSP Proposal ID: PR-16-26B

DCR Forest Cutting Plan File Number: 204-8233-16

***Location Information***

Watershed: Quabbin

Town(s): New Salem

Acres: 27

Nearest Road: Hunt Road

Natural Heritage Atlas overlap?: No

Public Drinking Water Supply Watershed?: Yes

Area of Critical Environmental Concern (ACEC)?: No

***Site Information***

Forest Types: white pine-hardwoods and mixed oak

Soils: Chatfield-Hollis and Canton-Chatfield-Hollis associations

Wetland Resources: none

Vernal Pools: none

***Harvest Information***

Harvest Start Date: June 29, 2016

Harvest End Date: July 6, 2016

Number of Wetland Crossings: none

Number of Stream Crossings: none

***Best Management Practices Applied***

Stream Crossings: n/a

Filter Strips: n/a

Wetland Crossings: n/a

Harvesting in Wetlands: n/a

***DWSP Forester supervising this harvest***

Name: Helen Johnson

Forester License number: 383

Phone number: (617) 733-2937

Email: Helen.Johnson@mass.gov

## **Narrative**

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

The area to be harvested is inside DCR-DWSP Gate 18 in the town of New Salem, at the end of Hunt Road. The cutting area is dominated by mature white pine overtopping black birch. Although there are a few oaks, maples, and other hardwoods and occasional hemlocks, tree species diversity is low. One exception is an area along the west boundary, where a ground fire a couple of decades ago resulted in diverse, vigorous seedlings. The only prior harvest in this area was a shelterwood completed in 1969, which resulted in what is now a black birch dominated midstory.

The primary focus of this harvest is on increasing both species and age class diversity by removing small groups of disease- or insect-weakened trees, particularly pines, in patches large enough to stimulate regeneration of a diverse mix of species. Two forest health considerations contributed to the silvicultural decisions for this lot. One is the white pine weevil, an insect that kills the terminal shoots of white pine, causing forks and sweeps in the main stem and weakening the tree's structural integrity. The second is nectria, a fungus that attacks birches, causing cankers that weaken the trunks of infected trees. Removal of these and other weakened trees will improve the health and vigor of the forest, and therefore its ability to withstand disturbances.

The entire lot is on high ground with no water resources. The soils on this lot are primarily Chatfield-Hollis and Canton-Chatfield-Hollis associations. These are well drained to somewhat excessively drained glacial till soils derived from schist and gneiss.

### ***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 such as diseases, insect infestations, ice storms and hurricanes, all of which are becoming increasingly common. The ideal way to achieve this is to have a diversity of species in 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 particular lot has very little species diversity, and the two dominant species are subject to insect and fungal threats (white pine weevil and nectria fungus) that are endemic to the region and cannot be eliminated. This harvest will increase the diversity of tree species and ages, and improve the overall health of the forest.

### ***Silvicultural Objectives***

This harvest focuses on removal of the overstory in small groups, ranging from 1/3 to 2 acres in size and averaging 0.7 acres, in order to foster regeneration. Groups were placed where there were clusters of trees that were declining or had weak stem form, with a preference for cutting weevilled white pine and nectria infected black birch. These vulnerable trees will be replaced with vigorous new seedlings. Wherever possible wildlife habitat features were maintained and

protected, such as large diameter logs, snags (dead trees), and den trees. The full diversity of existing native tree species is being maintained and promoted.

### ***Cultural Resources***

Stone walls line the west boundary of the lot, as well as portions of the north and south boundaries. There are some stone walls within the harvest area, evidence that the land was once cleared for agriculture. These include two parallel walls that probably once formed a travel lane between farms. All walls have been avoided as much as possible, and existing barways were utilized whenever possible to minimize damage.

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

This lot contains no known rare or endangered species.

Forest Cutting Plan

Forest Cutting Plan page 1 of 6

# 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)

**FINAL**

**For DCR Use Only:**

File Number	<u>204-8233-16</u>	Case No.	
Date Rec'd	<u>5/27/14</u>	Nat. Hert.	<u>NO 1</u>
Earliest Start	<u>6/14/16</u>	Nat. Hert. Imp.	<u>N/A</u>
River Basin	<u>Quabbin</u>	Pub. Dr. Wat.	<u>Quabbin</u>
Gen. Obj.	<u>LT</u>	ACEC	<u>No</u>

Site Information

**Location**

Town New Salem **LOT 3144**

Road Hunt Road (Gate 18)

Acres 27 Proposed Start Date May 2016

Vol. MBF 69 Vol. Cds. 56 Vol. Tons 89

**Plan Preparer**

Name Helen Johnson

Address DCR-DWSP Quabbin Section  
485 Ware Road

Town, State, Zip Belchertown, MA 01007

Phone 978-544-6343

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  
Helen.Johnson@state.ma.us

Town, State, Zip Belchertown, MA 01007

Phone 978-544-6343

Ch61  61A  61B  Stew  \*Case #

CR  CR Holder

**Licensed Timber Harvester\*\***

Name Chris Piono Logging

Address 152 Williamsville Rd

Town, State, Zip Hubbardston, MA 01452

Phone 978-928-4736

Mass. Lic. Harvester # 2016-587

\*\*This information may be supplied after the plan is approved, but before work begins.

Best Management Practices

**Stream Crossings** No Crossings

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

**Wetland Crossings** No Crossings

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

**Filter Strips** No Filter Strips

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

\* Actual width of vernal pool filter strips = 100 feet

**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**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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	
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

Forest Products

**Products to be Harvested\***

Species	Mbf/Cds		Mbf/Cds
White Pine	59.8	Red Maple	0.4
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	0.2
Hemlock	2.7	Black Oak	1.1
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	
White Ash	0.3	<b>Total Mbf</b>	68.7
Beech		<b>Cordwood (Cds)</b>	56
White Birch		<b>SW Pulp (Tons)</b>	89
B & Y Birch	4.1	<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	WH			
Acres	27.7			
Landowner Objective	LT			
Designation of Trees	CT			
Type of Cut	SE*			
Source of Regeneration	AD/SE			

\* Small group and single tree selection, with groups up to 2 acres.

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 specie

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]*  
 Signature of landowner(s)

5-27-16  
 Date

Service Forester

**Determination and Status** 204.8233-16

Approved  Disapproved  Expires 5/28/18  
 Cutting Plan *[Signature]* 6/2/16  
 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]* 9/20/16  
 Signature of Service Forester/Director's Agent Date

Codes

<b>Forest Types</b>	HK Hemlock	OM Mixed Oak	<b>Designation of Trees</b>	SH Shelterwood	<b>Type of Cut</b>	<b>Source of Regeneration</b>
WP White Pine	HH Hem/Hdwd	RM Red Maple	CT Cut Tree	ST Seed Tree	CT Commercial Thin	AD Advanced
WK WP/Hem	BC Blck Cherry	BE Beech	LT Leave Tree	CC Clear Cut	NT Non Com Thin	SE Natural Seed
WH WP/Hdwd	BB Bee/Bir/Map	SF Spruce/Fir	SB Stand Boundary	SE Selection	<b>Non-Standard Systems:*</b>	PL Plant
WO WP/Oak	OH Oak/Hdwd	SM Sugar Maple	OT Other	SA Salvage	HG Highgrade*	CO Coppice
RP Red Pine	OR N Red Oak	PP Pitch Pine	<b>Landowner Objective</b>	SN Sanitation	DL Diameter Limit*	DS Direct Seed
SR Red Spruce			LT Long-term Mgt.		OT Other*	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 New Salem

File Number 204 8233-16

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.

Blue Paint: Dot = cordwood / pulp; horizontal line = sawlog; vertical line = TSI; "X" = cull

Blue flagging OR Yellow "Skid Trail" = skidder/forwarder trails

Orange flagging or paint = edge of group (protect these trees). Orange "Hazard Tree" flagging may be cut or not, at operator's discretion.

Pink "Do Not Cut" flagging = trees to be protected

Edge of harvest marked with three blue dots of paint and/or pink "Timber Harvest Boundary" flagging.

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

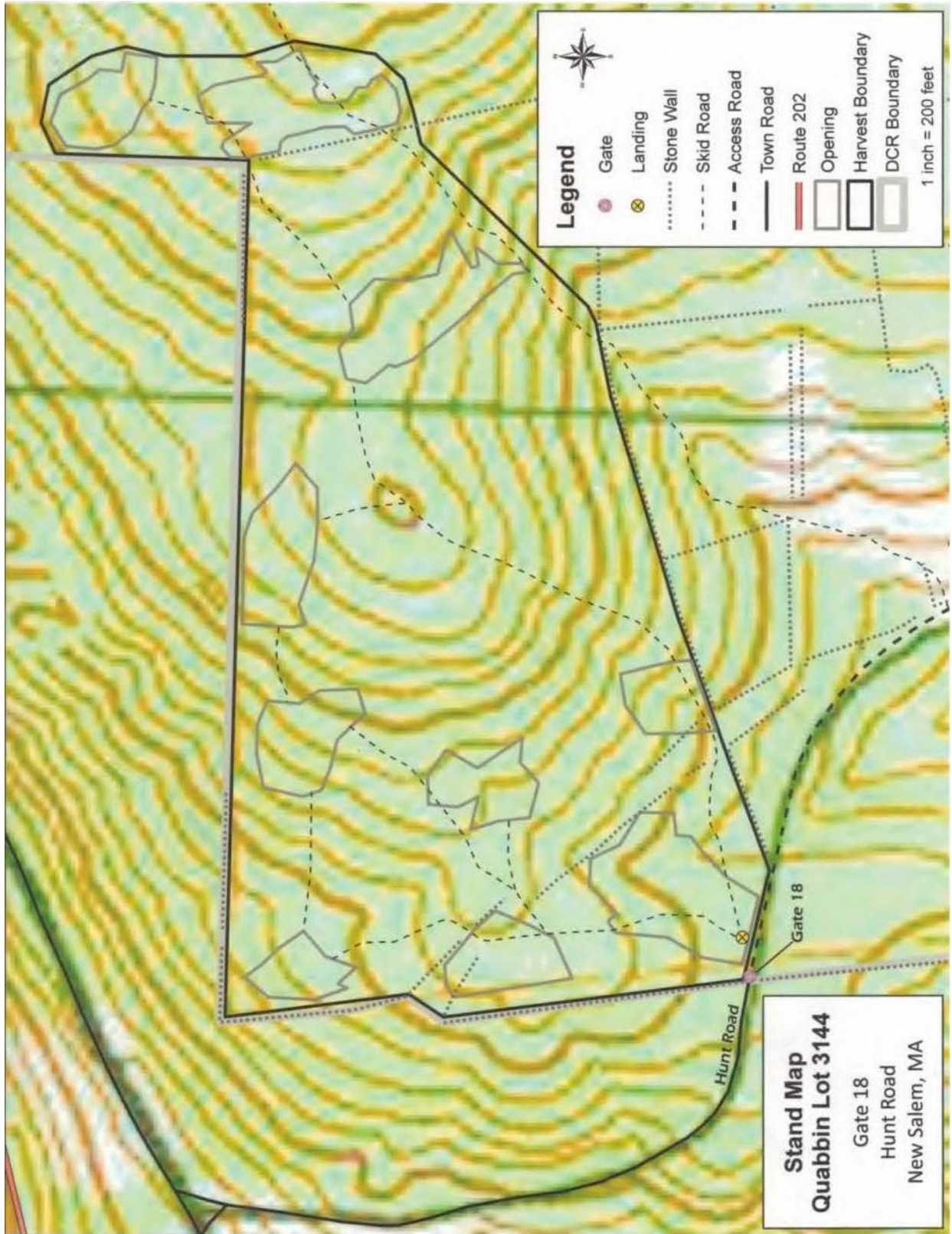
Use this Section to describe how Chapter 132 requirements will be met if a non standard system (HG, DL, or OT) was used for the "Type of Cut" in the Cutting Standards Section on page 4.

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
1	AD/SE	Existing regeneration is dominated by pine and black birch saplings. There are few existing seedlings. Groups of 0.3 to 1.1 acres, averaging 0.58 acre, have been placed where overstory trees are poor quality and there are relatively few saplings. Oaks and hickories were favored for seed trees at the edges of groups in order to promote greater species diversity in the next age class.

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

1	The desired future condition is a forest that is diverse in both tree species and age classes. The overall structure will be composed of patches of seedlings of multiple species within a mature forest. The overstory will continue to be dominated by white pine emergents overtopping black birch, with lesser components of red and black oak, hickory, and red maple, and occasional white oak, black cherry, and sugar maple. White ash is expected to drop out due to emerald ash borer. The few hemlocks that are present in the overstory may also succumb to insects and diseases; however, hemlock may seed into skid trails and openings. Black birch and white pine saplings will grow to pole and then small sawlog size, differentiating in the process.





dcf



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

FILE # 204-8233-16

# 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 DEE DWSE QUINNIN (Name of Owner) 485 WARE RD, BELCHERTOWN, MA (Address) in accordance with the

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 HUNT RD (GRAB 18) lot. (Lot 3144)

Approval Date 6/2/16  
Director's Agent Fletcher Clark  
DCR Phone No. (413) 262-2367

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